



Comments Received by the Department of
Consumer and Worker Protection on
Proposed Rules related to Cancellation of Subscriptions

IMPORTANT: The information in this document is made available solely to inform the public about comments submitted to the agency during a rulemaking proceeding and is not intended to be used for any other purpose

From: [Louise Harris](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] I support updates on new click to cancel rules
Date: Friday, April 10, 2026 11:14:07 AM

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I support these updates. Further, I wish that the companies charging consumers for subscriptions had to send (via text and e-mail) reminders (a month prior to renewal) so that the consumer has clear information about enrollment in subscribed services, charges associated with enrollment and easy “click to cancel” access.

Louise Harris
263 Eastern Parkway
3A
Brooklyn, NY 11238
[REDACTED]
Sent from my iPhone

From: [Polly Kanevsky](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Click to cancel proposed law
Date: Sunday, April 12, 2026 9:05:41 AM

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LOVE IT. Thank you for helping to equalize the playing field.

All the best,
Polly

design
kiddos

[REDACTED]

From: [Isadore Goldstein](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Canceling Subscriptions with a click
Date: Sunday, April 12, 2026 10:47:44 AM

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Canceling subscriptions with a click is a great idea. It should extend to everything including cable who can pester you for hours before allowing you to cancel.

Isadore Goldstein
Brooklyn NY

From: [Robert Culbertson](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] I totally support a measure like this!
Date: Sunday, April 12, 2026 12:04:38 PM

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I'm Not a New Yorker, but couldn't agree more. This needs to be done Federally!! But I know it shouldn't be attempted Federally until we have a Stable and Sane president in the White House.

From: [Angel Ortega](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] automatic renewal or continuous service offer
Date: Sunday, April 12, 2026 4:33:21 PM

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To whom it may concern,

My name is Angel Ortega and I am a resident of Queens NY. I am a proponent of **Ease of Cancellation**.

Too often are businesses predatory in nature to take away money from their clients by allowing them to easily sign up for subscriptions like gym membership or goods and products, but often make it impossible to opt out.

Just as a personal story, I had a subscription to NY sports club in 2017 and had cancelled my gym membership. 2 years later I took a look at my Bank account and noticed my gym membership had been re-instated. I spoke to the gym personally and I was not returned any of the money which at the time was 200\$. They forced me to go in person and waste more time and money. There was no justice for me and I was robbed of 200\$ as the ease to subscribe is a click away and to cancel are copious amounts of hurdles. To avoid this reoccurrence I had to cancel my debit card and get a new one issued. Once again, I am a proponent of this "ease of cancelation" because businesses need to stop having predatory practices without consequences. Thank you.

Mr. Ortega
LIC resident

From: [George McCracken](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Subscription cancellation rule
Date: Tuesday, April 28, 2026 7:05:33 AM

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Hi,

I hope that you pass this rule to make canceling subscriptions easier!
I'm having an issue with a business right now that opened a subscription for me without my permission, two years after I made a one time purchase. And getting them to cancel it has been really difficult. There is no way to do it through their website, and their customer service department doesn't answer the phone.

I think that this proposed rule could help to really help to dissuade companies from these bad practices.

Thank you!
George McCracken

From: [Laura Smith](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Proposed "Click-to-Cancel" Rule
Date: Wednesday, May 6, 2026 11:46:08 AM
Attachments: [5_6_26_TINA_comment_re_NYC_Click_to_Cancel_proposal.pdf](#)

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Hello,

TINA.org's comment regarding New York City's April 8, 2026 proposal to adopt a "click-to-cancel" rule is attached. (Our comment was also filed electronically at <https://rules.cityofnewyork.us/rule/cancellation-of-subscriptions/>.)

Thank you,

Laura Smith
Legal Director

[REDACTED]





May 6, 2026

VIA EMAIL

NYC Department of Consumer and Worker Protection
rulecomments@dcwp.nyc.gov

*Comment also submitted electronically via
<https://rules.cityofnewyork.us/rule/cancellation-of-subscriptions/>*

Re: Proposed “Click-to-Cancel” Rule

Truth in Advertising, Inc. (“TINA.org”) respectfully submits this comment regarding New York City’s April 8, 2026 proposal to adopt a “click-to-cancel” rule.¹ Home to 8.5 million residents, New York City is the most populated city in the country² and its economy is larger than that of most U.S. states (generating \$2 trillion in GDP³). Further, research indicates that e-commerce subscribers tend to be concentrated in urban areas of the Northeast.⁴ In fact, New York City residents are especially active digital shoppers, with more than 78% making at least one online purchase per week.⁵ Given this concentration of digital consumers, deceptive subscription practices disproportionately inflict costs on New York City consumers who are routinely misled into enrolling in subscription programs through deceptive marketing and then encounter unnecessary friction when attempting to cancel. These facts and the persistent issues surrounding subscription-based models lend support to the NYC Department of Consumer and Worker Protection’s (“the Department”) proposed “click-to-cancel” rule.⁶

I. INTEREST OF COMMENTER

TINA.org is a nonpartisan, nonprofit consumer advocacy organization dedicated to combating deceptive advertising and consumer fraud; promoting understanding of the serious harms commercial dishonesty inflicts; and working with consumers, businesses, self-regulatory bodies and government agencies to advance countermeasures that effectively prevent and stop deception in the economy. Its website, www.tina.org, provides information about common deceptive advertising techniques; consumer protection laws, regulatory actions and other lawsuits; and alerts about specific deceptive marketing campaigns.

TINA.org has become a trusted authority on false and misleading tactics, testifying before Congress on issues related to consumer protection, deceptive marketing and economic justice.⁷ TINA.org regularly draws on its expertise to advocate for consumer

interests before the FTC and other governmental bodies, and appears as amicus curiae in cases raising important questions of consumer protection law.⁸

Since its inception, TINA.org has received more than 10,000 tips and complaints from consumers, filed legal actions with regulatory agencies against hundreds of companies and entities, published more than 1,600 ad alerts and more than 1,100 news articles, and tracked more than 6,600 federal class actions alleging deceptive marketing. Notably, since 2015, state and federal agencies have obtained monetary judgments of more than \$380 million against wrongdoers based on TINA.org's legal actions and evidence, and returned millions in ill-gotten gains to consumers.

With respect to the marketing of subscriptions specifically, TINA.org has investigated and reported on dozens of companies using deceptive subscription schemes,⁹ and has filed complaints with state and federal regulators against seven brands for engaging in such tactics.¹⁰ As a result of these investigations and complaints, six regulatory enforcement actions have been taken cumulatively resulting in more than \$6 million in monetary judgments.¹¹ TINA.org is also tracking more than 250 class-action lawsuits challenging alleged misleading subscription practices used by a multitude of companies in diverse industries.¹²

In short, the tools available to stop deceptive subscriptions are of central importance to TINA.org's work and mission.

II. THE PROPOSED “CLICK-TO-CANCEL” RULE IS NEEDED.

New York City consumers increasingly rely on subscription-based services for everything from run-of-the-mill goods to digital access, yet too many of these arrangements are structured in ways that obscure material terms and true costs, and then make cancellation unnecessarily difficult. The result is a marketplace where convenience is ensured at sign-up but denied at exit, leaving consumers locked into recurring charges they neither expect nor want. A clear, enforceable “click-to-cancel” rule is a practical and proportionate response to this imbalance.

A. Deceptive subscriptions are pervasive.

Deceptive subscription practices span virtually every consumer industry—from home internet and mobile services, to fitness memberships, food delivery, legal services, vitamins, skin care, clothing, and more.¹³ TINA.org investigations of more than 100 products and services sold through problematic subscription programs have uncovered the same playbook across industries: (1) use deceptive marketing to lure consumers in; (2) conceal subscription terms so consumers remain unaware of recurring costs; and (3) impose burdensome cancellation barriers to make termination difficult.

And most—if not all—of these subscription-based companies market to New York City residents.

By way of example, in 2022, TINA.org filed regulatory complaints regarding the meal kit company HelloFresh,¹⁴ which deceptively advertised “free” meals to lure consumers—including those in New York City¹⁵—to its website and then ensnared them in an improperly disclosed autorenewing subscription.¹⁶

Similarly, last September, TINA.org filed complaints with state and federal regulators regarding Homeaglow, an online cleaning platform that uses a problematic subscription model that draws in consumers from across the country, including in New York City.¹⁷ Among the issues identified by TINA.org were falsely advertised \$19 home cleanings to entice consumers to Homeaglow’s website where a variety of dark patterns are used to pressure consumers to speed through their transactions likely missing improperly disclosed material subscription terms and then charging steep cancellation fees if members leave within six months.¹⁸

In addition, TINA.org tracks numerous class-action lawsuits alleging misleading subscription practices by companies selling to New York City consumers, including The New York Times, NFL Enterprises, Peacock TV and Paramount+, among many others.¹⁹ Moreover, numerous enforcement actions have been filed against other subscription-based companies that have financially harmed millions of New Yorkers.²⁰

Further, thousands of complaints related to misleading subscriptions and negative-option offers are filed by consumers every year. The FTC has indicated that such complaints have “steadily increase[ed] over the past five years,”²¹ noting that in 2024 the Commission received nearly 70 complaints per day on average, up from 42 per day in 2021.²² And the Department received more than 100 complaints regarding difficult-to-cancel subscriptions in 2025 alone.²³ Like New York City, the FTC has expressed “persistent concerns” regarding “continued unlawful negative option marketing practices in the marketplace.”²⁴

In short, far too many companies manipulate consumers with deceptive and misleading subscription offers, which undoubtedly cost consumers in New York City large amounts of money each year on charges they have forgotten about or never wanted in the first place.²⁵

B. Deceptive subscriptions harm New York City consumers and the economy.

The goal of companies deceptively employing recurring subscription models is to charge consumers indefinitely—luring consumers in, driving out competitors, and all but ensuring consumers can never leave.²⁶ This type of deceptive conduct deprives New Yorkers of free choice in their purchasing decisions and costs them significant amounts of money.²⁷ Indeed, a recent survey found that New Yorkers underestimate how much they spend on subscriptions by more than \$116 per month.²⁸

More generally, approximately 37,000 complaints filed with the BBB from 2015 to 2017 reported an average loss of \$186 as a result of deceptive subscriptions.²⁹ The FBI's Internet Crime Complaint Center recorded more than 9,600 complaints about free trial offers between 2015 and 2019, with losses totaling more than \$28 million over that time span.³⁰ And these numbers are likely lower because, inter alia, studies have found that less than 10 percent of fraud victims report their losses to the BBB or law enforcement.³¹

Further, a 2024 survey found that more than 85 percent of consumers had at least one paid subscription going unused each month.³² Similarly, a 2021 study by Chase Bank found that nearly three-quarters of Americans waste more than \$50 a month on unwanted subscription fees.³³ And in a 2022 survey, consumers reported underestimating their actual monthly spend on subscriptions by \$133 (or two-and-a-half times more than what they thought they were paying).³⁴ Corresponding with this consumer dissatisfaction, since 2013, more than 250 federal class actions have been filed on behalf of consumers complaining about various subscription terms and conditions.³⁵

Indeed, the scope of deceptive subscription plans is so extensive that consumer complaints about them are ubiquitous.³⁶ In fact, issues with deceptive subscriptions are one of the most common types of complaints that TINA.org receives.³⁷ Consumers generally report unwittingly being enrolled in a subscription, and then finding it impossible to cancel. The following examples are illustrative of the kinds of complaints consumers have had for over a decade. While the consumers quoted below do not identify where they live, their experiences are representative of what consumers across the country, including in New York City, regularly encounter.

- “I ordered some jewelry from this company. I got my jewelry and saw that I was part of there month subscription which I was unaware of. I tried contacting them and customer service. Didn't hear anything from them. Followed online instructions to cancel. But on the website there is no where to goto cancel. I've messaged them on Instagram and gotten nothing back. They made the charges to my card into 3 days and they progressively get more expensive. There Instagram has a lot of commenters so asking the same questions of when they will hear back from customer service. Or that they havent gotten there package. And if you look up this brand they are known for scamming people. So I had to goto my bank to get a new card.” (jewelry company, Feb. 2026 complaint)³⁸
- “They mislead me into enrolling into a subscription and they are charging me despite I don't own a house anymore. They are saying there is no way to cancelling the plan. I must pay 210\$ to cancel their service which I have never used more than once.” (Homeaglow, Dec. 2025 complaint)³⁹
- “MaxAI . . . offers browser-based AI plugin services and charged me unauthorized subscription fees without my informed consent. In February 2024, I was charged \$300 via Stripe for what I believed to be a one-month trial or annual subscription. In February 2025, I was again charged \$300

without any renewal notice, opt-out reminder, or confirmation from my side. There was no clear cancel button, no effective cancellation workflow before the renewal occurred, and no adequate warning provided. When I reached out to MaxAI’s support to request a refund, they refused and only offered account credits. This practice is highly misleading....” (MaxAI, May 2025 complaint)⁴⁰

- “I first saw the ad on a facebook reel. When I went to their page, it reads as if you can get the shower head and filter for \$0 if you sign up for a subscription for filters(\$33) every 3 months. When I went to the second page, again in bold, larger font lettering again states \$0 due today. I went ahead with purchase and immediately received a noticed I had a \$160 charge pending. I quickly went back to their site and went through the process(with my reading glasses this time, which I thought weren't needed the first time because I could read all the larger font) the read in smaller/grayed out font that if I were to keep the product 10 days, I would then be charged. I immediately sent an email to cancel my order, but received another email this morning the order had already shipped.” (showerhead company, May 2025 complaint)⁴¹
- “In December 2024 I ordered perfume from this company as a Christmas gift for my daughter. At the beginning of January 2025, I noticed that the company charged my credit card over \$42. When I disputed the charge they said it was for my monthly subscription. I asked that they refund the money & cancel the subscription since I had never agreed or subscribed to anything! They reversed the charges in short order. However—it is now February and I now see another \$42+ charge on my credit card from this company” (perfume company, Feb. 2025 complaint).⁴²
- “If you try to cancel your service, they will make it so difficult that you will cry. I had to talk to 5 different people who all gave me different information, was assured that my service was canceled multiple times, only to continue receiving bills, it was a nightmare . . .” (internet and cable company, Sept. 2024 complaint).⁴³
- “Once you sign up for auto-renew, they make it near impossible to cancel. Thus they are participating in the kind of financial abuse of elders that they should be protecting us from. Avoid at all costs” (national senior service organization, June 2023 complaint).⁴⁴
- “I tried to call and cancel, they told me it was canceled, but it was not. I received packages from them filled with . . . things I don’t eat. I called the bank to file a dispute and set up a stop payment, but that didn’t stop, they just kept changing the amount they were charging, so the stop payment didn’t do anything. Now left with no options, I have to close my card!” (meal-kit company, Apr. 2022 complaint).⁴⁵

- “They charge your card \$39 every single month even if you do not shop that month. I would have never even shopped on their website if I known that. No where did I see I would be charged \$39. I think it’s sneaky and not good business. And I also see I’m not the only one who had this problem. I would have never known they were taking money out if it wasn’t for me checking my bank statement because they don’t send you a receipt to your email like they do when you order something” (children’s clothing company, Apr. 2021 complaint).⁴⁶
- “I have been trying to cancel my monthly subscription/membership for MONTHS. No response on live chats, no response through customer service. They keep charging me 50 dollars . . .” (lingerie company, Jan. 2020 complaint).⁴⁷
- “[S]ent for the free bottle of . . . oil plus an extra one bottle they charged me \$98/93 . . . THAT IS FRAUD . . . i realize I have been scammed and as I am a pensioner they have taken my xmas money for my kids. i want to cancel the order and get my money back can you help me please as that amount for 1 bottle is outrageous there is no phone number to ring” (weight-loss company, 2016 complaint).⁴⁸
- “In August, they took my money but never sent me the product. I contacted them via email to inform them of this and asked them to cancel my subscription since they did that. In September, they again took my money and never sent my product. Again, I contacted them for a refund and cancellation. It happened again this week. I emailed them on Wednesday and today. I called today and they stated that they have not received any communication from me. They also said they would not refund my money unless I send them the bottles. But, being I am not receiving the product, how am I suppose to mail the bottles to them?” (multilevel marketing company, 2013 complaint).⁴⁹

The tactics employed to trick consumers into subscriptions that are difficult to cancel also have an especially burdensome impact on susceptible populations, including those with limited financial resources,⁵⁰ seniors,⁵¹ the disabled,⁵² children (and their parents),⁵³ non-native English speakers and people with low digital literacy.⁵⁴

Of course, the harms of deceptive subscriptions are not limited to consumers. Such dishonest practices inflict systemic damage on the economy. Bad advertising can drive out good: When consumers become suspicious of advertising claims, persuading them that an honest representation is true becomes more costly—a special obstacle for new market entrants, who account for a disproportionate share of innovative products and must rely on advertising to overcome consumer wariness.⁵⁵ Capital is likewise being misdirected to businesses that profit off of deceptive subscription practices, further emboldening them to keep consumers locked in subscription contracts. In significant ways, such issues have worsened over time as more and more companies have adopted the subscription model.⁵⁶

III. CONCLUSION

Deceptive subscription marketing is a harmful and widespread problem that impacts New York City residents. Accordingly, TINA.org urges the Department to adopt the proposed “click-to-cancel” rule.

Sincerely,



Laura Smith, Esq.
Legal Director
Truth in Advertising, Inc.



Bonnie Patten, Esq.
Executive Director
Truth in Advertising, Inc.

¹ N.Y.C. Dept. of Consumer and Worker Prot. Notice of Public Hearing and Opportunity to Comment on Proposed Rule on Cancelling Subscriptions, <https://rules.cityofnewyork.us/wp-content/uploads/2026/04/DCWP-NOH-Proposed-Rules-Relating-to-Cancellation-of-Subscriptions.pdf>; N.Y.C. Proposed Rule on Cancellation of Subscriptions, <https://rules.cityofnewyork.us/rule/cancellation-of-subscriptions/>.

² NYC Department of City Planning, Population, <https://www.nyc.gov/content/planning/pages/planning/population>; NYC/EDC, Why NYC, <https://edc.nyc/why-nyc>; State of the New York City Economy 2025, NYC/EDC, New York City Economic Development Corporation, https://edc.nyc/sites/default/files/2025-12/NYCEDC-2025-State-of-NYC-Economy_12-12-2025.pdf.

³ State of the New York City Economy 2025, NYC/EDC, New York City Economic Development Corporation, https://edc.nyc/sites/default/files/2025-12/NYCEDC-2025-State-of-NYC-Economy_12-12-2025.pdf.

⁴ Tony Chen et al., *Thinking Inside the Subscription Box: New Research on E-Commerce Consumers*, McKinsey & Company (Feb. 2018), <https://www.mckinsey.com/~/media/McKinsey/Industries/Technology%20Media%20and%20Telecommunications/High%20Tech/Our%20Insights/Thinking%20inside%20the%20subscription%20box%20New%20research%20on%20ecommerce%20consumers/Thinking-inside-the-subscription-box-New-research-on-ecommerce-consumers.pdf>. See also *What Percentage of Consumers Pay for Online Subscription Services?*, Payments Journal (June 24, 2020), <https://www.paymentsjournal.com/what-percentage-of-consumers-pay-for-online-subscription-services/>; Robert Gombos Atila, *Subscription Economy Impact: How Local Services Should Adapt*, Jasmine Business Directory (June 11, 2025), <https://www.jasminedirectory.com/blog/subscription-economy-impact-how-local-services-should-adapt>.

⁵ New York E-commerce Trends: Strategies to Dominate the NYC Market, API DOTS, Aug. 15, 2025, <https://apidots.com/blog/nyc-ecommerce-trends/>.

⁶ TINA.org has submitted several comments to the FTC regarding deceptive subscriptions practices. See TINA.org’s Comment to FTC Re: Petition for Renewed Click to Cancel Rulemaking, FTC-2025-0792 (Jan. 2, 2026), https://truthinadvertising.org/wp-content/uploads/2023/06/1_2_26-comment-to-FTC-re-Click-to-Cancel-rulemaking-petition.pdf; TINA.org’s Comment to FTC Re: Negative Option Rule; Project No. P064202 (June 20, 2023), https://truthinadvertising.org/wp-content/uploads/2023/06/6_20_23-Negative-Option-Rule-Comment-to-FTC.pdf; TINA.org’s Comment to FTC Re: In the Matter of MoviePass, Inc. – Consent Agreement (Commission File No. 192 3000) (July 15, 2021), https://truthinadvertising.org/wp-content/uploads/2021/07/FTC-2021-0032-0003_attachment_1.pdf; TINA.org’s Comment to FTC Re: The FTC Should Update Its Negative Option Rule (Dec. 2, 2019), https://truthinadvertising.org/wp-content/uploads/2019/12/12_2_19-comment-to-FTC-re-NOO-Rule.pdf. See also Brief for Amicus Curiae Truth In Advertising, Inc. In Support of Respondent, *Custom Comm’ns v. Fed. Trade Comm’n*, 142 F.4th 1060 (8th Cir. 2025) (No. 24-3137), https://truthinadvertising.org/wp-content/uploads/2025/03/CustomComm_v_FTC_TINA_Amicus_Brief.pdf.

⁷ Safeguarding American Consumers: Fighting Fraud and Scams During the Pandemic Before the Subcomm. on Consumer Prot. and Com. of the Comm. on Energy and Com., 117th Cong. (Feb. 4, 2021) (testimony of Bonnie Patten, Exec. Dir., Truth In Advertising), <https://truthinadvertising.org/action/house-testimony-2021-summary-action/>; Curbing COVID Cons: Warning Consumers about Pandemic Frauds, Scams, and Swindles Before the Subcomm. on Consumer Prot., Prod. Safety, and Data Sec. of the Comm. on Com., Sci., & Transp., 117th Cong. (Apr. 27, 2021), (testimony of Bonnie Patten, Exec. Dir., Truth In Advertising), <https://truthinadvertising.org/action/senate-testimony-2021-summary-action/>.

⁸ See, e.g., Brief for Amicus Curiae Truth In Advertising, Inc. In Support of Respondent, *Custom Comm’ns v. Fed. Trade Comm’n*, 142 F.4th 1060 (8th Cir. 2025) (No. 24-3137), https://truthinadvertising.org/wp-content/uploads/2025/03/CustomComm_v_FTC_TINA_Amicus_Brief.pdf; Brief for Amici Curiae Truth In Advertising, Inc., et al. in Support of Plaintiff-Appellee, *Fed. Trade Comm’n v. Quincy Bioscience Holding Co., Inc.* (2d Cir. July 24, 2025) (No. 25-12), https://truthinadvertising.org/wp-content/uploads/2021/12/7_24_25-TINA-amici-motion-and-brief.pdf; Brief of Amici Curiae Truth In Advertising, Inc., et al. in Support of Respondent, *Intuit, Inc. v. Fed. Trade Comm’n* (5th Cir. June 21, 2024) (No. 24-60040), <https://truthinadvertising.org/wp-content/uploads/2024/06/Intuit-v-FTC-TINA-Amici-Brief.pdf>; Brief for Truth In Advertising, Inc. as Amicus Curiae Supporting Respondent, *AMG Capital Mgmt., LLC v. Fed. Trade Comm’n*, 593 U.S. 67 (2020) (No. 19-508), https://www.supremecourt.gov/DocketPDF/19/19-508/162934/20201207192719389_19-508%20brief.pdf; Brief of Amici Curiae Truth In Advertising, Inc., et al. in Favor of Appellants and in Support of Reversal, *Fed. Trade Comm’n v. Quincy Bioscience Holding Co., Inc.* (2d Cir. Mar. 6, 2019) (No. 17-3745), https://truthinadvertising.org/wp-content/uploads/2018/03/Prevagen_Amici-Curiae-brief.pdf.

⁹ TINA.org’s Ad Alerts: Results Using the “Subscriptions” Filter, <https://truthinadvertising.org/ad-alerts/?f-search=&f-tactic%5B%5D=4700>.

¹⁰ TINA.org’s Shapes, Inc investigation, <https://truthinadvertising.org/brands/shapes-inc/>; TINA.org’s Homeaglow Investigation, <https://truthinadvertising.org/brands/homeaglow/>;

TINA.org’s HelloFresh Investigation, <https://truthinadvertising.org/brands/hellofresh/>;
TINA.org’s Savage X Fenty Investigation, <https://truthinadvertising.org/brands/savage-x-fenty/>;
TINA.org’s FabKids Investigation, <https://truthinadvertising.org/brands/fabkids/>;
TINA.org’s Adore Me Investigation, <https://truthinadvertising.org/brands/adore-me/>;
TINA.org’s O2PUR Investigation, <https://truthinadvertising.org/brands/o2pur/>.

¹¹ Settlement Agreement, *In the Matter of Scott Barth*, DCP Case No. 82403 and 86039 (Utah Div. of Consumer Prot. Dept. of Com. Jan. 20, 2017), <https://truthinadvertising.org/wp-content/uploads/2017/01/O2Pur-Settlmt-Agrmt-w-Scott-Barth.pdf>; Settlement Agreement, *In the Matter of: Alpha Int’l Mktg. LLC*, No. 86039 (Utah Div. of Consumer Prot. Dept. of Com. Jan. 4, 2017), <https://truthinadvertising.org/wp-content/uploads/2017/01/O2Pur-Settlmt-Agrmt-w-Alpha-Intern.pdf>; Motion to Enter Stipulated Order for Permanent Injunction and Monetary Judgment, *Fed. Trade Comm’n v. AdoreMe, Inc.*, No. 1:17-cv-09083 (S.D.N.Y. Nov. 20, 2017), <https://truthinadvertising.org/wp-content/uploads/2017/11/FTC-v-AdoreMe-settlement-motion.pdf>; Press Release, Off. N.Y. State Att’y Gen., A.G. Schneiderman Announces Settlement With Adore Me Lingerie Company For Deceptive Advertising (Mar. 20, 2018), <https://ag.ny.gov/press-release/2018/ag-schneiderman-announces-settlement-adore-me-lingerie-company-deceptive>; Stipulation for Entry of Final Judgment, *State of California v. AdoreMe, Inc.*, No. 18cv332846 (Cal. Super. Ct. Aug. 20, 2018), <https://truthinadvertising.org/wp-content/uploads/2019/01/Adore-Me-Final-Judgment.pdf>; Final Judgment and Injunction Pursuant to Stipulation, *State of California v. Lavender Lingerie, LLC d/b/a Savage X Fenty*, No. 22CV402737 (Cal. Super. Ct. Nov. 23, 2022), <https://truthinadvertising.org/wp-content/uploads/2021/12/CA-v-Savage-x-Fenty-order.pdf>; *In the Matter of AdoreMe, Inc.* Settlement Agreement (June 9, 2023), https://truthinadvertising.org/wp-content/uploads/2021/12/NC_AdoreMe_Settlement-Agreement.pdf; *Pennsylvania v. TFG Holding, Inc.* Assurance of Voluntary Compliance (Oct. 21, 2025), <https://www.attorneygeneral.gov/wp-content/uploads/2025/10/Executed-PA-AVC-for-Filing-JustFab-1.pdf>.

In addition, following TINA.org’s investigation and regulatory complaints regarding FabKids’ deceptive subscription practices, several states entered into a \$4.8 million multistate settlement with the brand’s parent company. *See* Press Release, Penn. Att’y Gen., AG Sunday Secures Settlement Valued at \$4.8 Million with Online Clothing Retailer for Deceptive Advertising and Billing Practices (Oct. 23, 2025), <https://www.attorneygeneral.gov/taking-action/ag-sunday-secures-settlement-valued-at-4-8-million-with-online-clothing-retailer-for-deceptive-advertising-and-billing-practices/>.

¹² TINA.org’s Class-Action Tracker: Results Using the “Subscriptions” Filter, <https://truthinadvertising.org/legal-action/class-action-tracker/?f-search=&f-tactic%5B%5D=4700>.

¹³ TINA.org’s Ad Alerts: Results Using the “Subscriptions” Filter, <https://truthinadvertising.org/ad-alerts/?f-search=&f-tactic%5B%5D=4700>;
TINA.org Legal Actions, Brands & Industries: Results Using the “Subscriptions” Filter, <https://truthinadvertising.org/legal-action/brands-industries/?f-tactic%5B%5D=4700>.

¹⁴ Of note, HelloFresh’s U.S. headquarters are in New York City. HelloFresh, Careers, <https://careers.hellofresh.com/global/en/usa>; HelloFresh, Discovering the Vibrant Work Culture at HelloFresh US, <https://careers.hellofresh.com/global/en/blogarticle/discovering-the-vibrant-work-culture-at-hellofresh-us>.

¹⁵ Meal Delivery In New York City With HelloFresh, <https://www.hellofresh.com/eat/nyc-food-delivery>.

¹⁶ TINA.org HelloFresh Investigation, <https://truthinadvertising.org/brands/hellofresh/>.

¹⁷ Homeaglow Apartment Cleaning Services in New York, NY, <https://www.homeaglow.com/us/ny/new-york/apartment-cleaning/>; Homeaglow House Cleaning Services in New York, NY, <https://www.homeaglow.com/us/ny/new-york/house-cleaning/>. See also Letter from TINA.org to New York State Attorney General’s Office Re: Homeaglow’s Multifaceted Deceptive Advertising Scheme (Sept. 8, 2025), https://truthinadvertising.org/wp-content/uploads/2025/09/9_8_25-letter-to-NY-re-Homeaglow.pdf.

¹⁸ TINA.org Homeaglow Investigation, <https://truthinadvertising.org/brands/homeaglow/>.

¹⁹ See TINA.org’s Class-Action Tracker: Subscriptions for The New York Times, *Perkins et al. v. The New York Times Co.*, <https://truthinadvertising.org/class-action/subscriptions-for-the-new-york-times/>; TINA.org’s Class-Action Tracker: Subscriptions to The New York Times, *Moses et al v. The New York Times Company d/b/a The New York Times*, <https://truthinadvertising.org/class-action/subscriptions-to-the-new-york-times/>; TINA.org’s Class-Action Tracker: NFL+ Premium Subscriptions, *Oyler et al. v. NFL Enterprises LLC*, <https://truthinadvertising.org/class-action/nfl-premium-subscriptions/>; TINA.org’s Class-Action Tracker: Peacock TV, *Winston et al. v. Peacock TV LLC*, <https://truthinadvertising.org/class-action/peacock-tv/>; TINA.org’s Class-Action Tracker: Paramount+, *Adkins et al. v. Paramount Global*, <https://truthinadvertising.org/class-action/paramount/>. See also TINA.org’s Class-Action Tracker: DAZN Subscriptions, <https://truthinadvertising.org/class-action/dazn-subscriptions/>; TINA.org’s Class-Action Tracker: Nord Security Subscriptions, <https://truthinadvertising.org/class-action/nord-security-subscriptions/>; TINA.org’s Class-Action Tracker: Hotmart, <https://truthinadvertising.org/class-action/hotmart/>; TINA.org’s Class-Action Tracker: Noom Weight-Loss App, <https://truthinadvertising.org/class-action/noom-weight-loss-app/>; TINA.org’s Class-Action Tracker: Bespoke Subscriptions, <https://truthinadvertising.org/class-action/bespoke-subscriptions/>; TINA.org’s Class-Action Tracker: Subscriptions to The Epoch Times, <https://truthinadvertising.org/class-action/subscriptions-to-the-epoch-times/>; TINA.org’s Class-Action Tracker: HungryRoot Subscriptions, <https://truthinadvertising.org/class-action/hungryroot-subscriptions/>; TINA.org’s Class-Action Tracker: Subscriptions for Frey Products, <https://truthinadvertising.org/class-action/subscriptions-for-frey-products/>; TINA.org’s Class-Action Tracker: Blue Apron’s 2-Person Plan Subscription, <https://truthinadvertising.org/class-action/blue-aprons-2-person-plan-subscription/>; TINA.org’s Class-Action Tracker: MoviePass Subscriptions, <https://truthinadvertising.org/class-action/moviepass-subscriptions/>; TINA.org’s Class-Action Tracker: Amazon Prime’s “Free Titles at Audible”, <https://truthinadvertising.org/class-action/amazon-primers-free-titles-at-audible/>; TINA.org’s Class-Action Tracker: FloSports Subscriptions, <https://truthinadvertising.org/class-action/flosports-subscriptions/>; TINA.org’s Class-Action Tracker: Starz Free 7-day Trial, <https://truthinadvertising.org/class-action/starz-free-7-day-trial/>.

²⁰ See e.g., Press Release, N.Y. State Att’y Gen., Attorney General James Sues SiriusXM Radio for Trapping Consumers in Unwanted Subscriptions (Dec. 20, 2023), <https://ag.ny.gov/press-release/2023/attorney-general-james-sues-siriusxm-radio-trapping-consumers-unwanted>; Press Release, N.Y. State Att’y Gen., Attorney General James Secures \$740,000 from Online Mental Health Provider for its Burdensome Cancellation Process (Dec. 28, 2023), <https://ag.ny.gov/press-release/2023/attorney-general-james-secures-740000-online-mental->

[health-provider-its](#); Press Release, N.Y. State Att’y Gen., Attorney General James Secures \$600,000 from Fitness Company Equinox for its Hard-to-Cancel Memberships (May 30, 2025), <https://ag.ny.gov/press-release/2025/attorney-general-james-secures-600000-fitness-company-equinox-its-hard-cancel>; Press Release, N.Y. State Att’y Gen., Attorney General James Sues Queens Gym for Misleading Customers (June 13, 2025), <https://ag.ny.gov/press-release/2025/attorney-general-james-sues-queens-gym-misleading-customers>; Press Release, N.Y. State Att’y Gen., Attorney General James Sues Uber for Trapping Customers in Costly Subscriptions (Dec. 15, 2025), <https://ag.ny.gov/press-release/2025/attorney-general-james-sues-uber-trapping-customers-costly-subscriptions>;

²¹ Press Release, Fed. Trade Comm’n, *Federal Trade Commission Announces Final “Click-to-Cancel” Rule Making It Easier for Consumers to End Recurring Subscriptions and Memberships* (Oct. 16, 2024), <https://www.ftc.gov/news-events/news/press-releases/2024/10/federal-trade-commission-announces-final-click-cancel-rule-making-it-easier-consumers-end-recurring>.

²² *Id.*

²³ N.Y.C. Dept. of Consumer and Worker Prot. Notice of Public Hearing and Opportunity to Comment on Proposed Rule on Cancelling Subscriptions, <https://www.nyc.gov/assets/dca/downloads/pdf/about/DCWP-NOH-Rules-Relating-to-Subscription-Cancellations.pdf>.

²⁴ Rule Concerning the Use of Prenotification Negative Option Plans, Advanced notice of proposed rulemaking (Mar. 13, 2026), <https://www.federalregister.gov/documents/2026/03/13/2026-04952/rule-concerning-the-use-of-prenotification-negative-option-plans>.

²⁵ Ben Cohen, *The Real Reason You’re Paying for So Many Subscriptions*, WALL ST. J. (Jan. 19, 2024), <https://www.wsj.com/business/cancel-subscriptions-save-money-streaming-peacock-da7e6123>.

²⁶ *See, e.g.,* Caruso & Cox, *Silence as Consumer Consent: Global Regulation of Negative Option Contracts*, 73 AM. U. L. REV. 1611, 1624 (2024) (“Negative option contracts fundamentally differ from most other contracts. Absent regulation, a consumer can sign up once and, via negative option, essentially obligate themselves to pay for some good or service indefinitely. While they may offer some efficiencies and benefits [. . .], these contracts also present real consumer risks and are highly susceptible to abuse.”).

²⁷ *See FTC v. Am. Screening, Ltd. Liab. Co.*, 105 F.4th 1098, 1104 (8th Cir. 2024) (noting that “because the seller’s misrepresentation tainted the purchasing decision . . . the consumer has lost the chance to avoid the purchase entirely, and is stuck with one that he did not intend to make”); *see also Donaldson v. Read Magazine, Inc.*, 333 U.S. 178, 189 (1948) (“People have a right to assume that fraudulent advertising traps will not be laid to ensnare them.”); *Spiegel, Inc. v. FTC*, 494 F.2d 59, 62 (7th Cir. 1974) (“[I]ndividuals in society have a right to be told the truth so that their choices among products, or, as in this case, among offers, can be understandingly made.”). And when consumers are deprived of free choice, they suffer financially. *See Subscription Traps and Deceptive Free Trials Scam Millions with Misleading Ads and Fake Celebrity Endorsements*, BETTER BUS. BUREAU (Dec. 12, 2018), <https://www.bbb.org/article/investigations/18929-subscription-traps-and-deceptive-free-trials-scam-millions-with-misleading-ads-and-fake-celebrity-endorsements> [hereinafter *Subscription Traps*].

²⁸ Neal Taparia, *Perception vs. Reality: Subscription Budgets* (June 4, 2025), <https://solitaired.com/perception-vs-reality-subscription-budgets>.

²⁹ *Subscription Traps; BBB Study: Free Trial Scams*, BETTER BUS. BUREAU (https://www.bbb.org/all/scamstudies/free_trial_scams/free_trial_scams_full_study) [hereinafter *BBB Study*].

³⁰ *Subscription Traps; BBB Study; BBB Investigation Update: Free Trial Offer Scams*, BETTER BUS. BUREAU (Apr. 21, 2020), <https://www.bbb.org/article/news-releases/22040-bbb-update-free-trial-offer-scams>.

³¹ *BBB Study*. See also Jeffrey Gottfried et al., *Online Scams and Attacks in America Today*, Pew Research Center (July 31, 2025), <https://www.pewresearch.org/internet/2025/07/31/online-scams-and-attacks-in-america-today/> (“Most people who’ve been a financial victim to an online scam or attack never contacted the authorities. Roughly three-quarters of this group say they have not reported to law enforcement that they lost money from an online scam or attack.”); Amy J. Schmitz, *Access to Consumer Remedies in the Squeaky Wheel System*, 39 PEPP. L. REV. 279, 312 (2012) (“‘the actual complaining customer’ is a rarity.”); *FTC v. Pantron I Corp.*, 33 F.3d 1088, 1098 (9th Cir. 1994) (consumers do not complain “because they think it not worth the trouble, because they feel guilty for having been deceived, because they [blame themselves], or for any one of a number of other reasons”); Keith B. Anderson, *To Whom Do Victims of Mass-Market Consumer Fraud Complain?*, SSRN (May 2021), <https://perma.cc/8V54-YKWE> (“‘Less than 3 percent of victims complained to a government entity. Somewhat more than half of these – 1.5 percent of victims – complained to a local authority – the local police or a local consumer agency. Less than 1 percent complained to a state Attorney General or other state authority or to a federal agency. Just over 2 percent of victims reported having complained to a Better Business Bureau. Together, 4.8 percent of victims complained to a BBB or to a government agency.’”); A Penny for Your Thoughts: When Customer Don’t Complain, Arizona State University, (Sept. 27, 2006), <https://news.wpcarey.asu.edu/20060927-penny-your-thoughts-when-customers-dont-complain> (“Most unhappy customers never say a word.”).

³² *The Cost of Unused Subscriptions 2025*, Self, <https://www.self.inc/info/cost-of-unused-paid-subscriptions/>.

³³ *Survey from Chase Reveals That Two-Thirds of Consumers Have Forgotten About At Least One Recurring Payment In The Last Year*, CHASE (Apr. 1, 2021), <https://media.chase.com/news/survey-from-chase-reveals>.

³⁴ *Subscription Service Statistics and Costs*, C+R RESEARCH (May 18, 2022), <https://www.cresearch.com/blog/subscription-service-statistics-and-costs/>.

³⁵ TINA.org’s Class-Action Tracker: Results Using the “Subscriptions” Filter, <https://truthinadvertising.org/legal-action/class-action-tracker/?f-search=&f-tactic%5B%5D=4700>.

³⁶ Unsurprisingly, a 2016 consumer survey found that hidden fees associated with, among other things, trial offers and automatically renewing subscriptions was the biggest financial complaint of consumers. See Rebecca Lake, *Report: Hidden Fees Are #1 Consumer Complaint*, MY BANK TRACKER (updated Nov. 29, 2021), <https://www.mybanktracker.com/money-tips/money/hidden-fees-consumer-complaint-253387>.

³⁷ Other outlets for consumer complaints, including the FTC and third-party review sites, also receive complaints concerning subscriptions on a frequent and continual basis.

³⁸ Complaint submitted to TINA.org.

Note: All typographical errors in the consumer complaints recited in this comment were in the original text.

³⁹ Complaint submitted to TINA.org.

⁴⁰ Complaint submitted to TINA.org.

⁴¹ Complaint submitted to TINA.org. *See also Ad Alert: Jolie Filtered Showerhead*, TINA.ORG (May 27, 2025), <https://truthinadvertising.org/articles/jolie-filtered-showerhead/>.

⁴² *Business Profile: Dossier, Complaint Details*, BETTER BUS. BUREAU, <https://www.bbb.org/us/ny/new-york/profile/perfume/dossier-0121-87146464/complaints> (last visited Mar. 19, 2025).

⁴³ *Ad Alert: Xfinity Home Internet and Mobile Promotion*, TINA.ORG (Mar. 3, 2025), <https://truthinadvertising.org/articles/xfinity-home-internet-and-mobile-promotion/>.

⁴⁴ *Ad Alert: AARP Membership*, TINA.ORG (Feb. 25, 2025), <https://truthinadvertising.org/articles/aarp-membership/>.

⁴⁵ TINA.org's Comment to FTC Re: Negative Option Rule; Project No. P064202 (June 20, 2023), https://truthinadvertising.org/wp-content/uploads/2023/06/6_20_23-Negative-Option-Rule-Comment-to-FTC.pdf; Judy W., Review on BBB's HelloFresh Customer Reviews (Apr. 24, 2022), <https://www.bbb.org/us/ny/new-york/profile/food-delivery/hellofresh-0121-142623/customer-reviews>.

⁴⁶ TINA.org's Complaint Letter to FTC re: FabKids' Deceptive Advertising and Illegal Business Practices (Aug. 30, 2021), https://truthinadvertising.org/wp-content/uploads/2021/08/8_30_21-FabKids-complaint-to-FTC_Redacted.pdf.

⁴⁷ TINA.org's Comment to FTC Re: Negative Option Rule; Project No. P064202 (June 20, 2023), https://truthinadvertising.org/wp-content/uploads/2023/06/6_20_23-Negative-Option-Rule-Comment-to-FTC.pdf.

⁴⁸ TINA.org's Comment to FTC Re: The FTC Should Update Its Negative Option Rule (Dec. 2, 2019), https://truthinadvertising.org/wp-content/uploads/2019/12/12_2_19-comment-to-FTC-re-NOO-Rule.pdf.

⁴⁹ *What You Should Know about Nerium*, TINA.ORG (updated Sept. 28, 2023), <https://truthinadvertising.org/articles/what-you-should-know-about-nerium/>; *see also* Nerium Complaints on File with FTC 2012-July 2016, <https://truthinadvertising.org/wp-content/uploads/2017/04/Nerium-Complaints.pdf> (sent to TINA.org in response to FOIA Request).

⁵⁰ Consumers with limited disposable income do not have the means to absorb unexpected or unauthorized negative option payments, and as a result, when they are tricked into recurring

subscription charges, they may find themselves unable to pay for necessary expenses or may incur costly overdraft charges. See Kamaron McNair, *Nearly Half of Americans Say They Live Paycheck to Paycheck*, CNBC (Nov. 19, 2024), <https://www.cnn.com/2024/11/19/bank-of-america-nearly-half-of-americans-live-paycheck-to-paycheck.html> (noting that 26 percent of households spend 95 percent or more of their income on necessities); Sally Greenberg, *Capital One Eliminates Predatory Overdraft Charges*, NCL (Jan. 6, 2022), <https://nclnet.org/overdraft-fees/> (explaining that a \$5 charge can result in a \$40 cost, when including a \$35 overdraft fee).

⁵¹ Older adults are particularly vulnerable to deceptive subscription services. One study by the Iowa Attorney General’s office found that consumers older than 65 were disproportionately represented among those who were billed for a subscription but never used any of its purported benefits. See Prentiss Cox, *The Invisible Hand of Preacquired Account Marketing*, 47 HARV. J. LEGIS. 425, 452 (2010).

⁵² Deceptive negative option offers are problematic for those with disabilities, especially those with vision and hearing impairments. For example, cancellation policies that require a phone call can be particularly difficult for consumers who have hearing problems, and a website that disguises or hides material terms of an offer is a notable challenge for those with vision issues. See Natasha Frost, *Why Call-to-Cancel Policies Are an Accessibility Nightmare*, MODERNRETAIL (July 22, 2020), <https://www.modernretail.co/retailers/why-call-to-cancel-policies-are-an-accessibility-nightmare/>; Caruso & Cox, *supra*, at 1636. Further, those with mental health challenges or disabilities are especially susceptible to deceptive negative option schemes. See, e.g., Nadya Ali et al., Citizens Advice, TRICKS OF THE TRADE (Dec. 2022), https://assets.ctfassets.net/mfz4nbgura3g/4UtD4Gkl7cmdVrps2Uy2ZG/378374c06e75496974571cfd6a9237bf/OCA_20report_20-20version_202_20_5_.pdf (“[W]hen looking at subscription traps we found 26% of people have signed up accidentally, but this rises to 46% of people with a mental disability or mental health problem.”).

⁵³ Children are vulnerable to deceptive subscription traps. Although children are adept at handling technology, when it comes to advertising, they do not interpret or understand marketing material in the same ways that adults do—a smaller proportion of children than adults have the ability to recognize advertising messages, and even those that do may not be able to critically evaluate the underlying marketing message. See Angela Campbell, *Rethinking Children’s Advertising Policies for the Digital Age*, 29 LOY. CONSUMER L. REV. 1, 38 (2017); Iulia Grad, *Ethical Considerations on Advertising to Children*, 6 POSTMODERN OPENINGS 43, 51 (2015); Fran Blumberg et al., *Linkages Between Media Literacy and Children’s and Adolescents’ Susceptibility to Advertising*, ADVERTISING TO CHILDREN: NEW DIRECTIONS, NEW MEDIA 158, 163 (Mark Blades et al. eds., 2014). Thus, children (and by extension their parents) are also unwitting consumers of subscription products and services. See Jaime Catmull, *4 Ways Your Child’s Unlimited App Usage May Be Costing You*, FORBES (Feb. 26, 2025), <https://www.forbes.com/sites/jaimecatmull/2025/02/26/four-ways-your-childs-unlimited-app-usage-may-be-costing-you/> (“Whether a child signed up for the app under the pretense that it was entirely free, or if they meant to come back and cancel it before the first charge, it’s possible for busy parents to go months paying for a rogue app subscription without even realizing it.”).

⁵⁴ J.J. Pavlick, *NYC Unveils First-in-the-Nation “Click to Cancel” Rule Targeting Subscription Traps*, Bad Dawg Media Group (Apr. 9, 2026), <https://bad-dawgsports.com/2026/04/09/nyc-click-to-cancel-rule-subscription-traps/>; Directorate for Science, Technology and Innovation Committee on Consumer Policy, *Consumer Vulnerability in the Digital Age*, Organisation for Economic Co-operation and Development, 29 (July 3, 2023),

[https://one.oecd.org/document/DSTI/CP\(2021\)7/FINAL/en/pdf](https://one.oecd.org/document/DSTI/CP(2021)7/FINAL/en/pdf) (“Consumers with less experience with certain kinds of online *transaction* may be exposed to greater detriment, such as financial loss, (e.g. auto-renewing subscriptions)...”).

⁵⁵ See Peter S. Menell, *Symposium—Brand New World: Distinguishing Oneself in the Global Flow, Part II 2014: Brand Totalitarianism*, 47 U.C. DAVIS L. REV. 787, 790 n.17 (2014) (“[I]nformative advertising plays a role in the introduction of new products to the market and in allowing consumers to differentiate among similar products.”); see also, e.g., Andrew Faridani, *How To Market To Skeptical Consumers*, FORBES (May 22, 2024), <https://www.forbes.com/councils/forbesbusinessdevelopmentcouncil/2024/05/22/how-to-market-to-skeptical-consumers/> (“Clearing that air of mistrust requires a robust marketing strategy that is both novel and authentic.”).

⁵⁶ See *Spiegel*, 494 F.2d at 63 (“If sellers in our society are free to compete for consumers’ patronage with others by unfair advertising, not only is the consumers’ right violated, but our commitment to fair competition becomes a pretense.”).

From: [Adira Siman](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Partnership for NYC comments on proposed rule related to cancellation of subscriptions
Date: Thursday, May 7, 2026 3:10:32 PM
Attachments: [Partnership for NYC. Click to Cancel Rule Comments 20260508.pdf](#)

CAUTION! EXTERNAL SENDER. Never click on links or open attachments if sender is unknown, and never provide user ID or password. If **suspicious**, report this email by hitting the **Phish Alert Button**. If the button is unavailable or you are on a mobile device, forward as an attachment to phish@oti.nyc.gov.

Please see attached testimony.

-Adira

Adira M. Siman
Senior Vice President and General Counsel
Partnership for New York City

[REDACTED]
[REDACTED]



**Comments to the Department of Consumer and Worker Protection
Proposed rules governing the cancellation of subscriptions
May 8, 2026**

Thank you for the opportunity to testify about the Department of Consumer and Worker Protection’s (DCWP) proposed rules on the cancellation of subscriptions (the “Proposed Rule”). The Partnership for New York City mobilizes private sector resources and expertise to advance New York City’s standing as a global center of economic opportunity, upward mobility, and innovation. We are a nonprofit organization whose members are preeminent business leaders and companies that support nearly one million jobs in New York City and deliver approximately \$263 billion in economic output.

We appreciate DCWP’s commitment to protecting consumers and ensuring transparency in subscription services. Our members share the goal of providing fair and simple cancellation processes. The Proposed Rule is unnecessary, risks creating inconsistency with state law, and would impose substantial unintended costs and operational burdens without meaningful additional consumer benefit.

The Proposed Rule is Largely Covered by New York State’s Comprehensive Law; Any Differences Will Only Create Confusion

The Proposed Rule largely duplicates New York State (NYS) law and is, therefore, unnecessary. NYS recently enacted significant amendments to its automatic renewal laws (NY General Business Law §§ 527-a and 396-mm), creating one of the most comprehensive subscription regulatory frameworks in the country. This law already mandates a simple cancellation mechanism that is as easy as the sign-up method and is available through the same medium used for consent. It also prohibits a business from obstructing or delaying cancellation and it includes robust disclosure, consent, and notice requirements.

The Proposed Rule contains a minimal number of differences from NYS law. This introduces ambiguity around compliance obligations. If DCWP moves forward with this rule, businesses would be subject to overlapping and potentially inconsistent requirements, making compliance more complex, particularly for companies operating across jurisdictions. Importantly, consumers would not receive materially different or enhanced protection.

Recommendation: Rely on NYS law. Do not enact additional rules.

The Rule Should Preserve Flexibility in Cancellation Channels

The proposal includes rigid “same medium” requirements that does not reflect how businesses actually operate across different channels (§§5-110-1(c) and (d)). Consumers should be able to cancel subscriptions through any simple and accessible method, but should not be strictly limited to the original enrollment channel. This approach protects consumers but avoids unnecessarily constraining service design.

Recommendations:

- The rule should provide more flexibility by mirroring the NYS law requirement to provide a “simple cancellation mechanism that is as easy to use as the mechanism used to provide consent” ((NY General Business Law §§ 527-a(1)(d)); and

- Where consent for a subscription is made in-person, a business should be able to provide an online or telephone cancellation mechanism.

The Treatment of Retention (“Save”) Offers Is Overly Restrictive

The Proposed Rule’s approach to discounted offers, retention benefits, and explanatory messaging during cancellation raises significant concerns. Evidence shows that consumers value and actively seek these offers. In fact, many consumers seek to cancel specifically to see whether a better price is available. These offers deliver direct financial savings to consumers, promote competition among providers, and allow consumers to make better-informed decisions.

The Proposed Rule would severely discourage businesses from offering discounts or retention benefits, reducing consumer access to benefits, even though there is no data showing that providing discounted offers, information about retention benefits or about the effect of cancellation obstructs cancellation.

Recommendation: Mirror NYS law’s provision stating: “if a consumer conveys a request to cancel, the business may present the consumer with a discounted offer, retention benefit or information regarding the effect of cancellation but may not impose unreasonable or unlawful conditions upon consumer’s ability to cancel, refuse to acknowledge, obstruct or unreasonably delay cancellation requested[.]” (NY General Business Law §§ 527-a(1)(e)(ii))

The Rule Does Not Adequately Account for Industry-Specific Considerations

Certain industries operate under complex regulatory frameworks and service structures that differ significantly from typical subscription products. Telecommunications services, for example, are similar to utilities where services are critical. Customers use these services daily, so they are not likely to forget they have a subscription. An accidental cancellation can create serious problems for a customer including loss of a phone number, acceleration of payments for devices. Therefore, these services require customer engagement and verification, not purely frictionless cancellation. In addition, these services are already subject to extensive consumer protection regimes. The Proposed Rule already includes exemptions for many similarly regulated entities.

Recommendation: Exempt providers entities regulated by the NYS Department of Public Service or the Federal Communications Commission.

The Proposed Penalty Structure Is Disproportionate

The Proposed Rule introduces monetary penalties that exceed those under NYS law. This would create inconsistent enforcement regimes within the state, additional compliance risks for businesses without any additional benefit to consumers, and potential over-deterrence of beneficial practices (e.g., offering discounts).

Recommendation: Aligning penalties with NYS law to ensure consistency and fairness.

The Partnership opposes the Proposed Rule. It adds operational burden and legal risk for businesses without meaningful additional protection for consumers. Accordingly, we respectfully urge DCWP not to act on the Proposed Rule. If DCWP is intent on moving forward, we recommend aligning the Proposed Rule with NYS’s existing law.

We appreciate the opportunity to provide input and look forward to continued engagement on this issue. Thank you.

From: [Levin, Josh](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] NYC DCWP Click to Cancel Rules - MPA Comments
Date: Friday, May 8, 2026 9:12:06 AM
Attachments: [image001.png](#)
[NYC DCWP Click to Cancel MPA Comments 5.8.26.pdf](#)

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Commissioner Levine,

On behalf of the Motion Picture Association, I respectfully submit the following comments to the NYC Department of Consumer and Worker Protection in response to the proposed rules relating to the cancellation of subscription services. Thank you for your time and attention to our concerns.

Sincerely,



Josh Levin
Vice President
State Government Affairs, Northeast Region
Motion Picture Association

[REDACTED]
[REDACTED]

Moving Pictures. Moving Audiences. Moving Forward.

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MOTION PICTURE ASSOCIATION

May 8, 2026

Commissioner Samuel A.A. Levine
New York City Department of Consumer and Worker Protection
42 Broadway, 5th Floor
New York, NY 10004

Re: Comments on Proposed Rules Relating to Cancellations of Subscription ("Click to Cancel") – Reference No. 2026 RG 020

Dear Commissioner Levine:

The Motion Picture Association, Inc. ("MPA")¹ respectfully submits the following comments to the New York City Department of Consumer and Worker Protection's ("DCWP") in response to the proposed rules relating to the cancellation of subscription services ("Proposed Rule"). The MPA supports transparency in subscription practices and DCWP's efforts to address subscription practices. After all, streaming platforms offer consumers the ease of cancellation without long term and cumbersome commitments. It is why seven in ten Americans view streaming services favorably according to a Streaming Innovation Alliance 2023 poll².

That said, we have concerns with provisions of the Proposed Rule where refinement would help preserve consumer choice, operational flexibility, and consistency with existing practices, while still advancing DCWP's consumer protection goals.

Restriction on Save Offers During Cancellation (Subsection (e)(2))

Subsection (e)(2), governing discounted "save" or retention offers during cancellation, presents significant concerns. Absent the qualifying language, the following section would effectively prohibit save offers altogether, "while imposing unreasonable or unlawful conditions on the consumer's ability to cancel". Many consumers value discounted retention offers and initiate cancellation specifically to see whether a lower price is available. Eliminating or discouraging these offers would reduce consumer choice and may result in higher overall costs for consumers.

Even with the qualifying language included, the standard remains vague. The term "unreasonable" is undefined, creating uncertainty for businesses attempting to design cancellation prompts that are both compliant and consumer friendly. Modifying the statutory language to require a clear path for customers to cancel immediately – for example, a cancel button in the save offer – would address concerns about

¹ The MPA serves as the global voice and advocate of the motion picture, television, and streaming industries. It works in every corner of the globe to advance the creative industry, protect its members' content across all screens, defend the creative and artistic freedoms of storytellers, and support innovative distribution models that expand viewing choices for audiences around the world. The MPA's member studios are Netflix Studios, LLC; Paramount Pictures Corporation; Prime Amazon MGM Studios; Sony Pictures Entertainment Inc.; Universal City Studios LLC; Walt Disney Studios Motion Pictures; and Warner Bros. Entertainment, Inc.

² <https://www.streaminginnovationalliance.com/survey>

obstruction of customers' ability to cancel while providing the clearer guidance is needed necessary for businesses to distinguish between legitimate, non-obstructive save offers and conduct that interferes with a consumer's ability to cancel

The Proposed Rule Are Duplicative to Existing New York State Law

New York State already has a law governing cancellation of subscriptions in General Business Law § 527-a, which went into effect last year. That statute requires cancellation mechanisms to be simple, accessible, and at least as easy as sign-up. It also prohibits businesses from obstructing, delaying, or refusing cancellation. Therefore, businesses operating in New York City are already required to comply with this robust statewide framework. The City's Proposed Rules do not fill a regulatory gap; instead, they layer an additional municipal law that will require additional burdens. This redundancy increases compliance costs, creates operational complexity, and generates legal uncertainty.

The Proposed Rule also creates a penalty structure that significantly exceeds the penalties established under state law. GBL § 527-a includes defined civil penalties, capped amounts, and a safe harbor provision for bona fide errors. The Proposed Rule, in contrast, establishes higher penalty thresholds and omits comparable safe harbors. Imposing a more stringent local penalty system for conduct already regulated at the state level would create disproportionate burdens without a demonstrated need for enhanced enforcement measures.

We therefore urge DCWP to match the Proposed Rule's restitution and penalty provisions with those set forth in GBL § 527-a, including the inclusion of a safe harbor for inadvertent violations.

Thank you for the opportunity to submit these comments. We would be pleased to discuss our comments further.

Sincerely,

Josh Levin
Vice President, Northeast Region
Motion Picture Association

From: [Tyler Fields](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Submission of Comments on proposed NYC Department of Consumer and Worker Protection Click to Cancel Rule
Date: Friday, May 8, 2026 9:54:31 AM
Attachments: [NC Letter of Opposition to proposed NYC Click To Cancel Rule.pdf](#)

You don't often get email from tfields@netchoice.org. [Learn why this is important](#)

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Hello,

I am writing on behalf of NetChoice, a trade association dedicated to making the internet safe for free enterprise and free expression, to submit comments on the proposed 'Click to Cancel' rule in front of the NYC Department of Consumer and Worker Protection. Thank you for your time and consideration!

Best,
Tyler Fields

NYC Click to Cancel Rule

Letter of Opposition

May 7, 2026

New York City Department of Consumer and Worker Protection

Members of the New York City Department of Consumer and Worker Protection:

On behalf of NetChoice, a trade association representing leading internet businesses committed to free expression and free enterprise online, I write to express our opposition to the proposed “Click to Cancel” rule. While NetChoice supports fair, and consumer friendly subscription practices, this proposal would be costly and unfavorable to both consumers and businesses in NYC, as well as cause uncertainty and inconsistency when it comes to the interpretation of NYC requirements compared to existing New York State law.

Subscription management is not merely a technical process but a touchpoint where consumers can make informed financial decisions, including whether to accept a lower price or modified service. Imposing rigid cancellation and notice requirements is rife with redundancy and compliance risks, particularly given existing New York State automatic renewal laws, and would ultimately increase costs and complexity without delivering meaningful consumer benefits. Mandating prescriptive design requirements would be operationally prohibitive, excessively burdensome, and disproportionate to the consumer benefit.

The Proposed rule would be costly and unfavorable to consumers

The proposed rule limits the ability for companies to present a “*discounted offer, retention benefit or information regarding the effect of cancellation*” when a consumer is attempting to cancel a subscription. There is no evidence to suggest that surfacing discounted offers, information about retention benefits or about the effect of cancellation obstructs cancellation.

In fact, millions of customers who are initially planning on canceling their subscriptions are interested in seeing such information during cancellation with many accepting save offers when considering whether

to cancel a subscription or not. Removing these interactions could therefore result in consumers paying higher prices or losing access to savings that, in aggregate, amount to hundreds of millions of dollars annually. In fact, nearly 30% of respondents cancel their subscription “to see if the company will offer [them] a discounted rate to keep [their] subscription active.”

Restricting businesses from communicating relevant account information such as the impact of cancellation on accrued credits, rewards, or bundled benefits leaves consumers less informed, not more. A one size fits all cancellation framework does not reflect how consumers actually interact with these services and risks eliminating the personalized, context sensitive communications that consumers often find most valuable.

Additionally, such requirements fail to take into account the technical constraints of different operating systems and the interoperability challenges of third-party billing integration. Users can enter a subscription via various ways, e.g. via the app store, in-app, bundle with phone provider, etc. Any withdrawal function requirement should take into account these multiple possibilities and recognize the operational burdens and costs that a one-size-fits-all approach imposes.

Click to Cancel places an undue burden on companies offering services in NYC

Businesses that operate within NYC already have to comply with New York State Law (the strictest subscription law in the country) and there should be alignment between State and City policy with regards to penalties.

The practical compliance burden imposed by this rule is substantial. Businesses would be required to build, test, and maintain separate cancellation flows, disclosure language, and notice systems specifically calibrated for NYC consumers, distinct from what is already required under state law. For smaller businesses and startups, these costs are not trivial. They divert engineering and legal resources away from product innovation, and toward duplicative regulatory compliance and could ultimately increase consumer costs. Many businesses operating nationally or globally cannot economically justify building city specific cancellation infrastructure and may choose to restrict their offerings in NYC leaving consumers with fewer choices and less competitive pricing.

This is not a hypothetical concern. Regulatory fragmentation has historically caused businesses, small and large to withdraw or limit services in highly regulated jurisdictions. The Department should be mindful that adopting requirements that exceed and diverge from existing state standards would make NYC a less attractive market for innovative businesses, and limit options for lower pricing on subscriptions, ultimately harming the very residents the rule is intended to protect.

Click to Cancel presents inconsistencies with existing New York State Law

The proposed rule introduces new, distinct rules on financial restitution and monetary penalties for failure to comply with the rule than existing New York state law. This approach is unnecessary and risks creating a fragmented enforcement environment. Businesses should not be subject to overlapping and potentially conflicting penalty regimes for the same conduct, particularly where state law already provides a comprehensive enforcement framework. Creating overly burdensome regulations on businesses only incentivizes them to cease innovating and operating in places like NYC, harming everyday consumers who enjoy, and rely on these services every day.

New York State already maintains a comprehensive enforcement structure governing automatic renewal and subscription cancellation practices, capping civil penalties at \$500 for a single knowing violation and \$1,000 for multiple violations stemming from a single act, with restitution available through the Attorney General via court proceedings. The proposed NYC rule imposes a minimum \$525 fine per violation rising to \$3,500 for repeat offenses, plus automatic restitution equal to the full amount charged after a consumer's first cancellation attempt, all administered by DCWP operating entirely separately from the AG's office. These regimes not only stack — they conflict.

There is no formal coordination requirement between DCWP and the AG's office, meaning a business could be compelled to negotiate two separate settlements, with two separate agencies, applying two different restitution formulas, to the same underlying conduct. This is not a gap filling exercise — it is duplication that imposes compounding legal exposure on businesses while further pushing companies towards limiting or even ceasing operations in New York City to avoid the risk.

New York State's existing automatic renewal law already establishes detailed requirements for subscription disclosures, renewal notices, and cancellation rights. NYC's proposed rule would layer additional, distinct obligations on top of this framework without a clear articulation of how these two

regimes interact or a compelling argument as to how additional citywide regulation would provide an added benefit to consumers. The legal uncertainty created by the proposed rule would itself cause harm to consumers and businesses alike. As stated in the Notice of Public Hearing, New York State has been successful in enforcing its automatic renewal law. However, if the Department believes the current statewide policy is insufficient, the appropriate remedy is to advocate for changes to the law at the State level – not construct a conflicting citywide rule that businesses cannot practically reconcile with their existing compliance obligations.

Conclusion

The proposed rule introduces inconsistencies with existing state law that will create uncertainty, places restrictions on practices that benefit consumers, and imposes undue costs on businesses operating in NYC. While Americans across the nation, and particularly in NYC continue to experience an unprecedented cost of living crisis, it is imperative that local, state, and federal governments do all they can to lower costs for consumers. We urge the Department to oppose the proposed Click to Cancel rule as written, and ensure harmonization between existing statewide policy and city policy, which would be the most effective way to reduce costs for New York City families while ensuring they retain access to services they utilize.

NetChoice stands ready to work constructively with the Department to identify approaches that genuinely protect consumers without introducing unnecessary costs, and legal uncertainty. We welcome the opportunity to discuss these concerns further and to provide additional information that may be helpful to the Department's deliberations.

Sincerely,

Tyler Fields
Government Affairs Associate, NetChoice¹

NetChoice is a trade association that works to protect free expression and promote free enterprise online.

¹ The views of NetChoice expressed here do not necessarily represent the views of all NetChoice members.

From: [Cassie Losey](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Comment Submittal for NYC
Date: Friday, May 8, 2026 10:24:56 AM
Attachments: [HFA Advocacy State Affairs NYC Comments on Subscription Services.pdf](#)

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Good morning,

On behalf of the Health and Fitness Association our comments are attached for the proposed rules.

Thank you for the opportunity,

--

CASSIE LOSEY

Senior Manager of State Affairs



healthandfitness.org



<https://www.healthandfitnessbusiness.org/hfb/>



HEALTH & FITNESS ASSOCIATION

May 8, 2026

Submitted via email: Rulecomments@dcwp.nyc.gov

New York City Department of Consumer and Worker Protection
42 Broadway, 5th Floor
New York, NY 10004

RE: Comments of the Health & Fitness Association Regarding Proposed Rules Relating to Subscription Cancellations

To Whom it May Concern,

The Health & Fitness Association (“HFA” or “Association”) appreciates the opportunity to submit comments regarding the New York City Department of Consumer and Worker Protection’s (“Department” or “DCWP”) proposed rules relating to subscription cancellations and automatic renewal practices.

The Health & Fitness Association is the leading trade association representing the health and fitness industry in the United States. HFA’s membership includes a diverse range of businesses, including large multi-location health clubs, independently owned gyms and studios, franchise operators, wellness providers, and industry suppliers. Collectively, the industry serves millions of consumers nationwide and supports hundreds of thousands of jobs, including throughout New York City.

HFA and its members support clear, enforceable, and consumer-friendly standards governing recurring billing, automatic renewal practices, and cancellation procedures. The industry recognizes the importance of transparency, consumer trust, and accessible cancellation mechanisms, and over the past several years operators across the industry have taken meaningful steps to modernize disclosures, simplify cancellation procedures, and align business practices with evolving consumer expectations and regulatory requirements.

The industry also recognizes that consumer concerns have historically existed surrounding recurring billing and cancellation practices within portions of the health club market. HFA and its members support continued efforts to address those concerns through improved disclosures, transparent membership terms, accessible cancellation processes, and ongoing compliance with evolving consumer protection requirements. At the same time, any regulatory framework should remain appropriately tailored to the operational realities of facility-based businesses and the specific consumer harms the rule seeks to address.

The Health & Fitness Association recently submitted comments to the Federal Trade Commission regarding proposed federal negative option and subscription cancellation regulations, addressing many of the same operational, compliance, and consumer protection considerations implicated by the Department's proposed rulemaking.¹

As currently drafted, several provisions of the proposed rule contain ambiguity, may create unintended conflicts with existing state and federal regulatory frameworks, and could impose operational requirements that are difficult to implement in practice, particularly for small and independently owned fitness facilities operating within New York City.

HFA believes any final rule should: (1) target demonstrated consumer harms; (2) remain operationally feasible within real-world billing and enrollment systems; and (3) complement existing state and federal regulatory frameworks. These principles are particularly important in the context of facility-based businesses operating under extensive preexisting consumer protection requirements.

I. THE HEALTH AND FITNESS INDUSTRY OPERATES WITHIN AN EXISTING COMPREHENSIVE REGULATORY FRAMEWORK

Unlike many passive or low-engagement digital subscription services, health and fitness facilities already operate within a highly regulated consumer protection environment governed by extensive state and federal requirements.

Fitness facilities are subject to New York State health club statutes governing membership agreements, disclosures, cancellation rights, and refunds.² Operators are additionally subject to automatic renewal laws, federal consumer protection standards, Electronic Fund Transfer Act requirements, payment card network operating rules, ACH processing standards, and various local and state enforcement mechanisms governing recurring billing practices.³

Consumers entering health club memberships also typically execute written membership agreements that clearly outline membership terms, recurring payment obligations, cancellation rights, facility access provisions, and other contractual conditions. These agreements differ materially from the passive enrollment structures frequently associated with digital subscription models.

Importantly, health and fitness memberships differ fundamentally from the “forgotten subscription” concerns that have driven much of the recent regulatory focus in the digital subscription space. Consumers routinely and actively engage with health clubs and fitness facilities through in-person attendance, staff interaction, classes, programming, and ongoing facility usage. These regular interactions substantially reduce the likelihood that consumers are unaware of recurring charges or disconnected from the services they are purchasing.

¹ See Health & Fitness Association, Comments to the Federal Trade Commission Regarding Rule Concerning the Use of Prenotification Negative Option Plans, RIN 3084-AB60 (Apr. 13, 2026).

² See N.Y. Gen. Bus. Law §§ 621–631.

³ See, e.g., Electronic Fund Transfer Act, 15 U.S.C. §§ 1693 et seq.; Nacha Operating Rules & Guidelines; N.Y. Gen. Bus. Law § 527-a.

For this reason, HFA respectfully encourages the Department to recognize that facility-based membership businesses operate differently than purely digital subscription models and should not necessarily be regulated through a one-size-fits-all framework designed primarily around passive-use services.

The Department should also ensure that any final municipal requirements complement, rather than conflict with, existing state law frameworks governing health club contracts and automatic renewal practices. Divergent city-level requirements may create inconsistent compliance obligations, fragmented consumer experiences, and operational burdens for businesses operating across multiple jurisdictions within New York State.

II. ADDITIONAL CLARITY IS NEEDED REGARDING A CONSUMER'S "FIRST ATTEMPT" TO CANCEL

The proposed rule appears to impose obligations triggered by a consumer's "first attempt" to cancel a subscription or recurring service. HFA respectfully requests additional clarification regarding what constitutes a qualifying cancellation attempt for purposes of compliance and enforcement.

As currently drafted, it is unclear whether unsuccessful or misdirected communications — including emails sent to incorrect addresses, incomplete web submissions, unsupported communication methods, disconnected calls, or consumer input errors — could nonetheless trigger liability for businesses.

This ambiguity creates significant compliance uncertainty and enforcement risk, particularly where businesses maintain reasonable and clearly disclosed cancellation methods that consumers fail to properly utilize. Operators should not face penalties for technical failures or consumer errors outside of their control where businesses have otherwise established accessible and compliant cancellation mechanisms.

The Department should clarify that businesses are responsible for honoring valid cancellation requests submitted through designated and reasonably accessible channels, but should not face strict liability exposure arising from failed communications, incomplete submissions, or consumer mistakes unrelated to business conduct.

Without additional clarification, the proposed rule risks creating uncertainty for both consumers and businesses attempting to comply in good faith.

III. THE RULE SHOULD CLARIFY THAT NON-COERCIVE RETENTION PRACTICES DO NOT CONSTITUTE "UNREASONABLE OBSTRUCTION"

HFA supports prohibitions on deceptive, coercive, or intentionally burdensome cancellation practices. However, the proposed rule's prohibition on "unreasonable delay or obstruction" would benefit from additional clarification regarding what conduct falls within that standard.

Within the health and fitness industry, it is common for operators to engage in standard retention or “save” practices when a consumer expresses an interest in canceling a membership. These interactions may include discounted rates, temporary membership freezes, alternative membership structures, billing accommodations, short-term holds, or modifications to service packages.

These practices are not inherently deceptive or coercive. In many circumstances, they provide meaningful consumer benefits by allowing individuals experiencing temporary financial, scheduling, medical, or life-related disruptions to maintain access to fitness services without permanently terminating their memberships or forfeiting existing pricing structures.

Importantly, consumers remain free to decline any such offer and proceed directly with cancellation. The relevant inquiry should not be whether retention efforts occur, but whether consumers retain a clear and accessible ability to cancel without misleading representations, improper delay, or coercive conduct.

HFA respectfully urges the Department to clarify that transparent and non-coercive retention efforts do not constitute “unreasonable obstruction” where consumers retain the ability to proceed with cancellation at any time. Without such clarification, businesses may be discouraged from offering flexible membership accommodations that consumers frequently value and request.

IV. THE DEPARTMENT SHOULD ADOPT AN OUTCOME-BASED APPROACH TO DISCLOSURES AND ENROLLMENT FLOWS

HFA supports clear and conspicuous disclosures regarding automatic renewal terms, recurring billing obligations, cancellation rights, and material membership conditions. However, the proposed rule’s references to “visual proximity” and related disclosure requirements require additional clarification and should avoid imposing overly rigid formatting or sequencing mandates.

Specifically, the Department should clarify whether disclosures must appear on the same page as consumer consent, how the requirements apply to online versus in-person transactions, and whether integrated membership agreements and enrollment flows remain permissible.

Many fitness facilities rely upon third-party membership management systems, enrollment platforms, and billing vendors configured to comply with a complex patchwork of state and federal legal requirements. Prescriptive disclosure sequencing or formatting mandates may require substantial redesigns of websites, mobile applications, enrollment flows, point-of-sale systems, and membership agreements.

In addition, many state health club statutes and automatic renewal laws already prescribe the content, formatting, and placement of required disclosures, including requirements that certain provisions appear in specific locations or in particular font styles. Layering rigid municipal formatting or sequencing mandates on top of these existing requirements risks creating direct

conflicts with state law obligations, which in some cases may affect contract enforceability. Excessive formatting mandates may also reduce consumer comprehension by requiring all disclosures to receive equal visual emphasis.

These compliance burdens may disproportionately impact independently owned facilities, franchisees, small businesses, and operators relying on legacy systems or third-party vendors.

Moreover, highly rigid formatting requirements may not meaningfully improve consumer understanding and may instead create fragmented or confusing enrollment experiences inconsistent with modern digital transaction expectations.

HFA respectfully encourages the Department to adopt an outcome-based approach focused on whether disclosures are clear and conspicuous, understandable, and presented prior to consent, rather than imposing inflexible sequencing or formatting mandates that may become technologically outdated or operationally burdensome over time.

V. THE RULE SHOULD ACCOUNT FOR THE OPERATIONAL REALITIES OF RECURRING BILLING SYSTEMS

The Department should account for the operational realities associated with recurring billing systems and payment processing infrastructure.

Health and fitness operators frequently rely on third-party vendors and payment processors to administer recurring billing, ACH transactions, credit card processing, membership management, cancellations, and consumer account administration. These systems operate through coordinated multi-step processes involving billing file generation, batch processing, payment network transmission, fraud review, settlement procedures, and third-party processor coordination.

Once billing cycles enter processing stages, immediate modifications or reversals may not always be technically feasible without creating payment errors, duplicate transactions, failed settlements, or compliance concerns under card network and ACH operating rules.

For this reason, HFA respectfully urges the Department to avoid standards that effectively require instantaneous billing cessation regardless of operational timing realities.

Instead, businesses should be permitted a prompt processing within a reasonable operational timeline consistent with industry-standard billing operations, provided consumers receive clear notice regarding billing timing, cancellation requests are processed promptly, and businesses do not intentionally delay cancellation effectiveness.

This approach would better balance consumer protection objectives with operational feasibility and existing payment processing frameworks.

VI. THE DEPARTMENT SHOULD CONSIDER THE IMPACT ON SMALL BUSINESSES AND LEGACY OPERATORS

Many fitness facilities operating within New York City are independently owned small businesses with limited administrative and technical resources.

Unlike vertically integrated technology platforms, many health clubs rely on third-party software vendors, outsourced billing providers, legacy membership systems, manually administered operational processes, and in-person enrollment procedures. Compliance with new municipal requirements may therefore require substantial legal review, software redevelopment, vendor coordination, operational restructuring, website redesigns, and staff retraining.

These compliance costs may be particularly significant where city-level requirements diverge from existing state or federal frameworks.

Additionally, technology vendors serving the fitness industry frequently operate across multiple jurisdictions and business models. Highly prescriptive local requirements may require vendors to develop separate compliance configurations for different markets, increasing costs and operational complexity for both vendors and fitness operators.

Ultimately, these increased compliance costs may impact affordability and consumer access to health and fitness services.

VII. THE DEPARTMENT SHOULD INCORPORATE ENFORCEMENT FLEXIBILITY AND OPPORTUNITIES TO CURE

HFA respectfully urges the Department to incorporate reasonable enforcement flexibility for good-faith compliance efforts, particularly during the implementation phase of any new requirements.

Given the complexity of recurring billing systems and the ambiguity of several proposed provisions, businesses acting in good faith should be afforded reasonable implementation periods, educational guidance, and opportunities to cure technical deficiencies before enforcement penalties are imposed.

The Department should also consider adopting safe harbor provisions for businesses making good-faith efforts to comply, including businesses relying on established third-party billing or enrollment systems, absent evidence of deceptive or intentional misconduct.

Such an approach would encourage proactive compliance while avoiding unnecessary penalties against businesses attempting to responsibly implement new requirements.

Undefined or highly subjective standards may otherwise create inconsistent enforcement outcomes and uncertainty for both consumers and businesses attempting to comply in good faith.

The Department should also recognize that many operational systems supporting recurring billing and cancellation processes are administered through third-party vendors, creating implementation timelines that may extend beyond the direct control of local operators.

An enforcement approach prioritizing collaboration, implementation guidance, and voluntary compliance would better serve both consumers and businesses during any transition period.

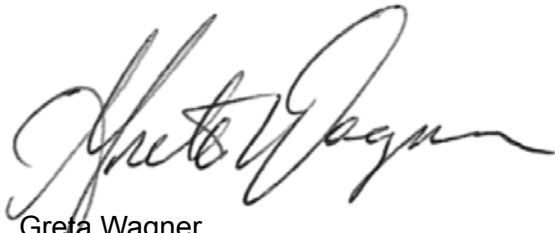
VIII. CONCLUSION

HFA appreciates the opportunity to provide comments regarding the Department's proposed rules relating to subscription cancellations.

HFA supports clear and workable consumer protection standards that improve transparency and accessible cancellation practices. At the same time, any final rule should remain appropriately tailored to the operational realities of facility-based businesses and should avoid creating duplicative, conflicting, or technologically impractical requirements.

The health and fitness industry remains committed to continuing improvements in consumer experience, disclosure practices, and cancellation accessibility. HFA welcomes continued engagement with the Department to ensure that any final rule advances consumer protection objectives while remaining practical, balanced, and operationally workable for businesses serving communities throughout New York City.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Greta Wagner", written in a cursive style.

Greta Wagner
Interim Chief Executive Officer

From: [Chelsea Lemon](#)
To: [rulecomments \(DCWP\)](#)
Cc: [Joni Yoswein](#); [Jamie Van. Bramer](#); [Kate Cucco](#); [Paul Zuber](#)
Subject: [EXTERNAL] BCNYS Comments on Proposed Rules: Cancellation of Subscriptions
Date: Friday, May 8, 2026 10:47:28 AM
Attachments: [Outlook-suprhr3](#)
[FINAL DCWP CLICK TO CANCEL PROPOSED RULES BCNYS COMMENT LETTER 05.08.2026.pdf](#)
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Good morning:

Attached please find comments from The Business Council of New York State, Inc. concerning the proposed rules on the Cancellation of Subscriptions.

Thank you,
Chelsea

Chelsea Lemon | Senior Director of Government Affairs
The Business Council of New York State, Inc.
111 Washington Avenue, Suite 400 | Albany, NY 12210

[REDACTED] www.bcnys.org



The voice of business and employers in New York State.

Advancing economic growth, creating good jobs and strong communities across New York State.



May 8, 2026

Commissioner Samuel A.A. Levine
Department of Consumer and Worker Protection
42 Broadway #5
New York, NY 10004
Rulecomments@dcwp.nyc.gov

Re: Comments on Proposed Rules Relating to Cancellation of Subscriptions ("Click to Cancel") – Reference No. 2026 RG 020

Dear Commissioner Levine:

The Business Council of New York State, Inc. ("The Business Council") respectfully submits these comments in response to the Department of Consumer and Worker Protection's ("DCWP" or "Department") proposed rules relating to the cancellation of subscriptions ("Proposed Rule"), published in connection with the public hearing scheduled for May 8, 2026.

The Business Council is New York's largest statewide employer association, representing more than 3,000 private sector employers from across New York, in all major business sectors. The Business Council has the unique perspective of advocating on behalf of New York State businesses that touch every sector of the economy. In that role we consider many voices in the business community and utilize that interaction to advocate for the best possible results for our members, and most of all, the State of New York.

We support meaningful consumer protection efforts and appreciate the Department's attention to subscription practices. However, we have significant concerns regarding several aspects of the Proposed Rule and urge the Department to reconsider or revise the provisions described below.

The Proposed Rule Is Largely Redundant of Existing New York State Law

New York State already has a comprehensive law governing automatic renewal and continuous service offers, General Business Law ("GBL") § 527-a, which was revised and enacted as part of last year's budget bill. That statute imposes detailed requirements on businesses relating to disclosures, affirmative consent, cancellation mechanisms, and prohibited practices — requirements that are materially similar to those contained in the Proposed Rule.

Specifically, GBL § 527-a already requires businesses to:

- Provide a "simple cancellation mechanism that is as easy to use as the mechanism that the consumer used to provide consent" and that is "through the same medium that the consumer used to provide consent" (GBL § 527-a(1)(d));
- Offer cancellation through all mediums by which the business accepts affirmative consent, and where consent was obtained in person, through an online mechanism or telephone number (GBL § 527-a(1)(d-1)); and

- Not “impose unreasonable or unlawful conditions upon, refuse to acknowledge, obstruct or unreasonably delay cancellation requested or attempts to request cancellation by a consumer” (GBL § 527-a(1)(e)).

Given that businesses operating in New York City already must comply with this state framework, which is the strictest subscription law in the country, we question the need for a duplicative municipal layer of regulation. Where the Proposed Rule departs from state law, it does so in ways that create inconsistency and legal uncertainty rather than enhanced consumer protection, as detailed below.

The Proposed Rule’s Treatment of Retention Offers Diverges from State Law and Harms Consumers

One of our most significant concerns involves the Proposed Rule’s treatment of save offers and retention benefits presented during the cancellation process. Section 5-110.1(e)(2) of the Proposed Rule identifies as an “unreasonable or unlawful condition” the act of “presenting the consumer with a discounted offer, retention benefit or information regarding the effect of cancellation while imposing unreasonable or unlawful conditions upon the consumer’s ability to cancel.”

This language directly conflicts with the existing state statute GBL § 527-a(1)(e)(ii) which clearly states: “if a consumer conveys a request to cancel, *the business may present the consumer with a discounted offer, retention benefit or information regarding the effect of cancellation* but may not impose unreasonable or unlawful conditions upon consumer’s ability to cancel.” The operative word is “may” — explicitly permitting such offers so long as cancellation is not obstructed.

A substantial portion of consumers who initiate cancellations actively want to see save offers. According to the 2026 BSA Consumer Survey, nearly 30% of respondents cancel subscriptions specifically to see whether a discounted rate will be offered. Millions of consumers across the U.S. accept retention offers when canceling, resulting in hundreds of millions of dollars in aggregate savings.

We strongly urge the Department to revise Section 5-110.1(e)(2) to align with the affirmative “may present” framing of GBL § 527-a(1)(e)(ii), making clear that presenting a discounted offer or retention benefit is permissible provided it does not impose unreasonable conditions on or delay the consumer’s ability to cancel.

Additional Textual Inconsistencies with New York State Law Should Be Resolved

Beyond the retention offer issue, the Proposed Rule introduces at least one additional textual inconsistency with GBL § 527-a that could generate confusion and contrasting compliance obligations for the same conduct:

- **Use of the word “obscuring”:** Section 5-110.1(e)(1) lists as an unlawful condition “obscuring or providing false information about how to cancel.” State law does not use the word “obscuring.” The term “obscuring” is undefined and broader than the state standard, potentially sweeping in conduct not contemplated by the legislature. We recommend removing “obscuring or” to align with state law and avoid interpretive uncertainty.

Inconsistencies are particularly problematic where a business’s compliance program is designed around a single statewide standard. Introducing localized variations without any clear policy rationale only increases compliance costs and creates legal risk without adding meaningful consumer protection.

The Proposed Rule’s Penalty Structure Exceeds State Law and Should Be Harmonized

The Proposed Rule introduces financial restitution provisions (Section 5-110.2) and civil penalties (Section 2, amending 6 RCNY § 6-47) that significantly exceed the penalty framework under GBL § 527-a. Under state law, civil penalties are capped at \$100 for a single violation and \$500 for multiple violations arising from a single act, with knowing violations subject to up to \$500 and \$1,000 respectively, and a safe harbor for bona fide errors.

The Proposed Rule, by contrast, imposes penalties of \$525 for a first violation, \$1,050 for a second, and \$3,500 for third and subsequent violations, with no safe harbor provisions. Businesses operating in New York City are already subject to the state penalty regime. Layering on substantially higher municipal penalties for the same conduct creates a disproportionate compliance burden, particularly for small and mid-sized businesses, without a demonstrated need beyond the state framework.

We urge the Department to align the restitution and penalty provisions with GBL § 527-a.

The Exemptions Should Be Maintained

We support the exemptions set forth in Section 5-110.3(a)-(e) of the Proposed Rule, which mirror the exemptions in GBL § 527-a(4). Maintaining these exemptions is important for consistency with the state framework and should not be disturbed.

We welcome the opportunity to discuss these comments further. Please do not hesitate to contact me with any questions.

Respectfully submitted,

Chelsea Lemon
Senior Director of Government Affairs
The Business Council of New York State, Inc.
Chelsea.lemon@bcnys.org

From: [Tammy Cota](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Comments on Proposed Rule Reference No. 2026 RG 020, Cancellation of Subscriptions
Date: Friday, May 8, 2026 10:50:45 AM
Attachments: [IC Comments AR NYC DCWP Proposed Rule.pdf](#)
Importance: High

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Dear Commissioner Levine:

I am the executive director of the Internet Coalition (IC), a national trade association that represents member companies in state public policy discussions. The IC serves as an informational resource, striving to protect and foster the internet economy and the benefits it provides consumers.

I appreciate the opportunity to provide the attached comments to Proposed Rule Reference No. 2026 RG 020, Cancellation of Subscriptions which the IC believes as drafted would duplicate existing legal requirements, introduce potential inconsistencies and impose disproportionate compliance burdens without corresponding consumer benefit.

For these reasons, outlined in more detail in the attached comments, the IC respectfully urges the Department to reconsider the need for this rule or consider revising it to align closely with New York State law.

Feel free to reach out with questions.

Tammy

Tammy Cota, Executive Director

Coalition

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May 8, 2026

Commissioner Samuel Levine
Department of Consumer and Worker Protection
42 Broadway #5
New York, NY 10004
Rulecomments@dcwp.nyc.gov

Re: Comments on Proposed Rule Reference No. 2026 RG 020, Cancellation of Subscriptions

Dear Commissioner Levine:

I am the executive director of the Internet Coalition (IC), a national trade association that represents member companies in state public policy discussions. The IC serves as an informational resource, striving to protect and foster the internet economy and the benefits it provides consumers.

IC members share the Department's commitment to clear, transparent and user-friendly subscription practices, including straightforward cancellation processes. At the same time, IC is concerned that the Proposed Rule is unnecessary in light of existing law, may introduce inconsistencies within New York's regulatory framework and could impose operational burdens without delivering meaningful additional benefits to consumers. We respectfully highlight a few areas below which we urge the Department to reconsider.

Overlap with New York State Law

The Proposed Rule largely restates requirements that are already established under New York State law, specifically the recently updated automatic renewal provisions in General Business Law §§ 527-a and 396-mm. These statutes already create a robust and comprehensive framework governing subscription services. Among other things, the law requires businesses to provide cancellation mechanisms that are simple and comparable to the method used for enrollment, to make cancellation available through the same channels used to obtain consent and to refrain from impeding or delaying a consumer's request to cancel. It also imposes detailed standards for disclosures, consent and renewal notices.

Given the existing framework, an additional municipal rule risks creating duplicative and potentially conflicting obligations for companies operating in New York City. Even modest differences in wording or interpretation can generate uncertainty, particularly for businesses that operate across multiple jurisdictions and must implement uniform compliance systems. Importantly, these added layers are unlikely to produce materially different outcomes for consumers beyond what state law already ensures.

Recommendation: Defer to the comprehensive state statutory scheme and avoid adopting overlapping local requirements.

Restrictions on Retention Offers

IC is also concerned with how the Proposed Rule addresses retention, or “save” offers presented during the cancellation process. Consumers frequently value the opportunity to receive discounted pricing, modified service tiers or information about the consequences of cancellation before finalizing their decision. In many cases, consumers initiate cancellation precisely to explore whether better terms are available. Limiting or discouraging these interactions would reduce consumer choice and could eliminate opportunities for cost savings, without evidence that such offers inherently interfere with a consumer’s ability to cancel. When implemented appropriately, retention offers can coexist with a seamless and non-obstructive cancellation process.

New York State law already strikes a workable balance by allowing businesses to present discounted offers, retention benefits or relevant information, while clearly prohibiting practices that obstruct, delay or condition cancellation.

Recommendation: Align the Proposed Rule with state law by expressly permitting retention offers, provided they do not impose unreasonable conditions or interfere with a consumer’s ability to cancel promptly.

Penalty Framework

Finally, the penalty structure contemplated by the Proposed Rule significantly exceeds that established under state law. The introduction of higher civil penalties and restitution provisions, without corresponding safe harbor protections, would create a more punitive and fragmented enforcement environment within New York. Businesses are already subject to the state’s penalty regime under GBL § 527-a, which includes defined caps and allowances for bona fide errors. Layering substantially higher local penalties on top of this framework for the same conduct would increase compliance risk and costs, particularly for smaller entities, without clear evidence that stronger deterrence is needed. Consistency between state and local enforcement structures is important to ensure fairness, predictability and efficient compliance.

Recommendation: Harmonize the Proposed Rule’s penalty provisions with those set forth in state law, including applicable caps and safe harbor protections.

Conclusion

The Proposed Rule as drafted would duplicate existing legal requirements, introduce potential inconsistencies and impose disproportionate compliance burdens without corresponding consumer benefit. For these reasons, IC respectfully urge the Department to reconsider the need for this rule or consider revising it to align closely with New York State law.

We appreciate the opportunity to provide these comments and welcome continued dialogue about how best to advance shared goals in a clear and consistent regulatory framework.

Respectfully submitted,

Tammy Cota
Executive Director
Internet Coalition

From: [Holly Lubart](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] News/Media Alliance Comments re: Proposed Rule on Cancellation of Subscriptions
Date: Friday, May 8, 2026 12:23:53 PM
Attachments: [NYC Proposed Rule Sub Cancellations 5-26.pdf](#)

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Please see the attached comments from the News/Media Alliance.

Thank you,
Holly

Holly Lubart
Vice President
Government Affairs
News/Media Alliance

[REDACTED]
[REDACTED]

www.newsmediaalliance.org





May 8, 2026

New York City Department of Consumer and Worker Protection
42 Broadway #5
New York, NY 10004

The News/Media Alliance, which represents over 2,200 news and magazine companies nationwide, including numerous members in New York, writes to express concerns on the proposed rule regarding the Cancellation of Subscriptions. Almost all publications provided by NMA's members are sold by subscription, and many are offered only on a recurring subscription basis. While we are supportive of giving consumers an easy option to cancel a subscription, any policies must also allow flexibility for our member companies to continue providing valuable auto-renewing subscriptions for their subscribers.

Automatic renewal subscriptions allow consumers to receive content they choose for as long as they wish and ensure a simple and streamlined renewal process. Customers also benefit from features such as low-price introductory offers; lower-cost, continuous 24/7 access to content; access to members-only content, custom e-mail news alerts, products, and experiences; and eligibility for gifts and other enhancements.

First, the proposed rule is not necessary, because it is already covered by the current New York State auto-renew law, which was just updated last year to provide consumers with the ability to obtain a refund 14 days after sale when the price increases. New York is the only state with this provision.

Next, if the proposal moves forward, we recommend the following changes as this language was negotiated with numerous stakeholders in California and included in their law, which was passed in 2024:

- (e) For purposes of subdivisions (c) and (d), providing a discount offer or other consumer benefit or informing a consumer of the effect of the cancellation shall not be considered

an obstruction or delay, provided that the consumer remains able to cancel or terminate the automatic renewal or continuous service, as follows:

- (1) If a consumer conveys a request to cancel by telephone, the business may present the consumer with a discounted offer, retention benefit, or information regarding the effect of cancellation, provided that the business first clearly and conspicuously informs the consumer that they may complete the cancellation process at any time by stating that they want to “cancel” or words to that effect. If the consumer states their intention to “cancel” or words to that effect, the business shall promptly process the cancellation and shall not otherwise obstruct or delay the consumer’s ability to cancel.
- (2) If a consumer conveys a request to cancel by an online system, the business may display a discounted offer, retention benefit, or information regarding the effects of cancellation, provided that the business simultaneously displays a prominently located and continuously and proximately displayed direct link or button entitled “click to cancel,” or words to that effect, with the presentation of the discounted offer, other consumer benefit, or information. If the consumer utilizes this direct link or button, the business shall promptly process the cancellation and shall not otherwise obstruct or delay the consumer’s ability to proceed to cancellation.

The publishing industry, including local newspapers, is more than just a collection of businesses; it is the lifeblood of our communities, providing essential information, fostering civic engagement, and holding elected officials accountable for their actions. We urge the City Department to not move forward with this proposed rule.

Respectfully submitted,

Holly Lubart

Holly Lubart

From: [Michael Blank](#)
To: [rulecomments \(DCWP\)](#)
Cc: [Gerard Keegan](#)
Subject: [EXTERNAL] CTIA Comments - Click to Cancel Proposed Rule
Date: Friday, May 8, 2026 1:36:40 PM
Attachments: [20260508 - CTIA NYC Click-to-Cancel Proposed Rule Comments - Final.pdf](#)

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Please find attached written comments from CTIA, the trade association for the wireless communications industry, in response to the New York City Department of Consumer and Worker Protection's proposed rules regarding Click to Cancel.

Thank you,
Mike


Michael Blank
Director, State Legislative Affairs
1400 16th Street, NW
Washington, DC 20036



**Before the
NEW YORK CITY DEPARTMENT
OF CONSUMER AND WORKER PROTECTION
New York, NY 10004**

In the Matter of)
Cancellation of Subscriptions, Proposed Rule) Reference Nos. 2026 RG 020, DCWP-72
)
)
)

COMMENTS OF CTIA

Gerard Keegan
Vice President, State Legislative Affairs

Michael Blank
Director, State Legislative Affairs

CTIA
1400 16th Street, N.W.
Washington, D.C. 20036
202-736-3200

May 8, 2026

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**Before the
NEW YORK CITY DEPARTMENT
OF CONSUMER AND WORKER PROTECTION
New York, NY 10004**

In the Matter of)
Cancellation of Subscriptions, Proposed Rule) Reference Nos. 2026 RG 020, DCWP-72
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)
)

COMMENTS OF CTIA

CTIA¹ respectfully submits these comments in response to the New York City Department of Consumer and Worker Protection’s (“DCWP” or “Department”) request for public comment on its proposal to add rules governing the cancellation of consumer subscription services (“Proposed Rule”).² The Department issued the Proposed Rule in response to Executive Order No. 10, entitled “Fighting Subscription Tricks and Traps” (“Executive Order 10”), which directs the agency to consider a rulemaking to regulate subscription services.³

I. INTRODUCTION AND SUMMARY.

CTIA and its member companies support the pro-consumer intent behind the Mayor’s directive to DCWP. CTIA is concerned, however, that the Proposed Rule’s broad scope would

¹ CTIA – The Wireless Association® (“CTIA”) (www.ctia.org) represents the U.S. wireless communications industry and the companies throughout the mobile ecosystem that enable Americans to lead a 21st century connected life. The association’s members include wireless providers, device manufacturers, and suppliers as well as apps and content companies. CTIA vigorously advocates at all levels of government for policies that foster continued wireless innovation and investment. CTIA represents a broad diversity of stakeholders, and the specific positions outlined in these comments may not reflect the views of all individual members. The association also coordinates the industry’s voluntary best practices and hosts educational events that promote the wireless industry. CTIA was founded in 1984 and is based in Washington, D.C.

² *Rules Relating to Cancellation of Subscriptions*, Reference Nos. 2026 RG 020, DCWO-72, Notice of Public Hearing and Opportunity to Comment on Proposed Rules (rel. Mar. 25, 2026) (“Proposed Rule”).

³ See N.Y.C. Exec. Order No. 10, § 2 (Jan. 5, 2026), <https://www.nyc.gov/content/dam/nycgov/mayors-office/downloads/pdf/executive-orders/2026/eo-10.pdf> (“Executive Order 10”).

unnecessarily sweep in critical services from wireless providers to the detriment of wireless customers. Wireless providers offer wireless and related services (e.g., text messages and data) that are bundled and billed together on a monthly basis. These offerings are far afield from the “subscription tricks and traps” that the Department is targeting, and wireless providers are already separately regulated at the federal level. Extending the Proposed Rule to the wireless sector could also inadvertently confuse consumers or leave them worse off, including the unintended loss of phone and/or internet access.

With these comments, CTIA outlines how wireless and related bundled services differ from other services with recurring billing in the marketplace, and thus why the Department should not evaluate these services through the same lens as the deceptive subscription products that Executive Order 10 targets. As explained below, the wireless industry provides critical ongoing services that consumers expect to be billed on a monthly basis, and robust consumer protections are already built into wireless billing and cancellation processes through industry commitments and existing regulations. Applying the Proposed Rule’s cancellation requirements broadly to the wireless sector would result in harmful impacts to wireless consumers. Indeed, doing so would limit competitive offers that customers want to hear and restrict providers’ ability to provide critical information to customers about the consequences of wireless service cancellation.

Given the unique nature of wireless services, the Department should avoid sweeping such services within the Proposed Rule’s ambit. It could do so by adopting an exemption specifically for service providers regulated by the Federal Communications Commission (“FCC”), which is consistent with the treatment of FCC-regulated entities commonly found in state autorenewal laws and with the entity-specific exemptions found in the current proposal. Moreover, prior to

moving forward with the Proposed Rule, DCWP must engage with the New York City Law Department to conduct a robust regulatory analysis of the proposals, consistent with the City Administrative Procedure Act. Such a regulatory analysis counsels against applying the Proposed Rule to wireless providers.

II. THE WIRELESS INDUSTRY PROVIDES CRITICAL ONGOING SERVICES THAT CONSUMERS EXPECT TO BE BILLED ON A RECURRING BASIS.

The wireless market in the United States continues to flourish, generating unprecedented benefits for consumers, the economy, and more. Strong consumer demand and competition among wireless service providers continue to drive increasing amounts of innovation and investment to make wireless broadband faster, better, and even more affordable.⁴

Telecommunications service is a critical service that consumers knowingly and intentionally purchase on an ongoing, recurring basis. Indeed, consumers affirmatively enroll in an ongoing service relationship with the expectation of uninterrupted connectivity. Consumers also typically choose to bundle services, like text messages and mobile data with voice service, which is reflected on monthly bills. And those consumers who do not wish to be charged on an auto-renewing basis have options to instead purchase certain wireless services on a pre-paid basis, where consumers pay upfront for services in advance of using them, without a subscription plan.

Because of this essential role, consumers reasonably expect that wireless service will continue unless and until they take affirmative steps to change providers or terminate service. Services offered by wireless providers therefore differ fundamentally from the “subscription

⁴ See, e.g., 2025 Annual Survey Highlights, CTIA (Sept. 8, 2025), <https://www.ctia.org/news/2025-annual-survey-highlights>.

tricks and traps” that are the subject of Executive Order 10.⁵ Consumers’ expectation that they will receive monthly bills reflects the provision of ongoing network access and related services that the consumer has actively chosen, rather than the seller interpreting consumer silence as assent to new or additional charges. Monthly wireless services are also billed on a post-paid basis, meaning that the customers are paying for services already used in the previous month—unlike subscription plans that may be paid in advance of receiving service.⁶

Accordingly, DCWP should not treat wireless and related bundled services as functionally equivalent to the automatic renewal or continuous service offers that Executive Order 10 seeks to target.

III. THE PROPOSED RULE SHOULD NOT APPLY TO THE WIRELESS INDUSTRY, WHICH ALREADY COMPLIES WITH ROBUST CONSUMER PROTECTION COMMITMENTS AND FCC REGULATORY REQUIREMENTS.

The wireless industry is already subject to significant disclosure, billing, and cancellation processes through voluntary industry commitments and existing FCC regulations. As discussed below, a wide range of state laws that regulate autorenewal contracts exempt entities regulated by specialized telecommunications agencies, including the FCC, recognizing that monthly wireless charges are unique and should not be treated like general autorenewal contracts. Accordingly, DCWP should add an exemption to Section 5-110.3 of the Proposed Rule for service providers subject to regulation by the FCC.

⁵ See Executive Order 10 at pmb1. (“WHEREAS, subscription tricks and traps conceal or misrepresent the price of a subscription or the terms of a subscription from consumers, thereby burdening consumers with subscriptions they did not intend to purchase and for terms that consumers did not intend to agree to . . .”).

⁶ While the majority of wireless customers receive service on a post-paid basis and receive a monthly bill, wireless providers also offer some services on a pre-paid basis, as discussed further in Section III.

The wireless industry is committed to ensuring consumers have accurate and transparent disclosures regarding pricing, billing, and cancellation for product and service offerings. This commitment is informed by existing rules at the FCC and commitments CTIA and its members have made for two decades as part of the *Consumer Code for Wireless Service*, which is an evolving set of principles and practices designed to help consumers make informed decisions when selecting wireless services.⁷

Existing federal regulations govern the transparency of wireless providers' disclosures, charges, and terms of service. Pursuant to the Infrastructure Investment and Jobs Act ("IIJA"),⁸ the FCC has issued rules regulating sales and business practices related to mobile broadband internet access.⁹ The FCC's Transparency Rule, which implements IIJA, requires any broadband internet provider, including wireless broadband data providers, to "publicly disclose accurate information regarding . . . [the] commercial terms" of its services "to enable consumers to make informed choices regarding the purchase and use of such services."¹⁰ Specifically, the Transparency Rule requires wireless providers to publicly disclose "network management practices, performance characteristics, and commercial terms of its broadband internet access services."¹¹ These disclosures are subject to prescriptive formatting and consent requirements. The FCC also continues to re-evaluate the appropriate scope and extent of these disclosure rules,

⁷ *Consumer Code for Wireless Service*, CTIA (Mar. 2020), <https://api.ctia.org/wp-content/uploads/2020/03/CTIA-Consumer-Code-2020.pdf>.

⁸ Infrastructure Investment and Jobs Act, Pub. L. 117-58, 135 Stat. 429 (2021).

⁹ *Empowering Broadband Consumers Through Transparency*, CG Docket No. 22-2, Report and Order and Further Notice of Proposed Rulemaking, 37 FCC Rcd 13686 (2022) (requiring broadband providers to display easy-to-understand labels that include key information such as prices, speeds, and data allowances).

¹⁰ 47 C.F.R. § 8.1(a).

¹¹ *Id.*

based on its own expertise and experience.¹² Any additional regulatory obligations could lead to conflicting requirements and consumer confusion.

Customers in auto-renewing, post-paid plans also receive monthly, itemized billing statements that clearly disclose monthly charges or other fees, subject to the FCC’s Truth-in-Billing regulations.¹³ These rules require providers to clearly disclose the services and charges that subscribers are paying for on monthly bills.¹⁴ Wireless providers also offer some services on a pre-paid basis, where customers do not receive monthly invoices because they operate on a “pay as you go” basis. Pre-paid customers may elect to enroll in an autopay program, and in those cases, providers comply with the laws and regulations governing preauthorized payments. Accordingly, it would be unnecessary, confusing, and potentially frustrating for consumers to sweep wireless providers into the Proposed Rule, as wireless billing and cancellation is unique and already heavily regulated.

Indeed, many state autorenewal laws exempt entities regulated by the FCC, a state public utilities commission, or both.¹⁵ Many other state autorenewal laws exempt contracts that automatically renew for a month or less, and therefore do not apply to monthly wireless billing in the first place.¹⁶ Other state pricing disclosure laws similarly exempt entities subject to specific

¹² *Empowering Broadband Consumers Through Transparency; Delete, Delete, Delete*, CG Docket No. 22-2, GN Docket No. 25-133, Second Further Notice of Proposed Rulemaking in CG Docket No. 22-2, Notice of Proposed Rulemaking in GN Docket No. 25-133, 40 FCC Rcd 8614 (2025).

¹³ 47 C.F.R. § 64.2401.

¹⁴ *Id.*

¹⁵ *See, e.g.*, Cal. Bus. & Prof. Code § 17605(a)-(b); Colo. Rev. Stat. § 6-1-732(5)(a)-(b); Or. Rev. Stat. § 646A.295(a)-(b).

¹⁶ *See, e.g.*, Conn. Gen. Stat. § 42-126b; Del. Code Ann. tit. 6 §§ 2731, 2734; D.C. Code § 28A-203; Fla. Stat. § 501.165; Ga. Code Ann. § 13-12-1; Haw. Rev. Stat. § 481-9.5(a); 815 Ill. Comp. Stat. 601/10; 10 Me. Stat. tit. § 1210-C; N.J. Stat. Ann. § 56:12-95.5; N.D. Cent. Code § 51-37-01; Va. Code Ann. § 59.1-207.45.

regulatory requirements, such as the Transparency Rule discussed above.¹⁷ And notably, the Department’s Proposed Rule and New York’s autorenewal law also contain exemptions for other types of entities that are regulated, including banks, other financial institutions, and business operating pursuant to a government-issued franchise.¹⁸

While New York’s recently amended autorenewal law does not explicitly exempt wireless providers, which further counsels in favor of avoiding duplicative and potentially inconsistent regulations of wireless providers under the Proposed Rule, the Proposed Rule threatens to add inconsistent requirements. For example, New York’s autorenewal law allows regulated entities to offer either online or over-the-phone minimum cancellation methods for consumers that signed up in-person (as wireless customers can do),¹⁹ whereas the Proposed Rule would require regulated entities to offer online cancellation for such consumers.²⁰ The Proposed Rule also contains a vague prohibition on “unreasonable” conditions on cancellation requests²¹ (as discussed in more detail in Section IV), and because both the New York law and the Proposed Rule can be independently interpreted and enforced, wireless providers potentially

¹⁷ See, e.g., Colo. Rev. Stat. § 6-1-737(2)(b)(V) (“Notwithstanding any provision of this section to the contrary, a person is compliant with subsections (2)(a) and (3)(b) of this section if the person does not use deceptive, unfair, and unconscionable acts or practices related to the pricing of goods, services, or property and if the person: . . . Can demonstrate that the person is providing broadband internet access service on their own or as part of a bundle, as defined in 47 CFR 8.1(b), and is compliant with the broadband consumer label requirements adopted by the Federal Communications Commission in FCC 22-86 on November 14, 2022”); Cal. Civ. Code § 1770(a)(29)(B) (“Compliance by a person providing broadband internet access service on its own or as part of a bundle, as defined in Section 8.1(b) of Title 47 of the Code of Federal Regulations, with the broadband consumer label requirements adopted by the Federal Communications Commission in FCC 22-86 on November 14, 2022, codified in Section 8.1(a) of Title 47 of the Code of Federal Regulations, shall be deemed compliance with this paragraph.”).

¹⁸ See Proposed Rule § 5-110.3; N.Y. Gen. Bus. Law § 527-a(4).

¹⁹ See N.Y. Gen. Bus. Law § 527-a(1)(d-1).

²⁰ Proposed Rule § 5-110.1(d).

²¹ *Id.* § 5-110.1(e).

could be subject to conflicting interpretations of reasonable cancellation practices, depending on whether the customer is within or just across City lines.²²

Given the voluntary consumer disclosure commitments that wireless providers have made and the extensive FCC regulations to which they are already subject to, the Department should therefore avoid applying the Proposed Rule to the wireless industry.

IV. THE PROPOSED RULE’S CANCELLATION REQUIREMENTS ARE OVERLY RESTRICTIVE AND WOULD CAUSE UNINTENDED CONSEQUENCES THAT NEGATIVELY IMPACT WIRELESS CUSTOMERS.

Although CTIA supports the pro-consumer intent behind Executive Order 10 and the Proposed Rule, the Proposed Rule’s cancellation obligations (Sections 5-110.1(c)-(e)) would result in unintended consumer harms, including depriving consumers of opportunities to save money on service plans that better fit their needs and critical information about the impact of cancellation.

A. The Proposed Rule’s Provision Aimed at Deterring Retention Offers May Cause Consumers to Miss Out on More Affordable Options or Critical Information.

Section 5-110.1(e) of the Proposed Rule, as currently drafted, prohibits covered companies from imposing “unreasonable or unlawful conditions upon,” or to “obstruct or unreasonably delay cancellation requests or attempts to request cancellation by a consumer.”²³ The Proposed Rule explains that “unreasonable or unlawful conditions” includes “upon receiving a request to cancel, presenting the consumer with a discounted offer, retention benefit or information regarding the effect of cancellation while imposing unreasonable or unlawful

²² See N.Y. Gen. Bus. Law § 527-a(3); Proposed Rule § 5-110.2.

²³ Proposed Rule § 5-110.1(e).

conditions upon the consumer's ability to cancel[.]”²⁴ Section 5-110.1(e), as written, may cause consumers to miss getting better deals that their existing provider is willing to offer in order to keep the customer's business, as well as important information about the ramifications of cancellation. It can be difficult to discern between educating a customer on the implications of cancelling their wireless service and the conduct that Section 5-110.1(e) seeks to regulate. The Department's proposed requirement could therefore be in tension with making these important disclosures and educating consumers in this manner.

B. Section 5-110.1(e) of the Proposed Rule Poses Unique Harms to Wireless Customers.

The Proposed Rule's regulation of companies' responses to cancellation requests implicates several complicated issues, which are unique to the wireless industry and counsel in favor of exempting wireless providers from the Proposed Rule.

First, consumer cancellation of wireless services differs from cancellation of other types of online services, because consumers generally do not cancel their wireless service entirely; instead, they often choose to move their service to another provider. Customers may move their mobile service to a new provider by “porting” their number and beginning service with a new wireless provider at any time. Protection of consumer phone number portability is mandated by the Telecommunications Act of 1996 and regulated by the FCC.²⁵ The FCC's Local Number Portability rules set standards and obligations for porting a customer's telephone number to a new provider upon subscriber request.²⁶ Port-out rules allow customers to switch providers

²⁴ *Id.* § 5-110.1(e)(2).

²⁵ *See* 47 U.S.C. § 251(b)(2); 47 C.F.R. Part 52, Subpart C.

²⁶ 47 C.F.R. Part 52, Subpart C.

quickly and seamlessly, without the disruption that would accompany outright cancellation. This regulated switching process is consumer-friendly and effective.

Imposing a parallel DCWP cancellation regime on top of this would risk duplicative, inconsistent, and confusing obligations without providing additional benefits for New York City consumers. Premature cancellation of services without obtaining new wireless services promptly could cause consumers to lose their existing phone number. Consumers often value keeping their same mobile numbers, and the loss of the phone number would cause substantial inconvenience, as customers would be unreachable by personal and professional contacts.

Second, when customers contact providers to cancel services, providers inform the customer about the consequences of cancellation. Customers that cancel quickly may be inadvertently left without wireless services. Indeed, complete cancellation of wireless services can impose serious risks, including disruption of everyday activities, as mobile phone numbers are routinely used for multi-factor authentication for financial transactions, online services, and account access. And importantly, consumers want to hear alternative service offers, at least as it relates to their wireless services. In a 2023 poll conducted by Morning Consult, 80% of customers indicated that wireless providers should not terminate a customer's services without explaining the potential impact of cancellation to existing phone numbers or the billing/service disruptions.²⁷

Third, cancellation of wireless services can also trigger the acceleration of payments under device installment contracts, which consumers should consider as part of their cancellation decisions. Many consumers purchase a cell phone or other wireless device through a retail

²⁷ Morning Consult National Tracking Poll (June 7-9, 2023) (2,214 respondents, +/- 2% MoE).

installment contract, and that cost is pro-rated over a period of time and included on their monthly invoice. When wireless service is cancelled, the device installment contract accelerates, and the entirety of the remaining balance immediately becomes due. While this is clearly disclosed in the terms and conditions of the installment contract at the time the consumer purchases their device, contract acceleration may not be at the top of consumers' minds when they are calling to cancel service.

Fourth, cancellation of wireless service also requires verification of customer identity as part of a wireless provider's robust efforts to protect consumers from fraud. Wireless providers are required by the Communications Act of 1934 ("Communications Act") to authenticate a customer prior to disclosing customer proprietary network information ("CPNI"), which includes certain information that appears on a customer's telephone bill.²⁸

If the Department nevertheless decides to apply the Proposed Rule to wireless providers—which it should not—consumers would benefit from the Department taking a more nuanced approach to restricting companies' ability to communicate with their customers, aimed at eliminating the use of tactics designed to impose material delays on consumers' cancellation efforts. Such an approach would address the potential problem of deceptive sellers abusing the process, while still allowing the free flow of information and potential cost savings for consumers. Instead of creating a vague "obstruct or unreasonably delay" standard²⁹ when consumers are presented with better and more affordable options, DCWP could give consumers the option to state their preference not to hear a new offer and have the process move to cancellation, which would allow consumers the option to hear better terms and allow companies

²⁸ 47 U.S.C. § 222; 47 C.F.R. § 64.2003.

²⁹ Proposed Rule § 5-110.1(e).

to present competitive offers (if the consumer wants to hear them), as well as make all necessary disclosures related to the unique circumstances of cancellation, including the impacts of wireless cancellation noted above.

C. Sections 5-110.1(c) and (d) (Minimum Requirements for Cancellation Mechanisms) Are Overly Restrictive.

Proposed Sections 5-110.1(c) and (d) also raise practical issues for wireless providers and customers. These provisions require that: (1) entities offering automatic renewal or continuous service offers to consumers “provide the consumer with the option to cancel at any time using a simple cancellation mechanism that is . . . through the same medium that the consumer used to provide consent”; and (2) entities offering automatic renewals or continuous service offers to consumers “must provide the consumer with the option to cancel, at any time through all mediums by which the business allows a consumer to provide affirmative consent to, the automatic renewal, continuous service offer, or any price increase.”³⁰ These provisions raise practical issues for the wireless industry. Businesses should be able to have a live representative speak with a customer seeking to cancel their wireless services, regardless of the medium used to sign up.

As discussed above, when a customer says they want to cancel their service, the first reaction of the wireless provider is likely to ask what it can do to address the customer’s concerns. That can result in a better offer for the customer and/or services that better meet their needs. While online cancellation might potentially be quicker, it does not allow for necessary discussion between the service provider and the customer, which provides substantial information and education to the customer’s benefit. This customer benefit is illustrated by a

³⁰ Proposed Rule § 5-110.1(c)-(d).

recent poll of wireless customers, which found that over two-thirds of consumers would prefer to speak to a live customer service representative when cancelling their wireless service, even if it takes longer than other methods of cancellation, in order to avoid security compromises and billing disruptions.³¹

Adding new requirements to this already complex area could also risk confusing consumers. Requirements that wireless cancellation mechanisms be designed to mirror enrollment flows or symmetry standards developed for purely digital subscriptions will not translate cleanly. Attempting to impose such mandates could risk complicating fraud prevention, reduce accessibility for consumers who rely on live assistance, and ultimately degrade the customer experience. Indeed, there are numerous important consumer disclosures that wireless customers benefit from, including those with respect to a customer's number being ported from one carrier to another, information about the impact of cancelling service, and critical customer authentication requirements for access to sensitive information, such as CPNI, as required by the Communications Act.

While the Proposed Rule should exclude wireless providers entirely for the reasons discussed above, if the Proposed Rule were to apply, a better rule would be to require entities to offer a simple means of cancellation through one or more media commonly used by the seller and reasonably designed to effectuate cancellation at the consumer's request.

³¹ Morning Consult National Tracking Poll (June 7-9, 2023) (2,214 respondents, +/- 2% MoE).

V. THE NEW YORK CITY LAW DEPARTMENT MUST CONDUCT A ROBUST REVIEW OF THE PROPOSED RULE TO ENSURE COMPLIANCE WITH THE CITY ADMINISTRATIVE PROCEDURE ACT.

If the Department decides to move forward with the Proposed Rule, the New York City Law Department must conduct a robust review of the Proposed Rule under the City Administrative Procedure Act to ensure that it, in part: “(i) is drafted so as to accomplish the purpose of the authorizing provisions of law; (ii) is not in conflict with other applicable rules; [and] (iii) to the extent practicable and appropriate, is narrowly drawn to achieve its stated purpose[.]”³² As part of this review, the New York City Law Department must state:

(a) whether such rule is understandable and written in plain language; (b) how the drafting process of the rule, . . . included analysis sufficient to minimize the compliance costs for the discrete regulated community or communities . . . ; and (c) why, in the event such rule involves the establishment of a violation, . . . without also including a cure period, or other opportunity for ameliorative action by the party or parties subject to enforcement, such cure period or other opportunity for ameliorative action was not included.³³

For the reasons discussed above, sweeping in the wireless industry as part of the Proposed Rule would not be “narrowly drawn to achieve its stated purpose,”³⁴ and the lack of plain language and significant compliance costs³⁵ when uniquely applied to wireless service counsel in favor of narrowing the Proposed Rule to exempt wireless providers.

Extending the Proposed Rule to the wireless industry would not account for the fact that the wireless industry’s disclosure, billing, and cancellation processes are already heavily regulated—in contrast to the “subscription tricks and traps” that are the stated target of Executive Order 10. Wireless customers affirmatively enroll in an ongoing service relationship with the

³² N.Y.C. Charter § 1043(d)(1).

³³ *Id.*

³⁴ *Id.*

³⁵ *Id.*

expectation of uninterrupted connectivity, unlike standard subscription services. Accordingly, sweeping wireless providers into the Proposed Rule would not accomplish the authorizing provisions of Executive Order 10, and therefore should be rejected. Additionally, the requirement not to “obstruct or unreasonably delay” cancellation,³⁶ as applied to wireless service, is not “understandable and written in plain language,”³⁷ because it is vague as to how wireless providers can comply both with the Proposed Rule and with regulatory requirements and consumer protections when customers cancel critical communication services.³⁸

Finally, the New York City Law Department must state “how the drafting process of the rule, . . . included analysis sufficient to minimize the compliance costs for the discrete regulated community or communities[.]”³⁹ For the wireless industry specifically, a new layer of regulation would impose additional costs, and the Department has not explained how the Proposed Rule, as applied to wireless providers, is tailored to minimize compliance costs in light of the full extent of existing regulatory obligations. These are similar concerns raised with respect to the Federal Trade Commission’s now-vacated 2023 amended Negative Option Rule’s simple cancellation provisions,⁴⁰ which were not narrowly tailored and would have imposed undue costs that do not have corresponding benefits for consumers.

³⁶ Proposed Rule § 5-110.1(e).

³⁷ N.Y.C. Charter § 1043(d)(1).

³⁸ *See supra* Section IV.A.

³⁹ N.Y.C. Charter § 1043(d)(1).

⁴⁰ *Negative Option Rule*, Final Rule, 89 Fed. Reg. 90476 (Nov. 15, 2024), <https://www.federalregister.gov/documents/2024/11/15/2024-25534/negative-option-rule>; *but see Custom Commc’ns, Inc. v. FTC*, 142 F.4th 1060 (8th Cir. 2025).

VI. CONCLUSION.

For the reasons described above, the DCWP should exempt wireless providers from the scope of the Proposed Rule.

Respectfully submitted,

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May 8, 2026

From: [Neale Mahoney](#)
To: [rulecomments \(DCWP\)](#)
Subject: [EXTERNAL] Comment on Rules Relating to Cancellation of Subscriptions
Date: Friday, May 8, 2026 8:31:29 PM
Attachments: [Mahoney NYC DCWP comment 20260508 FINAL.pdf](#)

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To Whom It May Concern:

Please find my comment attached.

Neale

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Neale Mahoney
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Comment of Neale Mahoney

TG Wijaya Professor of Economics, Stanford University

on the Proposed Rule

Rules Relating to Cancellation of Subscriptions

New York City Department of Consumer and Worker Protection

May 8, 2026

I. Introduction and Summary

I am the TG Wijaya Professor of Economics at Stanford University, the Trione Director of the Stanford Institute for Economic Policy Research (SIEPR), and a research associate at the National Bureau of Economic Research (NBER). My research focuses on consumer finance, behavioral economics, and regulatory policy. I submit this comment in response to the Department's notice of proposed rulemaking on the Cancellation of Subscriptions, published in the City Record on April 8, 2026.

I focus this comment on the conceptual underpinnings of the proposed rule: the economic mechanisms that generate consumer harm in subscription markets, why those mechanisms cannot be adequately addressed through market forces or disclosure alone, and how each provision of the proposed rule maps onto a specific source of harm. I draw on three pieces of research that bear directly on the questions raised by the rulemaking:

1. A study with Liran Einav and Benjamin Klopck, published in the *American Economic Review* (Einav, Klopck, and Mahoney 2025), which uses transaction-level data from a large U.S. payment card network to measure the revenue impact of consumer inertia in subscription markets.
2. An audit study with Giacomo Fraccaroli and Zahra Thabet (Fraccaroli, Mahoney, and Thabet 2024), which documents cancellation practices across 47 major U.S. newspaper subscriptions for a consumer in Massachusetts and California.
3. A review article in the *Journal of Economic Perspectives* (Mahoney 2025), which examines the economic case for regulating junk fees, drawing on theoretical models and empirical evidence from consumer financial markets.

The principal conclusions I draw from this body of research, applied to the proposed rule, are as follows:

1. Consumer harm in subscription markets arises from two distinct mechanisms operating simultaneously: inattention (consumers forget about subscriptions they no longer want) and switching costs (cancellation friction, much of it deliberately engineered). This harm is not evenly distributed: financially less sophisticated consumers exhibit substantially greater inertia and bear a disproportionate share

of the cost. The proposed rule's core architecture in subdivisions (b) through (e) of § 5-110.1 is well-targeted at both mechanisms.

2. The reminder provisions in subdivisions (g) and (i) address the inattention channel for annual subscriptions and free trials, respectively. They leave a substantial gap: monthly and short-cycle subscriptions, the most prevalent form of digital subscription, are not covered. Closing this gap would materially strengthen the consumer benefit case without imposing meaningful additional costs on firms.
3. The standard industry objection that regulation will simply be offset through higher subscription prices is not supported by the relevant empirical evidence. My research on the Credit CARD Act of 2009 (Agarwal, Chomsisengphet, Mahoney, and Stroebel 2015) provides direct evidence that regulating non-salient consumer financial harms does not trigger fully offsetting base price increases. Subscription inertia revenue is non-salient by definition, and the same logic applies.

The Mayor's January 5, 2026 Executive Order 10 directs the Department to combat subscription tricks and traps. The economic case for the rule, and for the modest extensions I recommend, is supported by a substantial empirical and theoretical record.

II. Two Mechanisms Generating Consumer Harm

Subscription markets are widespread in the modern economy, yet consumers frequently continue paying for subscriptions they no longer use or value. My research identifies two distinct mechanisms that sustain this pattern. They have different policy implications, and both must be addressed for a regulatory regime to be effective.

A. Inattention

Under the inattention model, consumers fail to cancel not because cancellation is difficult, but because they are simply not actively thinking about their subscriptions in any given month. A fully attentive consumer would cancel as soon as the value they receive falls below the monthly charge. An inattentive consumer continues to pay even after that threshold is crossed, not out of active preference, but because the subscription never surfaces in their attention.

In our American Economic Review paper, my coauthors and I model consumer renewal behavior using transaction-level data from a large U.S. payment card network, covering the period August 2017 through December 2021 and ten large subscription services. The research design exploits a natural experiment: when a consumer's payment card is replaced (due to expiration, loss, or theft), the consumer must actively update billing information with each subscription provider, creating a moment of active decision-making in an otherwise passive renewal process. Outside of card replacement months, the average monthly drop in retention is 0.02; during the replacement window, it is 0.08,

four times larger. This pattern is the signature of inertia: when the default shifts from automatic renewal to active choice, a meaningful share of subscribers cancel rather than renew.

To translate the behavioral pattern into a structural estimate of inattention, we estimate a model in which consumers make an active renewal decision only with probability λ in each period. The average estimated value of λ across the ten services in our study is 0.18, meaning that in a typical month, a subscriber makes an active renewal decision only about one in five to six times. This estimate is the basis for several of the recommendations in this comment.

The harm is not distributed evenly across consumers. Using cash advance usage as a proxy for lower financial sophistication or greater financial stress, our paper finds that consumers in this group exhibit substantially greater inertia, with an average revenue ratio approximately 75 percent larger than for other consumers. The consumers most harmed by inertia-driven subscription charges are therefore disproportionately those least able to monitor and manage their recurring payment obligations.

Inattention has a direct implication for rule design. A click-to-cancel requirement helps consumers who reach the cancellation page. It does not help the consumer who has forgotten about the subscription entirely and never visits the cancellation page. Addressing inattention requires bringing the subscription back into the consumer's attention at regular intervals, through reminders or active renewal requirements.

B. Switching costs and engineered friction

Under the switching cost model, consumers are aware of their subscriptions but face friction that makes cancellation costly enough to deter action. These costs can be genuine (the time required to navigate a cancellation process) or artificially inflated through deliberate design choices, such as requiring phone calls during business hours, mandatory retention surveys, or promotional offer screens placed between the consumer and the cancellation button.

In research with Giacomo Fraccaroli and Zahra Thabet, I conducted a systematic audit of cancellation practices at the 47 highest-circulation U.S. newspapers that offered functioning automatically renewing digital subscriptions. We enrolled in each newspaper's cheapest digital subscription and then attempted to cancel, conducting the exercise twice: once with a billing address and IP address in Massachusetts (which had no subscription cancellation laws at the time of our audit), and once with a billing address and IP address in California (whose Automatic Renewal Law requires online cancellation without additional steps that obstruct or delay the process).

Every newspaper allowed online sign-up. In Massachusetts, only 45 percent of newspapers (21 of 47) allowed consumers to cancel online at all. Of those that did offer

online cancellation, 76 percent injected sludge: 67 percent required consumers to complete a survey explaining their reasons for cancellation, 24 percent required consumers to click through promotional offers before reaching the cancellation page, and 15 percent required both. For the remaining 26 newspapers where online cancellation was unavailable, we canceled by phone. Seven of those 26 phone cancellations took more than ten minutes. Several specific Massachusetts cases illustrate the pattern: the Chicago Tribune's online cancellation platform was down for over a month, making online cancellation impossible during that period; the Honolulu Star-Advertiser placed us on indefinite hold and ultimately required a multi-day email exchange.

The California results are particularly informative for the rulemaking, because they isolate the effect of existing state regulation. California subscribers fared better than Massachusetts subscribers (64 percent could cancel online), but compliance was far from universal. Seventeen of 47 newspapers did not allow California subscribers to click to cancel, in apparent violation of state law. Among the 30 that did offer online cancellation to California subscribers, 83 percent still injected sludge, also in apparent violation of California law's prohibition on additional steps that obstruct or delay cancellation. Even California-based newspapers were not reliably compliant: two of the seven California-based newspapers in our sample did not allow California account holders to cancel online.

Two implications follow. First, cancellation friction is not incidental. Every newspaper allowed online sign-up; fewer than half allowed online cancellation. The asymmetry reflects deliberate design, not technical limitation. Second, well-designed state regulation reduces the problem but does not eliminate it without active enforcement and a clear set of substantive requirements covering both the cancellation channel and the steps within it.

C. Both mechanisms operate simultaneously

The data and research design underlying our American Economic Review study do not allow us to cleanly separate the relative contributions of inattention and switching costs. We estimate separate models for each mechanism and find that both generate large revenue effects of similar magnitude. Our view, consistent with the broader literature, is that both mechanisms operate simultaneously and that observed inertia reflects a combination of the two.

This conclusion has a direct implication for rule design. Each mechanism requires its own remedy. A click-to-cancel requirement addresses switching costs but does not reach the consumer who never visits the cancellation page. A reminder requirement addresses inattention but does not help the consumer who remembers the subscription but faces a 30-minute cancellation gauntlet. A regulatory regime that addresses only one mechanism leaves the other intact, and would be inadequate. The proposed rule's combination of click-to-cancel provisions and reminder requirements reflects the right structure. The

remaining question, addressed in Sections IV and V, is whether each provision is appropriately calibrated.

III. Why Market Forces and Disclosure Cannot Solve This Problem

A natural question is whether competitive market forces or enhanced disclosure requirements could address the harms identified in Section II without a new rule. In my *Journal of Economic Perspectives* review article on junk fee regulation, I examine both possibilities. Neither is sufficient.

A. Market self-correction fails

The intuitive argument against regulation runs as follows: if firms are earning excess profits by exploiting consumer inattention, competitors should have an incentive to offer easier cancellation and win over consumers who value that feature. Competition should dissipate the profits from consumer exploitation through lower base prices.

There are two reasons why this reasoning fails in subscription markets.

The first, developed by Ellison (2005), arises from consumer heterogeneity. When the consumers most likely to generate inertia revenue (those most prone to forgetting subscriptions or least able to navigate cancellation) are also less likely to comparison-shop, a firm that lowers its base price to attract consumers does not attract the consumers who generate that revenue. Firms therefore do not fully dissipate inertia-driven profits through lower subscription prices. The market equilibrium features both a lower base price and high inertia revenue, representing a transfer from inattentive to sophisticated consumers rather than a correction of the underlying harm.

The second reason, due to Gabaix and Laibson (2006), is what those authors term the “curse of debiasing.” In a market where firms shroud their cancellation practices, naive consumers cross-subsidize sophisticated consumers through the inertia revenue they generate. A firm that operates transparently and advertises easy cancellation cannot poach naive consumers from its shrouding rivals: once informed of the exploitation, formerly naive consumers prefer to remain at the shrouding firm, take preemptive action to avoid the charges, and continue receiving the cross-subsidy from remaining naifs. The transparent firm ends up serving only sophisticated consumers, who generate no inertia revenue and cannot support a lower base price. Gabaix and Laibson show that the resulting equilibrium features lower total welfare than a world without shrouding, and a transfer of surplus from naive to sophisticated consumers. This is a direct argument that voluntary disclosure by individual firms will not solve the problem: the market structure makes transparency unprofitable for any individual firm even if it would be welfare-improving collectively.

A third channel reinforces these conclusions. As I discuss in my Journal of Economic Perspectives article, citing Heidhues, Kőszegi, and Murooka (2016), the ability to earn revenue from consumer inertia distorts the direction of firm innovation. If firms can increase revenues by investing in harder cancellation flows (adding retention surveys, taking phone lines offline, building dark patterns into cancellation pages), they will do so in preference to investing in improved product quality or lower prices. The audit evidence in Section II is consistent with this prediction.

B. Disclosure alone is insufficient

Existing legal frameworks, including New York State's GBL § 527-a(1)(d), already require disclosure of automatic renewal terms. Disclosure is necessary but not sufficient to address the harms documented in Section II.

The fundamental problem is that subscription harms materialize months or years after enrollment, when the original disclosure is far from the consumer's attention. A disclosure made at sign-up does not surface again when the consumer, having forgotten about a subscription they no longer use, continues to be charged month after month. The evidence that consumers fail to process, retain, or act on enrollment-time disclosures is overwhelming, and the subscription context is particularly ill-suited to this approach because the harm and the disclosure are separated in time.

Consumers' beliefs can be brought into alignment with product terms either by shifting consumer beliefs toward product terms via disclosure, or by shifting product terms toward consumer beliefs via product regulation. When shifting consumer beliefs is difficult, as it plainly is in subscription markets, the more effective approach is to shift product terms closer to what consumers expect. Consumers expect that a subscription they stop using will not continue charging them indefinitely, and that cancellation will be as simple as enrollment. The proposed rule does not impose alien expectations on this market. It enforces the expectations consumers already hold.

IV. The Proposed Rule, Evaluated Provision by Provision

This section evaluates each provision of § 5-110.1 against the conceptual frame in Section II, focusing on whether each provision addresses a documented mechanism of harm and whether it is appropriately calibrated.

A. Subdivision (b): enrollment-time disclosure

Subdivision (b) requires that material terms of an automatic renewal or continuous service offer (price, frequency of charges, deadline to act, cancellation mechanism) be presented clearly and conspicuously before consent or billing information is requested, and in visual or temporal proximity to the request for consent.

This provision is a necessary baseline. It establishes the informational predicate for the cancellation provisions that follow, and it is consistent with existing requirements under New York State law. Standing alone, however, enrollment-time disclosure cannot address the harms identified in Section II, for the reasons discussed in Section III.B. The provision's value lies in setting a clear standard against which deceptive enrollment practices can be evaluated for enforcement, and in providing the foundation for the cancellation rights established in subdivisions (c) through (e).

B. Subdivision (c): cancellation as easy as enrollment, through the same medium

Subdivision (c) requires that consumers be able to cancel through a simple mechanism that is as easy to use as the consent mechanism, and through the same medium that the consumer used to provide consent.

This provision is a direct remedy for the switching cost channel. The audit evidence makes the point concretely. Every newspaper in our sample of 47 allowed online sign-up, but in Massachusetts only 45 percent allowed online cancellation. The “same medium” clause is doing important work in the rule text. It forecloses the asymmetric pattern in which firms offer one-click online sign-up but route cancellation through a phone line that requires waiting on hold during business hours. That pattern was the modal one in our audit, and it cannot be reached by a rule that requires only “easy” cancellation without specifying the medium.

I support this provision as drafted. It is grounded directly in documented firm conduct and is narrowly calibrated to that conduct.

C. Subdivision (d): cancellation through every consent medium, with mandatory online cancellation for in-person enrollment

Subdivision (d) requires that cancellation be available through every medium by which a consumer can provide affirmative consent, and further requires that for in-person enrollments, online cancellation be offered in addition to whatever in-person mechanism is provided.

This provision is a meaningful extension beyond subdivision (c) and beyond California's existing law. In our audit, even where firms offered some form of online cancellation, they often steered consumers to higher-friction channels by burying the online option or by making certain account types phone-only. Requiring cancellation through every consent medium prevents that channel-steering, and the in-person provision is well-targeted at gym-style memberships and similar contracts where in-person enrollment has historically been paired with phone-only or in-person-only cancellation.

I support this provision as drafted. The intuition behind requiring cancellation through every consent medium is correct: a firm that allows enrollment through a medium worth

the cost of supporting cannot credibly claim that the corresponding cancellation flow is uniquely burdensome.

D. Subdivision (e): no obstruction, false information, or retention sludge

Subdivision (e) prohibits unreasonable or unlawful conditions on cancellation, with two enumerated subcategories. Subdivision (e)(1) prohibits affirmative deception (hanging up, false information about how to cancel, misrepresentations about the consequences of cancellation). Subdivision (e)(2) prohibits using discounted offers, retention benefits, or information about the effect of cancellation as a vehicle for delay or obstruction.

The enumerated examples in subdivision (e) match the conduct documented in our audit almost exactly. We observed cases of being placed on indefinite hold (Honolulu Star-Advertiser); we observed the use of retention pitches and promotional offers as obstruction (24 percent of online cancellation flows in Massachusetts); we observed mandatory cancellation surveys (67 percent of online cancellation flows in Massachusetts).

The two-clause structure is well-designed. Clause (1) addresses affirmative deception, which is the easier case for enforcement. Clause (2) addresses the more subtle pattern in which retention efforts are formally permissible but operationally function as obstruction. The qualifier “while imposing unreasonable or unlawful conditions upon the consumer’s ability to cancel, refusing to acknowledge, obstructing or unreasonably delaying the cancellation requested” preserves the legitimate practice of presenting a single retention offer that the consumer can decline with a single action, while prohibiting the design pattern in which retention offers are stacked or combined with friction to delay cancellation.

I support this provision as drafted. It is the provision that translates audit evidence most directly into rule text.

E. Subdivisions (g) and (i): pre-renewal and free-trial reminders

Subdivision (g) requires firms to notify consumers of an upcoming automatic renewal or continuous service charge between 15 and 45 days before the cancellation deadline, but only for subscriptions with an initial paid term of one year or longer that renew for a paid term of six months or longer. Subdivision (i) requires similar notice (between 3 and 21 days before the first chargeable period) for free trials of more than one month.

Both provisions target the inattention channel. The free-trial reminder in subdivision (i) is well-targeted at a documented harm and appropriately calibrated. The pre-renewal reminder in subdivision (g), as drafted, leaves a substantial gap that I discuss in Section V.

Subdivision (h), addressing material changes including price increases, is best understood as a complement to subdivisions (g) and (i) rather than a separate inattention remedy. It serves the distinct purpose of preserving the consumer's original consent calculus when the firm changes the terms of the deal. I support it as drafted.

F. Subdivision (f): unauthorized goods

Subdivision (f) deems goods sent to a consumer without affirmative consent to be unconditional gifts. This is a standard remedy in negative-option law and is consistent with the unconscionability framing in NYC Administrative Code § 20-700. I support it as drafted.

G. § 5-110.2: restitution

The restitution provision ties liability to the monetary amount charged after the consumer's first attempt at cancellation. This is an analytically clean design choice. It avoids the difficult counterfactual question of when, in the absence of friction, the consumer would have cancelled, and it focuses liability on the period during which the firm's conduct (rather than the consumer's inertia) is causing the continued payment. I support it as drafted.

V. Recommended Additions

Three additions to the proposed rule would substantially strengthen its consumer benefit case, each grounded in the conceptual frame in Section II. The first I view as essential. The second and third I recommend the Department consider in this rulemaking or in a follow-on action.

A. Extend the reminder requirement to monthly and short-cycle subscriptions

Subdivision (g) covers only subscriptions with an initial paid term of one year or longer. Most of the modern subscription economy bills monthly: streaming services, software subscriptions, news subscriptions, app subscriptions, and a growing number of consumer goods subscriptions all use monthly billing as the default. Under the current draft, none of these is covered by a reminder requirement.

This is a meaningful gap given the evidence on inattention. Our American Economic Review estimate of $\lambda = 0.18$ implies that a typical monthly subscriber reaches an active renewal decision only about one in five to six months on average. The consumer harm associated with inattention is therefore concentrated, not diffused, in monthly products: the subscriber who has forgotten about the service may go four, five, or six months without an active reconsideration, accumulating charges that they would not have authorized had they been actively attending.

Extending subdivision (g) to require a reminder at least once per year for any automatically renewing subscription, regardless of billing cycle, would close most of this gap at minimal cost. An annual reminder for a monthly subscription is technologically trivial, places no friction on engaged subscribers (who can ignore it), and brings forgotten subscriptions back into the attention of inattentive ones. I recommend that an annual reminder be required for all automatically renewing subscriptions, with the existing 15-to-45-day pre-renewal window in subdivision (g) preserved for annual and longer-term contracts.

B. Periodic active renewal

The proposed rule does not include a periodic active renewal requirement. Active renewal, in which a firm must obtain affirmative consent from the consumer at regular intervals in order to continue charging, is the most powerful intervention identified in our American Economic Review work. In simulations using our estimated parameters, requiring active renewal every six months reduces excess inertia revenue by approximately 45 to 48 percent under both the inattention and switching cost models. This represents a substantial reduction in consumer harm and brings the market closer to the benchmark of full consumer attention.

Active renewal at monthly intervals would impose meaningful friction on engaged subscribers and is likely too stringent. Intermediate frequencies (six months, one year) achieve substantial gains while preserving the convenience benefit of automatic renewal for consumers who actively want a subscription. I recommend the Department consider adding a periodic active renewal requirement, calibrated to subscription type, either in this rulemaking or in a follow-on action.

C. Usage-based triggers for digital services

For subscription services where account activity data is available (streaming, software, digital news, and similar products), an active renewal requirement could be conditioned on account inactivity rather than on the passage of calendar time alone. A firm could be required to obtain active renewal from a subscriber who has not used the service in three months, while allowing automatic renewal to continue for subscribers who are actively engaging with the product. This approach targets the consumers most likely to be paying for something they no longer value, while minimizing friction for active users.

This is a direction the empirical literature supports but does not yet quantify. I flag it as a promising area for the Department to develop in the rulemaking record or in subsequent action.

VI. Pass-Through and the Affordability Question

A standard industry objection to subscription regulation is that any reduction in inertia revenue will simply be offset by higher subscription prices, leaving consumers no better off. The relevant empirical evidence rebuts this argument in the subscription context.

The theoretical foundation is provided in a framework I developed with coauthors Agarwal, Chomsisengphet, and Stroebe (Agarwal et al. 2014, *Journal of Legal Studies*). The pass-through of regulation to base prices depends on two factors: the salience of the regulated charge and the degree of competition in the market. When a charge is non-salient (consumers do not factor it into their purchase decisions), it functions economically like a pure cost reduction for the firm. Regulating it is analogous to imposing a cost increase. When salience is low and competition is limited, the pass-through of this cost increase to base prices is less than one-for-one, and the consumer benefit is not fully offset.

The empirical evidence is consistent with the theory. In Agarwal, Chomsisengphet, Mahoney, and Stroebe (2015, *Quarterly Journal of Economics*), my coauthors and I studied the effects of the 2009 CARD Act, which restricted over-limit and late fees on consumer credit cards. Using a research design that compares consumer credit cards (subject to the law) against small business credit cards (excluded), we find that the restrictions significantly reduced fee revenue with no measurable offsetting increase in interest rates or reduction in access to credit. The contrast with a different regulatory episode sharpens the prediction. Sarin (2019) analyzed the Durbin Amendment to Dodd-Frank, which capped debit card interchange fees. Unlike the late and over-limit fees regulated by the CARD Act, debit interchange is salient to banks in their account economics. Consistent with the theory, Sarin finds that banks responded to the Durbin cap by eliminating free checking accounts and raising maintenance fees, a more complete pass-through to base prices.

The subscription inertia context maps closely onto the CARD Act setting. The charges that the proposed rule would reduce, by definition, are payments made by consumers who have forgotten about their subscriptions or cannot navigate cancellation. These consumers are not factoring those future charges into their initial subscription decisions. That is the essence of the harm. A rule that reduces this revenue therefore operates on the non-salient margin, and the CARD Act evidence provides direct empirical support for the conclusion that the reduction will not be offset dollar-for-dollar through higher subscription prices.

A further consideration is specific to NYC. Subscription firms typically operate cancellation flows on a national basis, and they generally do not customize subscription prices by consumer location. As a result, compliance with the NYC rule is likely to be effectively national, and the marginal cost of compliance is spread across the firm's national subscriber base. Whatever modest pass-through occurs is therefore diluted from

the perspective of NYC consumers. The affordability case for the rule is therefore strong: the consumer benefit is direct, the pass-through is muted by non-salience, and any residual cost increase is spread across a much larger base than NYC alone.

VII. Conclusion

The proposed rule rests on a coherent economic theory of consumer harm and is supported by direct empirical evidence on both of the mechanisms that generate that harm. The core architecture, in subdivisions (b) through (e) of § 5-110.1, is well-targeted at the switching cost channel and at deliberately engineered cancellation friction. The reminder provisions in subdivisions (g) and (i) address the inattention channel for the subset of subscriptions they reach. Extending the reminder requirement to all automatically renewing subscriptions, regardless of billing cycle, would close the most significant remaining gap.

The affordability concerns conventionally raised against this kind of regulation do not apply with full force here. The harm that the rule addresses is non-salient by definition, and the relevant empirical evidence from consumer financial markets indicates that regulating non-salient harms does not trigger fully offsetting price increases. Compliance is likely to be effectively national, further muting any price effect on NYC consumers.

NYC has an opportunity to issue the country's first municipal click-to-cancel rule on a strong empirical record. I urge the Department to adopt the proposed rule, with the recommended extension to monthly and short-cycle subscriptions, and to consider periodic active renewal in this rulemaking or in a follow-on action.

Sincerely,

A handwritten signature in black ink that reads "Neale Mahoney". The signature is written in a cursive style with a long, sweeping underline.

Neale Mahoney

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From: [Chris Cooper](#)
To: [rulecomments \(DCWP\)](#)
Subject: Re: [EXTERNAL] Registering to speak at the Click-to-Cancel hearing
Date: Sunday, May 10, 2026 12:11:08 PM

You don't often get email from [REDACTED] [Learn why this is important](#)

Hello Reina,

I just realised I have one other important item to add to my earlier comments I gave in person at the recent hearing on the Click to Cancel rule.

Subscription vendors often make it extremely difficult, or outright prevent consumers from recording exchanges.

They will not allow you to get a transcript of support phone calls about cancellation requests, and will often say they are not allowed to continue if they know you are recording the line - despite the fact that they record all conversations themselves. For online chat support re cancellations, the online conversations are often not able to be copied, or emailed, and some delete online conversations on conclusion.

This asymmetry prevents consumers from getting valuable evidence to support click to cancel complaints.

Without being able to show how hard they made it to cancel - it is very challenging to make further claims to regulators etc.

So - please consider in your rule making - that Vendors MUST support transparency in communications, namely:

- Online chats with support agents must be easily copyable (in full - some only allow copying one side of the conversation!), or emailed on request.
- Phone calls with support should always be allowed to be recorded by consumers IF the call is already recorded by the vendor (Most are)
- I would suggest that in this day and age of AI, a requirement to provide a transcription of calls would be entirely appropriate - and be trivial cost to support.

Please help improve consumer rights, by ruling to prevent onerous communication friction by subscription vendors.

Thank you!

Chris Cooper

On Tue, 28 Apr 2026 at 15:25, rulecomments (DCWP) <rulecomments@dcwp.nyc.gov> wrote:

Hi Chris,

You are now currently in the list of people to speak at the rules hearing. There is no other registration and you only need to be present during the hearing. You will have 3 minutes to provide oral testimony.

Best,

Reina

Reina Revina (she/her) ~ NYC DCWP

Legislative Analyst

t: [REDACTED] | nyc.gov/dcwp

From: Chris Cooper [REDACTED]
Sent: Tuesday, April 28, 2026 12:44 PM
To: rulecomments (DCWP) <rulecomments@dcwp.nyc.gov>
Subject: [EXTERNAL] Registering to speak at the Click-to-Cancel hearing

You don't often get email from [REDACTED]. [Learn why this is important](#)
CAUTION! EXTERNAL SENDER. Never click on links or open attachments if sender is unknown, and never provide user ID or password. If **suspicious**, report this email by hitting the **Phish Alert Button**. If the button is unavailable or you are on a mobile device, forward as an attachment to phish@oti.nyc.gov.

Hello,

I have submitted a comment already, online and it's been accepted.

<https://rules.cityofnewyork.us/rule/cancellation-of-subscriptions/>

I want to register to speak at the hearing itself.

Please advise if there is anything specific I need to do, to be registered to speak at this hearing?

Will you provide confirmation of such registration, or do I just dial in and see on the day of the event?

Thank you,

Chris Cooper

FYI <https://www.theguardian.com/us-news/2025/jul/15/us-readers-cancelling-subscriptions>

I am considering taking Verizon to court over this exact issue.

Speaking points I want to make:

I want to flag two policy gaps I believe are missing from current proposals:

Billing provider accountability

Banks and credit card companies know exactly which vendors generate the most subscription disputes. They have the data. They should have the duty. Legislation should impose monitoring obligations on payment processor, similar to anti-money-laundering compliance, requiring them to flag, warn, fine - & ultimately suspend services to vendors with persistent cancellation friction.

Customers should also be able to cancel subscriptions directly from their bank or credit card portal. Some providers (such as Wise) already support this. If you can see a subscription charge on your statement, you should be able to cancel it from right there.

Subscription-specific chargeback thresholds

Current excessive chargeback thresholds (typically 1% of sales) are calibrated for fraud, not for subscription traps. Subscription disputes involve small individual amounts that would never trigger these thresholds, which is precisely why companies get away with it. Legislation and billing provider policies should create a separate tier for subscription billing disputes, with lower thresholds and mandatory consumer compensation for time lost in the dispute process.

I am open to contribute in any way, to help push for systemic change in this area - which affects millions of tired Americans who can't cancel their subscription due to apparent 'Engineered friction'. Of this friction - I have documented a very long list of specific examples. This has to stop.

Submitted via email to rulecomments@dcwp.nyc.gov

May 8, 2026

Commissioner Samuel A.A. Levine
NYC Department of Consumer
& Worker Protection
42 Broadway
New York, NY 10004

Re: NYC DCWP April 2026 Click to Cancel Proposed Rule
Proposed Addition of a New Part 8 of Subchapter A of Chapter 5 of Title 6
of the Rules of the City of New York

*Comments of Shelmun Dashan, Policy Director, and Ted Mermin, Executive Director,
UC Berkeley Center for Consumer Law & Economic Justice*

Dear Commissioner Levine:

We – Shelmun Dashan and Ted Mermin of the Center for Consumer Law and Economic Justice at the UC Berkeley School of Law¹– submit this comment in response to the Department’s request for comments on its proposed Click to Cancel Rule regarding cancellation of subscriptions.²

We strongly support the DCWP’s proposed Rule. This comment explains the basis for our support and provides examples that we have identified of unlawful automatic renewal or continuous service practices. We also offer the following suggestions for clarifying and strengthening the Rule:

- Add a requirement for companies to maintain records of consumers’ affirmative consent;
- Add to § 5-110.1(f) a requirement that companies (1) promptly refund all charges incurred after a consumer’s cancellation request, (2) stop future charges, and (3) backdate cancellation to the date the consumer requested it;
- Require retention of records showing a consumer’s affirmative consent (written, telephonic, or electronic) that extends at least 2 years after the end of a consumer’s subscription.
- Add to § 5-110.1(e)(2), “requiring the consumer to make a payment, or deplete account credits in order to cancel.”

¹ Affiliation listed for identification purposes. The views expressed in this letter are those of its authors.

² DCWP, Cancellation of Subscriptions, Click to Cancel Proposed Rule, <https://rules.cityofnewyork.us/wp-content/uploads/2026/04/DCWP-NOH-Proposed-Rules-Relating-to-Cancellation-of-Subscriptions.pdf>

- These additions would explicitly prohibit practices employed by a commonly-used software company and a well-known nationwide massage franchise, respectively.
- Add a comma, for clarity, to § 5-110.1(e)(2) between “obstruct” and “unreasonably delay”.
- § 5-110.1(g) is difficult to follow and seems ripe for evasion by manipulation of the renewal period lengths to fall just outside of the listed periods.
- § 5-110.1(i): Reduce the trial period duration to 7-days - a common length for trial periods. Consider adding “upcoming” before “automatic renewal or continuous service charge” in the first line of § 5-110.1(i).

We thank DCWP staff for their work crafting and proposing this much-needed rule which adopts most model provisions for Click to Cancel laws.³

I. Introduction And Background: Subscription-Based Products Regularly Deceive Consumers And Make Cancellation Infeasible Or Impractical.

We strongly support the Department’s efforts to combat deceptive practices in subscription marketing models and, particularly, to ensure that consumers are given simple methods to cancel subscriptions that they no longer want or cannot afford. We agree with the Department that “[f]ailing to provide an easy way to cancel a subscription is ... an unconscionable trade practice because it forces customers to purchase services they no longer want, requiring consumers to jeopardize more money than was immediately at issue in the transaction.”⁴

The heart of what drives markets toward efficiency is consumers being able to switch away from products they don’t like (quality) or away from products that are more expensive than comparable options (price) and instead reward companies who offer products they like more or that are cheaper. Subscription traps are anti-efficiency wrenches thrown into the gears that are supposed to exert pressure on companies to improve their products and lower their prices. Subscription traps also harm companies who are competitive by trapping their would-be customers in inferior or more expensive products.

Subscription traps are particularly reprehensible in the context of an affordability crisis that has families making difficult choices about their basic necessities - food, medical care, utilities, housing, and transportation. For too many New Yorkers living paycheck to paycheck, a \$10 subscription trap (or three or four) can have a substantial impact on their family’s food and transportation access. That is on top of the stress and wasted time of trying to navigate each company’s process.

³ Model Provisions in *Click to Cancel Legislation. End Subscription Traps*, <https://endsubscriptiontraps.com/model-provisions> (accessed May 8, 2026).

⁴ DCWP, Cancellation of Subscriptions, Click to Cancel Proposed Rule, at 2.

A. Businesses Regularly Use Dark Patterns to Facilitate Enrollment in Subscription-Based Products and Inhibit Cancellation.

A wide variety of industries and businesses employ manipulative subscription techniques that amount to unfair and deceptive commercial practices. These techniques include dark patterns—“practices that trick or manipulate users into making choices they would not otherwise have made and that may cause harm.”⁵ Certain types of opportunistic marketing also take advantage of consumers by changing the price or quality of a particular service after the consumer has initiated or even completed the transaction.⁶

The examples in the Appendix illustrate the many ways that businesses use dark patterns and other manipulative techniques in subscription-based services. For example, in 2024 ads BMW and Tesla appear to have misrepresented certain features of their vehicles and to have required consumers to subscribe to an additional service to access the full software capability of the hardware they had purchased. *See* Appendix §§ 4, 14.⁷

Companies also use dark patterns and other deceptive practices to make it difficult for consumers to navigate subscription cancellation processes. As a result, consumers may face significant barriers to exit that are far out of proportion to the ease of entry. For example, Sirius XM deployed a byzantine cancellation process with confusing terms and conditions in addition to requiring subscribers to undertake multiple steps to cancel. Appendix § 13.⁸ Meanwhile, companies such as Embodied Inc. and Vitality Extracts have required consumers to call a customer service representative or fill out a form to cancel subscriptions despite permitting

⁵ Fed. Trade Comm’n, *Bringing Dark Patterns to Light 2* (2022); *see also* Cal. Civ. Code § 1798.140(l) (“‘Dark pattern’ means a user interface designed or manipulated with the substantial effect of subverting or impairing user autonomy, decisionmaking, or choice, as further defined by regulation”); Mark Leiser, *Illuminating Manipulative Design: From “Dark Patterns” to Information Asymmetry and the Repression of Free Choice Under The Unfair Commercial Practices Directive*, 34 Loy. Consumer L. Rev. 484, 484 (2021) (defining dark patterns as “tricks used in websites and applications that make users do things that they did not mean to, like buying or signing up for something”); Jamie Luguri & Lior Jacob Strahilevitz, *Shining a Light on Dark Patterns*, 13 J. Legal Analysis 43, 46 (2021) (finding that “dark patterns are strikingly effective getting consumers to do what they would not do when confronted with more neutral user interfaces”).

⁶ Timothy J. Muris, *Opportunistic Behavior and the Law of Contracts*, 65 Minn. L. Rev. 521, 521 (1981) (explaining that opportunistic behavior occurs when a “performing party behaves contrary to the other party’s understanding of their contract, but not necessarily contrary to the agreement’s explicit terms, leading to a transfer of wealth from the other party to the performer”); *see* Prof. Chris Hoofnagle, Comment Letter on Rule Concerning the Use of Prenotification Negative Option Plans, *Comment on Negative Option Rule 9* (May 26, 2023), <https://www.regulations.gov/comment/FTC-2019-0082-0002>.

⁷ BMW requires owners of their new vehicles to separately subscribe to a service to access the heated seat and steering wheel capabilities of their vehicles. Tesla requires owners of their vehicles to separately subscribe to access the self-driving capabilities of their vehicles.

⁸ In 2023, the FTC sued Amazon for its “Iliad Flow” cancellation process that was allegedly designed to inhibit or prevent consumers from canceling their Prime subscriptions. Compl., *F.T.C. v. Amazon.com, Inc.* at ¶¶ 113-48 (W.D. Wash. filed June 21, 2023); *see also* App. §§ 1, 3. (documenting dark patterns used by Amazon in its Prime Student and Audible services).

simple enrollment online—and consumers have consistently reported that the phone lines are not answered and cancellation forms are ignored. These types of practices require subscribers to invest significant time attempting to find out how they can cancel their unwanted subscriptions, and too often result in subscribers just giving up—which may, of course, be the point. Appendix §§ 6, 17.

B. Rulemaking is Necessary to Curb the Use of Dark Patterns and Other Deceptive Automatic Renewal or Continuous Service Subscription Practices.

In general, subscription businesses have thus far shown little interest in making cancellation processes easy for consumers. The lack of voluntary action militates for clearer, enforceable laws. As subscription-based services have proliferated in recent years,⁹ so too have consumers' complaints about the difficulties they encounter when they try to cancel those services.¹⁰ Meanwhile, consumers are spending even more of their money on subscriptions than they believe. A 2022 study found that consumers underestimated their subscription costs by an average of \$133 a month or \$1,596 per year, and that about 42 percent of consumers reported they had continued to pay for a subscription service well after they had stopped using it.¹¹

Industry self-regulation, standing alone, has proven ineffective to ensure easy cancellation mechanisms. For example, the Association of National Advertisers (ANA), which counts among its members over 900 major companies including Google, DirectTV, Disney, and Comcast, offers guidelines to its members for their “advance consent/negative option marketing” plans, but those guidelines simply suggest that sellers furnish refund requests “promptly” and allow for a “reasonable time period” between subscription reminders and renewals for possible cancellation.¹² The guidelines do not contain any recommendations about what cancellation processes should entail or how they should be presented to the consumer, let alone that cancellation should be as easy as the mechanism to consent to the contract.¹³

The Department’s proposed Rule should help address many of these problematic subscription practices, including those we have provided in the Appendix. By requiring the mechanism of cancellation to be as easy as the mechanism to provide consent and in the same medium, issues like overly complex cancellation processes with multiple steps will be minimized.¹⁴ Additionally,

⁹ See, e.g., UBS, *Investing in Digital Subscriptions* (Mar. 11, 2021), <https://tinyurl.com/htzyrsj8> (projecting “the subscription economy to expand into a USD 1.5 trillion market by 2025 . . . [which] would make it one of the fastest-growing industries globally”).

¹⁰ Elaine Povich, Pew Charitable Trs., *It Turns Out State Lawmakers Hate Auto-Renew Contracts* (Mar. 4, 2022), <https://stateline.org/2022/03/04/it-turns-out-state-lawmakers-hate-auto-renew-contracts-too/> (noting that, in 2020, the BBB reported more than 58,400 complaints about “free trials” and automatic renewals over the previous three years, in which customers lost an average of \$140).

¹¹ C + R Research, *Subscription Service Statistics and Costs* (May 18, 2022), <https://www.crrresearch.com/blog/subscription-service-statistics-and-costs/>.

¹² ANA, *Guidelines for Ethical Business Practice* 18-20 (2020), <https://www.ana.net/getfile/30491>.

¹³ See *id.* at 20.

¹⁴ DCWP, Cancellation of Subscriptions, Click to Cancel Proposed Rule, at § 5-110.1(b).

requiring “clear and conspicuous” disclosures of material terms related to the automatic renewal and a description of the underlying goods or services will help prevent cancellation terms from being shrouded in mystery through complicated terms and conditions, while also blocking the practice of hiding subscription services that are needed to fully use a product.¹⁵

Whether or not consumers make decisions to subscribe to a product or service based on its cancellation provisions, knowing they can cancel any way the company allows sign up¹⁶ will empower them should they need it. The Rule also increases deterrence of subscription trappers because it will be much easier for the subset of dedicated consumers or consumer advocates who are aware of the law, or care to find out, to determine whether consumer rights have been violated and to successfully get redress.¹⁷

C. Adoption of The Proposed Rule Will Set the Standard for Other Jurisdictions.

When finalized, the Department’s Rule will provide important guardrails for businesses that utilize subscription marketing services. Current federal and state laws have proved insufficient to protect consumers broadly against deceptive and abusive automatic renewal or continuous practices. The Rule will provide a consistent and predictable legal framework for consumers and businesses alike.

If adopted as proposed, the Rule will provide consistency, predictability, and benchmarking benefits. It sets an example to other jurisdictions debating enacting or promulgating subscription trap laws that unfair practices in this area can be curtailed across the board with simple language and clear rules. It also creates incentives for the FTC, which is currently engaged in round two of crafting a subscription practices rule after its first attempt was struck down on procedural grounds, to finalize a rule that is as strong or stronger than its previous rule. Currently, about half of states have a law specifically addressing automatic renewal or continuous service agreements; nearly all of those laws are more limited in their scope and coverage than DCWP’s proposed Rule. For example, Virginia’s automatic renewal law requires businesses to provide consumers with the information necessary for them to cancel their subscriptions, but does not mandate a simple cancellation method or annual reminders of ongoing subscriptions.¹⁸ Moreover, some state laws are limited only to certain types of contracts: for instance, Arkansas law governs only home security contracts, while laws in Iowa, Maryland, and Pennsylvania are limited to health club memberships. Other states’ laws may be general in scope but are riddled with exemptions and loopholes.¹⁹

¹⁵ *Id.*

¹⁶ *Id.* at § 5-110.1(d).

¹⁷ See Yonatan Arbel & Roy Shapira, *The Theory of the Nudnik*, 73 Vand. L. Rev. 929 (2020) (spotlighting the disciplinary power of a small subset of consumers who call to complain, complete satisfaction surveys, demand to speak with managers, post detailed online reviews, and file lawsuits).

¹⁸ See Vir. Code § 59.1-207.46; see also Ark. Code § 4-86-106; Iowa Code § 552.8; La. Rev. Stat. 9:2716.

¹⁹ Ark. Code § 4-86-106; Iowa Code § 552.8; Md. Code Ann., Com. Law § 14-12B-06; 73 Pa. Stat. § 2164.

The breadth and relative lack of counterproductive carveouts is a salutary feature of DCWP’s Proposed Rule. In many states, disappointingly but unsurprisingly, the industries that profit most from subscription traps successfully lobby to be carved out of state click-to-cancel laws. The strength of DCWP’s law would give state and federal advocates stronger proof of concept to challenge future carveouts and a powerful argument against accepting existing carveouts in the future. After all, the federal Restore Online Shoppers’ Confidence Act (ROSCA)²⁰, already requires most subscription offerors to provide simple cancellation methods. The most valuable addition of local laws is creating a bright line definition for “simple,” requiring reminders, and creating credible enforcement mechanisms - which are not in ROSCA.

II. While the Proposed Consent Requirement Adequately Responds To Consumers’ Lack Of Bargaining Power In Transactions, The Department Should Strengthen The Language To Protect Against Dark Patterns.

As discussed above and illustrated by the examples in the Appendix, dark patterns regularly trick consumers into agreeing to something in a transaction that, clear-eyed, they would not ordinarily agree to. As both the State of California and legal scholars have found, a seller’s use of dark patterns can obviate a buyer’s consent to engage in a transaction.²¹ The Department should expressly state that consumer agreements “obtained through the use of deceptive or unfair dark patterns do not constitute affirmative consent.”

III. The Rule Rightly Requires Affirmative Consent To Enter An Automatic Renewal Or Continuous Service Contract, But Should Also Require Creation And Retention Of A Record Of That Consent.

We strongly endorse the provision of the proposed Rule requiring persons providing automatic renewals or continuous service offers to obtain affirmative consent for such agreements. We suggest, however, that the provision be more plainly stated.²² Requiring “affirmative consent” clarifies—as state data privacy laws do—that neither silence nor inactivity can constitute consent.²³ For consumers and law enforcement to effectively enforce this requirement, DCWP’s Rule should also require that companies create and maintain (for two years after the end of the consumer’s subscription) records of consumers’ consent to enter such agreements.

IV. The Proposed Rule Appropriately Preserves “Save Attempts” While Prohibiting Using Them to Trap Consumers.

Finally, we support the Department’s “simple cancellation” mechanism outlined in proposed section 5-110.1(c), which calls for cancellation methods “as easy to use as the mechanism that

²⁰ 15 U.S.C. §§ 8401-8405.

²¹ *See, e.g.*, Cal. Civ. Code § 1798.140(h) (“[A]greement obtained through use of dark patterns does not constitute consent”); Luguri & Strahilevitz, *supra* note 5, at 96 (concluding that “the use of dark patterns to secure a consumer’s consent can render that consent voidable by virtue of undue influence”).

²² DCWP, Cancellation of Subscriptions, Click to Cancel Proposed Rule, § 5-110.1(f).

²³ *See, e.g.*, Cal. Civ. Code § 1798.140(h) (declaring that “[h]overing over, muting, pausing, or closing a given piece of content does not constitute consent”).

the consumer used to provide consent.” Sellers will thereby be prevented from trapping consumers in automatically renewing subscriptions through obstacles created by tedious processes²⁴ or confusion.²⁵

We applaud the Department’s recognition²⁶ that some consumers like and benefit from pre-cancellation discount offers (“saves”) but that those offers can be thinly-veiled dark patterns designed to frustrate consumer efforts to cancel.

Some companies have already adapted their cancellation user interface by (1) simultaneously presenting the option to “Finalize Cancellation” or “Renew Subscription with [discount]” or (2) presenting the save immediately after cancellation. If a company wants to present a bona fide discount without trapping consumers, the proposed Rule does not get in its way.

The proposed rule would preserve saves without permitting a “nagging” dark pattern, which occurs when a seller makes “[r]epeated requests to do something the firm prefers.”²⁷ Nagging can take the form of a “repeated intrusion during a regular interaction that obstructs or redirects the user’s focus, such as pop-up windows.”²⁸ For example, Instagram uses nagging techniques through its repeated pop-up requests for users to turn on their notifications.²⁹ In this example, the continuous requests for permission to give notifications wear down the will of many users until they eventually resign and accept notifications.

²⁴ For example, the NY Attorney General sued Sirius XM for requiring its subscribers “to call or chat online with an agent to cancel a subscription, and train[ing] its agents not to take ‘no’ for an answer.” *Attorney General James Stops SiriusXM from Trapping New York Customers in Unwanted Subscriptions* (Nov. 24, 2024), <https://ag.ny.gov/press-release/2024/attorney-general-james-stops-siriusxm-trapping-new-york-customers-unwanted>.

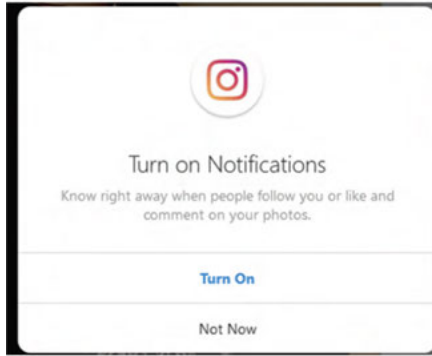
²⁵ The necessary page to initiate cancellation to an Amazon Prime Student subscription is confusingly obscured by other information. App. § 1; *see* Compl., *F.T.C. v. Amazon.com, Inc.* at ¶¶ 113-50.

²⁶ DCWP, Cancellation of Subscriptions, Click to Cancel Proposed Rule, § 5-110.1(e)(2).

²⁷ *See* Luguri & Strahilevitz, *supra* note 5, at 53; *see also* Brignull et al., *Deceptive Patterns, Nagging* (last updated Apr. 25, 2023), <https://www.deceptive.design/types/nagging> (defining nagging as an “adversarial resource depletion” aimed at shaping consumer behavior to conform with the marketer’s preferred wishes).

²⁸ Leiser, *supra* note 5, at 504.

²⁹ Alison Hung, *Keeping Consumers in the Dark*, 121 *Colum. L. Rev.* 2483, 2489 (2021).



Without the Department’s Rule, sellers could also combine nagging with another dark pattern known as “obstruction,” in which users must “jump through unnecessary hoops to reject a service.”³⁰ A well-known example of obstruction is the former cancellation process for the *New York Times*, which required multiple steps to confirm cancellation.³¹ Appendix § 10. The paper’s process has since been improved after public outcry and a settlement reached between the paper and Attorney General Letitia James.³²

V. Conclusion

We applaud the Department for its efforts to protect consumers from deceptive and manipulative dark patterns. As outlined in the Appendix that follows, a wide variety of subscription sellers deploy dark patterns to maximize profits at the expense of consumers. We believe the final Rule can be a powerful tool in fighting these dark patterns and in protecting consumers.

On internet social media forums where consumers complain about subscription traps and crowdsource advice to beat obstructive dark patterns, a common piece of advice³³ is for the consumer to change their computer or phone location to a jurisdiction with strong Click to Cancel laws. Often, the complaining consumer provides feedback that that was the only strategy that got them an easy cancellation mechanism. Soon, many fewer New Yorkers will have to seek or use such advice.

³⁰ Luguri & Strahilevitz, *supra* note 4, at 47; *see also* Brignull et al., Deceptive Patterns, *Obstruction* (last updated Apr. 25, 2023), <https://www.deceptive.design/types/obstruction> (defining obstruction as “obstacles or roadblocks” making it more difficult for users to complete their desired action).

³¹ *Cancel the New York Times? Good Luck Battling “Dark Patterns,”* Nir and Far, <https://www.nirandfar.com/cancel-new-york-times/#>

³² NY AG Settlement with NY Times, https://newyorkagsettlement.com/wp-content/uploads/2025/12/NYAGNYTimes_Digital_ClaimForm.pdf

³³ *Let me cancel my gym membership.* r/rant. Reddit. (2025) https://www.reddit.com/r/rant/comments/1k7kg64/let_me_cancel_my_gym_membership/ (Last visited May 8, 2026); *YSK if a website makes it impossible to cancel a subscription online you can often just change your address to california.* r/youshouldknow. Reddit (May 2, 2026) https://www.reddit.com/r/YouShouldKnow/comments/1t1zlx/yks_if_a_website_makes_it_impossible_to_cancel_a/

We welcome the Department's initiative and appreciate the opportunity to provide these comments. If you have any questions or if we can provide further information, please do not hesitate to contact us.

Sincerely,

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Adam Pukier, J.D. '24
Eva Thomas, J.D. '25
Bennett Williams, J.D. '25

UC Berkeley School of Law

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* This Appendix was originally compiled in June 2023. The examples are illustrative even if they are not current. Many companies improved their practices in light of the (later-stricken) FTC Rule.

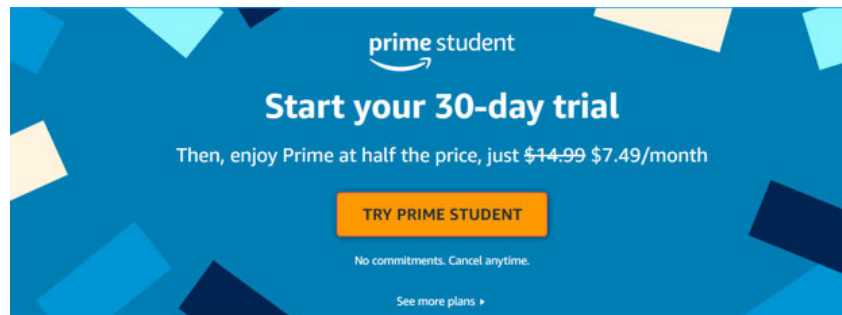
1. Amazon Prime Student

Product: Online retail and delivery.

Billing Policy: \$7.49 to \$14.99 per month (depending on discounts).

Enrollment Process:

1. Click the large, orange-highlighted “Try Prime Student” button in the center of Amazon’s homepage.
2. Review a list of benefits and payment methods.
3. Click the yellow-highlighted “Start your 30-day trial” (instead of the non-highlighted text stating “No Thanks”). Both buttons are located above the smaller text that state that Amazon will charge the card on file automatically at the end of the free trial.



Your Prime Student Benefits



No Thanks Start your 30-day trial

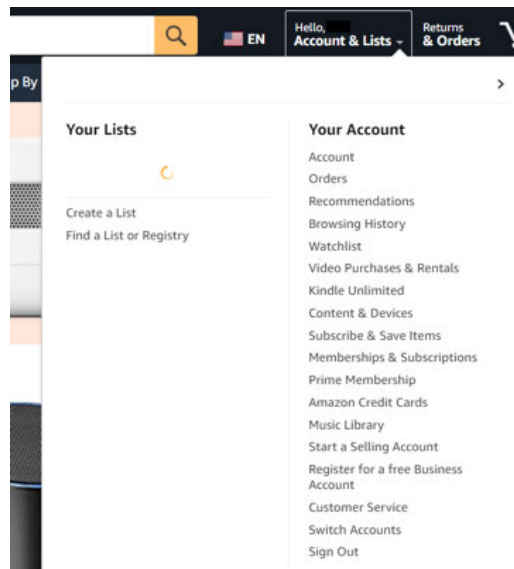
By signing up, you acknowledge that you have read and agree to the Amazon Student and Amazon Prime Terms and Conditions. At the end of your free 30-day trial, your membership will automatically upgrade to Amazon Prime membership charged per month, and we will charge your default payment method or another payment method on file \$7.49/month plus any applicable taxes. You may cancel anytime by visiting Your Account and adjusting your membership settings. You will continue to receive Amazon Prime for \$7.49/month, plus any applicable taxes, for as long as you are an Amazon Student member for a total benefit period up to 4 years (free and discounted) after which your Amazon Prime benefits will renew at the full price and continue until cancelled. The Amazon Student \$7.49 Prime plan includes the same benefits as Amazon Prime, but these benefits can't


Enrollment Process

Cancellation Process:



1. Mouse over the Accounts & List icon to display a drop-down menu with 2 sections and 20 items.
2. Click “Prime Membership,” located more than halfway down on the righthand side.

3. Ignore a yellow-highlighted button against a deep blue gradient that states “See all your Prime benefits” and a bright-blue banner that states “Celebrate deals exclusively for Prime members – Discover more” with a cartoon depicting people dancing.
4. Ignore options to “See more plans” and “Update your payment method.”
5. Click the “Manage Membership” option in the upper right corner.
6. Ignore the first option, which will send me a reminder 3 days before my Prime plan renews.
7. Click the “End trial and benefits” button, underneath a warning that the user will lose access to their Prime benefits if they cancel.
8. Read a notice that the user still has 29 days left in their free trial before the next billing cycle.
9. Review 3 links with large cartoon graphics describing Amazon Prime benefits: delivery, video, and exclusives.
10. Choose the “Continue to cancel” button from among 3 identical, yellow-highlighted buttons. The other two state “Remind Me Later” and “Keep Membership.”
11. Choose between “Cancel on renewal” and “Pause on renewal” options.
12. Read an indented, bolded notice that the user will no longer be eligible for Prime exclusive offers if they cancel.
13. Review a “Need Help?” panel, which displays a list of the benefits of Prime membership.
14. Choose the button that states “End on [Renewal Date]” instead of “Remind Me Later” or “Keep Membership.”
15. View an orange-outlined notice that the Prime benefits will expire after the renewal date.
16. Avoid clicking the orange-highlighted button that says “Continue Prime after [renewal date].”




29 days left in your Student trial
Prime Plan Free Trial See more plans ▾
Renewal Date May 4, 2023 Update your payment method ▾
Manage Membership Update, cancel and more ▾

Welcome to Prime, Eval
 Check out what's included with your Prime membership
[See all your Prime benefits](#)


Celebrate deals exclusively for Prime members 
[Discover more ▾](#)

Prime Membership Benefits
[SHIP](#) [STREAM](#) [SHOP](#) [READ](#) [MORE](#)

Manage Membership
[Update, cancel and more ▲](#)

Remind me before renewing
 Send a reminder on May 01, 2023, 3 days before my renewal date.

End Membership
 By ending your membership you will lose access to your Prime benefits.

████, Do you still want to end your Prime Student benefits?

You still have **29 days left** to enjoy your Prime Student benefits until the next billing cycle

Prime Delivery



Fast, FREE, and convenient ways to get millions of items, from unlimited Two-Day Delivery to Same-Day and 2-Hour Delivery in select areas

[Remind Me Later](#)

Prime Video



Skip the theatre by streaming thousands of movies and shows, included in your membership.

[Keep Membership](#)


Exclusives



Prime Students get access to exclusive deals, discounts, and offers from Amazon and partners

[Continue to cancel](#)

Please confirm your Prime membership cancellation

	Current Plan Free Trial	Next Billing Date 05/04/23
<input checked="" type="radio"/> Cancel on renewal 05/04/23 <input type="radio"/> Pause on renewal 05/04/23	Your Prime benefits will end on May 04, 2023. After that date your benefits will end, and you will no longer be charged for your Prime membership. <ol style="list-style-type: none">By cancelling, you will no longer be eligible for your unclaimed Prime exclusive offers.	
Remind Me Later	Keep Membership	End On May 04, 2023

Need Help?

What are the benefits included in my Prime membership?

What are my unused benefits?



How do I manage my billing information?

How do I check status of my orders?

Don't see your question? [Click here for more.](#)

As an Amazon Prime member, you have access to:

- **Prime Delivery:** Unlimited Two-Day Shipping on over 100 million items and One-Day Shipping and Same-Day Delivery in over 10,000 cities and towns as well as 2-Hour Delivery with Prime Now in select cities.
- **Prime Video:** Unlimited streaming of Movies, TV shows, and Amazon Originals

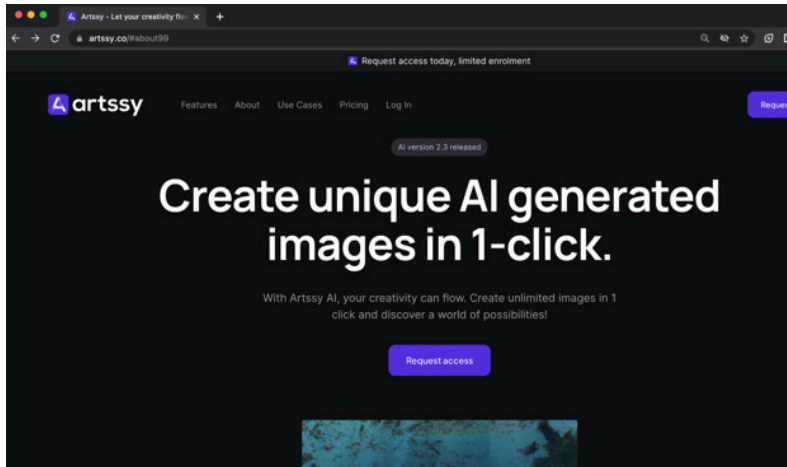
 29 days left in your Student trial	Prime Plan Free Trial	Membership ending May 4, 2023 Edit your payment method	Manage Membership Update, continue and more
 Your Prime membership will expire on May 4, 2023 You will no longer have access to Prime benefits when your membership ends.			Continue Prime after May 4, 2023

2. Artssy AI

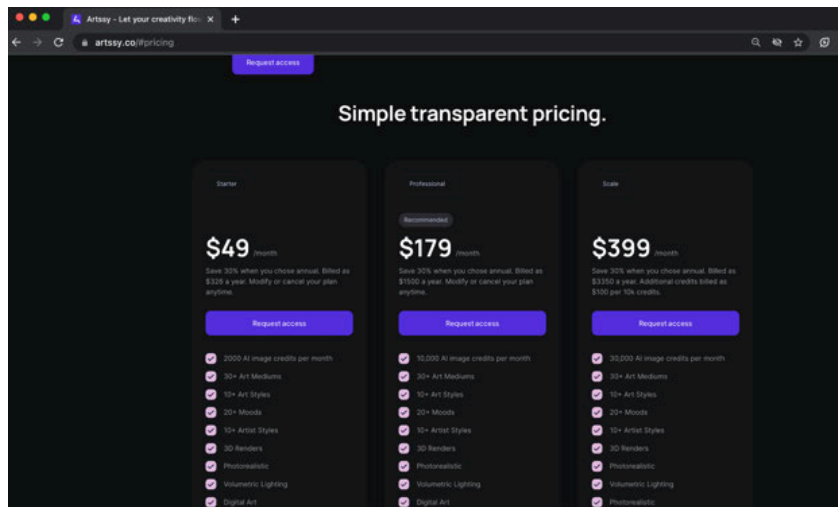
Product: A subscription-based tool that allows users to easily create AI generated images.

The service appears to be still in its trial phase and allows only a limited number of users after reviewing the user's request for access.

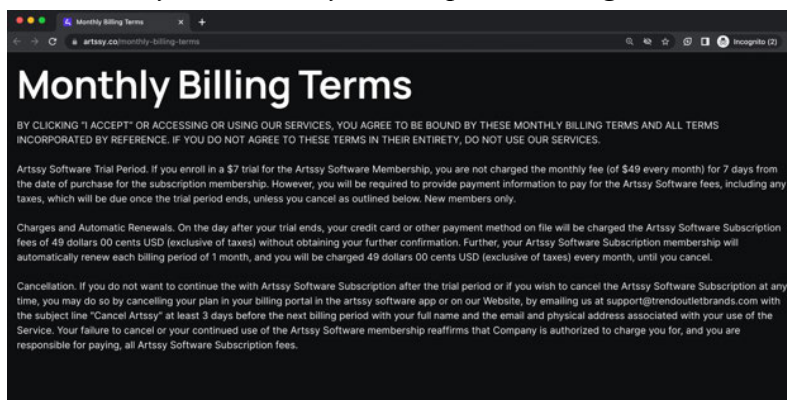
Cancellation Process: According to a consumer's complaint, it is nearly impossible to cancel the subscription with Artssy AI and its cancellation button does not work. The consumer also had difficulty contacting Artssy AI's customer service to process the subscription cancellation. As per the provider's Monthly Billing Terms and Contact Us section, the only means to get in touch with the provider is via an email address (support@trendoutletbrands.com).



Artssy AI's Home Page.



Artssy AI's Monthly Subscription Pricing Plans.



Artssy AI's Monthly Billing Terms, which discuss the subscription cancellation process.

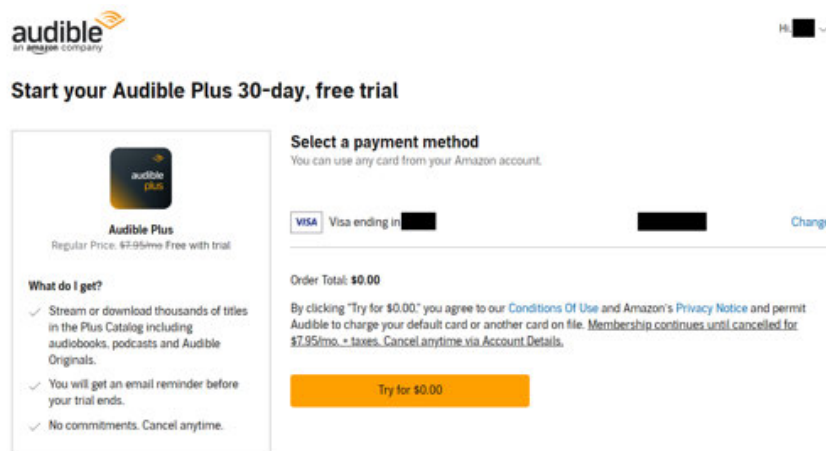
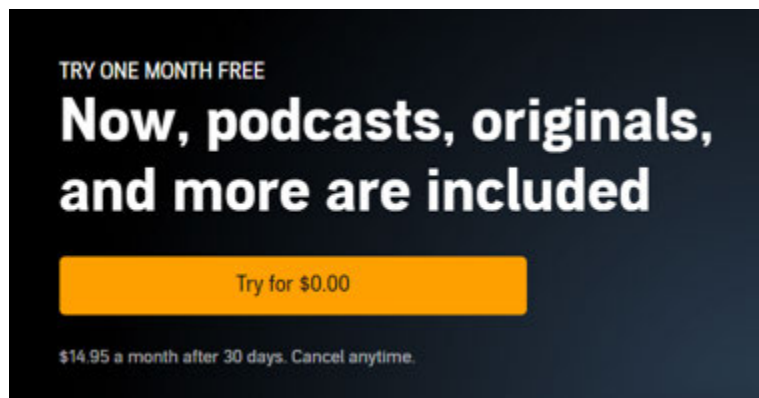
3. Audible

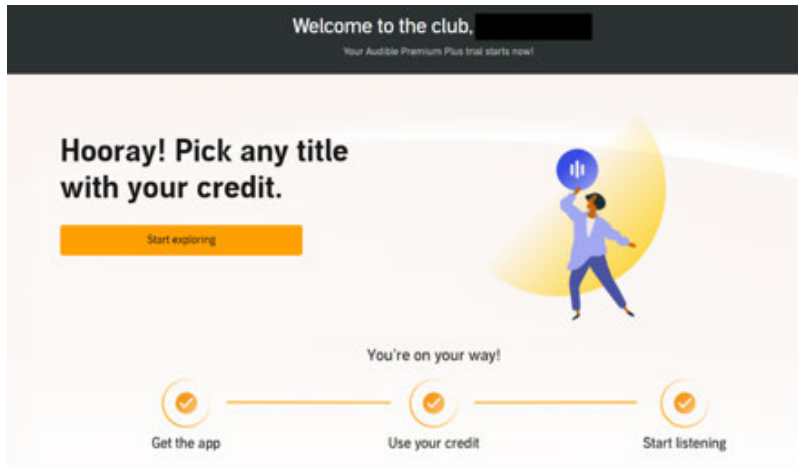
Product: Audiobook and podcast app

Billing Policy: Audible is a monthly subscription of either \$7.95 or \$14.95, depending on the tier. Audible accepts only credit cards, not debit cards. Members cannot receive a refund after canceling.

Enrollment Process:

1. Navigate to Audible's homepage.
2. Click the orange-highlighted "Try for \$0.00" button. Beneath this button, small, low-contrast text states that the cost is \$14.95 per month after 30 days.
3. Since the user is already signed into their Amazon account, they do not need to login or create login credentials. The account also auto-populates payment information, so the user does not need to enter any information like their card number or billing address.
4. Review the terms and benefits of the service. The price of \$7.95 per month is crossed out and followed by higher-contrast text that states "Free with trial." The order total is displayed as "\$0.00."
5. Click the orange-highlighted "Try for \$0.00" button.

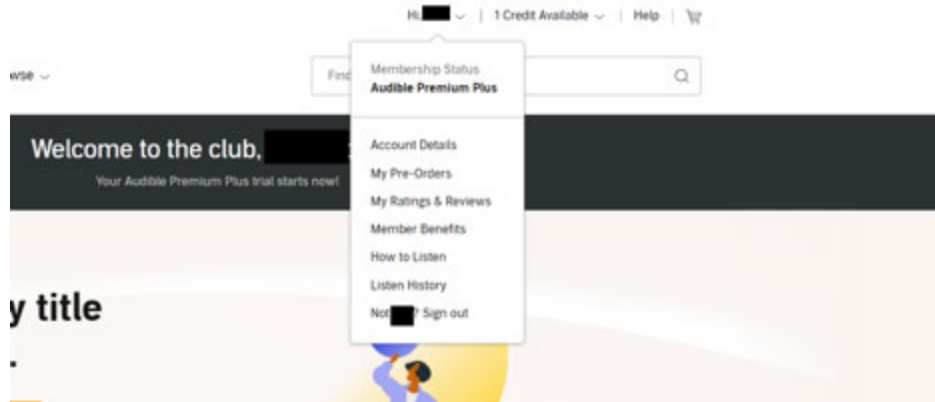




Cancellation Process:

Customers who signed up through the Audible website can cancel their membership through the website or by contacting a customer service representative. Customers who signed up through a mobile app must cancel their subscription via their phone's operating system (either iOS or Google Play).

1. Log in to the Audible website via the user's Amazon account.
2. Mouseover the user's profile icon to see a dropdown menu.
3. Select among the dropdown options that lead to cancellation (although it is not clear from the website): "Member Benefits" and then "Account Details."
4. Ignore an image advertising Audible's rewards program.
5. Ignore a list of membership benefits.
6. Ignore a highlighted "Switch membership" button next to the non-highlighted "Cancel membership" button.
7. Click the "Cancel membership" button.
8. View a notice warning the user they will lose a 1 unused credit if they cancel.
9. Scroll past images advertising 27 titles Audible carries.
10. Ignore an image advertising Audible's rewards program.
11. Click the "Continue to cancel" button.
12. Ignore a warning about the unused credits and membership benefits the user will lose if they cancel.
13. Fill out a form telling Audible why the user wants to cancel.
14. Click the "Continue canceling" button.
15. Scroll past 3 offers for discounted memberships (even though the reason the user selected was not related to cost).
16. Ignore a request to call customer service.
17. Click the "Confirm cancellation" button.
18. View an advertisement for Audible's rewards program, a warning that the user's membership will end soon, and directions about how to reverse cancellation.



Everything you want to hear is here

Audible Premium Plus members get the full Audible listening experience, including your pick of the latest best sellers, new releases, plus access to the entire Audible Plus Catalog.



Your Premium Plus membership includes:



Credits
[Learn more >](#)



The Plus Catalog
[Explore >](#)

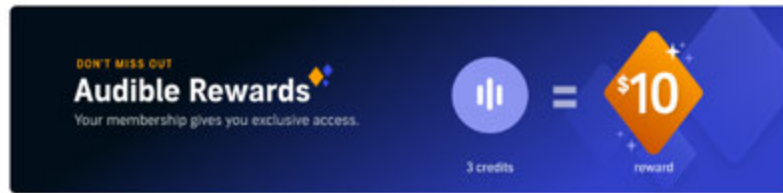


Audible Rewards
[Learn more >](#)


Member benefits page (does not begin the cancellation process).

Membership details

- Credit summary
- Payment
- Settings
- Listen History
- Purchase History
- Gift history
- Notifications



Your membership



Audible Premium Plus
You have 1 Credit
[View your credit summary](#)

Your next bill date is: 05-02-2023
or at the end of your free trial, if any.
Thanks for being a listener since: 07-31-2018

Membership gives you access to:

- One monthly credit to buy any title from our entire premium selection to keep
- Exclusive deals and discounts
- The Plus Catalog—a selection of thousands of Audible Originals, audiobooks, and podcasts including exclusive series.

[Switch membership](#) [Cancel membership](#)

Account details page

Home > Manage Your Account > Cancel Membership



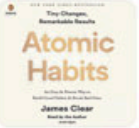
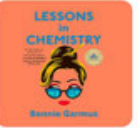

You have 1 unused credit

Use your credits before you cancel

You'll lose any credits you have at the end of your billing cycle. You can also pause or switch your membership instead to use them later.

Best sellers

[View all](#)

 <p>Outlive By: Peter Attia MD, an... 1 CREDIT</p>	 <p>Botticelli's Secret By: Joseph Luzzi 1 CREDIT</p>	 <p>Atomic Habits By: James Clear 1 CREDIT</p>	 <p>Lessons in Chemis... By: Bonnie Garmus 1 CREDIT</p>	 <p>Spare By: Prince Harry The D... 1 CREDIT</p>	 <p>I Will Find You By: Harlan Coben 1 CREDIT</p>
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Get member-only pricing and deals on select audiobooks

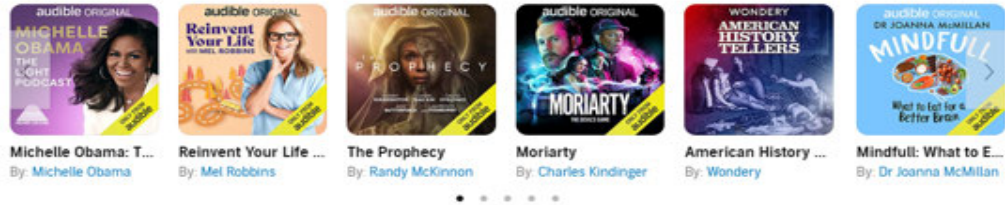
You get 80% off selected audiobooks and a 30% discount on any additional purchase with your current membership.

Premium Plus members-only deals

[View all](#)

				
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Popular ad-free podcasts



Audible Rewards
Don't miss out
You'll lose access to earning \$10 reward coupons with Audible Rewards.

Keep membership Continue to cancel

[Home](#) > [Manage Your Account](#) > [Cancel Membership](#)

Let us know why you're canceling

It'll just take a minute.

- I'm having technical problems
- I couldn't find audiobooks I liked
- I'm using another service
- I didn't know I was in a membership
- It's too expensive
- I don't use it enough
- Audiobooks aren't for me
- Other reason

Continue canceling

Don't leave anything on the table

[Use any remaining credits](#)

You'll no longer be able to use these after your final billing period is over, so be sure to use them before then.

[Hear titles in the Audible Plus Catalog](#)

For Audible Plus and Premium Plus members, after your final billing period is over, you'll lose access to the thousands of included audiobooks, podcasts, and Audible Originals—even those already in your Library. You can continue to listen to free podcasts without membership.

[Contact Customer Care](#)

If you have any unresolved issues, we're here to help.

WE HEAR YOU.

We'd love to make Audible work for you. Would you be interested in any of the options below?

YOUR CURRENT PLAN

Audible Premium Plus

Free trial, \$14.95 a month after trial ends

RECOMMENDED OFFER

Get Premium Plus at nearly 50% off for 3 months

Pay only \$7.49/mo for your next three months (\$14.95 a month thereafter). Get 1 credit every month, good to buy any title from our entire premium selection to keep. Continue to stream or download thousands of titles in the Plus Catalog. **\$7.49/mo** billed every month for the next 3 months

Get offer

Switch to a credit every other month for \$8.50/mo

You'll get 1 credit every other month to buy any title. Plus, you can listen to thousands of included titles. You can also enjoy exclusive deals and keep your credits until they expire. You will be billed \$17.00 every other month.

Switch Membership

Switch to annual plan for \$99.50 your first year

Switch to Audible Premium Plus Annual - 12 credits for only \$99.50 for your first year (\$149.50 a year thereafter). Get your annual 12 credits up front, each good to buy any title from our entire premium selection to keep. Continue to stream or download thousands of titles in the Plus Catalog.

Switch membership

We're here to help

Give us a call anytime. We're here to discuss anything from tech support to membership options.

We're here to help

Give us a call anytime. We're here to discuss anything from tech support to membership options.

[Contact Customer Care](#)

Confirm cancellation

Back to my account

ⓘ Your membership will be canceled at the end of your current billing period. You can continue to enjoy everything that's included with your membership before this date. ✕

Membership details

[Credit summary](#)
[Payment](#)
[Settings](#)
[Listen History](#)
[Purchase History](#)
[Gift history](#)
[Notifications](#)

DON'T MISS OUT
Audible Rewards
Your membership gives you exclusive access.

3 credits = \$10 reward

Your membership

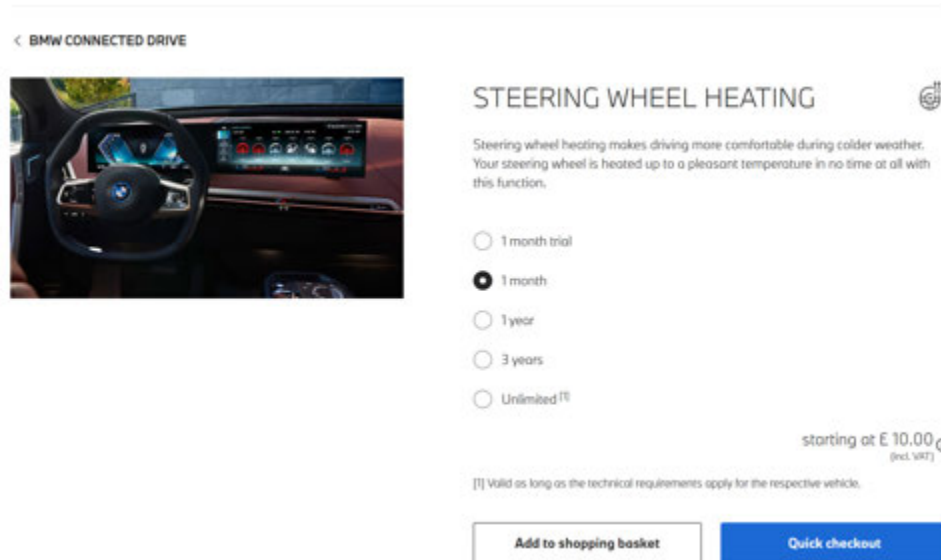
ⓘ Your membership will expire on May 02, 2023. You have less than 30 days left to enjoy your Audible Premium Plus membership and use any remaining credits — but it's not too late to change your mind.
[Keep my membership](#)

4. BMW

Product: Car company adding subscription services that are necessary to unlock the full software capabilities of hardware included in the purchase of the car.

- Shifting certain car accessories to a subscription service in Europe
- E.g., heated seats, steering wheels.

Billing Policy: Monthly payments for certain features

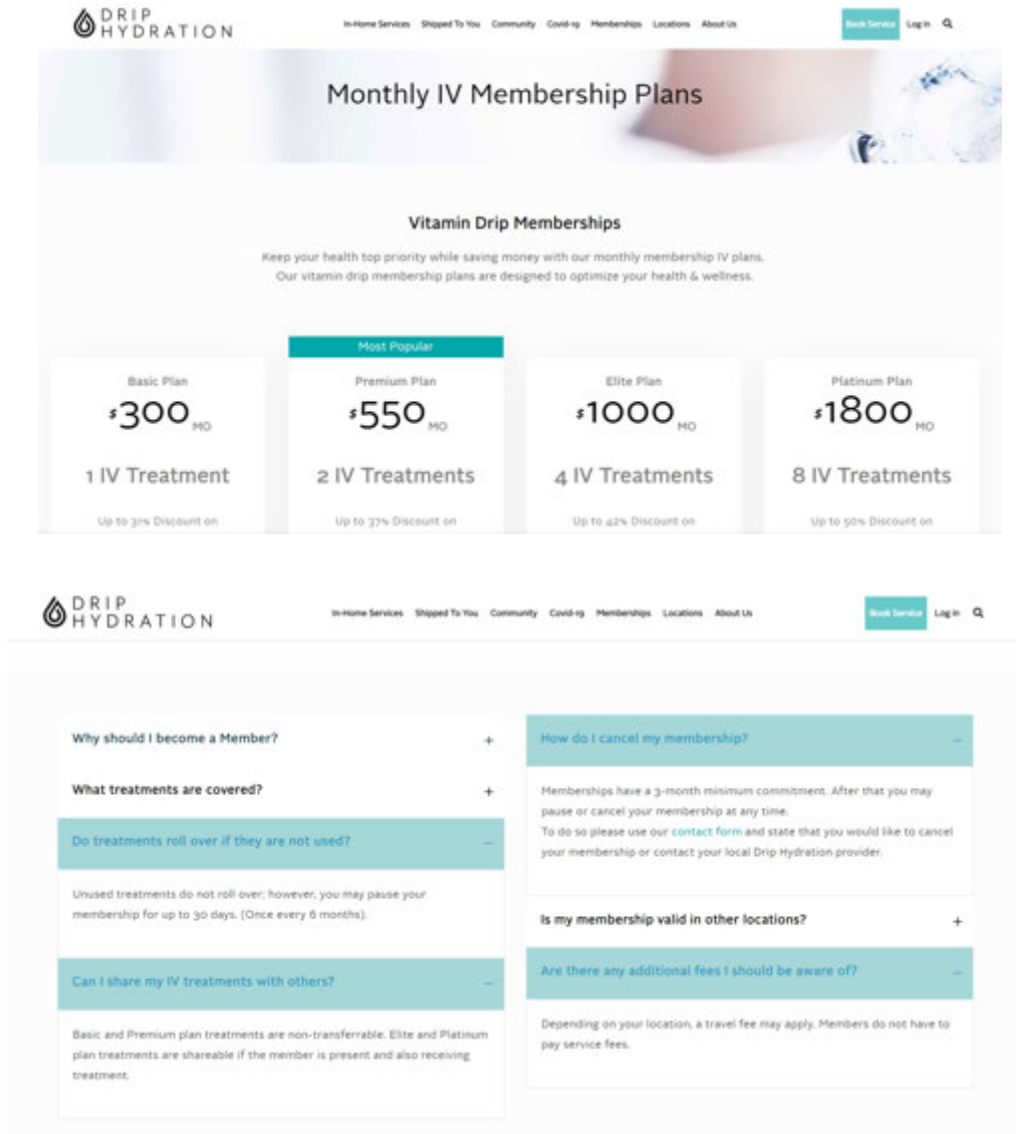


5. Drip Hydration

Product: Subscription health/wellness product. The Membership includes various services and enables access to IV drip “therapy” and “immune boosts.”

Billing Policy: Memberships require a 3 month commitment. Memberships can be paused for up to 30 days *and* only once per 6 months. Treatments do not roll over month-month

Cancellation Policy: There is no easy cancel button. Instead, one must fill out their general “contact form” indicating someone wants to cancel.



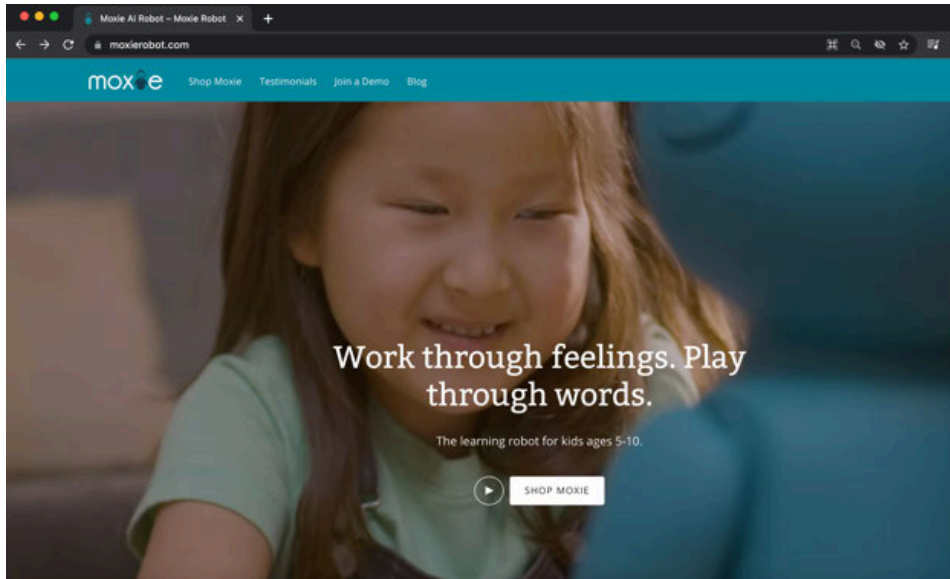
6. Embodied Inc.

Product: Embodied, Inc. is a company that creates AI learning robots for kids such as Moxie. The robot, Moxie, comes with a companion parent app.

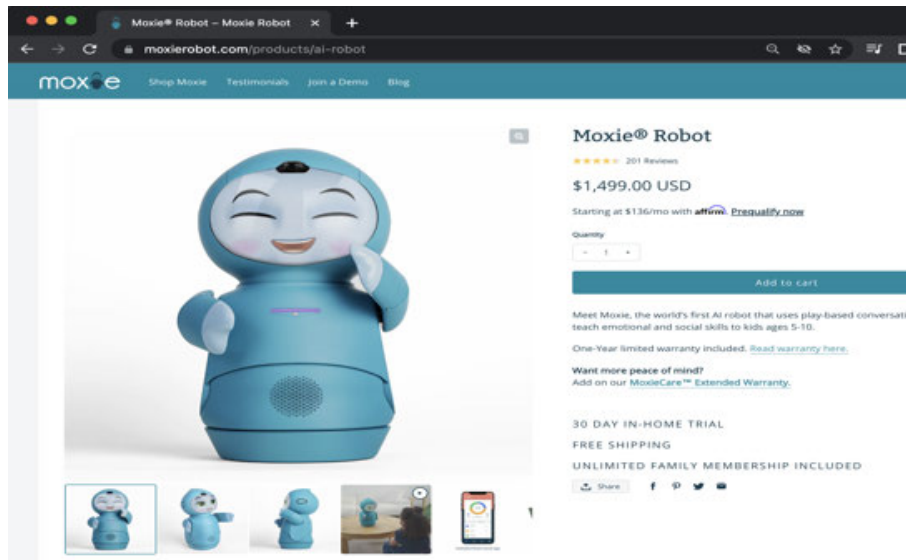
Billing Policy: According to the company’s website, a subscription is required to operate the Moxie robot and is necessary for the product to get over-the-air updates of new features and content. It appears that the company used to sell a monthly subscription for Moxie, but now sells a lifetime subscription. There also seems to be a monthly rental fee that might be a substitute for the monthly subscription.

Cancellation Policy: To cancel the monthly subscription, consumers need to contact the company’s support email (support@embodied.com). According to a consumer’s complaint,

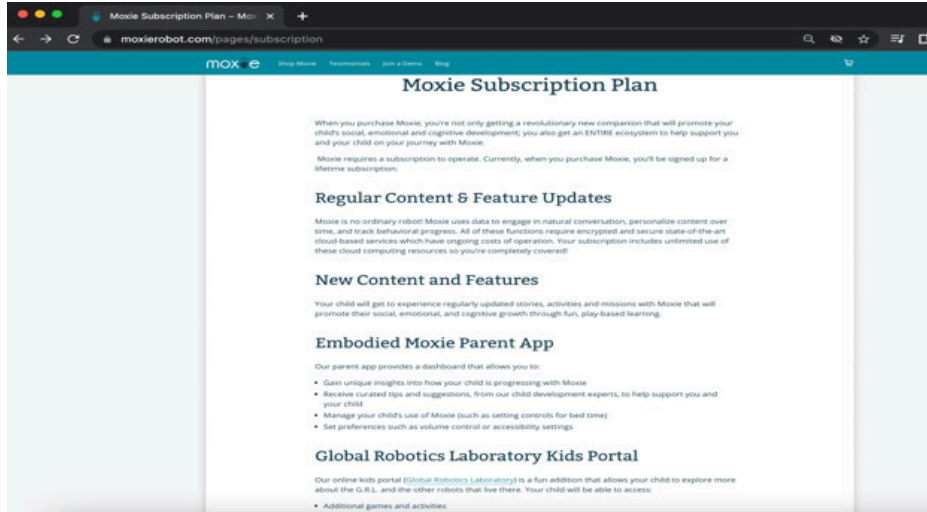
despite numerous attempts, the consumer could not get in touch with a representative and was unable to cancel their monthly subscription.



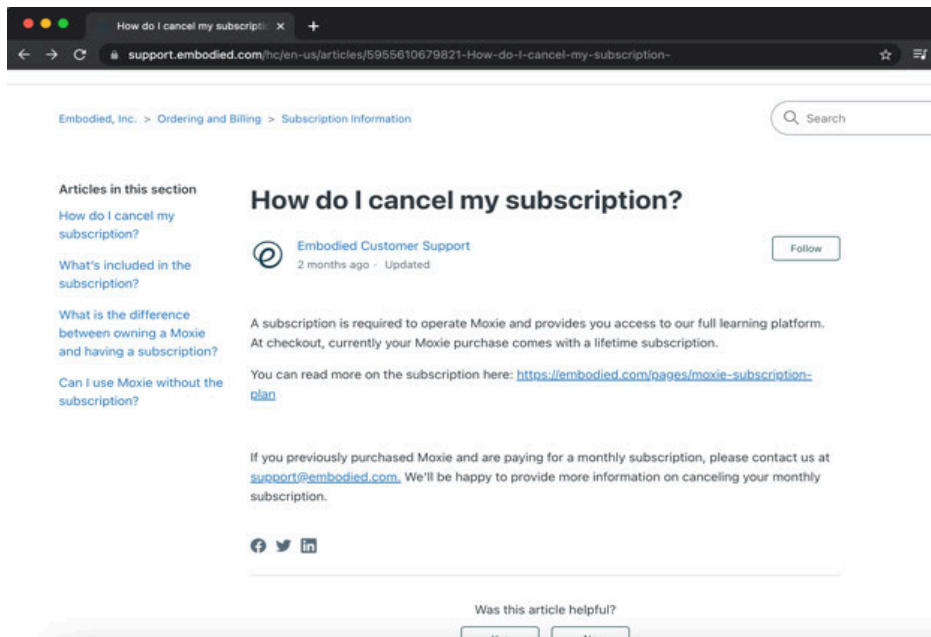
Embodied Inc.'s Home Page for the Moxie Robot for Kids.



Embodied's Moxie Robot Payment page.



This page provides information about Moxie’s Subscription Plan, which does not describe the cancellation process.

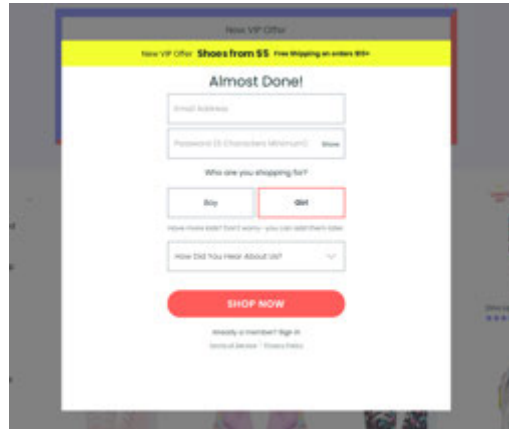


This image is a portion of Moxie’s Subscription Information page that describes subscription cancellation and indicates that consumers need to contact Embodied’s customer service via email to cancel the monthly subscription.

7. Fabletics

Product: Subscription e-commerce site that sells fitness clothes. Fabletics is one of 5 brands owned by Techstyle, which operates all their brands on a similar model. The other brands are SavageXFenty (see Section 12, *infra*), Justfab, Shoedazzle, and Fabkids (see image below; further information unavailable because the company makes users fill out a survey and provide an email before accessing the site).

Billing Policy: Members are automatically charged a monthly fee of \$59.95/month charged on the sixth day of each month. Members receive the membership “credit” (redeemable on certain purchases) that is automatically credited to the member’s account, access to “exclusive” savings, and free shipping on eligible orders. The online credits expire after 12 months and can be redeemed only for any 2-piece outfit or any other item up to \$100.



Monthly Member Credits = Even more savings



Skip as often as you like!

There's no limit on how many months you can skip

Member Credits 101

- On the 6th of each month, you'll be charged \$59.95 for your exclusive membership benefits. These benefits include a promotional Member Credit which unlocks our best savings when redeemed. Member Credits can be redeemed for any 2-piece outfit or item up to \$100, online or in-store.
- **Don't want to be charged for the month?** Visit the site between the 1st and 5th of the month, click "Skip the Month", and you won't be charged
- Any unused promotional Member Credits expire after 12 months. (Don't worry, we'll remind you!)
- You can now use your monthly member credits on Yitty.com as well



The best activewear at the best prices

20-50% off everything, always, with new arrivals every week



Free shipping on all orders over \$49.95

Plus, free returns and exchanges within 90 days



Get free access to our Fabletics FIT app.

Full access to trainer-led, on-demand workouts



Cancel easily online, anytime.

Cancellation Policy: Each month the company provides consumers a 5-day window during which the user can “skip the month” to avoid being charged for that month. Members must skip *each* month individually, or cancel the membership by calling customer service. To cancel a subscription, users must either call a service representative (available any time), or do an online chat with a customer service representative (between 9 am and 9 pm EST). Users can also skip any given month’s subscription and payment by clicking the “Skip the Month” option in their online account, between the 1st and 5th of the month. *See [Terms and Conditions](#).*

Users have noted the following problems with cancellation:

- Long wait times for phone representatives. *See [Reddit Complaint](#).*
- Phone representatives hanging up. *See [Reddit Complaint](#).*
- Phone representatives arguing with the user to keep their membership. *See [Reddit Complaint](#).*
- Online chat glitching and unavailable. *See [Reddit Complaint](#).*

Users have noted the following problems with skipping:

- Difficult to find the “Skip this Month” button. *See [Reddit Complaint 1](#), [Complaint 2](#).*
- Location of the “Skip this Month” button changes frequently. *See [Reddit Complaint](#).*
- Two steps are required to request and confirm skipping. *See [Reddit Complaint](#).*

WHAT IS “SKIP THE MONTH” AND HOW DO I SKIP? ▾

- Each month between the 1st-5th, you will have the opportunity to be billed for a Member Credit or skip the month. When you visit the site during this time period, there will be a window on your homepage that says “Skip the Month”—follow the prompts and you will have successfully skipped the month. You can also call our customer service number at 1-844-322-5384 (24 hours, 7 days a week) to skip the month as well.

We want you to check out all new products and outfits we curate for you, so you can only skip one month at a time.

WHAT HAPPENS IF I DON'T SKIP THE MONTH?? ▾

- It's up to you: skip by the 5th of every month to avoid **\$59.95 charge for your membership benefits**. Membership benefits include access to exclusive products and a promotional Member Credit, which unlocks our best savings when redeemed.

We will never automatically ship you product if you do not skip the month.

You can hold onto the Member Credit and use it later! **Any unused Member Credits expire after 12 months** (don't worry, we'll remind you!)

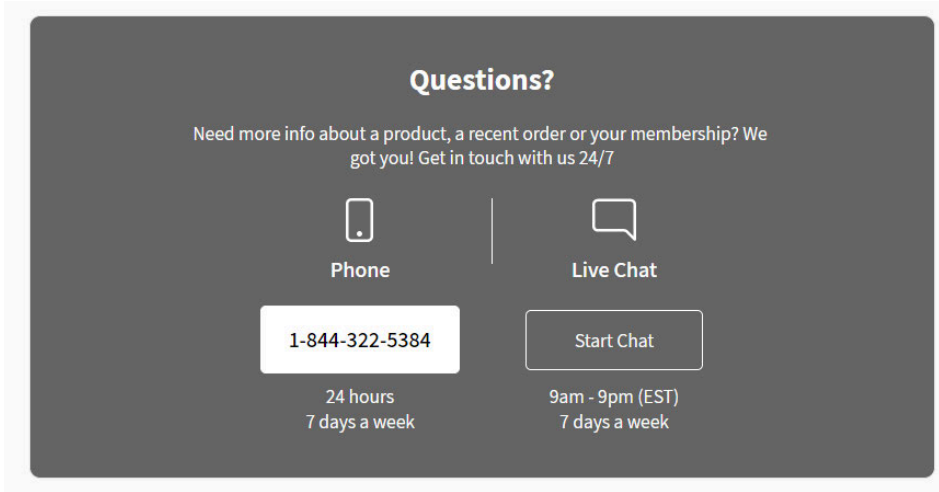
Pro-tip: Set a reminder on your phone for the 1st of the month to check out the new collection and decide whether or not to skip!

WHAT IS A PROMOTIONAL MEMBER CREDIT AND WHAT CAN I PURCHASE WITH IT? ▶

CAN I CANCEL MY MEMBERSHIP ANYTIME? ▾

- Yes, but we hate to see you go! There is no cancellation fee and you can cancel anytime. You may cancel your by calling one of our customer service representatives at 1-844-322-5384 (24 hours, 7 days a week). You may also cancel by contacting us via online live chat or by visiting your My Account page.

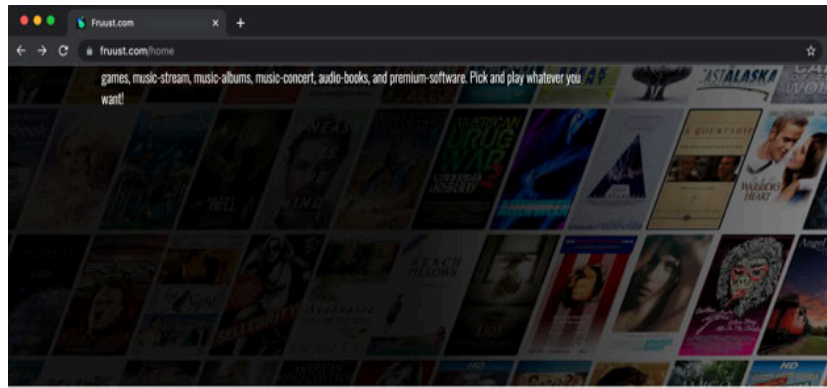
If you cancel your VIP membership, you can still shop the site at retail prices and redeem any unused VIP Member Credits left on your account. Remember that promotional Member Credits expire after 12 months of purchase—but don't worry, we'll remind you to use them!



8. Fruust.com

Product: Fruust.com is a subscription streaming service

Cancellation Policy: Fruust offers a brief free trial period before charging \$39 per month. According to a complaint on Better Business Bureau, a user who tried to cancel the subscription service had a difficult time doing so because they could only cancel via a contact form or email. Notably, the service’s terms and conditions are not searchable using automatic search functions (e.g., Control+F). Based on the service’s terms and conditions, the subscription is on auto renewal until the user cancels the service and the user could cancel the service via their account settings. Unfortunately, the ease of the cancellation process could only be verified by signing up. However, crucially, if the user signed up to the platform through a third party, then the user may need to cancel the service through that third party.



Unlimited films and series!

Fruust is your very own at-home cinema experience. It includes blockbusters, classics, horror movies, arthouse films and much more. We are constantly updating our catalog with new films and the best quality content for you.



Fruust.com Home Page

Account Help

[Sign up](#)[Sign in](#)[Sign in](#)

Your subscription lets you access all content and services from the site. You can now browse all content and enjoy the unlimited service.

You are not logged in.

[Sign in](#)

If you do not have an account yet, sign up by clicking on this link :

[Sign up](#)

Billing Information

If you have problems with billing or if you would like to cancel your membership, please contact us with the details below.

[Account](#) [Customer support](#) [Terms and conditions](#) [Privacy](#)

Here, there are no specific directions on how a user can cancel their membership.

Platform Terms and Conditions

Last Updated: December 20, 2022

For details of the Company offering you this Platform see:

The name and details of the company offering you the Platform can be found in the welcome email sent to you upon subscribing to the Platform. In addition, it can be found after logging in to the website fruust.com in the footer of this website, and on the My Account details page on fruust.com/account.

The company offering you the Platform is hereinafter referred to as "**Partner**".

Partner provides this website (located at fruust.com), and any subdomain, substitute, or successor domain ("**Site**"), and, as applicable, any mobile application owned or operated by Partner which links to or references these Terms (the "**Licensed Application**") to you, the user of the Site and/or the Licensed Application ("**you**" or "**your**"), for your personal, non-commercial use, and subject to the following general Terms and Conditions ("**Terms**"). For the purpose of the following Terms, references to "**we**", "**us**", and "**our**" include Partner and its affiliates, subsidiaries, agents, representatives, successors, and assigns.

Partner offers a subscription service that allows its users to access various digital and/or entertainment content through the Site and/or Licensed Application, such as Music, Audiobook, Sports and Movies, including all features and functionalities, recommendations and reviews through the Site and/or the Licensed Application (the "**Content**"), and all content and software associated with the Site and/or Licensed Application (the Site and any Licensed Application, collectively, the "**Platform**").

These Terms apply to you whether you purchase a subscription to our Platform or if you visit, access, browse, use, or attempt to interact with or use any part of our Platform. You may only access and use the Platform on devices that you own or control and you may not use the Platform on devices where you do not have all necessary permissions and rights to use the Platform. You acknowledge that these Terms are concluded between you and us only and that we are solely responsible for the Platform, including providing any maintenance or support for the Platform and any product liability, intellectual property infringement, consumer protection, or privacy claims you may have regarding the Platform.

From time to time, we may modify these Terms by providing notice to you, and any such notice may be provided to you through the Platform, on any other website maintained by us, by email, by pop-up, or by any other reasonable means. Any such modifications to these Terms will also be posted on the Site and the "Last Updated" date at the top of this webpage will be revised. Your continued use of the Platform following such modifications constitutes your acceptance of any modified Terms.

BY INDICATING YOUR ACCEPTANCE TO THESE TERMS ELECTRONICALLY OR BY VISITING, ACCESSING, BROWSING, USING, OR ATTEMPTING TO INTERACT WITH OR USE ANY PART OF THE PLATFORM, YOU REPRESENT THAT YOU ARE A RESIDENT OF THE UNITED STATES OR CANADA OR ONE OF THEIR TERRITORIES AND AT LEAST 18 YEARS OF AGE OR THE AGE OF MAJORITY IN YOUR STATE OF REFERENCE, AND YOU AGREE THAT YOU ARE LEGALLY BOUND BY THESE TERMS. IF YOU DO NOT AGREE TO THESE TERMS, PLEASE DO NOT ACCESS OR USE ANY PART OF THE PLATFORM.

- 1. Platform.** Your access to and use of the Platform are governed by the Site's Privacy Policy (located at fruust.com), which is incorporated herein by this reference. Your failure to accept the Privacy Policy and/or to register with the Site may prevent you from accessing or using certain features and functionalities of the Platform or any Content through the Platform. Any a violation of these Terms and/or the rights of Partner, its licensors, or certain other third-party suppliers, and these Terms are directly enforceable by any such third-party licensors and suppliers for the purpose of enforcing any of the terms related to the Platform or any Content through the Platform as further detailed below.
- 2. Use Rights.** Conditioned upon your payment of all applicable subscription fees and your strict compliance with all terms and conditions set forth in these Terms, Partner hereby grants you a non-exclusive, revocable, and non-transferable, non-assignable, non-sublicensable limited right, solely as set forth in this Section and subject to all conditions and limitations set forth in these Terms, to: (a) download, install, and/or use the Platform for your personal, non-commercial use over the Internet on certain supported Internet-connected TVs, computers, and other devices owned or otherwise controlled by you, subject to the total number of devices on which you may simultaneously use the Platform as determined by Your Subscription (each, a "**Device**"); (b) access, stream, and use the Platform on such Device and the Content to make available or accessible on or through the Platform; (c) depending on the Platform, the applicable Content, or the third party software

7. Subscription.

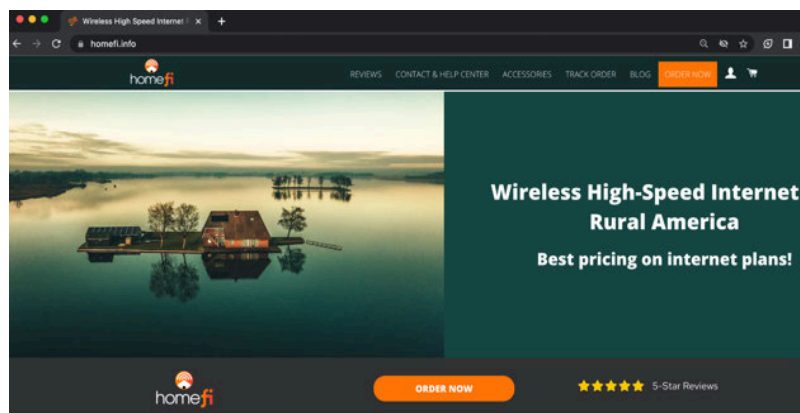
- a. **Ongoing Subscription.** Some membership plans may have differing conditions and limitations, which will be disclosed at your sign-up or in other communications made available to you, and for a recurring fee ("**Subscription Fee**"), we offer access to and use of the Platform on a subscription basis ("**Your Subscription**"). To the fullest extent permitted by Applicable Law, Your Subscription will continue and automatically renew for the Subscription Period (as defined below) unless and until you cancel Your Subscription, or your account is otherwise suspended or terminated pursuant to these Terms. Partner reserves the right to change the terms of Your Subscription, including the Subscription Fee, from time to time, effective as of the beginning of your next Subscription Period following the date of the change. We will give you advance notice of these changes.
- b. **Payment Method.** To use the Platform, you will be required to provide a current, valid, accepted method of payment to complete Your Subscription and to use the Platform, as may be updated from time to time and which may include payment through your account with a third party ("**Payment Method**"). Your "**Subscription Period**" will be as set forth on the Site corresponding to the type of subscription that you choose when you signed up for Your Subscription. At the beginning of each Subscription Period, we will charge your Payment Method the applicable Subscription Fee corresponding to the term of Your Subscription and any applicable taxes. If a payment is not successfully settled, due to expiration, insufficient funds, or otherwise, and you do not cancel your account, we may suspend your access to the Platform until we have successfully charged a valid Payment Method for your Subscription Fee. If you signed up for Your Subscription with a third party as a Payment Method, you could find the billing information about Your Subscription by visiting your account with the applicable third party, and for some Payment Methods, the issuer may charge you certain fees, such as foreign transaction fees or other fees relating to the processing of your Payment Method. You authorize us to charge any Payment Method associated to your account in case your primary Payment Method is declined or no longer available to us for payment of your Subscription Fee. All charges and Subscription Fees are final and non-refundable.
- c. **Cancellation.** You may cancel Your Subscription by logging into your account settings. You must cancel Your Subscription before it renews in order to avoid billing of the Subscription Fee for the next billing cycle to your Payment Method. If you cancel Your Subscription, you will continue to have access to the Platform through the end of your then-current Subscription Period. If you signed up for the Platform using your account with a third party as a Payment Method and wish to cancel Your Subscription, you may need to do so through that third party, for example by visiting your account with the applicable third party and turning off auto-renew, or unsubscribing from the Platform through that third party.
- d. **Updates.** Partner may from time to time in its sole discretion develop and provide updates to various aspects of the Platform and any Content, which may include upgrades, bug fixes, patches, other error corrections, new features and/or availability of Content (collectively, including related documentation, "**Updates**"). You agree that Partner has no obligation to provide any Updates or to continue to provide or enable any particular features or functionality and that Updates may modify or delete in their entirety certain features and functionality. All Updates will be deemed part of the Platform and be subject to all terms and conditions of these Terms.

9. HomeFi

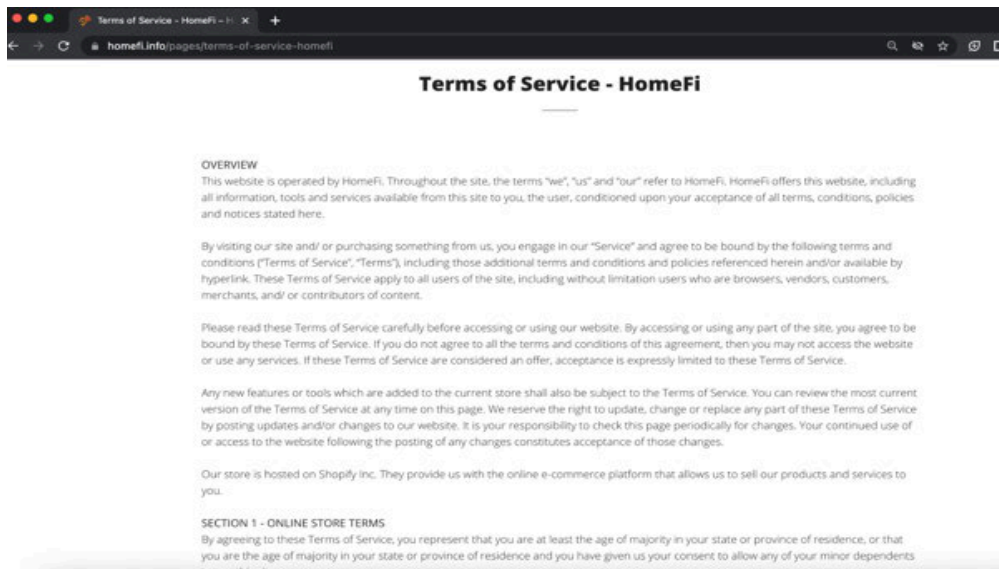
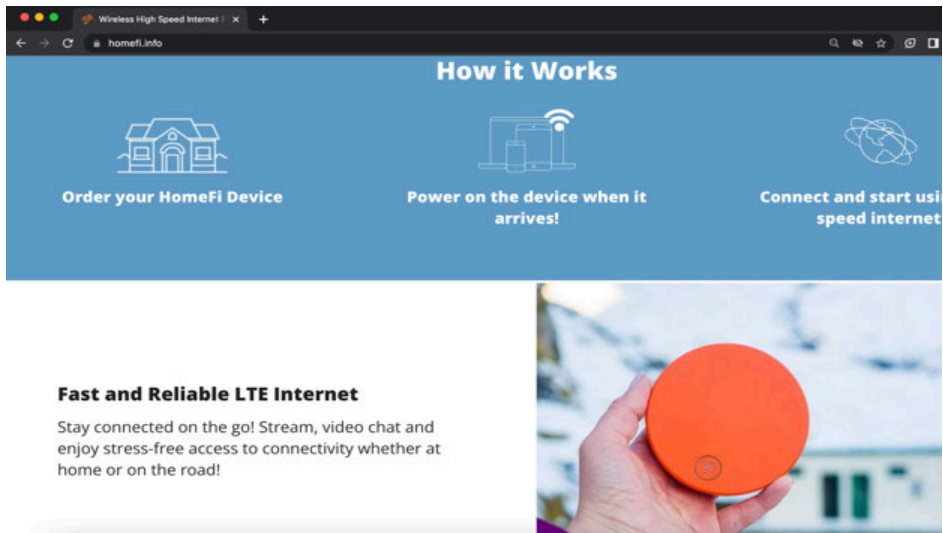
Product: HomeFi offers high-speed wireless internet, targeting particularly consumers living in rural areas.

Billing Policy: Once a consumer signs up for a plan, the company sends them an activated HomeFi router, which automatically connects to the consumer's plan once it is turned on. HomeFi charges monthly for its internet service and its subscription is set up as autopay, meaning that the consumer will be automatically charged every 30 days from their initial purchase.

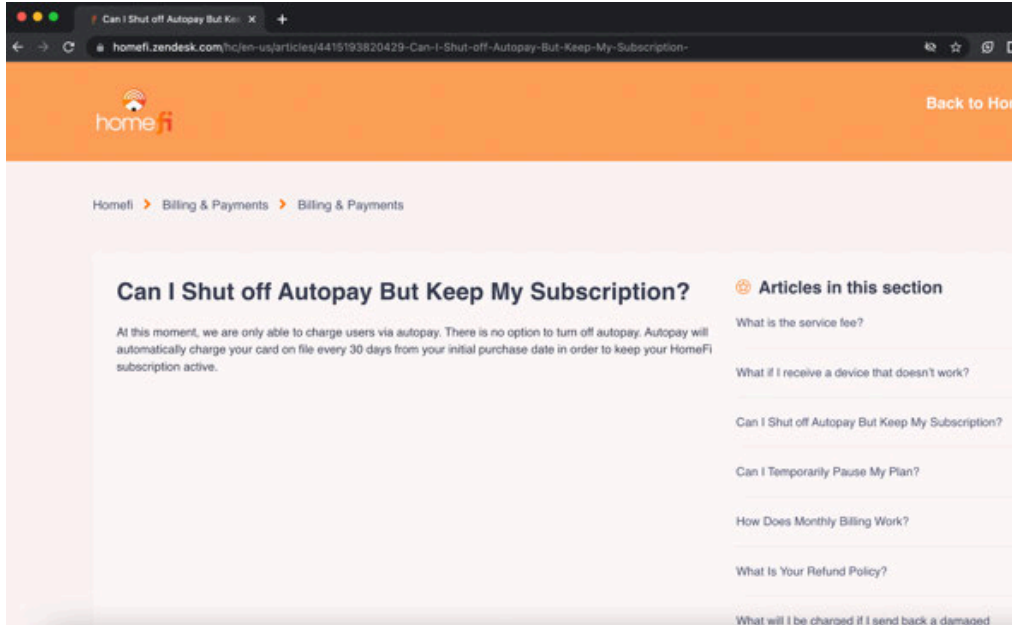
Cancellation Policy: According to HomeFi's Billing & Payments section, consumers cannot turn off autopay. It appears as if consumers can cancel the subscription service either by contacting HomeFi's customer service via their chat or by submitting a cancellation request form on their website. According to a consumer's complaint, the consumer never received the router, but was being charged monthly, and their attempts to cancel the subscription have been unfruitful.



High-Speed Internet, Everywhere!



The first page of HomeFi's Terms of Service. The Terms of Service do not explain how subscription cancellation works.



HomeFi's Billing & Payments section, which explains that Autopay of the monthly subscription cannot be turned off.

10. New York Times

Product: News

Billing Policy: \$4/month for the first year; \$25/month in subsequent years

Cancellation Policy: Customers can cancel their subscription by calling customer service during specified hours, chatting online with customer service at any time, or online through the customer's account. If the customer purchased their subscription through Google Play or iTunes, they need to cancel through that service.

Enrollment Process:

1. Enter an email address or log-in via Google, Facebook, or Apple.
2. Scroll down to "Become a subscriber" and select "Learn more" for any of the various types of content offered (e.g. select "News").
3. Review and decide between two offers:
 - a. "All Access" offer: This offer is presented first and in a larger box. It includes a colorful graphic, a high-contrast "Subscribe now" button, and a high-contrast outline. The offer is described as "Limited Time." Large text states the cost as "~~\$6.25~~ \$1/week" and small, low contrast text says "Billed as \$4 every 4 weeks for the first year."
 - b. "News only" offer: Presented second and in a smaller box. This offer has no colorful graphic, the "Subscribe now" button is not high-contrast, and there is no high-contrast outline. The offer is described as "Introductory." Large text states the cost as "~~\$4.25~~ \$1/week" and small, low contrast text says "Billed as \$4 every 4 weeks for the first year."

4. Select an offer by clicking “Subscribe now.”
5. Input payment information.
6. Review the payment due (\$4 due every 4 weeks) and automatic renewal terms (after 1 year, the monthly payment increases to \$25). This is the first place that the cost after the first year is easily made available.
7. Click “Purchase Subscription.”

The New York Times


Log in or create an account


Email Address


Continue

or

By continuing, you agree to the updated [Terms of Sale](#), [Terms of Service](#) and [Privacy Policy](#).


 Continue with Google


 Continue with Facebook


 Continue with Apple



Become a subscriber

 **News** Learn more
 Enjoy unlimited digital access to The New York Times coverage and support independent journalism.

 **Cooking** Learn more
 Get unlimited access to thousands of recipes, a digital Recipe Box and the NYT Cooking app.

 **Games** Learn more
 Play new games every day with unlimited access to Spelling Bee, Wordle and The Crossword, plus more visual and number games.

News only

Investigations, culture, analysis and more online and in the New York Times app.

INTRODUCTORY OFFER
\$4.25 \$1/week
Billed as \$4 every 4 weeks for the first year.

Subscribe now

Cancel or pause anytime.

See details ▼

Checkout

1. Account [REDACTED]@gmail.com Edit

2. Payment

Credit or Debit Card

PayPal

Continue

3. Review

3. Review

All Access	See details
Subtotal	\$25.00
Introductory offer i	– \$21.00
Total due every 4 weeks	\$4.00
Introductory offer expires: April 1, 2024	

Automatic Renewal Terms

Your payment method will be automatically charged in advance \$4.00 every 4 weeks for the first year.

It will then be automatically charged \$25.00 in advance every 4 weeks thereafter.

Sales tax may apply.

Your subscription will continue until you cancel. You can notify us of your intent to cancel at any time by [contacting Customer Care](#). Cancellations take effect at the end of your current billing period.

By subscribing, you agree to the Automatic Renewal Terms on this page, our [Terms of Sale](#) and [Terms of Service](#).

[Purchase Subscription](#)

Thank you for
subscribing.

We've sent an email confirmation to
[redacted]@gmail.com.

[Set up your new subscription](#)

[Take the new subscriber survey](#)

Cancellation Process:

1. Click on “Account” in the upper right-hand corner, which brings up a sidebar. It is not clear which option will lead to cancellation; maybe “Account settings” or “Subscription overview.”
2. Log-in to a user’s account (again) after selecting “Account settings.”
3. Click the “Manage Subscription” button.
4. Scroll down to the very bottom of the page, past a list of benefits included in the subscription and other options like “Change your subscription” and “Pause your subscription.” Each option has a description except for “Cancel your subscription.”
5. Click “Cancel your subscription.”
6. Decide between three options of how to proceed with cancellation: chatting with a representative, calling a representative during certain hours, or canceling online.
7. Click “Cancel Online.”
8. Select a reason for cancellation and/or provide written feedback.
9. Click “Continue” rather than “Return to my account.”
10. View a page thanking the user for my support, displaying images of *New York Times* content, and describing the high quality of the content.
11. Click “Continue to cancel” rather than “Return to my account.”
12. Scroll past a description of my current subscription and a list of the content it includes.

13. Select the option that reads “No thanks, just cancel my All Access subscription” rather than “Yes, I want to keep my subscription at the current rate.”
14. Read a drop-down notice that the user’s account will not be charged for the following 4-week billing cycle, and the user will continue to have access until the end of the current billing cycle.
15. Click “Confirm.”

██████████@gmail.com X

Good evening.

YOUR SUBSCRIPTION

All Access

Subscription benefits ^

What's included:

- ✓ **News** - Original reporting, investigation and analysis.
- ✓ **Games** - Spelling Bee, Wordle, The Crossword and more.
- ✓ **Cooking** - Recipes, advice and inspiration for any occasion.

[See all benefits](#)

Account settings >

Subscription overview >

YOUR CONTENT

Saved articles >

Newsletters >

GET SUPPORT

Help Center >

Log in or create an account

Email Address

Continue

or

By continuing, you agree to the updated [Terms of Sale](#), [Terms of Service](#), and [Privacy Policy](#).

Continue with Google

Continue with Facebook

Continue with Apple

Account

- Subscription overview
- Billing history
- Email and settings
- Help

Good evening.
You've supported independent journalism since 2018.

Your profile

Account number ██████████

Email address ██████████@gmail.com [Update](#)

Password ***** [Update](#)

Connected accounts [Manage](#)

Google

Your subscriptions

All Access
\$26 \$4 every 4 weeks

Unlimited digital access to everything we have to offer - News, plus Games, Cooking, Wirecutter and The Athletic.

[Manage subscription](#)

[Change subscription](#)

Good evening.
You've supported independent journalism since 2018.

Account

- Subscription overview
- Billing history
- Account
- Subscription overview
- Billing history
- Email and settings
- Help

Your profile

Subscription overview

All Access
\$26 \$4 every 4 weeks

Payment Information
To see previous invoices visit [Billing History](#).

Payment method [Change](#)
Visa ██████████

Next payment date
April 30, 2023

Subscription rate
\$26 \$4 every 4 weeks through April 01, 2024, then \$25 every 4 weeks

Account

- Subscription overview
- Billing history
- Email and settings

Subscription benefits

What's included:

- ✓ **News** - Original reporting, investigation and analysis.
- ✓ **Games** - Spelling Bee, Wordle, The Crossword and more.
- ✓ **Cooking** - Recipes, advice and inspiration for any occasion.
- ✓ **Wirecutter** - Independent reviews for thousands of products, online.

We offer several ways to cancel your All Access subscription.

Please keep in mind that you'll have limited access when you cancel.

Chat with a Customer Care advocate.

Begin Chat

Give us a call.

Call us at **858-877-6618** if you are in the U.S. Our hours are 7 a.m. to 10 p.m. E.T. Monday to Friday, and 7 a.m. to 3 p.m. E.T. Saturday to Sunday. Please see our [international contact information](#) if you are outside of the U.S.

Cancel online.

Cancel your own subscription without contacting one of our Customer Care advocates.

Cancel Online

Step 1 of 4

Please tell us why you'd like to cancel your All Access subscription.

Reason

Select reason for cancellation

Is there more you'd like to tell us? We'll use your feedback to improve.

Feedback (optional)

400 characters left

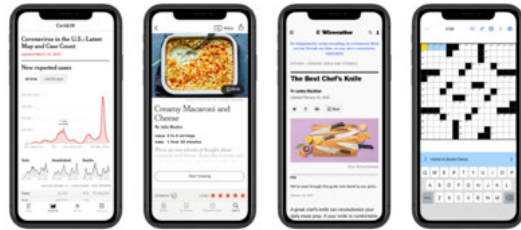
Return to my account

Continue

Step 2 of 4

Thank you for your trust and support.

You have made it possible for us to create high-quality journalism, interactive puzzles, delicious recipes and rigorously-tested product recommendations.



Return to my account

Continue to cancel

Step 3 of 4

Continue your subscription at the current rate, and keep your Times access.

Current subscription

All Access

\$1 a week

Billed as \$4 every 4 weeks

Available offers

Yes, I want to keep my subscription at the current rate.

Includes everything The Times offers:

- News – Investigation, culture, and analysis.
- Games – Spelling Bee, Wordle, The Crossword and more.
- Cooking – Recipes and inspiration.
- Wirecutter – Independent reviews for thousands of products.
- The Athletic – In-depth, personalized sports journalism.

\$1 a week for another year

Billed as \$4 every 4 weeks until April 1, 2024

No thanks, just cancel my All Access subscription.

Return to my account

Confirm

No thanks, just cancel my All Access subscription.

BILLING INFORMATION
When you cancel, we will stop charging your account the following billing cycle. Each billing cycle is 4 weeks. Your access will continue until the end of your current billing cycle.

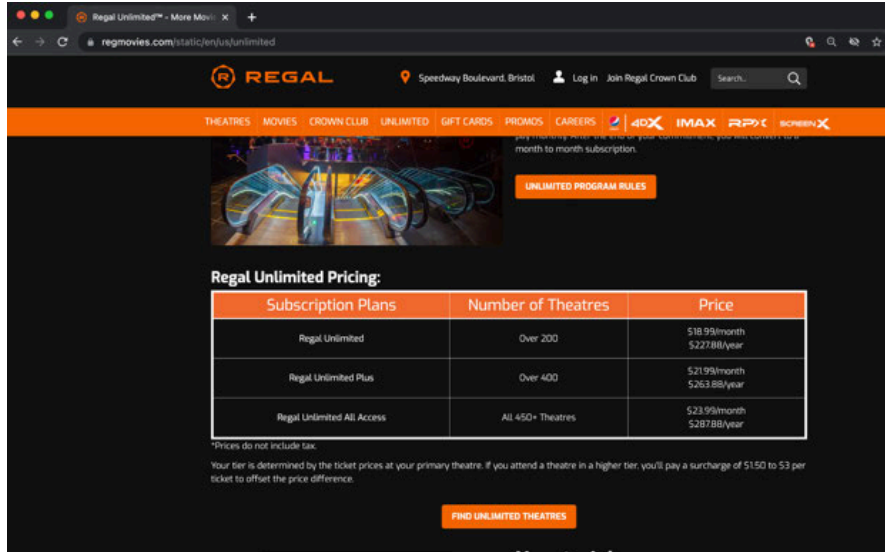
[Return to my account](#) [Confirm](#)

11. Regal

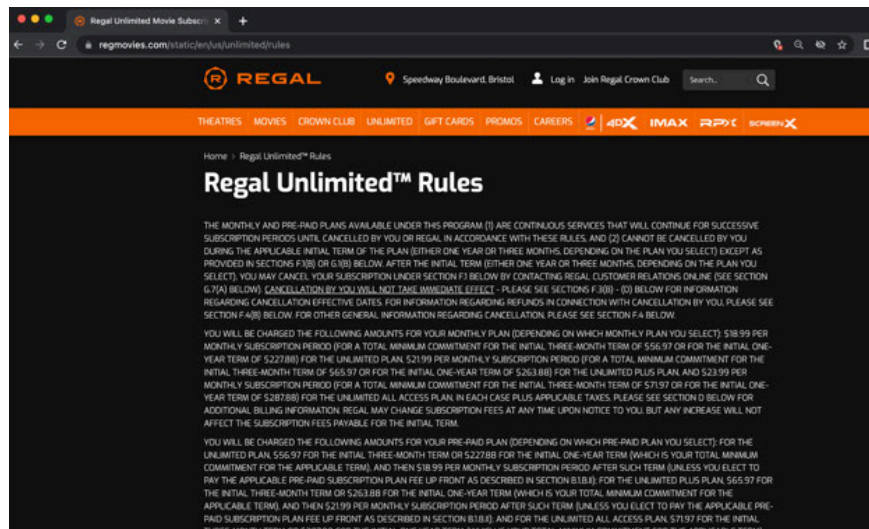
Product: Regal is a company that operates around 505 theaters in 42 states. The company runs a subscription-based program called Regal Unlimited Subscription Program that allows members to watch as many movies as the member wants at any participating Regal theater.

Billing Policy: Each subscription has a non-cancelable term of either three months or one year, depending on the type of plan the member chose. Regal's FAQs explain that the company also runs a Crown Club Account, which is a free rewards program where customers earn credits for purchasing admission tickets and concessions.

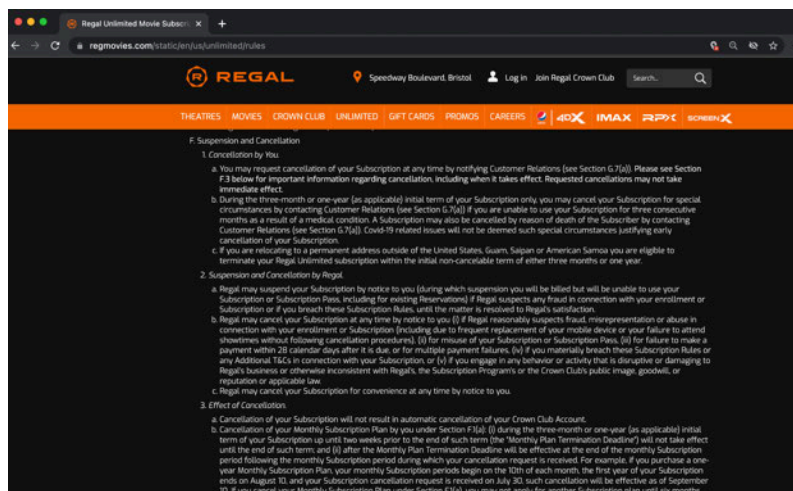
Cancellation Policy: According to Regal's Rules about its Unlimited Subscription Program, consumers cannot cancel their Crown Club Account while they are enrolled in the Subscription Program. More importantly, consumers need to request cancellation of the subscription by notifying the Regal's Customer Relations using the company's contact form and cancellation requests may not take immediate effect.



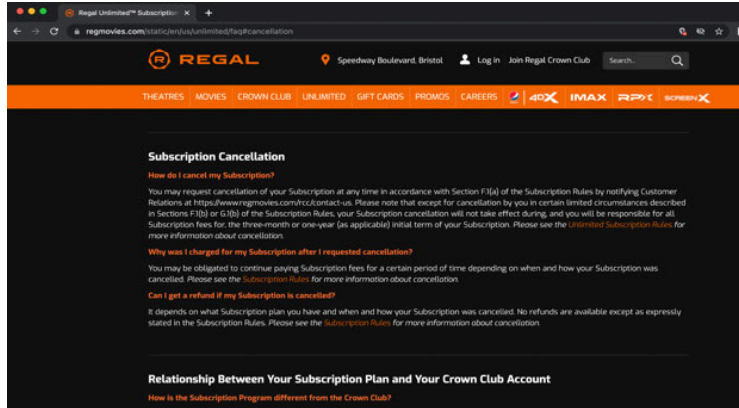
Regal Unlimited Subscription Program Pricing Page



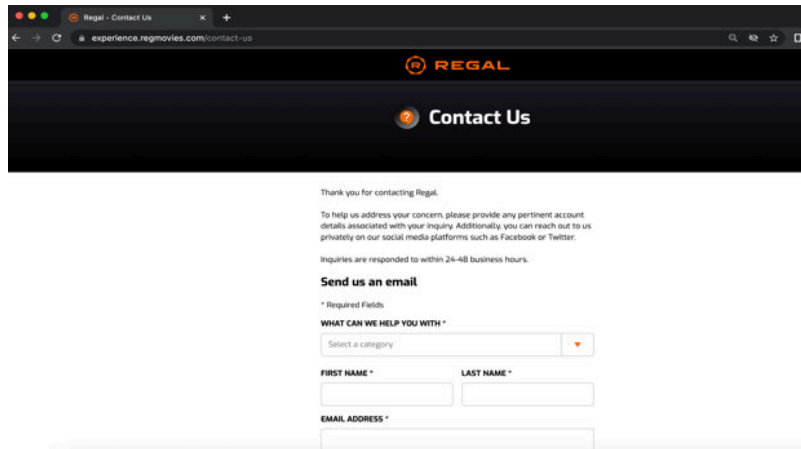
The first page of Regal Unlimited Subscription Program's Rules.



The cancellation section of Regal Unlimited Subscription Program's Rules.



The subscription cancellation section of Regal Unlimited Subscription Program's FAQs indicates that consumers can request to cancel their membership by contacting the company's customer service via their Contact Form.



Regal's contact form through which customers can send their subscription cancellation requests.

12. Savage Xfenty

Product: E-commerce subscription box of lingerie

Billing Policy: Monthly fee that includes the subscription box and “1 member credit” each month. Member credits can be used towards other purchases on the website

Cancellation Policy: A user must affirmatively click “skip this month” to not be charged the monthly fee, unless they call customer service to fully cancel the membership.

How Xtra VIP Membership Works
All Xtra VIP Members enjoy Everyday Xtra VIP Perks anytime.

- Save up to 50% off with Member Credits
- Yearly birthday surprise
- Save up to 25% on full-price styles
- Xtra VIP-only sales & offers

PLUS MORE

- Xtra VIP-only Boxes & Sets
- Free shipping on orders \$49+
- New drops & styles every month

Unlock Exclusive Perks With Monthly Billing
Take your membership to the next level! On the 6th of each month, if you haven't chosen to "Skip the Month," your payment method will be charged \$59.95, which unlocks these Exclusive Perks:

- Build Exclusive Bundles**
Any two items up to \$39.95 each
- Access to even more**
colors & sets for the month
- 1 Member Credit**
Redeem for ANY item, Xtra VIP Box, Set, or "Exclusive Bundle!"

Save More with Member Credits
Save up to 50% on full-price styles! Member Credits expire after 12 months. But don't worry, we'll remind you ahead of time!

Your Membership, Your Way

- Cancel Anytime**
Cancel anytime by calling our Customer Service representatives at (855) 728-2439 (open 24/7), or manage online.
- Skip As Many Times As You Like**
Click "Skip This Month" between the 1st and the 5th of each month to avoid a \$59.95 charge. Enjoy Everyday Xtra VIP Perks and pricing, even if you skip a month. Skip as many times as you like—there is no limit.

13. Sirius XM

Product: Radio

Billing Policy: \$10.99 to \$29.99 per month, depending on the plan.

Cancellation Policy: Users can cancel their subscription through SiriusXM's website, or the service they used to purchase SiriusXM, up to 24 hours before the billing date.

Enrollment Process:

1. Review offers for two different types of free trials. "Platinum" does not display the price after the expiration of the trial, whereas "Streaming Platinum" states that the cost is \$10.99 per month after the free trial. The "Get Platinum" is deep blue, whereas "Streaming Platinum" is light blue.
2. Review a summary of the plan and click the deep blue "Continue" button.
3. View a page informing the user that they must create an account, and click the deep blue "Continue" button.

4. Input the user's email address, create a password, and click the deep blue "Continue" button.
5. View a page informing the user that they must input their payment information, and click the deep blue "Continue" button.
6. Input their payment information, and click the deep blue "Review Order" button.
7. View a list of charges, all of which are "\$0.00" and a notice that they will be charged at a later date after their free trial expires.
8. Select a box which states that they agree my service will automatically renew and I will be charged.
9. Click the deep blue box "Complete My Order."

Start Listening for Free
with a new subscription. See Offer Details below.
Choose where you want to listen to SiriusXM.

SXM APP + CAR

Platinum

Free for 3 Months

No credit card required. See Offer Details below.

- from every angle
- ✓ **NFL, MLB*, NBA, NHL*, and NCAA* play-by-play, NASCAR***, plus the biggest names in sports talk
- ✓ **2 Howard Stern channels**, including video
- ✓ **Create Pandora stations** based on artists
- ✓ **SiriusXM video library** of in-studio shows & performances
- ✓ **Popular podcast series**, including SXM originals and Marvel, plus access to Stitcher Premium's collection

GET PLATINUM PLAN

SXM APP

Streaming Platinum

Free for 3 Months

with a new Streaming Platinum subscription.

- from every angle
- ✓ **NFL, MLB*, NBA, NHL*, and NCAA* play-by-play, NASCAR***, plus the biggest names in sports talk
- ✓ **2 Howard Stern channels**, including video
- ✓ **Create Pandora stations** based on artists
- ✓ **SiriusXM video library** of in-studio shows & performances
- ✓ **Popular podcast series SXM originals**, plus access to Stitcher Premium

GET STREAMING PLATINUM

OFFER DETAILS FOR PLATINUM PACKAGE: Your SiriusXM service will automatically stop at the end of the stated trial subscription term unless you decide to subscribe. See the SiriusXM [Customer Agreement](#) & [Privacy Policy](#) at www.siriusxm.com for full terms of service and how to cancel, which includes calling 1-866-635-2349. By registering for a trial subscription, SiriusXM may contact you at the registration information provided with special offers from time to time. You may always change your contact preferences with us. All fees, content and features are subject to change. This offer cannot be combined with any other and may be modified or terminated at any time. This offer is available only on eligible, inactive factory-equipped satellite radios. Satellite and streaming lineups vary.

OFFER DETAILS FOR STREAMING PLATINUM PACKAGE: Activate a SiriusXM Streaming Platinum subscription plan and get your first 3 months for \$0.00. A credit card is required on this offer. **Service will automatically renew** thereafter every month. At the beginning of month 4, you will be charged at then-current rates (currently \$10.99/month). Fees and taxes apply. **You must cancel your subscription during your promotional period to avoid future charges. Please see our Customer Agreement at www.siriusxm.com for complete terms and how to cancel, which includes online methods or calling us at 1-866-635-2349.** All fees, content and features are subject to change. This offer cannot be combined with any other and may be modified or terminated at any time. Offer available to new subscribers. Channel lineup varies by plan.

SiriusXM Streaming Platinum
3 months Free

Then \$10.99/mo. New subscribers only. Cancel online anytime. [Offer Details](#) below.

SiriusXM Streaming Platinum Includes:

- ✓ **Ad-free music** for every genre & decade plus artist-created channels
- ✓ **Original talk**, exclusive comedy, news from every angle
- ✓ **NFL, MLB®, NBA, NHL®, and NCAA® play-by-play**, NASCAR®, plus the biggest names in sports talk
- ✓ **2 Howard Stern channels**, including video
- ✓ **Create Pandora stations** based on artists
- ✓ **SiriusXM video library** of in-studio shows & performances
- ✓ **Popular podcast series SXM originals**, plus access to Stitcher Premium

Hide ^

CONTINUE



STEP 1 OF 3

Create your account

To get started we'll need an email address and a password. You'll use this to stream and manage your account online.

CONTINUE

STEP 1 OF 3

Create your account

SiriusXM Streaming Platinum (425+ Channels)
3 Months for Free. Then \$10.99/mo.

Email

Password

Show

Your password must have a minimum of 8 characters with 3 of the following: (a) an uppercase letter (b) a lowercase letter (c) a number or (d) special character.

[Privacy Policy](#)

CONTINUE



STEP 2 OF 3

Set up your payment

- ✓ Cancel online anytime
- ✓ Ad-free music plus original talk, news, comedy, and sports
- ✓ Stream the SXM App on your devices and listen in your car with your phone

CONTINUE

STEP 3 OF 3

Review your order

Confirm your plan and start listening now.
Remember you can cancel online anytime.

SiriusXM Streaming Platinum (425+ Channels)
3 Months for Free. Then \$10.99/mo. Fees & taxes apply.

Order Summary

SiriusXM Streaming Platinum 3 Months for \$0.00/mo	\$0.00
Fees and Taxes	\$0.00
Total - Due Now	\$0.00

Your estimated recurring monthly subscription charge will be \$11.96 starting on 07/08/2023.

Details ▾

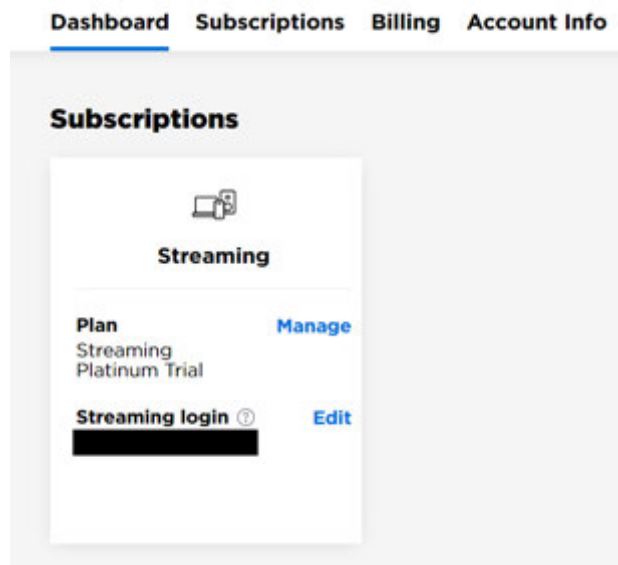
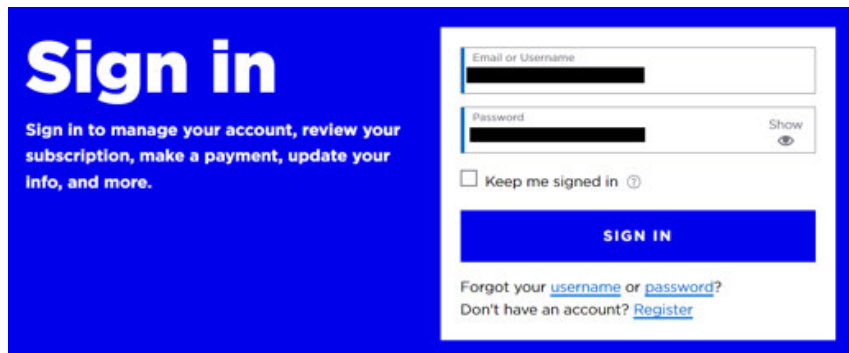
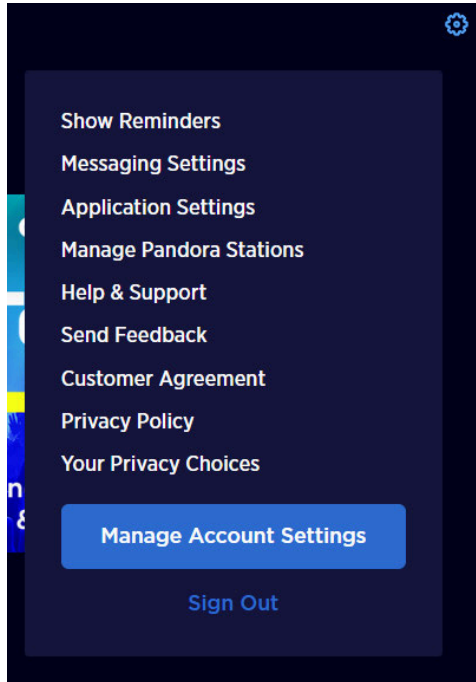
Please charge my credit card for the amount due now and recurring charges as outlined above. By clicking "Complete My Order" I agree that my service will **AUTOMATICALLY RENEW and will be charged to my payment method at then-current rates at the time of each renewal, plus fees and taxes, until I cancel.** I agree to the SiriusXM [Customer Agreement](#) and [Privacy Policy](#), including, receiving account notifications at the email address provided, the refund policy and how to cancel, which includes online methods or calling SiriusXM at 1-866-635-2349.

[En Español](#)

COMPLETE MY ORDER

Cancellation:

1. Click the settings icon in the top right of the landing page.
2. Click the button which says "Manage Account Settings."
3. Sign in again.
4. Under the "Streaming" heading, find my plan and click "Manage."
5. Next to the "Streaming Platinum" heading, click "Modify."
6. In the drop-down menu, select the last option, "Cancel subscription."
7. Answer a survey about why the user is cancelling their subscription.
8. View a full-page advertisement inviting the user to change to a 12-month subscription for \$4.99 per month, including a colorful image of a phone screen using the SiriusXM app and a list of the features offered. The text notes that this offer is over 50 percent off of the normal price.
9. Ignore the deep blue "Get This Plan" button and the light blue "Keep Current Plan" buttons.
10. Select the "Continue to Cancel" button, which is identical to and right beneath the "Keep Current Plan" button.
11. Review a page requesting me to confirm that they want to cancel, and reminding me that my plan will end on the renewal date.
12. Click "Finish Cancellation."



Streaming

SiriusXM

Audio

Streaming Platinum Modify ▾
Complimentary 3-month trial ends 07/07/2023.
[See what's included](#)

Streaming Platinum monthly plan starts on 07/07/2023 when your trial ends.

Streaming login ⓘ Edit

████████████████████

Audio

Streaming Platinum Modify ^
Complimentary 3-month trial ends 07/07/2023.
[See what's included](#)

Streaming Platinum monthly plan starts on 07/07/2023 when your trial ends.

Streaming login ⓘ Edit

████████████████████

- Change my plan
- Change my billing frequency
- Cancel subscription

Before you go...

Tell us why you're thinking of leaving.

- My subscription is too expensive
- I can't find what I want to listen to
- I don't listen enough
- I'm experiencing technical issues
- I thought I could listen with my car's built-in satellite radio
- I have other streaming services I prefer
- I have other reasons

CONTINUE

Consider staying for \$4.99/mo.
Save over 50% on our best streaming plan for the next 12 months.

Streaming Platinum \$4.99/mo for 12 months
Then \$10.99/mo. See [Offer Details](#) below.

- 425+ channels**
All on the SXM App
- Sports Talk & Live Play-by-play**
NFL, MLB*, NBA, NCAA*, NHL*, NASCAR*
- Ad-free music**
Every genre & decade
- Howard Stern**
24/7 channels, on demand & video

Current plan:
SiriusXM Streaming Platinum - Complimentary Trial
Trial ends 07/07/2023

[GET THIS PLAN](#)

[KEEP CURRENT PLAN](#)

[CONTINUE TO CANCEL](#)

Review and confirm you want to cancel this plan.

Your trial ends on 07/07/2023.

The renewal plan below will be cancelled and you won't be charged for it.

SiriusXM Streaming Platinum - 3-month Plan

Would start on 07/07/2023 when your trial ends.

[FINISH CANCELLATION](#)

[BACK TO MY ACCOUNT](#)

[Go back to view offers](#)

Credit card refunds are typically processed in 3-5 business days and check refunds are typically processed in 7-10 business days.

14. Tesla

Product: Electric vehicle with hardware to capable of providing autopilot features. However, the software needed to utilize the advertised autopilot features is locked behind a subscription model.

Billing Policy: Subscription model for different levels of self-driving capabilities (e.g. self park, highway driving, city driving). Free trials are not available.

Cancellation Policy: Cancellation is particularly easy via the Tesla mobile app under settings (and this is explained under the FAQ section of the website).

Full Self-Driving Capability Subscriptions

Autopilot is an advanced driver assistance system that assists your car with steering, accelerating and braking for other vehicles and pedestrians within its lane. It assists with the most burdensome parts of driving and work alongside features like emergency braking, collision warning and blind-spot monitoring.

With Full Self-Driving (FSD) capability, you will get access to a suite of more advanced driver assistance features, designed to provide more active guidance and assisted driving under your active supervision.

If you have not already purchased FSD capability and your vehicle has FSD computer 3.0 or above, you can subscribe to FSD capability from the Tesla app or your vehicle's touchscreen.

Eligibility

If your vehicle has Full Self-Driving computer 3.0 or above, plus Basic Autopilot or Enhanced Autopilot, you are eligible to subscribe to FSD capability. You can check your Autopilot configuration from your vehicle's touchscreen by selecting 'Controls' > 'Software' > 'Additional Vehicle Information.' You can also check your configuration in the Tesla app by selecting 'Vehicle' > 'Specs & Warranty.'

Hardware upgrades to the Full Self-Driving computer are not included with Full Self-Driving capability subscriptions. To be eligible for FSD capability subscriptions, the FSD computer must be installed in your vehicle. To [install the FSD computer](#), schedule an installation appointment from the Tesla app.

Subscription Pricing

Your vehicle's current Autopilot package of Basic Autopilot or Enhanced Autopilot will determine the FSD capability subscription price.

Basic Autopilot to FSD capability	\$199.00 per month
Enhanced Autopilot to FSD capability	\$99.00 per month

15. ThreadBeast

Product: Menswear delivery box

Billing Policy: \$60 to \$290, depending on which tier customers select. ThreadBeast does not offer refunds.

Cancellation Policy: To cancel, customers must email a request to cancel ThreadBeast from the email address they signed up with. Customers can only cancel within 7 days after they received the last package. Customers can also pause their subscription, but must also request this within 7 days after receiving their most recent package.

However, users have complained online on [Reddit](#) and [Medium](#) that although the cancellation policy states that users can email to cancel, ThreadBeast in fact requires users to also call a customer service representative. Customer service representatives attempt to convince users not to cancel and sometimes refuse to cancel the account. Because of the 7-day cancellation policy, if users pause their account, they cannot then cancel without receiving another package first and paying for it. Also, ThreadBeast adheres to its 7-day cancellation policy and no-refund policy even when users have canceled their account, but are then erroneously charged and seek a refund for those charges. Thus, users whose accounts are not canceled by mistake must still pay for the next package, cannot get a refund, and may be stuck in their subscription if they don't notify ThreadBeast within 7 days.

16. Toylibrary.co

Product: Toylibrary.co is a subscription-based toy rental business.

Billing Policy: Toylibrary.co charges \$29.95 per month and allows consumers to rent two toys per month.

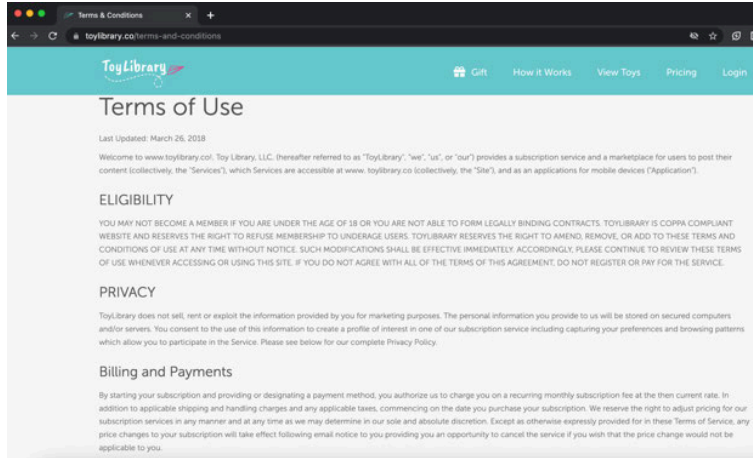
Cancellation Policy: According to the Toy Library, LLC’s terms and conditions, the subscription automatically renews each month at the then-current price, which is subject to change at the company’s discretion. Members can cancel their account using the “My Account” section on their website. However, the cancellation is only effective “when the last toy that was sent to [the user] is received by [] [their] processing center.” A consumer filed a complaint in Better Business Bureau explaining that they never received the toys in the first place and when they tried to cancel their subscription, the consumer was led to an automatic message that they could not cancel the subscription until the rented toys were returned.



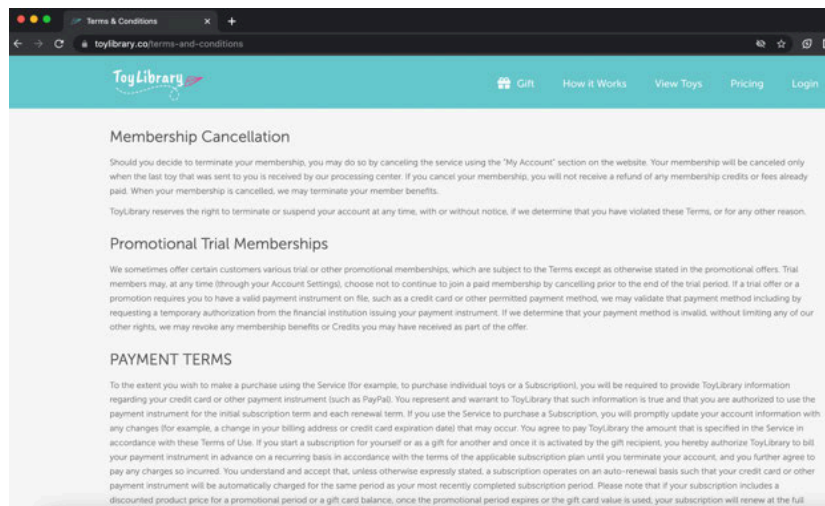
Toylibrary.co Home Page

Plan	Seed	Grow	Blossom
Duration	1 Month	3 Months	12 Months Gift: Year of Toys
Price/month	\$29 ⁹⁵	\$19 ⁹⁵	\$12 ⁹⁵
Value of Toys	\$160	\$420	\$1,920
Play Today	\$29.95	\$90 \$59.95	\$360 \$149.95

Toy Library’s Pricing Terms



Toy Library's Terms & Conditions



The section of Toy Library's terms and conditions that discusses membership cancellation

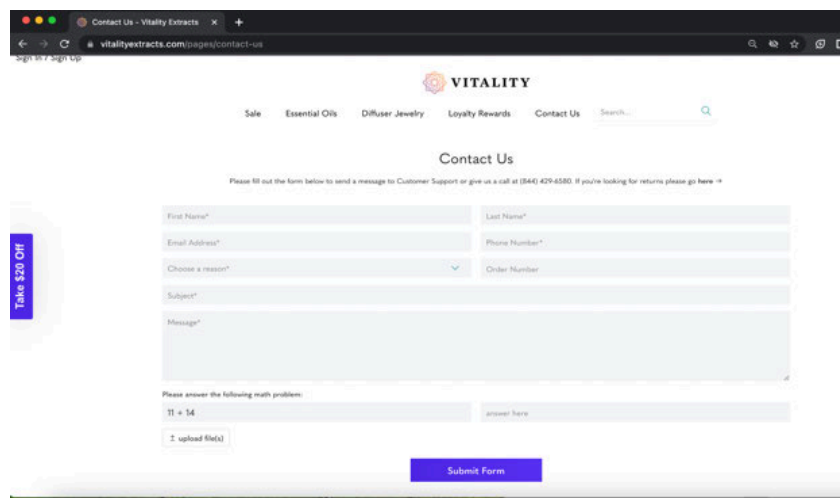
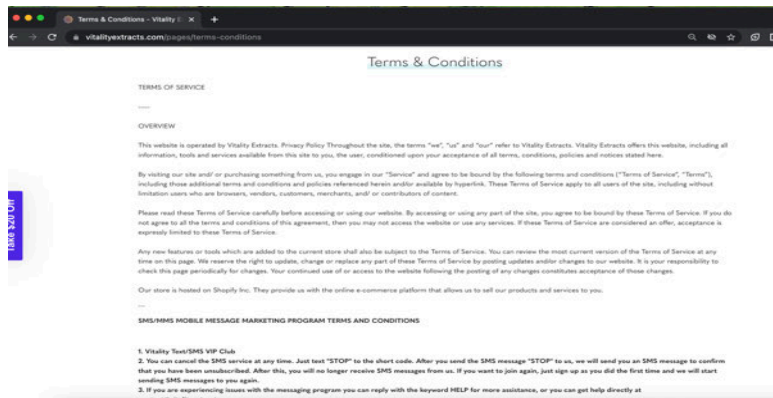
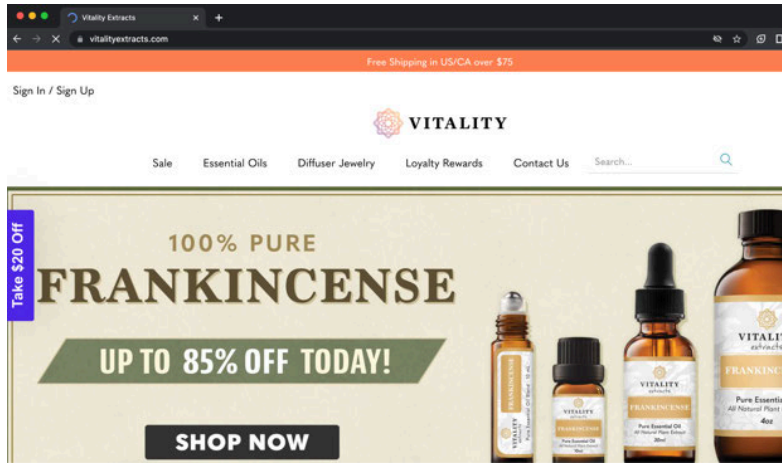
17. Vitality Extracts

Product: Vitality Extracts is an e-commerce platform that sells essential oils and diffusers.

Billing Policy: The platform offers a subscription service, although it is not clear from either the terms and conditions or the FAQs the purpose of such a subscription service.

Cancellation Policy: According to the platform's FAQs, subscriptions can be canceled or changed anytime by logging into the user's "Vitality Extracts account to make the changes or contact [their] customer service team using the contact form." However, one consumer complained that the Vitality Extracts website created a monthly recurring subscription without the consumer's knowledge after the consumer purchased a product and started charging \$28 per month. Moreover, the consumer's efforts to cancel the service through the contact form have been ignored and the listed customer service number was invalid. Also, consumers can only contact the service provider using a contact form and a phone number. According to one

consumer complaint, the listed phone number was invalid, and the provider did not reply to the consumer's inquiries to cancel their subscription sent through the contact form.



18. Xfinity (Comcast)

Subscription: Internet

Billing Policy: Monthly billing, the amount depending on the user's plan. Xfinity gives subscribers a \$10 discount if they use autopay with their bank account number, rather than a credit card—making it harder to cancel by canceling the payment method.

Cancellation Policy: To look up the cancellation policy, users must first read or scroll past a notice about Xfinity's efforts to address customer concerns. To cancel, users must speak with a representative. Users may request a call from Xfinity, visit an in-person Xfinity store, submit an online cancellation form and complete a confirmation call, or mail a cancellation form and complete a confirmation call.

Customers have reported the following problems with cancellation:

- Long, multiple-hour hold times. *See [Reddit Complaint 1](#), [Reddit Complaint 2](#).*
- Getting stuck in an automated phone tree. *See [Reddit Complaint](#).*
- Getting transferred between different representatives repeatedly. *See [Reddit Complaint](#).*
- Multiple-day waits to reach a representative who can cancel service. *See [Reddit Complaint](#).*
- Representatives hanging up mid-call. *See [Reddit Complaint](#).*
- Representatives arguing with customers and refusing to cancel service. *See [Reddit Complaint](#).*
- Getting charged for continuing service even after canceling. *See [Reddit Complaint](#).*
- Having to call in to remind Xfinity/Comcast to cancel their service. *See [Reddit Complaint](#).*
- In-person representatives cannot cancel service, so customers must call. *See [Reddit Complaint](#).*

The cancellation process is so frustrating and time-consuming that customers have resorted to tactics such as telling representatives that they need to cancel because they are going to prison, they are moving to another country or a remote part of the US that Xfinity/Comcast doesn't service, or they are closing the checking account that is tied to Xfinity/Comcast.

How To Cancel, Pause or Move Your Xfinity Services

If you want to cancel, pause or move your Xfinity services, we've got options for you that make the process quick and easy.

Cancel Your Service

We hate to see you go and would love to improve your experience. Here are a few helpful resources that may address your concerns.

- **Cost.** We're proud to participate in the [Affordable Connectivity Program \(ACP\)](#), which provides qualified customers with a credit of up to \$30 per month (up to \$75 per month in Tribal Lands) towards internet and mobile service. Learn if you qualify and how to enroll [here](#). We also offer [flexible payment options](#) for eligible customers.
- **Experience.** Visit our [support hub](#) for help identifying and troubleshooting potential issues, so you can enjoy the best connected experience. Or visit the [Xfinity app](#) for 24/7, real-time support along with speed tests and personalized tools.
- **Value.** Our services work even better together. With [Xfinity Mobile's](#) fast mobile service, including 5G and connections to millions of WiFi hotspots, you'll save money. With our free [Flex 4K streaming TV box](#), you can enjoy thousands of awesome shows and movies on us.

If you'd still like to cancel, we'll help make it easy. Choose the best option for you below:

- [Request a call back.](#)
- Visit your local [Xfinity Retail Store](#).
- Complete a simple online [cancellation form](#).
 - We'll call you within two business days of receipt to confirm your request.
- Mail a cancellation request, including your first and last name, service address, account number and phone number to:
Comcast Cable
ATTN: Service Change Requests
1701 JFK Blvd.
Philadelphia, PA 19103
 - **Note:** We'll call you within two business days of receipt to confirm your request.

Your bill

Two months left to update your automatic payment method

Don't lose your \$10 monthly automatic payment and paperless billing **discount**. Be sure to update your automatic payment method to a bank account using an account number and routing number no later than March 25, 2023.

Updating your payment method is easy - just have your bank account and routing number handy. **Make the switch today [here](#).**

If you have already updated your payment method to a bank account using an account number and routing number, please disregard this email.

Thank you for choosing **Xfinity**.

Online comments: 73

- **Michael First**

Wonderful idea...I fully support this. It is so easy to be tricked into subscribing to services on-line/

Comment added April 9, 2026 9:17pm

- **SEAN HUBERTH**

I support this proposed rule

Comment added April 10, 2026 8:02pm

- **Jacob**

Please make it possible for me to leave my Equinox membership I am now forced into a \$400 subscription I can't leave for an entire year. The facilities are packed and suboptimal. It's a lifestyle scam.

Comment added April 10, 2026 8:24pm

- **Anonymous**

This was such a good idea when it was proposed on the Federal level before it was blocked by Trump. So, yes, please!! Free trials turning into huge bills. There should be a click to cancel for everything. Honestly, I don't mind when a service asks you if you want a huge discount instead of cancelling—keep that option, please! Gyms are a huge issue. Those need to be much easier to cancel!!! I know people who had their credit ruined because of gym memberships!

Comment added April 11, 2026 11:22am

- **Anonymous**

This is a rule that absolutely needs to happen. We deserve protections, and the end of being held hostage by corporations, and forced to fight loopholes and red tape just to cancel a subscription program. I want it to be easy. I want to be able to do it with a click of a button, not have to go through a ten-step process that only ends in

frustration (and sometimes, requires me to pay MORE just to cancel!) I've faced it time and time again, especially with gym memberships that require me to fight a front desk person just to cancel a subscription I'm not even using! I'm sick of it!

I welcome this rule wholeheartedly, and I thank the team that is pushing this rule forward. I truly hope it passes. It will be for the better of all New Yorkers.

Comment added April 11, 2026 8:14pm

- **Robert Stribley**

Consumers should absolutely be able to cancel any subscription as easily as they initially subscribed. This is not an only a basic consumers rights issue, but it also affects the digital privacy of Americans and we need a federal framework for digital privacy rights, as well.

Comment added April 11, 2026 8:22pm

- **Marie Kaplan**

In essence, at will employment is a subscription agreement between an individual and a company. I assume this initiative will allow companies to part ways with an unwanted employee with a simple click, no explanations, and no recourse. I am in support of this change!

Comment added April 11, 2026 8:26pm

- **Stalin, Joe**

The bourgeoisie stole my lunch money in 1917 and I'm still waiting for the people's commissar to redistribute it.

Comment added April 11, 2026 8:37pm

- **Anonymous**

This is a rule that protects consumers. I'm all for it!

Comment added April 11, 2026 8:42pm

- **Steven Vascellaro**

I am fully in favor of this. I remember having to call customer support to cancel my subscription to WIRED

Comment added April 11, 2026 8:42pm

- **Benjamin Zweig**

I agree with this rule. Consumers should have clarity and consistency on cancelling subscriptions.

Comment added April 11, 2026 8:47pm

- **taylor robin**

There's basically no reason not to make this a rule. Fully approve—get on Adobe about this.

Comment added April 11, 2026 8:57pm

- **Freddy Vasquez**

Great idea, will be especially helpful for people trying to cancel gym memberships

Comment added April 11, 2026 9:12pm

- **Austin**

I strongly support this proposal to make subscriptions easier to cancel.

Comment added April 11, 2026 9:18pm

- **Sanaa Shah**

excellent initiative! fully support! when can we provide names of companies that engage in these practices?

Comment added April 11, 2026 9:25pm

- **Yandel Goris**

I strongly support this proposed rule. For far too long, companies have used misleading and covert business practices to trap New Yorkers into “forever” subscriptions that are extremely difficult to cancel or escape. Consumers should have the option to cancel their subscription at any time without penalty or delay. All consumers should be able to opt out of a subscription as easily as subscribing. This proposed rule will finally put an end to these deceptive practices and will set the national standard for consumer protection in the marketplace.

Comment added April 11, 2026 9:41pm

- **Anonymous**

This is a great idea, and will help save countless new yorkers both time and money

Comment added April 11, 2026 9:49pm

- **Liz**

I am all for this...thank you for asking and caring! It's refreshing!

Comment added April 11, 2026 9:50pm

- **Darrien Glasser**

Not sure how anyone could not support this. Cancelling subscriptions is such a pain. This would be such a boon to New Yorkers.

Comment added April 11, 2026 10:01pm

- **Anonymous**

I agree with the rule. Make subscriptions easier to cancel!

I'd also like something like this for companies to delete our data within a specific time period when you request (or at least make it unsellable).

Comment added April 11, 2026 10:06pm

- **Anonymous**

Thank you for doing this. It can be such a pain to unsubscribe to a service.

Comment added April 11, 2026 10:31pm

- **Anonymous**

This is a great idea!

Comment added April 11, 2026 10:41pm

- **Mason Chaz**

I fully support this rule and hope it comes into effect immediately

Comment added April 11, 2026 11:09pm

- **Ren**

Thank you – it's about time we dealt with these awful companies. The companies just want to trap us and make it such a headache to cancel their services. They know what they are doing; they run on deceptive practices with the goal of only increasing their bottom line.

Comment added April 11, 2026 11:34pm

- **Kaizer Yousuf Hossain**

100% agree with this. End Dark Capitalist practices now and forever.

Comment added April 11, 2026 11:36pm

- **Monano Pierre-Paul**

That would be a wonderful rule, Mr. Mayor! One more thing, being able to cancel a subscription in just 1 click is one thing, them not taking you off their mailing/subscribers list even if you unsubscribe or block them from e/ mailing you is another petty thing they do. THE NEW YORKER is a prime example of this. If I cancel a membership or unsubscribe from your mailing list then please leave me alone.

Comment added April 11, 2026 11:36pm

- **Sam**

Great idea

Comment added April 12, 2026 12:33am

- **hayley**

yes, companies are manipulative – love this!

Comment added April 12, 2026 1:46am

- **Anonymous**

Can you add a rule to opt out of having to endure the current Mayor?
I did not suscribe to this.

Comment added April 12, 2026 3:51am

- **Evan**

I signed up for a newsletter to find a citation for a paper 3 years ago and I still have my information on the site even after contacting them multiple times. I hope this rule is able to be out into place!!

Comment added April 12, 2026 7:08am

- **Khadjiah**

I believe this should also include trying to downgrade subscriptions. Just a few days ago I tried to downgrade my annual Google Business subscription (I am at the end of my annual subscription). They notified me that there is going to be a price change, so I tried to downgrade my subscription because I don't need all of the features my current subscription provides. It will not allow me to downgrade my subscription unless I change my current subscription to a monthly (flexible plan) subscription, wait for them to charge me, then downgrade to a lower tier.

Not only that, whenever I tried to click on information for downgrading my business tier it would ALWAYS switch me out of my

business account, into my personal one, and try to trick me into buying another business account.

Comment added April 12, 2026 8:15am

- **Sarah Madigan**

I strongly support this measure to make it more difficult for companies to create barriers to ending subscriptions.

Comment added April 12, 2026 9:07am

- **Cesario Tirado-Ortiz**

I have lost so much money due to impossible unable to delete subscriptions. Being a low income New Yorker, this would save me so much money and help me secure financial stability in the future.

Comment added April 12, 2026 9:08am

- **Anonymous**

Canceling subscriptions with a click is a great idea. It should extend to everything including cable who can pester you for hours before allowing you to cancel.

Comment added April 12, 2026 10:50am

- **Anonymous**

This is a really good rule. Some of the subscriptions I have made, have made it extremely hard to cancel once purchased and in some cases, I've had to figure out myself whether I was truly able to cancel or not. A suggestion is that this should be made common practice across everything, from shopping and returning items, to cancelling reservations and appointments. Additionally, corporations should be held to account when raising their prices, meaning not only sending short emails about price increases, but also holding off on charging customers, until they confirm that they want to continue with the price increased subscription. Thank you Mr. Mamdani for fighting for the youth and hard-working people in NYC.

Comment added April 12, 2026 11:07am

- **Anonymous**

I am fully in favor of this! Thank you for advocating for us

Comment added April 12, 2026 11:59am

- **Dee**

Making it difficult to cancel subscriptions suggests to me that companies are more interested in making money than being good to their customers. As if consistent price hikes for diminishing quality isn't bad enough, going out of your way to make it difficult to keep our money is even worse.

Comment added April 12, 2026 12:18pm

- **Cristina**

I support this 100%!!!

Comment added April 12, 2026 1:02pm

- **Jessica**

Fully support this, there are many companies and gyms that make it unreasonably difficult to cancel subscriptions. In a digital world, this impacts everyone but exploits older New Yorkers the most. There are companies such as ScentBird for example, that of course make it easy to sign up but say you have to email support to cancel. Even then if you're not on top of it, they will continue to charge you, even after you expressed your wish to cancel via email. I've heard of companies like BrainMD that make it equally as puzzling and difficult to cancel a subscription. Just thought those companies deserved a mention since they treat their customers who fall prey to their subscription service horribly. A company should have to earn our loyalty, not trap us. Hopefully New York can get this done. Thank you.

Comment added April 12, 2026 1:25pm

- **Anonymous, RM**

Support it! Equinox is the worst offender here.

Comment added April 12, 2026 1:42pm

- **Tee**

I support this. It should be as easy to cancel as it is to subscribe.

Comment added April 12, 2026 2:00pm

- **Joshua S**

I think it's a fantastic idea. PS: Planet Fitness is a big offender here!

Comment added April 12, 2026 2:41pm

- **Anonymous**

I support!

Comment added April 12, 2026 4:53pm

- **Anon**

This is a great idea.

Comment added April 12, 2026 6:09pm

- **Anonymous**

This is a fantastic idea and well beyond time for this. Companies that make subscribing so easy and make cancelling that subscription unnecessarily complex or difficult (by having to send a postmarked letter? come on) have been using that to squeeze extra months of fees out of their userbase forever. This is a much needed first step to demanding corporate responsibility and reigning in their deceptive and manipulative tactics at the consumer's dime. Maybe we can go after the cable company promotions next.

Comment added April 12, 2026 7:55pm

- **Larissa King**

I recently spent nearly an hour attempting to cancel a subscription to online grocery store Thrive Market. There was no cancellation option in the account settings, and I had to repeatedly request my account cancellation from a chatbot that was programmed not to take no for an answer. After requesting cancellation 5 times, it finally accepted.

Comment added April 12, 2026 8:27pm

- **Kinsen**

What a great and common sense way to cancel subscriptions.

Now companies can spend their time making their subscriptions worth it instead of designing ever worse cancellation pages.

Comment added April 13, 2026 2:05am

- **Amy**

I work in tech. I know how companies ignore inconvenient usability heuristics to keep consumers trapped in their digital ecosystems. They collect data on your every click and keystroke – often even recording your screen!! – to see how visitors navigate their sites and know where people are going to try to accomplish certain tasks. They are also running experiments on you constantly (which may take the form of A/B testing or beta testing, for example) without your knowledge to see which changes to their site or marketing campaigns result in manipulating customers to perform the desired action (conversion). The changes or design issues that get attention and investment are the ones that generate revenue. If a company can design a simple, intuitive subscription flow they can absolutely design its counterpart for cancellation. And don't even get me started on the companies that require you to call or use a customer service chat to cancel, when they can use social desirability biases to pressure you into continuing to remain a customer. At present, there's no incentive for companies to make any changes to cancellation experiences that benefit consumers and negatively impact their bottom line. As they say, "When there's a will, there's a way," but currently there is no will.

Please, NYC, do this and create model legislation for other cities and states to follow suit.

Examples:

– Recording of customer use of a

website: <https://www.pendo.io/session-replay-demo/hv/>

– Capturing customer interactions, and pairing it with individual, uniquely identifying customer information (attributes) to push you into spending more money:

— Adobe

Analytics <https://experienceleague.adobe.com/en/docs/core-services/interface/services/customer-attributes/attributes>

— Qualtrics <https://www.qualtrics.com/customer-experience/digital-analytics/>

– A/B testing software a company can subscribe to that allows them to conduct experiments on customers to see which version (variant) of a site results in customers spending more

money: <https://www.optimizely.com/products/web-experimentation/>

Comment added April 13, 2026 7:34am

- **Philip Matuskiewicz**

This rule should also extend to the telecom operators like Verizon and Sirius XM. With Verizon it was very easy to open a new line in store, but the store was not able to cancel any lines, I had to call into their customer support center, wait on hold for 60+ minutes, and then go through all sorts of retention acts before they'd cancel it for me in December. Cable TV isn't any better. I'm in strong support of such rules that require cancellation to be an equal effort to opening up the account in the first place.

Comment added April 13, 2026 9:19am

- **Suzanne C**

I've received many spam emails that either dont have an unsubscribe button or the button directs me to a "404 page not found" site. How

will you address this?

Also, how will you address the behind the scenes sale of our contact info to others?

Comment added April 13, 2026 9:27am

- **Anonymous**

I FULLY SUPPORT.

End predatory practices from corporate America. One click cancel must happen.

Comment added April 13, 2026 1:07pm

- **Lainie Fefferman**

I think click to cancel would help a huge number of people – definitely pro!

Comment added April 13, 2026 4:11pm

- **Jascha Narveson**

There is no good reason not to have this law. The only reason to make canceling subscriptions hard is for corporations to trap people into paying money against their will.

In a rational world this would be a no-brainer.

Comment added April 13, 2026 4:12pm

- **Amery Rock**

I agree with rules that restrict how corporations can make people unsubscribe from their services. I subscribed to an app recently called MyFitnessPal. It cost about \$20 a month to subscribe but a subscription is also available annually at about \$80 a month. I initially signed up for the \$20 a month plan so that I could see whether or not I would enjoy using the app and that it would be useful to me. After determining that I did want to continue to use the app. It took me

about 3 months to figure out how to unsubscribe from the \$20 a month plan. There was no option to easily switch from the \$20 a month plan to the \$80 annual plan. I had to literally cancel my subscription for a month and I'm going to have to sign up a month later for my \$80 plan. Unnecessary

Comment added April 13, 2026 5:16pm

- **Anna McPherran**
STRONGLY IN FAVOR, thank you!

Comment added April 13, 2026 8:47pm

- **Cee m**
Wonderful! I don't subscribe to almost anything because of the current automatic renewals.... having read/heard about so many people having trouble when they want to cancel a subscription. This not only hurts me, but the business that is seeking my dollars.

Comment added April 15, 2026 11:32am

- **Brett Frischmann, Sarah Rajtmajer, Evan Selinger, and Moshe Vardi**

Comments from Brett Frischmann, Charles Widger Endowed University Professor in Law, Business and Economics, Villanova University; Sarah Rajtmajer, Associate Professor, College of Information Sciences and Technology, The Pennsylvania State University; Evan Selinger, Professor of Philosophy, Rochester Institute of Technology; and Moshe Vardi, University Professor, Karen Ostrum George Distinguished Service Professor in Computational Engineering at Rice University.

It is a great idea to require symmetry in digital contracting so that it is just as easy/difficult to enter a contractual or other commercial arrangement as it is to withdraw from it. In general, symmetrical

design is a good idea. It is fair, and it can enable consumers to exercise their autonomy meaningfully.

One significant problem with “click-to-cancel” rules, however, is the premise that one click (or even a few) is enough to enter or withdraw, subscribe or unsubscribe. It is way too easy to enter subscriptions and other contractual arrangements in the first place. There is extensive literature on the topic. Click-to-contract (one-click contracting) is a pervasive social problem, and it is not solved by click-to-cancel. See, e.g., Brett Frischmann and Moshe Vardi, *Better Digital Contracts with Prosocial Friction-in-Design*, 65 *JURIMETRICS J.* 1 (2025); Brett Frischmann and Evan Selinger, *Re-Engineering Humanity* (Cambridge University Press 2018).

Companies use asymmetrical friction-in-design to engineer user behavior and trap consumers: The “easy to enter (frictionless), but difficult to escape (friction-full)” set-up not only traps consumers in bad deals and commercial relationships; it also destroys privacy and supports surveillance capitalism. See Brett Frischmann and Sarah Rajtmajer, *Defending Consent in Privacy Law*, at <https://ssrn.com/abstract=6204478>.

The solution is not simply to eliminate friction stacked against cancellation, however. In addition to making cancellation/withdrawal easier, the DCWP should make entering digital subscriptions and related contractual arrangements more difficult. At a minimum, consent should be meaningful and not illusory. Notice and clear and conspicuous disclosures coupled with some action to manifest assent (like clicking a virtual button) is not enough. Studies show: No one reads; people just click without thinking. And this is not natural, necessary, or inevitable; it is a direct consequence of the same type of asymmetrical friction-in-design. See *id.*

The DCWP should require better design. Prosocial friction-in-design that teaches and confirms understanding is possible and need not be

overbearing. Simply put, and as explained in a series of publications cited above, the party drafting and designing consent mechanisms should bear the burden of generating reliable evidence that a person actually understands the consequential terms to which the person agrees.

Before closing, it is important to clarify that we fully appreciate the intention to protect consumers trapped in a web of online services and subscriptions. Providing them with a reasonable way out is a laudable goal. And we also appreciate the concern about the perfect being the enemy of the good. While not perfect, the proposed rules seem like a radical improvement for the good because it would provide consumers with an easy way to escape. In the short run, this may be accurate. But we are much less confident about the impact of the proposed rules over the medium to long run, and briefly, here is why. The rules could backfire if they provide the illusion of sufficient consumer protection. While there might be a rush to take advantage of the rules in the short run, it is unclear whether consumers would continue to do so over time. Finally, perhaps the worst impact of the current proposed rules is that the rules effectively endorse and normalize the frictionless one-click approach.

[Comment attachment](#)

ReengineeringHumanity-EXCERPT.pdf

Comment added April 15, 2026 12:11pm

RE-ENGINEERING HUMANITY

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To our families

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Foreword

Human beings have a genius for designing, making, and using tools. Our innate talent for technological invention is one of the chief qualities that sets our species apart from others and one of the main reasons we have taken such a hold on the planet and its fate. But if our ability to see the world as raw material, as something we can alter and otherwise manipulate to suit our purposes, gives us enormous power, it also entails great risks. One danger is that we come to see ourselves as instruments to be engineered, optimized, and programmed, as if our minds and bodies were themselves nothing more than technologies. Such blurring of the tool and its maker is a central theme of this important book.

Worries that machines might sap us of our humanity have, of course, been around as long as machines have been around. In modern times, thinkers as varied as Max Weber and Martin Heidegger have described, often with great subtlety, how a narrow, instrumentalist view of existence influences our understanding of ourselves and shapes the kind of societies we create. But the risk, as Brett Frischmann and Evan Selinger make clear, has never been so acute as it is today.

Thanks to our ever-present smartphones and other digital devices, most of us are connected to a powerful computing network throughout our waking hours. The companies that control the network are eager to gain an ever-stronger purchase on our senses and thoughts through their apps, sites, and services. At the same time, a proliferation of networked objects, machines, and appliances in our homes and workplaces is enmeshing us still further in a computerized environment designed to respond automatically to our needs. We enjoy many benefits from our increasingly mediated existence. Many activities that were once difficult or time-consuming have become easier, requiring less effort and thought. What we risk losing is personal agency and the sense of fulfillment and belonging that comes from acting with talent and intentionality in the world.

As we transfer agency to computers and software, we also begin to cede control over our desires and decisions. We begin to “outsource,” as Frischmann and Selinger aptly put it, responsibility for intimate, self-defining assessments and judgments to programmers and the companies that employ them. Already, many people have learned to defer to algorithms in choosing which film to watch, which meal to cook, which news to follow, even which person to date. (Why think when you can click?) By ceding such choices to outsiders, we inevitably open ourselves to manipulation. Given that the design and workings of algorithms are almost always hidden from us, it can be difficult if not impossible to know whether the choices being made on our behalf reflect our own best interests or those of corporations, governments, or other outside parties. We want to believe that technology strengthens our control over our lives and circumstances, but if used without consideration technology is just as likely to turn us into wards of the technologist.

What the reader will find in the pages that follow is a reasoned and judicious argument, not an alarmist screed. It is a call first to critical thought and then to constructive action. Frischmann and Selinger provide a thoroughgoing and balanced examination of the trade-offs inherent in offloading tasks and decisions to computers. By illuminating these often intricate and hidden trade-offs, and providing a practical framework for assessing and negotiating them, the authors give us the power to make wiser choices. Their book positions us to make the most of our powerful new technologies while at the same time safeguarding the personal skills and judgments that make us most ourselves and the institutional and political structures and decisions essential to societal well-being.

“Technological momentum,” as the historian Thomas Hughes called it, is a powerful force. It can pull us along mindlessly in its slipstream. Countering that force is possible, but it requires a conscious acceptance of responsibility over how technologies are designed and used. If we don’t accept that responsibility, we risk becoming means to others’ ends.

NICHOLAS CARR

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Note on the Text

All books run the risk of seeming dated the moment that they're finished. The pages end but time marches on. This risk is especially pronounced with books like ours that discuss technology. We submitted the manuscript for *Re-Engineering Humanity* in the fall of 2017, knowing that publication was scheduled for the spring of 2018—a gap that can seem like an eternity in tech-time. We hope our readers appreciate this basic publishing constraint and recognize that our goal is to start a conversation about fundamental issues that have enduring relevance.

Introduction

There's a scene in the HBO series *Silicon Valley* where a character tries to show off by purchasing a \$14,000 smart refrigerator that can identify when it's running out of beer and when someone is about to put expired yogurt on one of its shelves. Hilarity ensues when another character hacks into it and sets the start-up screen to an inappropriate and looping video. The absurdity is a welcome relief for skeptics like us who bristle at the breathless media coverage of "smart" gadget rollouts as paving the path towards interconnected utopia. Unfortunately, techno-social engineering, the main subject of this book, is no laughing matter. How we engineer ourselves and are engineered by others is one of the most important questions of the twenty-first century.

The companies, organizations, and institutions that use and design smart technology are our leading techno-social engineers. They seduce us by promising smart tools will make our lives easier and better. But like all narratives about pure progress, this isn't the whole story. As we collectively race down the path toward smart techno-social systems that efficiently govern more and more of our lives, we run the risk of losing ourselves along the way. We risk becoming increasingly predictable, and, worse, programmable, like mere cogs in a machine.

Critics often claim that new technologies dehumanize, especially in recent decades with the widespread adoption of computers, the Internet, and, more recently, smartphones. But the public generally takes such claims to be alarmist, and so the claims remain untested and ultimately drowned out by rampant enthusiasm for new technology. Yet techno-social engineering of humans exists on an unprecedented scale and scope, and it is only growing more pervasive as we embed networked sensors in our public and private spaces, our devices, our clothing, and ourselves.

To get a clear sense of where on the path we are, let's play a game, the type that philosophers call a thought experiment. Imagine that an "evil, tech-phobic monarch" forced everyone to stop using products

and services from the major technology companies: Amazon, Apple, Facebook, Microsoft, and Alphabet (the parent company of Google), a.k.a. the “Frightful Five.”¹ No more Instagram. No more email. No more searching the Internet. If you had to stop cold turkey, you wouldn’t like it, would you? It might feel like the end of the world – the technological apocalypse.

But how, exactly, would our lives “deteriorate” by pulling out these cords?² It’s hard to imagine the specifics because we depend so deeply on each one of these companies. Consider Amazon, the supreme retailer whose stock “has been rising at nearly 42% a year.”³ Amazon began by selling books online and offering customers a simple way to share book reviews and get automated recommendations for books we might like to read. Then it expanded and expanded some more. And the company just keeps on creeping along, pursuing “dominance, comprehensiveness, and the pursuit of monopoly,”⁴ edging ever-closer towards a “United States of Amazon.”⁵

Without Amazon, we’d lose one-click, fast delivery ordering of everything from diapers to breakfast cereal – purchases that are so easy to make that there’s effectively “no thinking required.”⁶ If Amazon couldn’t deliver vast libraries of streaming television shows, movies, and music to our desktops, laptops, phones, and tablets, the loss of entertainment would sting. And if, suddenly, we couldn’t walk into brick-and-mortar stores and compare their prices to Amazon’s, we’d feel like bargain shopping died.

It’s become clichéd to say that the future is already here but not evenly distributed, but Amazon proved that this is so back in 2014. That’s when the company drew headlines for acquiring a patent for “anticipatory” shipping. This is exactly what it sounds like – a patent for a system that can predict what customers want to buy before they even know they want to make the purchases. Amazon’s goal is to “box and ship products it expects customers to buy pre-emptively, based on previous searches and purchases, wish lists, and how long the user’s cursor hovers over an item online.”⁷ Amazon’s “significant” stake in cloud computing – essentially running and renting space for other online businesses – means that the company is prepared to “power the public infrastructure that keeps the world running,” once self-driving cars go mainstream and run on smart grids that are “underpinned by cloud computing networks.”⁸ In light of all that Amazon offers, does, and will do, *New York Times* technology writer Farhad Manjoo characterizes the company as his “keeper of lists, a provider of food and culture, an entertainer and educator and handmaiden to my children.”⁹

When Manjoo describes his personal experience of getting sucked into Amazon world, he notes that the vortex intensified significantly when the company rolled out the Echo. Echo is a hands-free device. It interacts with users through a digital, voice-activated assistant named Alexa that “is designed to get smarter every day” by “adapting to its users’ speech patterns, vocabulary and personal preferences.”¹⁰ All Manjoo needs to do is ask, and Alexa will perform a range of tasks for him. She’ll look up the weather for him, turn on his favorite music playlists, and place his Amazon orders. And that’s just the beginning. Manjoo notes that Echo has become such an integral part of the “most mundane moments” of his day that the device is “well on its way to becoming” his “household’s brain, a kind of butler in the sky that runs the place for” him.¹¹

Notice what Manjoo is saying about how Amazon instills a can’t-live-without-you mindset. Alexa directly mediates Manjoo’s everyday experiences and habituates him to think and act in collaboration with the device, and Alexa persuades him by design to fundamentally change how he performs household tasks and makes consumer choices.¹² Manjoo will get some benefits from this “relationship,” but he probably won’t recognize all the subtle and profound ways that Alexa is programmed to program him. The folks at Amazon knew exactly what they were doing when they gave Echo a human name and a human-sounding voice. These are two anthropomorphic features, giving the illusion of humanity. And as the research shows, both incline people to bond and empathize with inanimate technology.¹³

While the “brain” and “butler” comparisons suggest that Manjoo is using a networked device that is, at once, both master and servant, the reality is that Alexa doesn’t present evenly balanced powers. What Manjoo identifies is the beginning of a path where powerful companies use smart technologies to gain control over us by framing our choices and nudging us towards programmed lives of convenience and cheap bliss. Cheap bliss is addictive. If it weren’t, you could stop eating after you had exactly one potato chip. Or one bite of any of the other foods that are engineered to get us to come back for more, and more, and more . . . And so, Manjoo appears to say that if technology companies can deliver cheap bliss by optimizing his life, he’s all for it. He’s even willing to pay for their services with agency and self-determination.

Manjoo’s desires are not unique. We are all like Manjoo. Consumer demand for various kinds of digital assistants is growing, and during the much-touted Amazon Prime Day, we considered purchasing the deeply discounted Echos.¹⁴ Hal Varian, chief economist for Google, goes so far as

to declare: “Centuries ago, rich people had servants, and in the future, we will all have cyberservants.”¹⁵ Apparently, in the future everywhere we go, technological valets will track and assess our behavior, steer us towards our anticipated goals, and take care of our predicted needs.

You might well wonder, what’s the harm in technology companies making shopping easier for us? Or making it easier for us to communicate with our friends? Or making it easier to get valuable information like directions for how to get to a meeting across town during rush hour traffic? These all seem like good things that enhance our lives. That’s why it would feel catastrophic to lose the technological services that we’ve grown accustomed to. At the same time, however, we’re being sold a misleading vision of cyberservants and digital assistants. These tools don’t just do our bidding. They’re also smart enough to get us to do theirs.¹⁶

Our discussion of Amazon reveals a piece of a larger puzzle, a blueprint for building a world that’s filled with ubiquitous smart programming. Such a world will be dramatically different from our own. And that’s why it’s important to take a step back and critically consider the human-level implications of being programmed by the environments that are being designed for us to live, work, and play in.

Such programming was on full display during the 2016 US presidential race, in what’s come to be known as the fake news election.¹⁷ While it remains debatable just how much fake news helped Donald Trump get elected, one thing is certain: propaganda campaigns let loose highly automated networks of social media bots. The software posed as real people – regular folks offering earnest, special-interest-free, political opinions – and masked their real agenda of being tools designed to sway votes and circulate calculated talking points. Even though disinformation campaigns have been going on for a long time and attack ads have become a political staple, the bot situation is especially troubling. In a polarized world, when bots are designed to look and sound like us, our neighbors, and our friends, it can be hard to know who – or better yet, what – is engineered to follow a deviously programmed script. This problem, the growing hold Amazon and other technology giants have on us, and many other related issues in the personal, social, and political spheres all concern *twenty-first-century techno-social engineering*.

Techno-social engineering refers to processes where technologies and social forces align and impact how we think, perceive, and act. That’s the “techno” and “social” components of the term. “Engineer” is quite close in meaning to “construct,” “influence,” “shape,” “manipulate,” and “make,” and we might have selected any of these terms.¹⁸ After due consideration, however,

“engineer” won out for two reasons. First, the practice of engineering is directed at designing and using tools to achieve desired ends. Second, the term “engineer” lends itself to analysis that draws parallels between designing environments and designing the people who live in them.¹⁹

Techno-social engineering has many components. An especially potent one is surveillance. We live in a surveillance society now, and while some people, groups, and even nations resist, most of us are being conditioned to accept surveillance expanding in scale and scope. Business leaders, policy-makers, and consumers are clamoring for a world with smart technology embedded in everything. And that world can’t function without always-on people interacting with always-observing, always-analyzing, and always-acting technological systems.

Consider a few examples of techno-social engineering from your everyday life. Have you ever been relentlessly pursued by targeted advertising across the Internet – perhaps a pair of shoes or a jacket that you once considered buying pop up wherever you browse and won’t go away? That’s done to wear you down. The more you need to exercise will-power when considering whether to buy something, the more your will-power depletes.²⁰ Or, have you ever clicked “I agree” and accepted the terms of service for online contracts that you didn’t bother reading? We all have. Those contracts are designed so that there’s no point in reading the fine print. See it, click it, stimulus-response. Or, have you ever been in social situations where you shouldn’t check your phone but you do because you just can’t help yourself? That’s addiction by design, and it cuts both ways.²¹ It also accounts for why other people annoy us when they can’t leave their digital tethers behind.²²

Then there’s social media. Ever intend to bare your soul or engage in a reasoned debate but end up sticking to the widely used expressions that the interfaces promote – clicking “like,” “retweet,” or “heart” instead of formulating more thoughtful responses? We have. And that’s because social media platforms are optimized to get users to communicate this way. The platforms profit from this style of communication.

Let’s not forget the games. Billions of dollars are spent each year on mobile games that are free to download. Free to download, however, doesn’t necessarily mean free to play. Gamers pay with their time, attention, and data. They make in-app purchases and get sucked into playing during the time programmers select when they heighten their control over players by limiting when special rewards and challenges are offered.²³

These experiences and many others reveal that powerful techno-social engineering is occurring everywhere and that a common theme runs throughout them: We are being conditioned to obey. More precisely, we're being conditioned to want to obey.

One extreme scenario that's worth considering is that the smart programming of the future will require us to automatically accept the shots that algorithms call. Perhaps the only way we'll be able to do all the things that smart systems require will be for humans to accept a new lot in life and behave like simple machines. That's the dark side to twenty-first-century techno-social engineering.

Should such a future arise, it will be a long way off. But before the programming deepens, it's crucial to get a clear sense of how decisions that are made today can impact the world of tomorrow. Conventional wisdom says we've made tremendous technological progress in the past century and that it's been driven by the rational behavior of producers and users who develop, deploy, adopt, and use innovative technologies to satisfy consumer preferences and pursue happiness. The conventional wisdom obscures the truth and engineers complacency.²⁴ Our preferences are increasingly manufactured rather than freely adopted, thanks to techno-social engineering calling the shots. The worst, perhaps, is yet to come.²⁵

Welcome to the Experience Machine n.o

Farhad Manjoo's thought experiment about how contemporary technology companies are shaping our values reminds us of a different thought experiment – one that the philosopher Robert Nozick first articulated over forty years ago, long before the invention of the commercial Internet.²⁶ Nozick didn't seem to have much interest in being a futurist. As an exercise in theorizing about well-being, he wondered whether he or anyone else would choose to plug into a hypothetical "experience machine" that could convincingly simulate any desired experience. In the blink of an eye, the experience machine would let you take on the role of a renowned novelist, a caring father, an ascetic saint, or any of the myriad of other possibilities, like rock star, brilliant scientist, or world-class athlete.²⁷

Nozick seemed to imagine the experience machine as a huge mainframe computer. By now, it seems safe to say that he envisioned the wrong type of machine. If a contemporary experience machine were to be built, it wouldn't be anything like a 1970s-era mainframe computer that one plugs into with a cord.

Nozick wasn't far off in other respects. He imagined neuropsychologists would supply us with the sensations we desire and ostensibly crave. Today, technologists, entrepreneurs, and policy-makers are importing scientific insights about how minds work and can be manipulated into their engineering projects and business plans. Knowledge from cognitive science, psychology, and behavioral economics guides how technologists design contemporary computer programs, architect technical systems, and create human-computer interfaces.

Extrapolating from the present to the near future, trends point toward the possibility of creating distributed experience machines, comprised of interconnected sensor networks and big-data-driven automation of socio-technical systems around, about, on, and in human beings. In the final iteration, the distributed experience machine would be ubiquitous and all-encompassing. In this imagined future, our entire environment would be a host of interconnected experience machines, what we'll call Experience Machine n.o for short. Deployed and integrated incrementally over decades, people will be gradually prepared for and conditioned to accept how it reshapes our entire world and ultimately us.

If the Experience Machine n.o strikes you as unrealistic, remember we're using it as a metaphor. It represents the combined effects of several real technological developments – all of which are gaining momentum today. We're not claiming that an actual variation of Nozick's thought experiment will be built. The dynamic relationships between social and technological tools and the complex systems within which they are nested and deployed are not easily reduced to a linear series of cause and effect relationships.²⁸ Nevertheless, reports ranging from the White House's "Internet of Things: Examining Opportunities and Challenges" to the Pew Center report "The Internet of Things Will Thrive by 2025" suggest that the Experience Machine n.o metaphor dovetails closely with projected projects and scenarios.

Nozick invented the thought experiment to challenge hedonism. This theory stipulates that what matters most in evaluating the quality of our lives is our subjective experience of happiness. Many who have engaged his hypothetical have assumed people would only enter the experience machine if they freely choose to – that is, if they willingly embraced hedonism. The presumption of choice, however, deserves more scrutiny in the context of the Experience Machine n.o. It's hardly a "choice" to plug in anymore. It's almost a practical necessity. Fighting for the freedom to be off will be one of the most important battles of the twenty-first century.

How could the Experience Machine n.o get built? In an essay titled “Utopia?” we identify several pathways.²⁹

- One possibility is a *slippery slope*. Slippery slope refers to the process by which incremental steps down a sloped path can lead to tipping point – a slip and fall, so to speak.
- Another possibility is *engineered complacency*. Engineered complacency refers to one of the mechanisms for accelerating slippage down the slope. If we’re engineered to avoid critically questioning innovation, it’s hard for us to pay attention to whether change accords with values we deem important or to deliberate about strategies for avoiding change that threatens our values.
- Another possibility is the *aggregation of trillions of perfectly rational choices*. The aggregation of trillions of perfectly rational choices refers to the idea that the incremental steps we take down the slippery-sloped path often will be perfectly rational when evaluated one-by-one on their own seemingly independent terms. This frame evokes the tragedy of the commons, which we’ll revisit momentarily.
- Yet another possibility is the *ubiquitous deployment of “smart” techno-social resource management systems for the purposes of maximizing human happiness at minimal social cost*. This possibility links means with ends specifying what type of infrastructure could support Experience Machine n.o.³⁰

Each possibility captures part of the techno-social engineering story. Collectively, they highlight the key features of the path we seem to be on.

Humanity’s Techno-Social Dilemma

Let’s consider in more detail how the path towards Experience Machine n.o could be fueled by the aggregation of trillions of perfectly rational choices. A helpful comparison is the tragedy of the commons, a famous environmental allegory. In ecologist and philosopher Garrett Hardin’s original formulation, the tragedy of the commons involves a dilemma faced by a community of sheep herders who share a common pasture. The herders create a disaster by thinking and acting selfishly. Each one wants to use limited land to feed her own sheep. And so, each individual proceeds under the assumption that it’s rational to increase the size of her own herd to capture the benefits of a pasture that everyone shares while only bearing a fraction of the costs that accrue as the common resource gets

exhausted. These externalized costs add up, however, and over time the mad rush for resources leads to massive depletion.

Many believe that things could work out differently if the herders adopt a different outlook. To avoid disaster, they need to better understand their relationships to each other and their shared resources and develop governance strategies for cooperatively bringing about sustainable well-being.

The tragedy of the commons is shorthand for describing many problems that involve a shared resource, a lack of governance, rational, selfish behavior, external costs, and incremental individual actions that aggregate over time to disastrous, often irreversible, social consequences. One of the most pressing examples is climate change – a super-sized, global tragedy of the commons. Remarkably, it has taken decades for the public to appreciate that a large-scale climate change problem exists that humans bear responsibility for creating. Despite widespread scientific consensus for years, the mainstream media only recently have come around to gloomy portrayals of our greenhouse gas crisis. How to understand the relationships between key factors and how to respond to the problem remain highly contentious works-in-progress.

In the context of techno-social engineering of humans, we're calling the tragedy-of-the-commons-like problem *humanity's techno-social dilemma*. Like climate change, there are an incredible variety of small-scale decisions we each make about technology that seem, on their own terms, rational and unproblematic. Yet the increments aggregate, and, like individual herders who need to decide whether to add another sheep to their flock, we suffer if we fail to account for the systemic effects of our decisions, including the production of negative externalities and the impacts on ourselves and future generations.

Just because techno-social engineering is old news doesn't mean we've got a handle on it. Think about our dependence on carbon-based fuels. Relying on them has induced status quo bias (the tendency to accept how things currently are) and made it hard for many people to acknowledge that climate change poses an existential threat. It is hard to accept that lifestyles, industries, and politics need to change. Similar things can be said of technology and techno-social engineering.

One of the ways that humanity's techno-social dilemma differs from the tragedy of the commons is that we're frequently unsure if the problems associated with techno-social engineering are being imposed on us, whether we're electing to behave in short-sighted and insufficiently reflective ways, or whether both factors are in play.³¹ Companies, institutions, and designers regularly treat us as *programmable objects* through hyper-

personalized technologies that are attuned to our personal histories, present behaviors and feelings, and predicted futures. Although some finger wagging at powerful corporations is justified, let's not fool ourselves into believing we're innocent victims. The overly simplistic "us vs. them" dichotomy is an ideological trap. There's not always a bright line dividing either, and even when there is, we can't blame "them" fully. We're at fault, too. We choose to participate or choose not to choose and simply follow laid out plans as our default orientation. We adopt technology and mindlessly bind ourselves to the terms and conditions offered. We carry, wear, and attach devices to ourselves and our children, maintaining a connection and increasing our dependence. In doing so, we leash ourselves. As we feed on incremental satisfactions, curiosities, updates, and attention, we treat ourselves as grazing sheep and make ourselves more susceptible to conditioning. We outsource memory, decision-making, and even our interpersonal relations, among many other things. In constructing many different aspects of ourselves, ranging from intelligence to fitness, attentiveness to sociality, we rely on the techno-social engineers' tools to train ourselves, and, in doing so, let ourselves be trained. We both herd ourselves and get herded by others.³²

Take social robots – think of an embodied and upgraded form of Alexa. When they go mainstream, our new "companions" will engage in highly intimate forms of techno-social engineering by inviting us to change our habits and altering how we relate with others. Will those changes be good or bad for us? It's hard to know without possessing a framework for identifying the central components of techno-social engineering and evaluating some of its normative consequences. We create that framework as we analyze the fundamental ideas associated with techno-social engineering, develop a theory about what makes contemporary techno-social engineering more troubling than previous versions, and propose tests to measure the impact of techno-social engineering upon our capabilities and dispositions. Finally, we offer suggestions for how to minimize undesirable techno-social engineering in the age of smart systems.

The Structure of the Book

This book is divided into four parts. In the first part, we use contemporary observations, thought experiments, and theoretical analysis of creep phenomena and slippery slope arguments to reflect on why it's so hard to understand techno-social engineering and come to grips with humanity's techno-social dilemma. Some reasons concern the difficulty of identifying

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the dominant logics driving techno-social systems. Others have to do with the incremental nature of techno-social change and the challenge of recognizing when gradual adoption hits a tipping point and becomes radical transformation.

We explore different ways that techno-social engineering programs our behavior. The mechanisms are complex, subtle, and often interwoven. Technologies afford different actors different capabilities, and it's all too easy to become enthralled with the positive outcomes of innovation while underestimating the cost of its downsides and being blindsided by them, and even ignoring the fact that downsides exist.

We open the second part of the book with a historical primer on the transformative power of tools. Then we use electronic contracts as a case study that illustrates why techno-social engineering isn't taken as seriously as it should be, despite having powerful effects. From there we explain how mind-extending technologies can invite others into our minds, incline us to outsource important aspects of thinking and acting, and even lead to worrisome cases of mind control. These discussions highlight how techno-social engineering can influence our beliefs, preferences, and even values. We then critically discuss why there's so much excitement about smart environments, why dominant discussions of these environments obscure important points about techno-social engineering, and why we may not be aware of how profoundly techno-social engineering is altering our social relationships.

The second part examines three formidable influences behind the growing scale, scope, influence, and power of techno-social engineering. First, instrumental reason is valorized to such a degree that it's become fetishized. Second, the scientific management of human beings in general and data-driven efficiency management in particular are rapidly spreading, and that shift is best understood as the extension of Taylorism³³ from the workplace context to nearly every environment within which we develop and live our lives. Third, it's rapidly becoming easier to design technologies that nudge us to go on auto-pilot and accept the cheap pleasure that comes from minimal thinking; smart environments are poised to significantly exacerbate the situation.

The third part of the book builds upon the first two. We propose a new framework for identifying and evaluating the techno-social engineering of humans: a techno-social engineering test that follows a two-step procedure. The first step is to run an experiment – an empirical experiment or a thought experiment – that determines if, in some context, humans are behaving like simple machines. In cases where humans are behaving like

simple machines, and, in principle, could be substituted by them without anything significant being lost in translation, this step triggers a metaphorical yellow light that invites us to pause and look closer at what techno-social engineering is doing to us.³⁴

While the first step is observational, the second step is evaluative. It assesses whether the techno-social engineering that's taking place in the environment studied by the first step is adversely impacting us. Think of this follow-up step as triggering either a metaphorical red light (i.e. stop, determine how deep the problem runs, and consider alternatives if possible) or a green light (i.e. conclude that no normative problem exists). We articulate the framework's conceptual foundation and offer representative examples of how it could be applied.

Our framework is inspired by the famous Turing test that focuses on a conversation between a human judge and an unseen test subject, which could be a human or a machine. The mathematician and pioneering computer scientist Alan Turing proposed an observational test to examine whether a machine can think. If a judge mistook a machine for a human after an extended conversation, the remarkable machine might deserve to be classified as intelligent; perhaps it could think. Over time, the Turing test established an elusive endpoint or finish line for some artificial intelligence researchers.³⁵

While there has been considerable research and attention devoted to the computers involved in the Turing test race, designing intelligent machines is only half of the relevant picture. Another race is occurring on the other side of the Turing line, the human side.³⁶ Though there is much more to our analysis than intelligence, a bumper sticker for our book might very well display the following motto: We're not interested in the engineering of intelligent machines; we're interested in the engineering of unintelligent humans.

We develop a series of techno-social engineering tests to examine different aspects of intelligence: (a) mathematical computation, (b) random number generation, (c) rationality, and (d) common sense. All four are plausible tests to distinguish humans and machines. However, the first two don't implicate fundamental notions of what it means to be a human whereas the third and fourth do. For each test, we explain what we are testing, specify the sorts of stimuli an observer might use, and then discuss how to interpret the results. We examine thought experiments to tease out implications of the rationality and common-sense tests.

We next explain how free will is threatened by engineered determinism. Free will is a person's situated capability to reflect upon on and determine

their beliefs, preferences, values, and intentions. Based on the fundamental role free will plays in human civilization and in our basic conceptions of moral responsibility, we advance a pragmatic wager to live our lives and structure society as if free will exists and matters, and then we propose techno-social engineering tests for free will.

We conclude the third part by critically considering the core normative question, *To what end?* Techno-social engineering cuts to the very heart of who we are as people and the kinds of worlds we want to live in. We are techno-social animals. What meaningfully distinguishes *homo sapiens* from all other species is our capability to imagine, conceptualize, and engineer our environment and ourselves. And what matters about being human is how we exercise such power over generations to collectively produce, cultivate, and sustain shared normative conceptions of humanity. *How should we exercise such power? How should we engineer our world and ourselves? What type of society should we build and sustain?* These are not new questions. Every generation faces them and is defined by how they answer. Twenty-first-century techno-social engineering frames these questions in a new and challenging light.

We conclude the book with prescriptions. Most fundamental is our call for freedom, which encompasses two related ideals:

1. Freedom from programming, conditioning, and control engineered by others. In our modern techno-social world, we call this the *freedom to be off*.
2. Freedom of will and practical agency. In our modern techno-social world, we call this *freedom from engineered determinism*.

After discussing these ideals, we consider a series of strategies to mitigate humanity's techno-social dilemma and redirect techno-social engineering to sustain humanity.

Given the rapid pace of technological development and the insidious ways techno-social engineering can mold us while going unnoticed and unchallenged, we couldn't think of a better time to write this book. We, the authors, will narrate events and analysis by using the plural pronoun 'we'. This is a literary device meant to connect authors and readers and not a naïve way of pretending that the two of us can speak universally. We're painfully aware that our collective voice is biased by our disciplinary training, a lifetime of living in the US (despite spending significant time traveling abroad), and the privileges that come from being white, middle-aged, and financially secure. We further realize that limiting the scope of our book to deep discussion of the core aspects of techno-social

engineering means we'll pay scant attention to the digital divides that exist within countries and even neighborhoods. We'll infrequently discuss why resources, opportunities, and problems aren't the same for everyone and we'll only obliquely refer to the employment problems associated with automation. These occlusions matter. But the type of deep analysis we're providing requires unwavering focus.

PART I

CHAPTER I

*Engineering Humans***Introduction**

Techno-social engineering represents a constant in human history.¹ Our analysis begins with contemporary examples of well-intended teachers, administrators, and parents helping to create a surveillance culture. The mystery of why these caretakers fail to understand the full implications of their choices illuminates how techno-social engineering works.

Fitbits at Oral Roberts University

Controversy erupted at Oral Roberts University in 2016 after the press drew attention to a requirement that students purchase and wear Fitbit health trackers for a physical education class. The wrist-worn device counts the total number of steps students take each day and tracks compliance with a weekly requirement of 150 minutes' elevated heart rate. Tracked activity represents up to 20 percent of the physical education grade. As students are required to take physical education every semester, they wear the Fitbits throughout their entire college experience.

Commentators both criticized and defended the program. Many worried that that university intruded too deeply into the lives of its students, seeming to disregard student privacy concerns. Who gets access to what data? What can the data-gatherers do with the information that they collect? How long is student data stored? How effective are the university's information security measures? Did students give informed consent (which is to say, did they give their permission to participate in the physical education program *after* being provided with full disclosure of the possible benefits and risks)?

Others saw the privacy panic as unnecessary, at least in principle. Consent forms, clear policies, and administrative safeguards could address these concerns, with the right to opt out of the requirement.

Oral Roberts University had provided these safeguards. And prior to introducing the Fitbits, the university already monitored students' physical activity in different locations as part of its physical education class. It just relied on different technology: students generated data by hand on paper.

Since the university did its basic due diligence, the privacy criticism fizzled out. A representative of the Electronic Frontier Foundation, a civil liberties group, stated the Fitbit requirement didn't pose privacy problems so long as the mandated technology didn't gather geolocation data. From this perspective, a Fitbit is merely a more efficient electronic means for gathering the same data that Oral Roberts University has always collected. It does not disrupt long-established norms, and incoming students and their parents presumably knew exactly what the expectations were/are.²

We're uneasy with this equation and will explain why by comparing how different surveillance tools impact students.

Different Forms of Tracking and Their Consequences

Psychologist James A. Gibson used the term "affordance" to describe the different "possibilities for action" that different environments provide.³ Just as "caves afford hiding and chairs afford sitting," different writing tools help shape different writing environments and the opportunities they make available.⁴ When a technology is put into practice, different affordances can incline users to adopt different behaviors and pursue different paths of personal development. In this case, we should compare a Fitbit versus a handwritten journal.

Students who record their daily physical activities in a journal find the analog medium affords several steps that require time and effort, planning, and thinking. It can orientate students to record fitness data in ways that automated and unreflective inscription machines could never do. The medium directs student attention inwardly and outwardly and the recorded data can reveal more than meets the eye.

Think-and-record activities inspire self-reflection, interpersonal awareness, and judgment. These activities are valuable because they're linked to the exercise of free will and autonomy. Even writing environments with standardized features can expand a student's consciousness. Blank forms with pre-specified categories of activities to fill in, measures to report, or boxes to check all impose higher transaction costs than automated Fitbits. The key to techno-social engineering better humans just might lie in taking these slower tools more seriously.

Let's move the discussion to an applied level. Journaling isn't just about recording numbers. It's a form of social communication that sociologist Erving Goffman calls an impression-management "performance."⁵ Students are tempted to perform when they are acutely aware that other people are observing them.⁶ When required to track their own activities, students can become sensitized to the consequences that follow from their instructors and peers judging them in light of what they've written. This awareness, in turn, raises issues concerning how students wish to be seen and understood. Social skills, including discerning relevance and appropriateness, can be deepened when students carefully consider these matters.

One may worry that giving students the freedom to write down their fitness activities tempts them to behave unethically. After all, students who want to boost their grades could fudge what they report. This is a genuine dilemma. It occurs every time students ponder whether to report 21 minutes of jogging as 21 minutes, round down to 20, or exaggerate and report 25 or maybe even 30.

White lies and outrageous fabrications seem to be bad outcomes. After all, accurate reporting and telling the truth are paramount in many contexts where trust matters.⁷ Nevertheless, it's dangerously myopic to place too much value on accurate and truthful data collection. These variables only partially account for what matters. Fetishizing them prevents us from appreciating the benefits of giving students opportunities to actively make independent decisions. To relate to others, you need to decide how you want to represent your accomplishments and failures, numerically quantifiable things in general, and even how you feel about information that can impact how others feel and what they believe. These activities are a basic part of a human life that's filled with social interactions.⁸

Think of the judgment involved when responding to someone who comes late to an appointment and asks how long you've been waiting. Whatever numeric answer you give – "I just got here" or "half an hour" – can depend less on numeric accuracy and more on whether you want to shame the tardy party. Or consider what happened when one of our elementary school age children came home with an assignment to record what she ate for a day. She condemned the assignment for not taking into account sufficient context and refused to include a dessert she ate on that day because she believed it would present a distorted picture of her general habits. There are many other examples where our representations of numbers convey aesthetic or ethical judgment, or influence how others make such judgments.

Returning to fitness tracking in educational settings, the point is that while some tools require users to have skin in the game, to engage and

exercise judgment, others do not or to a lesser degree.⁹ Studies make similar claims when differentiating taking notes in class by hand from typing them up.¹⁰ Handwriting class notes requires students to exercise more judgment compared to typing. The intuition is rather straightforward: If you need to stop and think about what's worth writing down because you can't possibly capture everything verbatim, that momentary act of deliberation can facilitate learning. Handwriting notes appears to lead to greater comprehension of conceptual knowledge and in some studies, retention of facts as well.¹¹

The change in data collection tools (from journal to Fitbit) are only part of the story. So much is hidden behind the veneer of the Fitbit being a technological upgrade, an innovation that affords simplicity and convenience. But the seemingly simple, efficient, and effortless data collection afforded by the Fitbit only seems simple to the student. A more complex system operates in the background.¹² Looking at the techno-social system running behind the scenes reveals a wide range of inputs, outputs, activities, agents, and points of control. Data-sharing practices shift from student-to-university to student-to-university-and-third-parties (Fitbit, advertisers, providers). Default settings are particularly relevant when set by educational institutions as the authority. This is because defaults, in general, are "sticky" – which is to say that, due to inertia, people often stick with them – and defaults set by authority figures can have extra psychological weight.

Surveillance Creep

The narrative that Oral Roberts University doesn't challenge traditional privacy norms by mandating Fitbit use obscures another problem: *surveillance creep*.

Surveillance creep is an offshoot of what engineers call *function creep*, the idea that a tool designed for one purpose ends up being used for another one. A classic is the driver's license. In a short period, the document went from being proof that you could legally drive a car to a credential for purchasing alcohol and getting into nightclubs; thanks to the post 9/11 passage of the Real ID Act (2005), licenses have become more secure and are used as counterterrorism measures for decreasing the chances that people on the terrorist watch list can board commercial airlines or enter federal buildings.¹³

Surveillance creep can take many forms. The gradual expansion of surveillance from one context to another. Or, the gradual expansion of

the types of data collected in each context. Or, the gradual expansion of the use or sharing of that data. Surveillance creep is perceived as something happening on the side of those doing the surveillance (e.g. the National Security Agency or Facebook). It also can happen on the other side, as those being surveilled become accustomed to it. Their beliefs and preferences about surveillance technologies and surveillance more generally are shaped through experience. Educationally mandated surveillance programs do much more than get students accustomed to using digital technology for self-tracking purposes. They habituate students to submitting data to opaque third parties that exercise authority and have agendas that may diverge (now or in the future) from the best interests of those surveilled. Such programs also normalize arrangements that occur in non-educational contexts, such as insurance companies that want to set rates by having their customers provide self-tracking data. Or, we might turn to the employment sector, where such programs are pervasive.

Schools shape us, generation after generation.

The Oral Roberts University example is best understood as a puzzle piece, a step along a path. When asked to reflect on the success of the Fitbit program 18 months after it began, Michael Mathews, Associate Vice President of Technology and Innovation at Oral Roberts University, proudly proclaimed that the college is “ahead of the curve with electronic devices to allow students to succeed.”¹⁴ As it turns out, “more than 70 major American companies have initiated similar programs.”¹⁵ No matter how commonplace surveillance is, its use in the educational sector remains particularly important.

Where does the *educational assembly line start*? If public elementary school kids were asked to participate in a digital tracking program, would views about its significance change? It’s easy to presume that college students, who are usually older than 18 and technically adults, are discriminating technology users who appreciate why bodily surveillance can mean different things in different contexts. But it seems presumptuous to expect the same level of awareness exists for elementary school children – a more vulnerable, inexperienced, and less autonomous group.

Bedtime and Bathtime Surveillance

For this section, we switch to a first-person narrative to describe a personal encounter one of us had with educational surveillance.

Last year, my first grader came home after school very excited. “Dad, I won. I mean, I’ve been picked. I get a new watch.” “That’s great,” I said,

“What happened?” He quickly rattled off something about being one of the kids in his class who was selected to wear a new watch for gym class. A day or two later, I received the following letter in the mail from the school district.

Dear Parents/Guardians,

Your child has been selected to be among the first group of students to participate in an exciting new initiative made possible by our recent \$1.5 million PEP Grant.

We have added ACTIVITY WATCHES to the K-12 physical education program so that we can assess how the PEP grant impacts students' physical activity in [the school district]. We are periodically selecting groups of students at random to wear activity watches on their wrists to track daily activity time.

One of the goals of our program is to see that students get the recommended amount of physical activity each day (60 minutes). As part of a quality physical education program, the use of activity watches can motivate students to challenge themselves to become more physically active.

For the students selected to participate in this first group, we will be distributing activity watches starting January 13th for students to wear before, during, after school and over the weekend until Tuesday, January 21st. We ask that students do not take off the watch once it's on their wrist. They should sleep, even shower with the watch in place. There are no buttons to push or need to touch the watch, as it is pre-programmed to record and store each day of activity time.

At the end of the 9 days, each family will be able to access a report of their child's activity, and you are welcome to consult with your child's physical education teacher about what you learn and ways to further support your child's physical health and fitness. In addition, the group's combined information will be used to provide baseline data on student physical activity in [the school district].

In closing, I invite you to join me and your child's physical education teacher in motivating your family to participate in physical activity together. If you should have any questions about this new technology, please do not hesitate to contact your child's physical education teacher.

Yours in health,
XXXX XXXXXXXXX
Supervisor of Health, Physical Education
and Nursing Services

What's your reaction to this note? I ask you to think about it for a moment before I tell you my reaction because mine was atypical for my community. When I read the letter, I went ballistic. Initially, I wondered about various privacy issues: who? what? where? when? how? and why? with regard to collection, sharing, use, and storage of data about kids. The letter did not even vaguely suggest that parents and their children could opt out, much less that their consent was required. Even if it had, it couldn't be informed consent because there were so many questions left unanswered.

I also wondered whether the school district had gone through some form of institutional review board (IRB) process. Had someone, anyone, considered the ethical questions? I read the letter again but got stuck on "We ask that students do not take off the watch once it's on their wrist. They should sleep, even shower with the watch in place." Seriously, bath-time and bedtime surveillance!

The letter made me think of one of those Nigerian bank scam emails that go straight into my spam folder. Such trickery! I thought. I remembered how my son had come home so excited. The smile on his face and joy in his voice were unforgettable. It was worse than an email scam. They had worked him deeply, getting him hooked. He was so incredibly happy to have been selected, to be part of this new fitness program, to be a leader. How could a parent not be equally excited? Most were, but not me.

I contacted someone at the PTA, spoke with the Supervisor of Health, wrote a letter to the School District Superintendent, and eventually had some meetings with the General Counsel for the school district. The program is like so many being adopted in school districts across the country: well-intentioned, aimed at a real problem (obesity), financed in an age of incredibly limited and still shrinking budgets, and elevated by the promise of efficiency that accompanies new technologies.

What caught people's attention most was a line from the letter I sent to the Superintendent: "I have serious concerns about this program and worry that the school district hasn't fully considered the implications of implementing a child surveillance program like this." No one previously had called it "child surveillance." All of a sudden, the creepiness of bath-time and bedtime surveillance sunk in. Naturally, this triggered familiar privacy concerns.

The term "surveillance" generated a visceral reaction and was an effective means for getting people to stop and think. Up to that point, no one seemed to have done so for several obvious reasons. People trust the school

district and love technology. The salient problem of obesity weighs heavily on the community; activity watches seem to be a less intrusive means for addressing the problem. People obtain information about their activity levels and then are better able to adjust their behaviour and improve fitness. They can do so on their own, as a family, or in consultation with the physical education teacher. Plus, it was funded by a federal grant. The activity watch program presents substantial upside with little or no downside, an easy cost-benefit analysis. For most people, it seems like one of those rare win-win scenarios. After my intervention, very little changed; better disclosure and informed consent apparently would fix everything.

These limited privacy concerns fall woefully short of acknowledging the full power of techno-social engineering. The 24/7 data collection and the lack of informed consent are real problems. But the stakes run much deeper.

The most pernicious aspect of the program is the unexamined techno-social engineering of children – their indoctrination into a “*hidden curriculum*.”¹⁶ The Department of Education, the school district, and other program supporters understand that they are engaged in social engineering in the sense that they use the activity watches and corresponding surveillance to shape cultural attitudes and individual preferences regarding fitness and activity. That much is transparent. The program aims to generate and provide information about activity levels and fitness, and thereby enable better choices. The activity watch program has a laudable intended purpose (to combat obesity by encouraging more exercise) and it employs seemingly laudable means. The program uses nudges that preserve autonomy rather than more restrictive alternatives, like policies that mandate compliance.

This picture is not complete, however. It’s a stretch to say that the program fully respects the autonomy of potential activity watch users. Without an easy opt-out, the ethical nudges (as defined by behavioral economist Richard Thaler and pre-eminent legal scholar Cass Sunstein) risk becoming paternalistic shoves that allow others’ preferences to have significant sway over our personal decisions.¹⁷ With that in mind, let’s probe deeper into how much freedom the students really had.

Let’s think about obesity and nudges in a broader context. Doing so will give us greater insight into the activity watch program. Obesity is a significant public health problem in many parts of the United States and around the world. It’s characterized as one of the most significant modern public health

problems and puts a serious strain on medical systems. Unfortunately, reducing obesity is hard to do and policy interventions to combat it can be contentious. Former New York City Mayor Michael Bloomberg learned this lesson the hard way back in 2012 when he proposed banning the sale of sugary drinks (in select locations), like soda, in serving sizes that exceeded 16 ounces. Bloomberg saw the initiative as a helpful nudge: consumers could still purchase as much soda as they wanted; they simply would have to put in the effort to carry multiple cups or cans. Critics, however, viewed Bloomberg's plan as the embodiment of an overly meddling nanny state that is intent on regulating ever more aspects of our private lives.¹⁸

Schools aren't just using fitness nudges to combat obesity.¹⁹ They're also directing their attention to cafeterias. For example,

[the] Cornell Center for Behavioral Economics in Child Nutrition Programs (BEN) has a long-term program in place for studying nudge initiatives to help people make better food choices. BEN has proposed numerous changes to school cafeterias as part of the Smarter Lunchroom Movement. In particular, BEN's work has influenced [former] First Lady Michelle Obama's initiative to solve the childhood obesity epidemic, as her group worked with BEN through the Chef's Move to Schools program. BEN's proposals for lunchroom nudges include relabelling vegetable choices with attractive names, serving fruit in attractive colourful bowls, placing healthy foods within easy reach and early in the food line, and placing problematic foods so that it takes a bit of effort to choose them.²⁰

Critics argue that it's a mistake to generalize from successes experienced in the highly particularized environment of a school cafeteria to more broad-based enthusiasm for using nudges to promote healthy eating. Indeed, some have argued that the very idea of turning to nudges to remedy poor eating habits perpetuates the culture of victim-blaming. It may abstract away issues that concern food systems and focus, instead, on matters at the individual level, like personal vices (e.g. gluttony) and weak willpower. For starters, healthy food typically is more expensive than less nutritious food and no amount of nudging can make that price difference go away. Furthermore, the grocery stores found in some neighborhoods make it hard to shop for the food that health experts recommend. They simply don't carry it and nudge literature isn't going to alter how management selects inventory. As political theorist Evgeny Morozov sardonically states: "For what else could possibly explain . . . health problems but . . . personal failings? It's certainly not the power of food companies or class-based differences or various political and economic injustices."²¹

In principle, it isn't mandatory to participate in the activity watch program. But in practice, it's not a coincidence that nearly everyone does. There are a host of plausible reasons that can explain the mass

conformity. For starters, the default for enrollment is set at “participation” for selected students. People tend to stick with the defaults they’re initially presented with. This default is made especially sticky by how children and parents are informed about the program.

Children are told they’ve been selected for a special program and will get a new wearable device, while parents get a letter in the mail. After both parties receive this information, the path of opting out requires two cumbersome steps. First, parents need to have a difficult conversation with their children. These kids like the idea of being characterized as special. They enjoy fashionable, new technology. Such preferences make it hard for parents to ask their kids not to participate in the activity watch program. Friends opt into the program, triggering peer pressure, which is intensified because the school, a looming authority figure, sanctions the endeavor. Second, parents can’t just snap their fingers and make the problem go away. They must inform school officials that their child will not participate, which can be a challenging conversation on a sensitive topic. Not every administrator or teacher likes to debate about hidden costs that are hard to quantify.

Such hidden costs – which no one considering the activity watch program voiced – include the matter of how the program shapes the preferences of a generation of children to accept a 24/7 wearable surveillance device that collects and reports data. Even if autonomy and choice are preserved, the subtle influence on beliefs and preferences still shape a host of future choices. These claims are not in the promotional material. Nor could they be. School administrators didn’t consider these issues. Can you imagine the uproar if the school had said that the activity watch program would increase tolerance of surveillance, manipulation, and nudging?

The same argument applies to Oral Roberts University’s physical education class. Students who are required to use Fitbits during college may be more likely to accept surveillance in other contexts, perhaps with the same or with other types of surveillance devices. This hypothesis requires empirical testing. Perhaps college kids are more sophisticated, have privacy concerns, and are capable of reasoning about the appropriateness of surveillance in different contexts. Maybe we can assume that college students don’t have easily engineered beliefs and preferences. Perhaps they’ll quickly recognize and perhaps resist surveillance creep. It’s a stretch to make the same assumptions for elementary school children.

It is only in isolation that incremental steps of this sort seem justifiable on a constrained cost-benefit calculus that only considers immediate and obvious costs and benefits. To be clear, the bottom line isn’t to reject

activity watches in public schools. They may be effective in combating obesity and encouraging fitness. The key point is that touting this utility fails to consider the cumulative cost of many interdependent incremental steps. Privacy is but one victim of death by a thousand cuts.

A school district that chooses this path ought to do so more carefully, with an awareness of and open dialogue about how the technology affects the children as human beings. As I said to the General Counsel for the school district, this is a decent teaching opportunity. Fitness and privacy might be joined as students learn about the technology and their relationships to it and to others (the school, the Department of Education, device manufacturers, various third parties including aggregators and advertisers). They might even be introduced to old alternatives, like a handwritten journal.

Returning to the Oral Roberts University example, the university could combine the fitness tracking tools. It could require students to use a fitness tracking device that collects data, while also expecting them to write reports about the collected data in a journal. This two-step process would be more comprehensive and accurate than journaling alone. It also gives the students an opportunity to reflect on their performance and freedom to decide how and what to communicate to their instructors and peers. As a deeper exercise, students might be asked to reflect on the data, what it says and doesn't say about them.²²

Fitness tracking devices, along with other tools for monitoring and recording healthy activities, are widely used in the "employee wellness" programs that are cropping up around the United States and abroad. These programs run the gamut from incentivizing losing weight and quitting smoking to improving employee morale. Vendors appear to be successful at selling these programs by telling companies that less illness results in employers paying less for the health insurance that they partially subsidize.

Unfortunately, as philosophy professor Gordon Hull and law professor Frank Pasquale argue in "Toward a Critical Theory Of Corporate Wellness," "the programs have routinely failed to generate any substantial impact on . . . health, reported well-being, or medical costs."²³ This is insidious. If the programs don't produce the intended results, why hasn't a bottom-line-driven corporate culture jumped ship? Hull and Pasquale propose that these "counterproductive" initiatives are more than meets the eye. They're attractive for reasons that have nothing to do with enhancing employee health or lowering health costs, per se.

As Hull and Pasquale see it, wellness programs have an ulterior motive and that's conditioning employees to be submissive and hyper-vigilant of the "costs

they may impose on their benefactors.” It might seem overly cynical to portray management as engineering the employees to be ever-obedient and ever fearful of looking out for themselves at a company’s expense. But Hull and Pasquale aren’t demonizing managers for being ruthless and authoritarian. Instead, they contextualize the logic of employee management programs as a manifestation of the broader ideology of “neoliberalism.”

Neoliberalism is a complex topic. At its core, what Hull and Pasquale have in mind is the conviction running through some governmental and industrial sectors that privatized market forces are best equipped to provide public good services. Within this worldview, individuals are held morally and financially accountable for making good choices, and good choices are defined as ones that minimize an individual’s exposure to risky activities that have expensive consequences which they can’t afford to pay for. The oil that greases the wheels of the neoliberal system, Hull and Pasquale argue, is citizens who perceive the big problems of life, including illness, to be the result of personal decisions, and not systematic problems that taint governance mechanisms. Workplaces have become training grounds for shaping citizens that internalize a you’re-on-your-own ideology.

CHAPTER 2

*Cogs in the Machine of Our Own Lives***Introduction**

The previous chapter highlighted cases where well-intentioned educators impose techno-social engineering on students. In stark contrast, this chapter addresses examples where it is self-directed. We focus on delegating physical, cognitive, emotional, and ethical labor to a third party, often through technical devices, systems, and applications. This is known as outsourcing.

Rational people choose to outsource for lots of reasons, including to save time and other limited resources. From an efficiency-oriented perspective, outsourcing can be a beneficial process. A slightly wider lens shows how outsourcing may have unintended consequences and trade-offs.

Outsourcing has six existential characteristics.

First, *passivity*. As we accept assistance, we lessen the personal effort needed to accomplish a goal. As effort diminishes, passivity takes hold. At a certain level, we become akin to spectators rather than active participants.

Second, *decreased agency*. We participate in less of the process than we would if we performed it ourselves. Less effort results in a corresponding reduction in our experience of the action itself. Our behavior becomes less intentional, and some measure of control is lost.

Third, *decreased responsibility*. By abdicating control over a process, we can become less culpable for how things turn out. This is a double-edged sword. The very reason that we can become less blameworthy can also leave us less entitled to feel proud of positive results. When something amazing happens through collaboration, nobody deserves all the credit.

Fourth, *increased ignorance*. Delegation of tasks can limit our understanding of how a process works. Even if proxies seem reliable, we don't know the full extent of how they work on our behalf. In the case of technology, outsourcing happens by translating our requests into

algorithmic or mechanical processes that computers – which don't always behave the way we do – can perform.

Fifth, *detachment*. Diminished participation leads to disengagement. The more intense the detachment, the less intimate an experience becomes. At the extreme, less intimacy results in alienation.

Sixth, *decreased independence*. When outsourcing becomes habitual, we become dependent on a third party for getting stuff done. At the extreme, dependency can result in deskilling. We can forget how to perform a task or become less capable of doing it. Or, we can lose the motivation to increase our knowledge and skills.

Outsourcing affects more than how a task is completed. When deciding whether to outsource, we need to consider whether it's worth losing agency, responsibility, control, intimacy, and, possibly, knowledge and skill. We address these issues by critically discussing a specific form of outsourcing: outsourced navigation.

Actuated Navigation

Max Pfeiffer, a researcher in the Human-Computer Interaction Group at the University of Hanover in Germany, ran an experiment where he manipulated how students navigated through a park. By stimulating their Sartorius muscles with electrical current, he directly guided their turns, nudging movements to the left and right. While this scenario sounds like invasion of the body snatchers, apparently the combination of existing smartphone technology and electrodes is all that's needed to inaugurate an innovative "pedestrian navigation paradigm".

Pfeiffer successfully assumed the role of an aggressive GPS device, but his prototype isn't ready to compete with Waze (yet). The successful proof of concept makes it hard to avoid speculating about future, fully automated, consumer versions of the technology.

Pfeiffer and his collaborators imagine a range of socially beneficial applications. Their vision revolves around three types of experience: multi-tasking, dispensing precise geolocation information, and coordinating group movement. These are embodied in several appealing scenarios including enhanced fitness (runners trying out new routes and optimizing existing routines), novel sports (coaches literally choreographing how their teams move), improved job performance (firefighters effortlessly zeroing in on danger zones), upgraded crowd control (concert goers' ability to evacuate in an orderly and calm manner if an emergency arises), and low transaction cost navigation.

Let's confront the basic moral and political question of outsourcing. To narrow our focus, consider the case of guided strolling. On the plus side, Pfeiffer suggests that senior citizens appreciate help returning home when they're feeling discombobulated, tourists will enjoy seeing more sights while with the pedestrian version of cruise control, and friends, family, and co-workers will get more out of life by safely throwing themselves into engrossing, peripatetic conversation. What of the potential downside?

Critics identified several concerns with using current forms of GPS technology. They have reservations about devices that merely cue us with written instructions, verbal cues, and maps that update in real-time. Technology writer and philosopher Nicholas Carr warns of our susceptibility to automation bias and complacency, psychological outcomes that can lead people to do foolish things, like ignoring common sense and driving a car into a lake.¹ Philosophers Hubert Dreyfus and Sean Kelly² lament that it's "dehumanizing" to succumb to GPS orientation because it "trivializes the art of navigation" and leaves us without a rich sense of where we are and where we're going. Technical fixes can correct the mistakes that would guide zombified walkers into open sewer holes and oncoming traffic. However, the value of knowing (and even not knowing) where one stands in relation to our physical environment and to others remains a more vexing existential and social problem. Being lost and struggling with the uncertainty may provide us with opportunities to develop ourselves and our relationships.³

Pfeiffer himself recognizes this dilemma. He told *Wired* that he hopes his technology can help liberate people from the tyranny of walking around with their downcast eyes buried in smartphone maps. He admitted that "when freed from the responsibility of navigating . . . most of his volunteers wanted to check email as they walked."⁴ At stake is the risk of unintentionally turning the current dream of autonomous vehicles into a model for locomotion writ large. While the hype surrounding driverless cars focuses on many intended benefits (fewer accidents, greener environmental impact, less congestion, furthering the shift to communal transportation), we can't lose sight of the fact that consumers are wooed with utopian images of time-management. Freed from the burden of needing to concentrate on the road, we're sold on the hope of having more productive commutes. Instead of engaging in precarious (and often illegal) acts of distracted driving, we'll supposedly tend to our correspondence obligations in a calm and civilized way. Hallelujah! We'll text, email, and post on social media in our "private office on wheels" just as if we were on a bus, train, or plane. All without having to deal with pesky strangers.

Pfeiffer's research demonstrates that a designer's intentions don't determine how consumers use technology.⁵ In a world where social and professional expectations pressurize people to be online, the temptation to exploit newly found schedule openings for this purpose will be immense. When industries get a sense that people have more time to attend to work-related activities, expectations will ratchet up accordingly. This pressure disincentivizes us from pursuing offline lives and makes a mockery of the cliché "if you don't like it, don't use it." Just as historical decisions about building infrastructure to support a suburban culture have made walking to work less tenable for many people, shifts in the digital ecosystem can make it harder to take an enjoyable offline stroll.

The prospect of being further chained to our devices is disturbing. The thought of *outsourcing our physical abilities to free up attention* raises a more disconcerting problem – one with deep psychological and metaphysical consequences. "Actuated navigation" isn't just a process that turns voluntary into involuntary behavior. If done habitually, it's an invitation to dissociate from our physicality and objectify our bodies as mere commodities. To see why, let's consider some basic ways bodies and technologies interact.

Bodies, Technology, and Outsourcing Creep

Many people rely on prosthetics, such as canes, walkers, wheelchairs, and artificial limbs, to move freely. These deeply embodied tools expand a person's sense of agency. They are particularly powerful when society commits the resources for accessibility and embraces a sense of justice and equality for anyone relying on them.

Let's approach this in experiential terms. As the French philosopher Maurice Merleau-Ponty argues, a blind person can't use a cane to see colors.⁶ The act of tapping just can't reveal how gray a street looks – at least, not yet. Technology can expand perceptual abilities by "extending the scope and active radius of touch and providing a parallel to sight." Indeed, the person who becomes expert at using a cane experiences the stick as a direct extension of being, a sense organ that's attuned to the world, not an external object that requires attention-grabbing, mechanical movements to master.

A seasoned driver feels that a car is an extension in a similar way. She gets in, cranks up the tunes, navigates on the highway while singing along, and arrives at her destination delighted that she became one with the vehicle and intuitively exhibited skill. By contrast, a beginner's journey involves

deliberating and a pronounced sense of separateness. Beyond needing to pause to consider who gets the right of way at a four-way stop, she needs to engage in all kinds of abstract reflections – like explicitly focusing on putting her hands on the 9–3 position before starting to drive (10–2 is pre-airbag).

The prosthetic and driving examples show that we're quite adept at using technology to expand our embodied relation to the world and with it our sense of identity. In a suburban area, for example, it's easier for the person with vehicle access to see herself as independent than it is for someone who depends on public transportation (where schedules are set by others). While this case may be objectionable from a moral point of view (not everyone can afford to opt out of public transportation, and it may be environmentally wrong not to use it), the basic phenomenology of enlarged capacities shows that it's a mistake to see so-called "cyborg" fusions as inherently alienating.⁷

What is different between outsourcing walking and getting around with the help of a cane or car? That's easy to answer in the case of malicious hacking. If a third party engaged in a version of Pfeiffer's experiment that enabled her to take over our body and move us in directions that we didn't want to go, our autonomy would be violated. But if we freely choose a destination and actuated navigation helped us get there straightaway without any imposed stops, our autonomy apparently would be respected.

Turning to outsourced walking for the purpose of freeing up our attention is an act that so strongly privileges mental activity that it effectively treats the body as nothing more than an impediment that needs to be overcome. Our bodily engagement with the physical world becomes seen as a logistical and navigational transaction cost to be minimized, even eliminated if possible.

By this logic, why surrender only a single physical ability? Why not outsource other movements that prevent us from being totally engrossed in intellectual activities: chewing, showering, shaving are nothing but corporeal subversions that get in the way of more elevated affairs. Perhaps even the effort to raise our cheeks to smile is a waste. Why not eliminate it and purchase an app that triggers the requisite movements when it detects patterns that make smiling appropriate? Where do we draw the line, and why? Is smiling an essential component of our unique identities? Consider Batman's enemy the Joker, a villain who appears existentially menacing because his face is forever frozen and incapable of fully conveying expression.

Some of you might find outsourcing as much bodily movement as possible attractive, and yearn for the day that consciousness can be uploaded to a machine. For some “transhumanists” this is indeed the moment we finally can evolve beyond recognizable human limits and start living the good life.⁸ Futurist Raymond Kurzweil, Director of Engineering at Google, predicts that by 2030 “our brains will be able to connect directly to the cloud” and not too long after “we’ll also be able to fully back up our brains.”⁹ We encourage supporters to consider that, although it may not be immediately obvious, the optimizing logic that makes it attractive to outsource away bodily functions applies to mental operations, too. Once the outsourcing spiral commences, we may regret where it ends.

Others will feel diminished by auto-pilot dualism that makes our bodies mere cogs in the machine of our mental life. If you fall into this camp, it’s empowering to move beyond gut feelings and vague impressions of discomfort and figure out exactly what’s the basis of your opposition.

There are many ways a purely mental life could be lived. In ancient Greece, for example, Aristotle depicted God as an immaterial Prime Mover who only thinks about his own eternal thinking.¹⁰ For our purposes, a decent place to start is *The Matrix*. Imagine human bodies are tethered to vats while human minds live virtual lives in a programmed simulation of our current world. In this scenario, human beings still needed to grapple with the same physical interactions that we currently do. They climb stairs. They open doors. They cook food.

Why does this familiar narrative persist? A compelling explanation is that the programmers recognized the structure is necessary for our mental life to be satisfying and meaningful. The optimizing logic we’ve discussed in this chapter persists. If so, there would be a desire for further reductions in transaction costs and more easily obtained bliss. Where would that lead us? A vicious circle where outsourcing occurs in the virtual world? An ever narrowing spiral? But to what end?

If autonomy is retained, we presumably still have decisions to make about our purely mental lives. If we retain free will, we still presumably must experiment with different kinds of experiences to form our preferences. We presumably must learn to develop interesting beliefs and contested knowledge. But making decisions, experimenting, and learning (among other mental processes) are costly endeavors. Optimizing logic would seem to press toward minimizing and if possible eliminating these costs.

To what end? The answer: cheap bliss.

CHAPTER 3

Techno-Social Engineering Creep and the Slippery-Sloped Path

The first two chapters painted a vivid picture of techno-social engineering creep. We showed how easy it can be for surveillance practices and outsourcing decisions to expand their reach, increase their intensity, and magnify their consequences. All of this suggests a slippery-sloped path to a rather bleak world.

Let's think a bit more about what the path looks like. In Chapter 1, we outlined a surveillance trajectory that runs from elementary school to college. Similar dynamics also exist in high school. Consider the debate over Google integrating its software and hardware into the daily activities of primary and secondary schools across the country. Some applaud the public-private partnership for reducing how much schools need to pay for information communication technology.¹ Others, however, raise privacy concerns. Some worry about Google finding a loophole that will allow them to mine minors' data and profit from these privacy violations.² And some worry about Google making it too easy for graduating students to transfer their school data into private Google accounts that they'll use as adults.

These concerns only capture part of the techno-social engineering problem. Think about how private companies build brand loyalty among impressionable youth. Is there any doubt that Google, like Coca-Cola, aims to engineer children's preferences and create lifelong consumers? When corporations subsidize technology (and other goods and services) for schools, people get excited that immediate costs for schools – and by extension taxes – can be lowered. Educators, parents, and children must pay attention to the hidden costs of such arrangements. What gets left out of the cost-benefit analysis is what the corporations are paying for, which is access to the minds of children. Imagine if school districts prohibited branding on goods and services procured for students. We doubt companies still would be willing to give steep discounts. There's no free lunch. Not even in schools.³

Even if schools improved considerably, parents still would need to critically examine how they normalize surveillance. As Deborah Lupton, author of *The Quantified Self: A Sociology of Self-Tracking Cultures*, observes, many parents don't think twice about subjecting their unborn and young children to social and corporate surveillance. They post pictures and videos online of everything from ultrasounds to childbirth and all kinds of childhood milestones. "By the time an eight-year-old asks for a Facebook account," Lupton writes, "there already are plenty of images of them on that platform posted by their proud parents."⁴

Lupton is pointing out how parents – even well-intended ones – model poor behaviour for their kids to follow. By setting a tone, parents invite their offspring to develop similar preferences and form similar expectations. When parents frequently post information about their kids on social media and then stop their sons and daughters from getting a Facebook or Instagram account, they seem hypocritical.

As if this wasn't enough, "quantified baby" (yes, this is a real term) products are starting to go mainstream.⁵ A "smart sock" called the Owlet lets you monitor a baby's heart rate, oxygen levels, and skin temperature. If your infant rolls over, you won't have to worry about checking up on her too infrequently. You'll get a cellphone alert and hopefully respond in plenty of time. Only time will tell whether such outsourcing will contribute to parents becoming less attentive than they should be and expecting technology to provide more care than it can offer.

A new technological twist on an old story also is taking place. Parents have always been worried about their kids making bad decisions, falling in with the wrong crowd, and getting hurt. They make tough calls about what rules to impose and how to ensure obedience. They grapple with the fact that policing curfew is a breeze compared to figuring out what happens when there's no adult supervision around and they can't verify who is where and doing what.

In the past, parents could deal with these issues by resorting to prying – perhaps eavesdropping or maybe going through a diary. The growing consumer surveillance industry makes these approaches seem quaint. They offer parents new, cutting-edge tools that (supposedly) solve their problems through software. Simply install inexpensive applications on your child's computer or smartphone, sit back, and let the technology do all the work to track your child's communication and comings and goings. Software can create automated reports about what your child is saying on email, texts, and social media and establish safe zones where your kids can travel. Through geolocation tracking, parents can get GPS verified alerts

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when their kids go too far, literally speaking. This is parental outsourcing on steroids.

Also, as a sign of our technologically changing times, the phrase “helicopter parent” is becoming passé. “Drone parent” is now part of the vernacular. Drone parents use surveillance technologies to monitor their kids, create a somewhat false sense of independence, and jump in when situations call for direct intervention. Heated debate on this issue erupted after a dad allowed his 8-year-old daughter to walk to school “alone” while trailing her every move through a drone’s eye in the sky.⁶

In short, as innovation makes snooping even easier, it becomes increasingly tempting to become panoptical parents. Distraught guardians who monitor their kids say that the digital age changed what it’s like to grow up, and not for the better. There’s one-click access to inappropriate information, cyberbullying, sexting, and all kinds of ways to behave online that can ruin a reputation. With such high stakes, who can afford to rely on what their kids are willing to say about their personal lives? Kids may have a strong incentive to lie. And it’s incredibly difficult to have cross-generational conversations about intimate affairs.

These valid concerns can obscure how constant observation does more than limit inappropriate boundary-testing and risk-taking. Too much surveillance and outsourcing can get in the way of children developing autonomy and cultivating a sense of personal accountability. If kids aren’t given opportunities to learn to take responsibility for following rules and disobeying them, it’s hard to see how they can possibly grow up to be responsible citizens.⁷ As we shall see, parenting is one of many difficult Goldilocks-style balancing acts that modern techno-social engineering tools and practices can challenge.

Slippery Slope Arguments

Having outlined more aspects of surveillance and outsourcing creep, we now examine the very logic of creep itself. Discussions of creep resemble a form of argument called the “slippery slope.” The conventional slippery slope argument expresses concern over seemingly small actions having very bad consequences. The slippery slope evokes a person taking a first step on a precarious hillside and then accidentally slipping to her doom. Here’s a casebook example. It’s a fallacious argument that’s used to support the contentious, pro-NRA conclusion that society shouldn’t ban assault rifles.

1. If the law bans one type of gun, such as the assault rifles that are repeatedly used in mass shootings, then soon all guns will be rendered illegal, except for use by special authorities like law enforcement and soldiers.
2. Shortly after the firearm ban is enacted, other Constitutional rights will be stripped away.
3. By destroying the Constitution, freedom and democracy will be obliterated.
4. To avoid these terrible outcomes, we should resist contemporary attempts to ban assault rifles.

Premises 1, 2, and 3 aim to persuade by dramatically expanding the set of consequences that flow from the initial act of banning assault rifles. In all three claims, the causal mechanism is assumed and not specified. In other words, the argument doesn't spell out how the transition from Point A to Points B, C, and D will occur. It's as if policy functions like a set of dominos that will fall once the first one tile gets pushed.

Richard Thaler and Cass Sunstein, scholars of behavioral economics and the law respectively, address slippery slope arguments in the final chapter of their much-discussed book, *Nudge*. Their analysis is important because slippery slope arguments arise in debates about many different types of technology.⁸ Thaler and Sunstein characterize it as the weakest anti-nudge counterargument and insist that the skepticism it conveys should be disregarded. All slippery slope arguments fail, they insist, because the positions are guided by wildly speculative hypotheses and don't directly address, through tried and true cost-benefit analysis, the shortcomings of the individual policy interventions that are under consideration.

In his essay "Fear of Falling," Thaler is even more dismissive.

[Y]ou may not be familiar with bathmophobia, which is an abnormal and persistent fear of stairs or steep slopes, or a fear of falling. Less well known is "nudgephobia," . . . which is the fear of being gently nudged down a slope while standing on a completely flat surface . . . Slope-mongering is a well-worn political tool used by all sides in the political debate to debunk any idea they oppose . . . The argument is perfectly versatile. If we allow (blacks, women, gays . . .) into the military then (fill in the awful but inevitable consequence here). If we allow free speech then we will give voice to the next Hitler . . . Instead of slope-mongering we should evaluate proposals on their merits.⁹

We understand the concern about "slope-mongering" but still reject Thaler's claim that slippery slope arguments are a mere phobia rooted in

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unfounded speculation. Slippery slope arguments can take many forms. They aren't all caricatures, like the portrayals above of guns, armies, and free speech. Good slippery slope arguments are analytically useful.

Good slippery slope arguments have two essential features. First, they explicitly specify plausible mechanisms that could drive slippage from one step to another. Second, they rigorously explain why the mechanisms deserve due consideration. When used properly, slippery slope considerations elevate dynamic over static analysis and highlight how complex and nuanced interactions drive transformative social change. To see what we mean, consider GPS technology one more time.¹⁰ Sunstein claims:

GPS . . . [is] a prime nudge, because it helps people to find the right route while also allowing them to go their own way. But there is a downside, which is that use of the GPS can make it harder for people to know how to navigate the roads. Indeed, London taxi drivers, not relying on the GPS, have been found to experience an alteration of their brain functions as they learn more about navigation, with actual changes in physical regions of the brain. As the GPS becomes widespread, that kind of alteration will not occur, thus ensuring that people cannot navigate on their own. This is an unusually dramatic finding, to be sure, but it raises the possibility that when people rely on defaults or on other nudges, rather than on their own active choices, some important capacities will fail to develop or may atrophy. This is the anti-developmental consequence of some helpful nudges, including the GPS itself.¹¹

GPS technology is widespread and the utility associated with real-time navigation has lent itself to extensions that go well beyond providing people with logistical help. Indeed, our analysis of GPS creep and its potential effects in the previous chapters show why loss of navigational skill, important as it may be, is far from the only trade-off that's worth considering. As we all know, GPS performs many other functions, ranging from geo-targeted advertising and tracking to find-a-friend apps. GPS is even a fundamental driver of surveillance creep. Just ask the police, Facebook, insurance companies, or worried panoptical parents.

Is it fair to describe GPS creep as a form of slippery slope? Absolutely. In all likelihood, it would have been much more difficult to persuade people to accept GPS-enabled find-a-friend apps if that service had been the first commercialized GPS application. Real-time navigation in cars paved the way for normalizing persistent collection and use of geolocation data on devices like smartphones.

GPS creep demonstrates the flaws in Thaler's and Sunstein's advice. Their myopic view focuses on isolated and independent technological

steps; and this makes it hard to detect and evaluate the convergence of complementary technologies (e.g. GPS, smartphones, mobile apps) and the expansion of practices and beliefs from one domain to another. One area of convergence that we'll discuss later in the book involves GPS, automation, and the path toward intelligent transportation systems. Moving along the path from GPS to self-driving cars is seen as a matter of technological feasibility and economic progress, but it's also about normalizing geolocation tracking and automation as well as outsourcing moral, economic, and political decisions. Intelligent transportation systems are poised to use vast amounts of data from surveillance to make morally relevant decisions about how our traffic will be prioritized. Whether all the affected stakeholders will have a voice in the outcome remains to be seen.

From Activity Watches to Brain Scans?

Let's consider one more case where slippery slope arguments might be useful to get a handle on the future. Imagine a School Board meeting where educators and parents meet to discuss how to upgrade the activity watch program.¹² Having successfully deployed activity watches for a few years, the children, parents, and teachers have grown accustomed to the technology. For some students, the fitness gains are truly impressive.

The new proposal is to use additional sensors to monitor brain activity. Proponents say that collecting neural data will improve mental fitness by allowing teachers to more accurately evaluate student attentiveness and engagement. Initially, the upgrade will only be available to the fourth, fifth and sixth grade students who have used activity watches. But over a two-year period, program administrators will extend the user base gradually until all the students are participating. Would you support the proposal? Do you believe the updated version differs meaningfully from the original activity watches? Regardless of your answers, are these questions relevant to an evaluation of the activity watch program or are they without merit, as Thaler suggests?

Now, suppose that instead of only measuring brain activity for attentiveness, the sensors could feed neural information into educational software, comprehensively map each student's brain activity, and then provide tailored instruction and personalized evaluation. Would you support the proposal? Does the proposal differ meaningfully from the original activity watch program or the first updated version of it? Again, is it prudent to dismiss this scenario as pessimistic fear-mongering?

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We could go on. And on. And on even further. Accepting newer and more powerful upgrades gets easier over time, especially when they reflect broader trends.¹³ The first step makes the second more palatable, harder to resist or even notice, and so forth down the iterative product line. This libertarian ideal of adaptability in motion shows why hasty rejections of slippery slope arguments risk substituting engineered complacency for critical discussions of techno-social engineering.

The Slippery-Sloped Path and the Forces that Drive Us

We wrote this book to look ahead to the possible future impacts that are being set in motion by current techno-social engineering practices. Futurism is an inherently speculative exercise, and those who pursue it dogmatically tend to conflate possibilities with necessities. Unfortunately, the rapidly evolving pace of innovation gives us no choice but to try to look ahead. It might be the only way to adequately combat path dependency. *How can we be honest futurists?*

To avoid overstatement and making definitive claims about dystopia on the horizon, we deliberately and transparently advance an argument consisting of various slippery slopes that can aggregate into macro-level outcomes. It's our burden to carefully specify steps, causal mechanisms, and possible consequences. This doesn't free us from the shackles of speculation. Indeed, one primary objective is to provide the motivation and tools for identifying and evaluating the various steps, mechanisms, and consequences involved. We don't claim to be either omniscient or exhaustive.

Our argument is better described in terms of a slippery-sloped path. Rather than the ledge of a cliff, imagine a steeply inclined path. We argue that society is progressing on a path that is downward-sloping and can become slippery.

That society is progressing on a path is not terribly controversial.¹⁴ Nonetheless, we emphasize "path" for a few reasons. First, it suggests many steps, in a direction, and toward a destination. Each of these features demands attention, specification, and analysis. Second, it admits the existence of alternative paths and the phenomenon of path dependency (i.e. the stickiness of the current path and high costs often associated with switching paths). Again, it's critical that in making our argument, we identify viable alternative paths and to the extent possible consider trade-offs. Third, "path" suggests the existence of something knowable yet not necessarily known or recognized. In many aspects of our lives, we may not realize or pay attention to what path we are on, where we're heading in

terms of direction or destination, or what infrastructures influence us. We must do so, however, to make plans for our future.

That society is progressing on a *downward-sloping* path might lead one to conclude we are pessimists or dystopian. Up or down in this metaphorical sketch of our argument has nothing to do with good or bad or normative valuation more generally; whether the destination is utopia, dystopia, or somewhere in between is an independent normative question. The slope is downward only because it reflects the idea that there is a powerful and constant gravitational force pulling society in a direction, toward an end, and so we say, “down the path”. For our purposes, gravity is a metaphor, and it refers to the dominant logics driving decision-making regarding techno-social systems, logics which we argue relate to optimization for efficiency, productivity, and happiness. In the next chapter, we will describe these logics in terms of Taylorism and the scientific management of human beings, the imperialism of instrumental reason, the idea that all social problems are comprehensible in the language of computation, and hedonism.

The metaphor of a downward-sloped path can be exploited further to reflect the idea that there may be more or less friction and resistance. The “surface” of the path where society and environment meet provides another metaphorical force to consider: the difference between a smooth and rough surface and how that difference affects the rate at which an object slides down an incline. We might think of this frictional resistance in terms of various countervailing forces such as cultural resistance to the dominant logics driving progress, alternative logics that push in other directions or towards other paths, or even governance institutions that allow “sheep herders” to escape tragedy.

Finally, we suggest that our metaphorical downward-sloping path can be, but is not necessarily, slippery. In the conventional slippery slope argument, slipperiness corresponds with the causal mechanism that connects steps. In our argument, the dominant logics drive societal progress along the path we’re positing. Slipperiness, then, corresponds to causal mechanisms or forces that accelerate progress, perhaps, metaphorically speaking, by greasing the surface of the path we’re on. Thus, slipperiness relates to countervailing forces that could reduce or even eliminate the friction. For example, resistance to particular steps or progress down our hypothesized path more generally might depend upon deliberation or active choosing or engagement by citizens. When techno-social engineering creates complacency and habituation, the effectiveness of such resistance is reduced.

PART II

CHAPTER 4

*Tools for Engineering Humans***Introduction**

Since the dawn of time, humans have been shaped by technology. To survive, humans built tools and re-engineered the environment and themselves. The roots of contemporary techno-social engineering are ancient. Accordingly, in this chapter, we provide a historical primer on the transformative power of tools.¹

Tool Use: The Basics

While the myth persists that technology is applied science, humans have always developed and used tools, even during pre-scientific times.² Some define the human essence by this capability, characterizing us as *homo faber*, beings who make and use tools. From this perspective, tool use enables us to accomplish ends that otherwise would remain out of our reach. Many of these ends continue to elude other species on the planet. There is considerable evidence of non-human tool use, even quite sophisticated techniques and inventions, among animals such as crows, chimpanzees, and cephalopods.³ Nonetheless, we don't have to worry about any of them starting a nuclear war any time soon.

Technology doesn't always do what we want it to do. Inventors can't always determine how a technology will be used once it's integrated into society. To believe otherwise is to commit the mistake known as the "designer's fallacy."⁴ Technology use routinely involves unintended consequences and trade-offs. Take the discovery of fire and early inventions that applied it to keep people warm and cook meat (a quick source of protein). The process had obvious benefits for our ancestors, including profound cognitive ones.⁵ But the Promethean gift also posed risks. Fire can burn people, possessions, and shelters. Most importantly, the development and use of tools to make and manage fire shaped who we are and

who we are capable of being. As anthropologists and historians have explained, these tools opened new possible paths for humans to live and develop. Other tools have done the same.

Yet over time we've lost many capabilities by learning to solve problems with newer tools. Our predecessors could do many things that most of us simply can't do anymore. Know anyone who uses "dead reckoning" to navigate a boat? That's a pre-GPS orientation to determining positioning, revolving around factors like time, direction, and speed. Or, imagine if, in the future, the only cars that exist are autonomous, self-driving models. If they collectively went on strike, how many would be able to ride a horse to work? Or pilot a "dumb" automobile, after stealing it from a museum?

Tool use also has expanded our capabilities. Delegating tasks to technology has freed up time and resources and enabled us to move on to new and often more advanced problems. Keeping the innovation cycle going requires imagining, creating, and using new tools.

Consider the trajectory of fishing tools as a progression from spear fishing, to using a fishing pole, to using nets, and so on.⁶ Along the way, capabilities have been gained and lost. At one time, many humans had considerable skill in handling a fishing spear; doing so was necessary to obtain food. Over time, that skill gradually became less useful. At some point, a fishing pole proved more efficient. And that efficiency ended up paling in comparison to subsequent large-scale fishing from boats with nets, a historical turn that turned pole fishing into a recreational hobby (rather than a professional endeavor) for many cultures.⁷ In the end, progress in fishing appears to be a net gain in terms of both efficiency and capabilities. Less fishing effort by fewer people yields more fish for consumption, and, as a result, people in a historically based fishing community can diversify their skills and learn to use other tools.⁸ Upon closer inspection, however, complex trade-offs become apparent. Displaced fishermen who cannot find work doing other jobs are a problem. Not everyone can transition from skill to skill – not least because training can be too costly and time-intensive. In some contexts, eroded familial and community traditions lead to a loss of social identity and capital. We should be skeptical of overly rosy narratives about how the future of automation will liberate us to spend more time doing artistic and related endeavors.⁹

While it's tempting to assume innovation yields ever increasing net gains, we must avoid being lulled into complacency by simple and comforting explanations. Patterns of this sort aren't uniform or inevitable. They can change, be localized, and even be manipulated to affect the

distribution of gains and losses. There are always winners and losers as wealth, power, and capabilities concentrate and dissipate.

Shaping and Being Shaped by Tools

As media scholar John Culkin put it in his rephrasing of a famous Winston Churchill quote, “We shape our tools and, thereafter, our tools shape us.”¹⁰ This truism seems banal. It’s easy to state but much more difficult to employ in a manner that elucidates and enables evaluation of tools or humanity. We need to understand *how* we shape and get shaped by our tools.

This mutual shaping occurs on an existential level, through self-understanding and modeling. Philosopher John Searle thus observes:

Because we do not understand the brain very well we are constantly tempted to use the latest technology as a model for trying to understand it. In my childhood we always assumed that the brain was a telephone switchboard . . . Sherrington, the great British neuroscientist, thought that the brain worked like a telegraph system. Freud often compared the brain to hydraulic and electro-magnetic systems. Leibniz compared it to a mill, and I am told that some of the ancient Greeks thought the brain functions like a catapult. At present, obviously, the metaphor is the digital computer.¹¹

On other levels, the dynamic constitutive relationship between humans and tools requires that we look beyond the particular function of a tool. According to Weizenbaum, “Whatever their primary practical function, [tools] are necessarily also pedagogical instruments.”¹² In other words, our tools allow us to teach each other about the tools and their functions, but also to teach us about who we are, what we can do, what is possible, and who we may become. Tools become part of the environment that shapes our beliefs, preferences, and capabilities.

In the history of techno-social engineering, language may be the most important tool ever invented. Historian Yuval Noah Harari claims that three major revolutions shaped the course of human history: the Cognitive Revolution, the Agricultural Revolution, and the Scientific Revolution. The Cognitive Revolution, which occurred about 70,000 years ago, involved the emergence of “new ways of thinking and communicating” that relied on “fictive language.”¹³ While many animals communicate, examples being the buzzing of bees and the howls of monkeys, only humans have developed language capable of describing things that don’t exist – *imagined things*.

Fictive language is important because of the collective affordances it provides, especially our ability to coordinate activities and work collectively in flexible ways.¹⁴ With fictive language, humans could create common myths and construct complex social institutions, such as churches and governments. People believe in “the existence of laws, justice, human rights,” for example, but “none of these things exist outside the stories that people invent and tell one another.”¹⁵ Language begets myths and large-scale human cooperation or subjugation. Myths sustain empires. Remarkably, on two consecutive pages of his book, Harari displays the Code of Hammurabi and the Declaration of Independence.¹⁶ Both claim to be rooted in “universal and eternal principles of justice.” Nevertheless, the Code proclaimed a social hierarchy among superiors, commoners, and slaves, while the Declaration proclaimed all are created equal. Neither is natural or objectively true. Both are powerful myths, imagined orders made possible by the tool of fictive language.¹⁷

The Agricultural Revolution also profoundly transformed human societies across the world. Unlike foraging societies, agricultural societies needed to manage huge amounts of mathematical data.¹⁸ Human brains were not up for the task, forcing our ancestors to develop tools to store and process data. The Sumerians developed a written language, initially “limited to facts and figures.”¹⁹ At first, this partial script did not cover the whole spoken language, but, over time, this changed. For example, cuneiform emerged as a full script allowing humans to speak not only to those around them but also across longer distances and even generations.

The Scientific Revolution introduced an array of powerful tools, starting with a change in mindset: embrace science as a means for transcending our natural human ignorance.²⁰ As humans began to accept their own ignorance, they invested more and more resources in scientific research to explore the unknown and use the acquired knowledge to develop new tools. Science incorporates systematic observation with experimentation, new forms of imagination, theorizing, and the logic and language of mathematics. Isaac Newton’s 1687 masterpiece, *The Mathematical Principles of Natural Philosophy*, might be “the most important book in modern history.”²¹ Newton’s theory was a powerful, general-purpose tool. It could be used to explain all sorts of physical phenomena, from apples falling from trees to the trajectory of artillery. It reflected and contributed to our changing mindset. “Newton showed that the book of nature is written in the language of mathematics.”²²

At a macro level, science has become a powerful techno-social engineering tool that rivals religion. For some, it has become a secular form of salvation. Instead of praying to God or the gods for help with some calamity, some place their faith in science's ability to solve all problems. Take global warming. Instead of having confidence in divine intervention or a radical change emerging in every-person's ecological sensibilities, some hope that global warming can be mitigated through powerful forms of geoengineering – literally, re-engineering the Earth.

Tools are also products of human imagination. We “create little without first imagining that [we] can create it.”²³ Yet tools also shape our “imaginative reconstruction of the world.”²⁴ Tools are “pregnant symbols in themselves,” meaning that they “symbolize the activities they enable.”²⁵ The fishing spear is a tool for fishing, and it represents the capability associated with its use. As it comes or goes, so does our imagined construction of the world and ourselves within it.²⁶

Joseph Weizenbaum discusses a series of examples of this phenomenon, ranging from spears, the six-shooter, and other weapons, to “ships of all kinds,” to the printing press, the cotton-picking machine, and industrial machines. He discusses tools for measurement, such as telescopes and microscopes, and various other prostheses that extend human power, reach, and control over the environment. With each of these examples, humans gain and lose functional capabilities while their imagined world and their place within it are transformed.

Perhaps the “paramount change that took place in the mental life” of humans was our perception of time and space.²⁷ For most of our time on Earth, humans perceived time “as a sequence of constantly recurring events” rather than “a collection of abstract units (i.e., hours, minutes, and seconds).”²⁸ The clock changed everything. It was the first autonomous machine, not a prosthetic extension of human power. As the historian and philosopher Lewis Mumford observed, the clock “disassociated time from human events and helped create the belief in an independent world of mathematically measurable sequences: the special world of science.”²⁹ The clock transformed human perception of nature and consequently humanity's role as “creature of and living in nature to nature's master.”³⁰ Weizenbaum not only connects the clock to the rise of scientific rationalism, but he also links the clock to the fall of direct experience as a guide for human judgment and knowledge.

It is important to realize that this newly created reality was and remains an impoverished version of the older one, for it rests on a rejection of those direct experiences that formed the basis for, and indeed constituted, the old reality. The feeling of hunger was rejected as a stimulus for eating; instead, one ate when an abstract model had achieved a certain state, i.e., when the hands of the clock pointed to certain marks on the clock's face . . . and similarly for signals for sleep and rising, and so on.³¹

Historians, economists, science and technology studies scholars, and experts from various disciplines have examined other transformative tools that shaped the developmental path for human society over the past few centuries. The steam engine transformed human society, as did the telephone, the automobile, radio, television, and many other forms of technology. And today, we have the computer.

Weizenbaum fixates on the computer as a symbol and implementation of the dramatic transformations at the end of the twentieth century. Like the clock, the computer is an autonomous machine that can run on its own and perform various functions without needing human intervention. Like the clock, the computer has transformed us.

Initially, computers simply performed existing computing tasks more rapidly. Calculations done by humans in their heads, with paper and pencil, slide rules, or tab cards could be done more efficiently with computers. But, as is often the case with transformative tools, the range of uses for the computer expanded substantially with experience. Problems that were comprehensible in the language of computation could be tackled with computers. Computers gradually became integrated into an incredibly wide array of business and government processes and systems, becoming part of the structures upon which these systems depended, part of their background environment. Business decisions and, more importantly, the methods for making business decisions, such as systems analysis and operations research, grew increasingly reliant on the power of computers. As the power of computers grew, so did the perceived power of the methods and consequently their prestige and scope of application or their domain. The expanded scope of systems analysis, operations research, and a host of related computer-aided decision-making tools extended their influence on society. They became their own fields and entered the mainstream.

Fetishized Computers and Idealized Computation

Weizenbaum makes a remarkable observation that resonates with much of what we say in this book. He states:

The interaction of the computer with systems analysis is instructive from another point of view as well. It is important to understand very clearly that strengthening a particular technique – putting muscles on it – contributes nothing to its validity.³²

If a computer greatly improves the carrying out of calculations used to cast a horoscope – performing a series of complex symbol manipulations, etc., and doing so much more rapidly and efficiently than an unaided human astrologer – the “improvement in the technique of horoscope casting is irrelevant to the validity of astrological forecasting.” And thus, “If astrology is nonsense, then computerized astrology is just as surely nonsense.”³³

Weizenbaum identifies a fundamental problem: We have fetishized computers (and other tools), and, as a result, we have “reified complex systems that have no authors, about which we know only they were somehow given us by science and that they speak with its authority, permit no questions of truth or justice to be asked.”³⁴ The “science” he refers to is a type of rationalism and instrumental reason that can be boiled down to “computability and logicity.” For example, he criticizes B. F. Skinner³⁵ for elevating “behavioral science” over “common sense,” and this means failing to appreciate “a common sense informed by a shared cultural experience [and that] balks at the idea that freedom and dignity are absurd and outmoded concepts.”³⁶

Weizenbaum sensed a shift in the pattern, in the co-evolution of humans and our social and technological tools.³⁷ There seemed to be an all too convenient marriage between means and ends. The tools – computers, systems analysis, science, instrumental reason – work together synergistically to define reality, just as the light under a lamp-post defines the territory within which a drunk might look for his lost keys. “[I]nstrumental reason, triumphant technique, and unbridled science *are* addictive. They create a concrete reality, a self-fulfilling nightmare.”³⁸

It’s difficult to appreciate how powerfully the tools we develop shape us. One of the most important ways is by shaping our imagined reality, our very beliefs about ourselves, and our preferences and values. If the ends worth pursuing are determined by our tools, by their constructed reality (the contours and contents of the lit space under the lamp-post), then nothing less than our very humanity may be at risk of being whittled away. Our imagination could become bounded by the constraints embedded in the tools and the logics they perpetuate. We are not there, at least not yet. In many ways, experience suggest that our tools generally have expanded our horizons. This is especially true when it comes to knowledge.^{39,40}

Nonetheless, we must remain vigilant and continue to examine our tools, our reliance on them, and what ends might linger just beyond the light.

Let us put the key point simply, as Weizenbaum did.

Problems comprehensible in the language of computation, in theory, can be solved with computers, systems analysis, science, instrumental reason, and so on. Conversely, problems incomprehensible in the language of computation, by definition, cannot.⁴¹ Weizenbaum explains how many incomprehensible problems are improperly assumed to be comprehensible. Justice, for example, is not in and of itself comprehensible in the language of computation. Many different conceptions of justice have been articulated. None of them are fully reducible to computation problems. Recall Harari's comparison of the two codes of justice – Hammurabi's Code and the Declaration of Independence. The subject matter of both uses numerical relationships to express conceptions of justice, and one might argue that the codes aim to reduce justice to a computational problem, but neither really does. Both rely on the prior judgment of the collective human society – or those in power – to construct the imagined reality reflected in the codes. Humans set the baselines for justice. Similarly, policy-makers and value theorists may frame social choice problems in terms of social welfare functions and thereby structure choices and trade-offs in a manner that seems quantitative, formulaic, and possibly reducible to problems comprehensible in the language of computation. However, beneath the framing itself are a host of human judgments about values and relative weights, that set the baselines necessary for computational processes to run their course.⁴²

A major social problem is rooted in the imperialism of instrumental reason and the improper assumption that *all* problems are comprehensible in the language of computation and thus can be solved with the same set of social and technological tools. This assumption sometimes results from erroneous understanding of problems but also from myopic infatuation with the power of our tools. We might modify Culkin's phrase as follows: "We shape our tools, fall in love with them, and, thereafter, our tools shape us." Weizenbaum's argument remains fundamental, particularly as we identify ever more powerful means for solving problems comprehensible in the language of computation.

Extending the concept of the "designer's fallacy," we label this issue the *problem of engineered determinism*. What we mean to evoke by the term is the idea that society can engineer in a deterministic fashion a world that operates deterministically. This is not to say the world is naturally deterministic, or predetermined by fate or natural physical processes. Rather, it

is the grand hubris that we can socially construct a perfectly optimized world if we only have the data, confidence in our tools, and willingness to commit.

“Against the Imperialism of Instrumental Reason,” a chapter in Weizenbaum’s book, opens with a parable of how the “enormous power” humans have attained through the tools of (computerized) science and technology have left humans impotent. To hammer home the point, he quotes the historian Studs Terkel:

For the many there is hardly concealed discontent . . . “I’m a machine,” says the spot welder. “I’m caged,” says the bank teller, and echoes the hotel clerk. “I’m a mule,” says the steel worker. “A monkey can do what I can do,” says the receptionist. “I’m less than a farm implement,” says the migrant worker. “I’m an object,” says the high fashion model. Blue collar and white call upon the identical phrase: “I’m a robot.”⁴³

Powerful as Weizenbaum’s account is, it remains incomplete. It has influenced our work substantially, as we’ve hopefully made clear. But Weizenbaum focused on two related sets of tools, one technological and the other social. The technological tool set centered on the computer; he emphasized its symbolic role. Throughout this work, we’ll discuss other tools within that set, such as communication networks, algorithms, and big data.

Taylor’s Scientific Management of Human Beings

There is something fundamental missing, or perhaps implicit, in Weizenbaum’s account that we need to draw out. It’s the paradigm shift that occurred at the turn of the twentieth century with the emergence of Frederick Taylor’s theory of scientific management, commonly referred to as Taylorism.⁴⁴ Taylor revolutionized the relationships between management and labor, and it’s no surprise that all the people in the Studs Terkel passage that Weizenbaum quoted were workers.

In his biography of Taylor, Robert Kanigel offers the following description:

Taylor was the first efficiency expert, the original time-and-motion man. To organized labor, he was a soulless slave driver, out to destroy the workingman’s health and rob him of his manhood. To the bosses, he was an eccentric and a radical, raising the wages of common laborers by a third, paying college boys to click stopwatches. To him and his friends, he was a misunderstood visionary, possessor of the one best way that, under the banner of science, would confer prosperity on worker and boss alike, abolishing the ancient class hatreds.⁴⁵

We connect Taylorism to Weizenbaum's account for a few reasons. First, the link strongly supports Weizenbaum's observations about the rise of systems analysis, operations research, and computer-assisted decision-making within business management circles. It even buttresses Weizenbaum's emphasis on the importance of the clock as a techno-social engineering tool. After all, Taylor's system depended heavily on "efficiency experts" using stopwatches to conduct time studies, a critical source of data used in scientifically managing workers. Second, the connection helps explain the rise of instrumental reason and scientific approaches to managing human beings and their social relationships in the workplace and elsewhere. Third, the association focuses on a set of techniques that preceded and did not depend on the computer. These techniques have been strengthened greatly by computers and adjacent technologies such as sensors, data analytics, communications networks, and so on. Yet the normative validity or legitimacy of the techniques must be evaluated independently, and, to do so, we must resist the pull of fetishized innovation and unwarranted claims of technological inevitability.

Taylor developed his techniques, his theory of scientific management of humans in the workplace, in the late nineteenth century and early twentieth century. Taylor saw substantial inefficiencies in factories and other workplaces, and he attributed many of the inefficiencies to mismanagement of labor. As a young man, Taylor had worked as a shop foreman, attempted to get the most out of his workers, and begun to diagnose the inefficiencies he observed as a product of poorly structured incentives, unmotivated and sometimes shirking laborers, and, perhaps most importantly, a tremendous knowledge gap that rendered management ineffective. Managers knew too little about the workers, their tasks, their capabilities, and what motivated them to work.

Over decades and across different workplaces and even industries, Taylor carefully studied workplaces, workers, and their work. He examined minute details of tasks performed, and, based on the data collected, sought to optimize performance in terms of increased efficiency and productivity. Taylor's system was generalizable. In other words, his system was not limited to a particular workplace, nor was it limited to any set of time and motion studies.

At one level, Taylor's scientific management system is a type of data-dependent technology.⁴⁶ Taylorism is one of the best early examples of data-driven innovation, a concept currently in vogue.⁴⁷ Taylor's system

included the techniques for both gathering data and putting such data to use in managing people. Taylor's system thus encompassed the surveillance techniques employed by the "efficiency experts," their use of stopwatches and careful visual observation of task performance under varied incentive schemes. For example, he would offer a worker being studied a much higher wage than the prevailing market wage to test worker capability and task performance under different conditions, and, if possible, push prevailing views about what workers could accomplish and increase productivity. Taylor and his disciples relied on personal observations written in notebooks and careful analysis of various inputs, outputs, processes, and procedures across the many workplaces they studied.

Taylor's critics emphasized that Taylor's scientific management was anything but scientific. They alleged (accurately in many cases) that Taylor's prescriptions for management often had an ad hoc flavor to them. When the data was incomplete, Taylor relied on his own judgment, which amounted to little more than a fudge factor or unwarranted exercise of managerial discretion and could not be considered scientific.

Yet the managerial data gaps would close. Twentieth-century technological innovations, ranging from the computer to the camera, have dramatically upgraded the capability of managers to gather, process, evaluate, and act upon data.⁴⁸ Not surprisingly, Taylorism spread like wildfire across industries and beyond the factory floor, to hospitals, schools, and various other contexts.⁴⁹ As Kanigel put it, "Taylor's credo of rational efficiency has burned its way into the modern mind."⁵⁰

Taylorism is an applied version of the instrumental reason and rationalism discussed by Weizenbaum. Consider how Taylorism defines both means and ends. As a technology or management technique or system, Taylorism is obviously branded as a means. The problem to be solved also was unambiguous: inefficiencies plagued the workplace leading to waste and lost productivity. Taylorism and Fordism are famous both for their underlying *objective*, namely, to increase efficiency, quality, and productivity for the ultimate benefit of managers, owners, and capitalists, and *means*, specifically by managing factory workers in various ways that get them to behave like machines.

Deeply embedded throughout Taylorism, the ends of productivity and efficiency are not only assumed to be paramount but also to be comprehensible in the language of computation. That is the heart of Taylor's claim that his system constituted scientific management; it is reflected throughout the system itself. Workers were, in fact, conceived as inputs, cogs, resources, etc.; their work was broken down, analyzed, and programmed.⁵¹

Taylor and his disciples assumed it was all comprehensible in the language of computation. At a fundamental level, Taylorism was a revolutionary system for engineering humans. As Taylor famously declared, “In the past the man was first; in the future the system must be first.”⁵²

The assembly line is a particularly salient and culturally recognized example.⁵³ An assembly line is a manufacturing process involving the progressive assembly of parts into a whole product, where the semi-finished assembly moves from one work station to the next in a linear fashion. While assembly lines pre-dated Taylor and Ford, Ford famously optimized the process for mass production. Fordism combined product standardization, systematized use of assembly lines wherein unskilled laborers used special purpose tools at different stages, and the principle that workers should be paid higher “living wages” to both provide better incentives and enable them to purchase the products they made.⁵⁴

A critically important aspect of this type of techno-social engineering is the *environmental nature of the means*, the way in which the managers employing the management practices advocated by Taylor (and adapted by Ford) reconstructed the physical and social environments within which their workers worked. Managers could leverage control over the environment to control those within the environment in various subtle but powerful ways. Similar to how the clock reconstructed our environment and us,⁵⁵ time and motion studies fueled task and schedule management in the workplace. As Harari describes:

[Modern industry] sanctifies precision and uniformity. For example, in a medieval workshop each shoemaker made an entire shoe, from sole to buckle. If one shoemaker was late for work, it did not stall the others. However, in a modern footwear-factory assembly line, every worker mans a machine that produces just a small part of a shoe, which is passed on to the next machine. If the worker who operates machine no. 5 has overslept, it stalls all the other machines. [To] prevent such calamities, everybody must adhere to a precise timetable. Each worker arrives at work at exactly the same time. Everybody takes their lunch break together, whether they are hungry or not. Everybody goes home when the whistle announces that the shift is over – not when they have finished their project.⁵⁶

The factory thus not only produced whatever widget the company eventually sold (e.g. Harari’s shoes or Ford’s automobiles), but it also produced machine-like humans, sometimes referred to as automatons.⁵⁷ Kanigel states:

Both Taylor and Ford raised production, cut costs – and reduced the judgment and skill needed by the average worker. [A Ford plant differed from a Taylorized plant in certain respects.] In either case, the worker was left with eight or ten hours whose minute-by-minute course was more closely prescribed and scrutinized than ever. After Ford and Taylor got through with them, most jobs needed less of everything – less brains, less muscle, less independence.⁵⁸

Taylorism Criticized Yet Expanding

Critics of Taylorism recognized and railed against these effects on workers, but architecting the environment (optimizing it, really) to achieve these particular effects is the technological innovation to note.⁵⁹ “The Industrial Revolution turned the timetable and the assembly line into a template for almost all human activities . . . [Soon] schools too adopted precise timetables, followed by hospitals, government offices and grocery stores.”⁶⁰ These are interesting examples because they define and are defined by the physical spaces, social institutions, and increasingly technologies that together constitute particular environments designed to engineer humans.

Schools engage in techno-social engineering of humans. Communities rely on schools to educate and transform their children. Like a factory, a school transforms a combination of inputs into socially valuable outputs; that transformation is the result of a series of internal processes. It may be disconcerting to think of schools as mere factories, children as inputs or outputs, teachers as factory workers, and so on. Still, Taylorism has had a profound impact on the educational workplace. In fact, “[t]he application of principles of scientific management within the structure, organization, and curriculum of public schools in the US became dominant in the early 1900s.”⁶¹ Like scientific management more generally, Taylorism in public schools may have waxed and waned over the past century and across different regions, but it has “resurfaced . . . as teachers’ classroom practices are increasingly standardized by high-stakes testing and scripted curriculum.” Education scholar Wayne Au and others have examined in detail how the incredibly fine-grained scripting (or micro-management) of teachers’ work neatly fits with the Taylorist logic.

The school-as-factory metaphor is wonderfully exploited in Pink Floyd’s “The Wall,” which vividly illustrates the worry that schools can be totalitarian environments architected to construct machines, rather than humans. Schools need not, and should not, be built and run this way. Another ideal vision casts schools as environments that enable children to develop a range of human capabilities, including, for example, reason, reflection, introspection,

emotional intelligence, sociality, and so on. For many schools, this is aspirational. Nonetheless, the social engineering that inevitably takes place in schools spans a continuum with the dystopian factory of “The Wall” at one extreme and the utopian ideal at the other. Schools in the real world occupy intermediate positions on the continuum and can be evaluated in terms of their position, which may change over time.

Without delving into education policy debates, we note that one modern trend in education is to import various surveillance, computation, and communication technologies into the schools. It is important to examine how these technologies may subtly affect the environment within schools. Schools tend to evaluate each technology on its own, performing a truncated cost-benefit analysis in the face of declining public funds and partially blinded by fascination with the power of new technology. Each incremental step to adopt a new technology may appear to be cost-benefit justified, but, in the aggregate, schools may be heading in the wrong direction on our hypothesized continuum. This is one example of humanity’s techno-social dilemma.

Today, even though the assembly line “defines surprisingly little of modern manufacturing,”⁶² Taylorism is pervasive. Taylorism had its ups and downs across business schools, management consultancies, and factory floors throughout the twentieth century. Some companies and even industries moved away from it to alternative systems for managing labor.⁶³ Nonetheless, the basic principles of Taylorism have become deeply embedded in how society conceptualizes all sorts of management, ranging from businesses to government to schools to amateur athletics to child rearing. Again, Robert Kanigel put it well:

Today, it is only modest overstatement to say that we are all Taylorized, that from assembly-line tasks timed to a fraction of a second, to lawyers recording their time by fractions of an hour, to standardized McDonald’s hamburgers, to information operators constrained to grant only so many seconds per call, modern life itself has become Taylorized.⁶⁴

With ever growing data about human labor, task performance, and so on, the trend in workplace surveillance and management has only grown and expanded in scope,⁶⁵ and it is likely to continue. *Until when? How far can it go? What happens if taken to the extreme? What would it mean to Taylorize human labor fully?* One thing it would mean is that we would have accepted, even if only tacitly, the contention that management of human labor is a problem comprehensible in the language of computation. Another thing it would mean is that any boundary around the workplace, employment, or even the idea of work itself would dissipate because human labor is not constrained to any such boundary.

Modern data-driven micro-management of human resources (time, attention, effort, etc.) across various industries is simply a form of Taylorism extended beyond formal employer–employee contexts. Like vehicles, physical space, and computing resources, human physical labor can be optimized for on-demand allocation determined by data and algorithms. The Taylorist vision of efficient management is focused on minimizing costs associated with misallocated or wasted human capital, effort, and attention. Ironically, soon, eliminating productive inefficiencies that arise from mismanagement of labor might entail getting rid of human managers altogether and turning instead to smart technologies.⁶⁶

There is no reason to limit technologically-optimized-and-implemented Taylorism to traditional work, however. The logic easily extends to a much wider range of actions that depend upon human labor (time, attention, effort, etc.), whether driving a car, caring for one’s children, exercising our bodies and minds, or any other human activity.⁶⁷ In the not-so-distant future, intelligent technological systems – not necessarily sentient ones – may be deployed to maximize human productivity throughout our lives.

Humans are naturally inefficient. We are often unproductive and costly to sustain. One way to understand the power of the Taylorist logic, particularly as extended beyond the workplace, is that it entails minimization of various costs associated with humans being human. For humanists, this is deeply troubling. Some will emphasize the potential upsides, rooted in increased convenience, entertainment, happiness, and welfare. They’ll argue that, overall, we’ll all be much better off in a world optimized to deliver cheap bliss. In subsequent chapters, we’ll revisit this debate about humanity and the world we’re building.

CHAPTER 5

*Engineering Humans with Contracts***Introduction**

Q: What do you do when you see a little button on a webpage or app screen that says ["I agree"]?

A: Click the button.

Previous chapters explained techno-social engineering and considered illustrative examples. Here, we discuss in detail the current legal and technical architecture of electronic contracting, a surprising case of techno-social engineering. The design of this environment might incline people to behave like simple stimulus-response machines and become increasingly predictable and programmable.

Contract law shapes the transactional environments where people formulate legally respected and binding commitments and relationships. In general, contract law is understood to be a form of liberating social infrastructure that enhances individual and group autonomy. Unfortunately, conventional understanding seems to be wrong. Contracting practices have changed dramatically over the past half-century to accommodate changes in economic, social, and technological systems. Today's contracts might be more liberating for some (e.g. firms) than others (e.g. consumers).¹ As implemented in electronic architecture, contracts may be oppressive.

Designers arrange the digital contracting environment to create a practically seamless, transaction cost minimized user experience. Rather than requiring people who intend to use online services to read lengthy pages filled with boilerplate legal jargon – jargon they can't reasonably be expected to understand and won't be able to negotiate with – a simple click of the mouse, with mere conspicuous notice of the existence of terms, suffices to manifest consent for entering legally binding contractual relationships.

There's plenty of legal debate about the legitimacy of contracts that this mechanism creates, including heated disputes over whether opportunities

for opting-out do enough to preserve autonomy. Some celebrate *efficiency*: the seamlessness of the interaction and the minimization of transaction costs. From this perspective, electronic contracts are a perfectly rational means for consumers to quickly access desired services and goods. Others, however, lament *unfairness*, the one-sidedness of take-it-or-leave-it contracts of adhesion that don't foster the "meeting of the minds" that once seemed to be the core principle of contract law.

While a significant debate about the content of contracts is taking place amongst scholars and in the courts, a crucial omission limits the critical conversation and prevents us from appreciating the full power of online contracting. Few discuss the negative impact the electronic contracting environment has on our habits and dispositions, and, more generally, on who we are as human beings.² It can be uncomfortable to focus on these issues and the possibility that electronic contracts are objectionable as a matter of public policy because they condition us to devalue our own autonomy.

We examine two related ways to characterize the contracting problem.

First, we claim that the electronic contracting environment should be understood as a techno-social tool for engineering human beings to behave automatically, like simple machines. To validate this claim, we develop testable hypotheses and explicate the underlying theory.

Next, we describe the contracting problem in Taylorist terms, as a system of scientific management that's directed toward consumers.³ This view highlights how consumers, like laborers in Taylorist workplaces, are conditioned (and possibly deskilled) to behave in ways that largely are determined by efficiency-oriented system designers. Viewing electronic contracting through the lens of Taylorism connects our discussion to a broader set of techno-social engineering problems.

Although we don't believe the click-to-contract mechanism necessarily was intended to be a tool for techno-social engineering humans, it nonetheless may have become one because of its gradual optimization and the expanding scale and scope of its deployment. Emergent Taylorism might seem oxymoronic because Taylor developed tools for management who would use them in a direct and deliberate manner. However, this line of thinking places too much emphasis on intentionality and managerial responsibility. We aren't making claims about the intentions of designers. Instead, we're focusing on environmental tools and their impacts on human behavior, and we're questioning the underlying logic of optimization.

If the electronic contracting environment conditions human beings to behave like simple stimulus-response machines, and if repeated interaction with this environment has lasting effects, then systemic reform of contract law might be warranted for reasons that go beyond the arguments proffered in the standard literature.⁴ Our argument is *not* about the goodness or badness of contract terms per se. Nor is it about the outcomes in specific contracts, transactions, or cases. Rather, our concern is with the social costs associated with rampant techno-social engineering that devalues and diminishes human autonomy and sociality.

One caveat before proceeding:

Throughout this chapter, we use endnotes marked with the header “Empirical Query” to identify hypotheses and claims that need to be verified through empirical investigation. These statements are not defensive. Nor are they signs of weakness in our theoretical argument. Good theory leads to good empirics. It reveals questions that are worth investigating and provides structure and boundaries for further theoretical and empirical inquiries. In short, we note these empirical queries to encourage others to work with us or independently on pressing research questions.

The Experience of Electronic Contracting

In her book, *Boilerplate*, law professor Peggy Radin presents two conceptually familiar worlds to help orient our thinking about contracts.⁵ In World A (for Agreement) “contracts” are actual bargained-for exchanges between parties who each consent to the exchange. Traditionally, this is how many imagine contracts work in an ideal world. In World B (for Boilerplate)⁶ “contracts” are standardized form contracts, also known as contracts of adhesion and take-it-or-leave-it contracts. The logic of this world captures what we often experience as consumers. Radin explores how the use of boilerplate has expanded significantly and what the implications of such expansion might be for consumers, contract law, and society. Most importantly, she explains how “boilerplate creep”⁷ gradually erodes public ordering (e.g. law of the people, political and social institutions, government) and replaces it with private ordering (e.g. law of the firm, market).⁸ Her analysis is comprehensive and includes many examples of boilerplate offline and online.

The beauty of the Internet is its scope and diversity, the incredibly wide range of websites, interactions, conversations, communities, activities, and transactions available to each of us. Not surprisingly, navigating webpages and online content carries an incredible amount of legal baggage. Much of

it is governed by electronic contracts. If the Internet followed Radin's model of World A, transaction and information costs could be stifling. Lawyers have worked to reduce friction by drafting boilerplate agreements. And website designers who architect the digital environment have played a role in this process, too. Both are "choice architects" who frame the choices or options that consumers are presented with.⁹

Consider a system where a choice architect designs the online environment to make using digital services as seamless as possible. Essentially, the choice architect structures the environment to minimize the burden placed on the user when she is consenting to terms. It's an environment where the rational response to terms of use pages (links, really) requires little thought and imposes no burden on the user. After all, "acceptance" is reduced to a mere click of the mouse. If this is starting to sound familiar, it's because it is our current online contracting environment.¹⁰ Technically, the contracting environment is choice-preserving in the sense that users retain their autonomy. They can opt out of the web applications services – so long as they're willing to accept that the social or professional costs of doing so can be high. The key point, though, is that, in this context, it is completely rational for a user to blindly accept the terms of use. To read the proposed and, frankly, imposed terms would be a complete waste of time, an irrational and ultimately futile exercise.¹¹

It seems natural to distinguish this scenario from those that involve the government. Contracting is, after all, a private affair: the holy grail of private ordering. While many of us may feel ashamed, cheated, disappointed, or otherwise less than satisfied with our contracting behavior, we cannot complain about coercion, much less government paternalism. *Or can we?* The answer depends on just how dramatically contracting has changed over the past half-century to accommodate changes in economic, social, and technological systems, both off- and online. According to law professors Robert Hillman and Jeffrey Rachlinski, "[t]he Internet is turning the process of contracting on its head."¹²

One aspect of the dramatic change in contracting practices is its pervasiveness and relevance in our everyday digitally networked lives. The current scale and scope of private ordering through written contract is unprecedented. It may truly be a massive "orgy of contract formation."¹³ We haven't attempted to quantify the number of written contracts the average person enters during her lifetime. However, we suspect the following: (i) the number has steadily, if not exponentially, increased over the past half-century;¹⁴ (ii) the rate of meaningful participation in negotiating terms has steadily decreased;¹⁵ and (iii) the number of written contracts

concerning mundane affairs has increased, if not skyrocketed. By mundane, we mean ordinary, everyday affairs for which a written contract would be cost-prohibitive and inefficient in the absence of boilerplate.¹⁶

We could add a fourth hypothesis about the increasing number of written contractual agreements concerning trivial affairs, which we imagine to be something like the offline purchase of a lollipop. Such “lollipop contracts” are unnecessary and wasteful. Why bother to cement relationships with a written contract when it concerns trivial affairs? One answer becomes apparent when we flip the question around and ask: Why not? It’s no bother because the transaction costs associated with forming a written contract are trivially low in the electronic contracting context. Such contracts might not really be about the legal relationship. They serve other purposes, such as setting standards, incrementally contributing to boilerplate creep, and further replacing public ordering with private ordering.

Let’s put this in personal terms. *Do you consider yourself experienced in contracting? Have you negotiated many contracts? If so, what did the negotiation entail?* For many people, contracts are significant legal affairs that involve insurance, loans, employment, and other major life transactions. We also enter many contractual agreements that concern less significant affairs. For example, a contract for a single service – say, to have a porch painted – or an ordinary sales contract – say, for a household item.¹⁷ Consider how much time you spend online each day, how many different service providers you interact with during such time, and the percentage of those interactions governed by contracts. Now perhaps you understand the intuitions behind our hypotheses.¹⁸

How many written contracts have you entered into during your lifetime? If we asked this question in the distant past, decades ago or a century ago, the answer probably would be orders of magnitude less than the answer provided by current readers.¹⁹ Future readers of this chapter may find the question odd because the idea of distinct, identifiable contracts may be at odds with their experience of completely seamless contractual governance. This raises an interesting theoretical issue. Freedom of contract requires the correlative freedom from contract.²⁰ When contract becomes automatic and ubiquitous, both disappear. There is no freedom.²¹

Our modern, digital, networked environment is architected with technological systems that operate mostly in the background, behind user interfaces that magically hide the complexity and incredible number of actual and virtual machines, processes, data flows, and actors. These

interfaces also happen to be means by which we enter a substantial number of legally binding relationships with service providers and other parties.

We routinely enter contracts by clicking a virtual button, whether using a mouse, touchpad, touchscreen, or remote control. The experience is hardly a momentous occasion and often is barely notable. This is a designed feature and not an accidental bug – a point we’ll subsequently revisit. Experientially, it feels²² nothing like signing on the dotted line of your mortgage, employment contract, or insurance agreement.²³ But the legal effect is the same. When you click “I agree,” you manifest consent to enter a legally binding contractual agreement. *With whom?* Most often, the other party is the service provider. Providers include website operators, software or app providers, smart television companies, and so on. Sometimes, there are other parties – affiliates or third parties – who also are part of the deal. For example, you may enter an agreement with the website owner and agree to let her share your data with affiliated entities. But these entities are not typically contracting parties. They’re just beneficiaries of the contract between you and the direct service provider. Typically, they have side-agreements with the service provider, but not with you.²⁴

The electronic contracting environment we’re all familiar with is thus a product of, and completely contingent upon, evolved contract law and practice. Critically, this includes technological systems through which we interact, communicate, transact, and form relationships. Both could be different. Contract law could have accommodated changes in economic, social, and technological systems differently.²⁵ What we have now is neither necessary nor inevitable. Fortunately, contract law still can change.

The technological systems through which we interact, communicate, transact, and form relationships also could be different. They are designed and optimized to obtain predetermined results given the legal and technological constraints and the predictable behavior of visitors. The technological systems reflect a series of design choices in their deployment, in their architecture.²⁶ Contract law has permitted and encouraged the development of an electronic contracting environment in which it would be irrational for users to read the terms of the contract. The technological design of the user interface – a click-to-agree button coupled with a link to a separate file with potentially endless pages of terms – is merely an implementation of what contract law has allowed.

It’s efficient. Each online contract we enter is presumably in our interest and cost-benefit justified. Otherwise, we’d choose to abstain. Price and service are presumably the driving factors. All else is a mere transaction cost

to be minimized, buried in terms of service that no rational person would read. You retain your autonomy and may choose to leave, but that's it. Quite simply, you may take it or leave it.

At least, that is how it seems. *But what exactly is the price?* Often, we have no idea because the true price is not money exchanged. Frequently, users do not pay money for services. The apparent sticker price is zero. Even when users pay money (e.g. for a subscription or a \$0.99 app), the sticker price often is discounted; other side-payments exist. The actual price users pay for the services websites provide includes all the information the sites collect about them.²⁷ As Radin shows, the actual price also includes the various legal rights we may have given up.²⁸ Further, it includes the commodification of users through pseudo-relationships. Websites act as brokers for user data and relationships to generate a weird sort of B-world social capital that greases whole series of transactions as well as the slippery slope.

How, then, do we evaluate the relationships being formed as users visit websites when the relationships extend well beyond the website and users to include third parties, such as advertisers, website affiliates, and others who may be direct or incidental third-party beneficiaries of the user-site transaction? One might reject our characterization of the relationships as part of the price that users pay. This puts the skeptic in an awkward position. *How else can we reconcile the flow of third-party benefits?* Website users are the objects of the various side-agreements, after all. As people like to say about Facebook and Google, users are not really the consumers. Rather, users are the product being consumed by all the advertisers and other third parties with whom Facebook and Google have side-agreements.²⁹ The point generalizes well beyond Facebook and Google. Apple's App Store, Amazon, Microsoft, and many other online services work this way. User as product describes much of the digital networked environment, and consequently much of our everyday lives.³⁰

Still, given the numbers (of users, sites, transactions, third parties, data, contracts), the design of the electronic contracting interface seems perfectly rational. In many offline contexts, consumers don't read most terms and only deliberate over a small number of salient variables, like price, quality, and timing. Comparable deliberation in the online context might take too long, be too complicated, and lead to fewer transactions. It's much easier to hide the complex details³¹ and nudge users to click "I agree" without deliberation over any terms.³²

Our current online contracting regime is a compelling example of how our legal rules coupled with a specific technological environment can lead us to behave like simple stimulus-response machines – perfectly rational, but also perfectly predictable and ultimately programmable. The environment disciplines us to go on auto-pilot and, arguably, helps create or reinforce dispositions that will affect us in other walks of life that involve similar technological environments. These similar environments might turn out to be everywhere given the direction of innovation.³³ Although Radin does not frame the issue in terms of conditioning or programming, she notes how status quo bias can lead us to continue down a familiar path:

Given our tendency to stick with what we've done before, it is hardly surprising that after we've received boilerplate many times without having any negative repercussions, we will persist in our acceptance of it. Once we are used to clicking "I agree," we'll keep clicking "I agree." It would take some extraordinary event, some real change in context, to make us stop doing what we're used to doing when it seems to work.³⁴

It turns out, however, that the effect may be more powerful than Radin suggests. A laundry list of heuristics (i.e. "rules of thumb") and cognitive biases might reinforce our behavior.³⁵ Decision fatigue can be overwhelming.³⁶ The opportunity costs of slowing down and deliberating can be high.³⁷ And, habits with their automaticity and corresponding behavioral path dependencies are incredibly powerful.³⁸

Not surprisingly, boilerplate creeps, which only exacerbates the effects as we become more comfortable, complacent,³⁹ and easier to nudge.⁴⁰ Particularly worrisome is how boilerplate creep enables both surveillance and nudging, which are both creep phenomena as well.⁴¹

Consider how the electronic contracting environment optimized for websites has migrated to mobile devices and apps, and further to smart televisions and beyond. The parties, legal relationships, technologies, services provided, data generated and collected, and implications vary dramatically across these contexts. Nonetheless, in general, our behavior remains the same: perfectly predictable, seemingly rational, and hyper-efficient, check the box, click "I agree."⁴²

Just think for a moment about how the relationships and privacy implications differ when you shift from website to smart television. There are different service providers, different third-party affiliates in the background, different technologies and services, and different types of data. A smart TV might be in your living room, and it might even have a microphone (for those karaoke sessions). Others have diagnosed

the problem. We only want to emphasize how the stimulus-response mechanism works similarly despite how different the implications might be.

We might be disposed to deliberate for at least some of these transactions, to stop and think about what we're getting ourselves and other people (e.g. family members who share the smart television) into. But we're being conditioned not to do so.⁴³ For example, if you decide to investigate the privacy policy for your smart television, you'll likely see the "1/50" page count at the bottom of the screen, shrug, and click the back arrow, behaving just as you're supposed to.⁴⁴

Some will resist our characterization and believe that while the objective theory of contracts is flawed,⁴⁵ nobody is in danger of mindlessly following scripted programming. You might believe that you really decide for yourself when you click "I agree" and are decidedly not pre-programmed to do so. This is a common reaction. It was ours at first. Many others have reacted similarly. People assume that, at some point in their past, they consciously adopted a strategy to deliberate once in a while and otherwise to trust in markets,⁴⁶ the wisdom of crowds,⁴⁷ and watchdog journalists and advocates.⁴⁸ If a contract has deep flaws, surely others will identify egregious terms and presumably a court would refuse to enforce them.

But what justifies the assumption or trust? Put aside the merits of such a strategy and the beliefs upon which it is based. The question is whether we in fact ever really adopt such a strategy based upon actual deliberation about the merits. Given the empirical difficulty of determining what's actually causing us to act, self-assessing the contents of our minds is an introspective blunder.⁴⁹ For starters, optimized environments might be architected to make you feel as though you're making deliberate choices when you're not actually doing so.⁵⁰ In other words, one effect of technological engineering might be that you're disciplined to overestimate how much freedom actually lies at your disposal – that you mistake the illusion of choice for the real thing.⁵¹ Moreover, just as an immediate click may be rational in the immediate context, trusting in markets, the wisdom of crowds, watchdogs, and courts may be the only rational choice across contexts given the incredible number of interactions mediated in the same manner. Crucially, the seemingly efficient rationality of both the micro and macro choices is completely contingent on the designed architecture of the electronic contracting environment and the scale and scope of its deployment. Crowds, watchdogs, and courts do catch some shockingly egregious terms and conditions, serving a useful function. However, they can only do so much.

Law professor Randy Barnett compared electronic contracts and other modern boilerplate to agreeing in advance to do whatever someone else had written in a sealed envelope.⁵² This excellent analogy highlights the degree to which we blindly trust in others, whether the other party, others with whom the party transacts, or, more generally, market forces or the legal system. Especially, although not exclusively, in the electronic contracting context, it may be a mistake to even call it trust. If we are conditioned to click or simply fatigued, can we really say we trust the other party? Or that we have agreed to anything? To the extent that we conclude that clicking “I agree” is an act that constitutes agreement to be bound Barnett-style and depends upon trust, we cannot ignore how the trust itself is contingent upon and a product of the techno-social engineered environment, much like the sheer ignorance of consumers. The sealed envelope metaphor works well to describe some aspects of the transaction, but it ignores others. Consumers who click “I agree” might view the interaction as Barnett describes, or they might view the click “I agree” button as a trivial annoyance, like a bothersome fly to be swatted when reaching for food at a picnic.

Would you hesitate before signing a piece of paper handed to you by a stranger? Do you hesitate to click “I agree” when downloading an app or visiting a new website?

Another complication concerns the very definition of choice. When we make decisions in the electronic contracting context (e.g. to click or not), it remains unclear whether we’re exercising judgment and making a genuine choice. The electronic contracting environment may be designed to stimulate instinctive, heuristic thinking (referred to in the scientific literature as System 1 of the brain). Yet the user may feel or be led to believe that she has engaged in rational deliberation (System 2).⁵³ In the moment and even in hindsight, the stimulus-response behavior of simply clicking is perfectly rational – again, reading terms and conditions is a waste of time and insisting upon negotiation is futile – and so it’s easily mistaken as a product of deliberation.⁵⁴

Put otherwise, suppose choice architects – website, application, or other interface designers – arrange the relevant stimuli in an electronic contracting interface to trigger an automatic click. They might describe their optimization problem in terms of minimizing decision time or time-to-click or some comparable metric. The designer’s goal is to consummate transactions with minimal transaction costs, which generally means rapid click-through to agreement. Consumers often have the same goal. For most, the electronic contracting interface is a mere hurdle, an obstacle to

getting the content or service they're looking for. Deliberation is generally wasteful in this context, with significant opportunity costs. Triggering System 1 seems to be a win-win(-win-win- . . . winⁿ).⁵⁵ This gradually becomes a truism. When we talk about this with people, they often suggest that they are behaving rationally, which is true, given the futility and costs associated with deliberating or reading terms. But they also insist that they deliberated at some prior point in time (which is left unspecified because they can't recall precisely when it occurred) and decided, rationally, to adopt a strategy of clicking through quickly and waiting for bad news to arrive later.

System 1 thinking does not always entail behaving like a simple machine,⁵⁶ but in this context, we think it does. First, the relevant human capability being engineered and examined by us is cognitive processing of an instrumental decision.⁵⁷ In this setting, System 2 corresponds with deliberation or "thinking slow," and System 1 corresponds with automatic behavior or "thinking fast."⁵⁸ Second, in this setting, the techno-social environment nudges at the micro level of a single interaction and contributes incrementally to decision fatigue. Other factors also affect participants and reinforce the techno-social environment at the macro level. People who repeatedly interact with this system end up performing simple scripts (whether learned or programmed) in response to stimuli, and, in this particular fashion, behave like a simple machine. Thus, we might go a bit further and say that, in this setting, System 1 corresponds with not thinking (rather than thinking fast) because the automatic behavior is scripted or programmed. It may be counterintuitive to equate rational behavior with scripted or programmed behavior because the former seems good and the latter bad. But the two characterizations are not mutually exclusive. Neither is inherently good or bad. Everything depends on the context. Sometimes following a script is perfectly rational. For example, we all do so daily when making pleasantries with others. What makes the electronic contracting environment special is that it is designed to make it irrational to break away from the click-to-contract script.

One strong objection to our analysis is that we have long behaved this way, that automatic assent is neither new nor unique to online contracts. Most people don't read the terms of insurance contracts, mortgages, or the vast majority of offline contracts. Supposedly, we have long given up on reading and negotiating contracts, especially in business-to-consumer contexts. But this counterargument is predicated upon a subtle mistake. *Not reading does not mean abandoning deliberation*. Skipping over the fine print does not mean we bypass exercising System 2 thinking altogether and rely

exclusively on System 1. We still focus on the most important and salient terms of insurance contracts, mortgages, etc. At some point during contracting, we at least deliberate over the magnitude of price.⁵⁹ The same is likely true for online purchases that involve “big ticket” items. That is, when the price or quality of the good or service being purchased is salient to the consumer, the consumer presumably deliberates, both online and offline. But as noted earlier, such deliberation is absent from many electronic contracts precisely because the apparent price is zero and the hidden price is in the unread terms, the data exchanges, and the attenuated and sometimes uneasy relationships brokered with various third parties. By design, we’re led to trust blindly, as if we had relationships worthy of such trust when we really don’t.⁶⁰

The electronic contracting environment is thus another illustration of techno-social engineering of humans. If our characterization is correct and the environment effectively programs human beings to behave like simple stimulus-response machines – perfectly rational, predictable and programmable – then it’s important to determine *if* the process is dehumanizing.

Thus far, we haven’t taken a strong normative position. Instead, we’ve primarily aimed to draw attention to a phenomenon that deserves more attention from legal theorists and ethicists. The majority of them seem to deny its existence or fail to recognize its contours. The techno-social engineering we’ve described affects two basic human capabilities, the capability to deliberate and the capability to relate to others. As we discuss below and in later chapters, we believe these capabilities are fundamental to being human and at risk of being lost through rampant techno-social engineering.

Electronic Contracting and Taylorism

In this section, we again turn to Taylorism. It’s a useful lens for examining the design of electronic contracting and the phenomenon of electronic contracting creep.

As discussed in Chapter 4, in the late nineteenth century and the early twentieth century, Frederick Taylor developed his theory of scientific management of humans in the workplace.⁶¹ His work was motivated by concerns about efficiency. Taylor saw substantial inefficiencies in factories and other workplaces. He attributed many of the inefficiencies to mismanagement of labor. Taylor carefully studied workers and their work, examining minute details of tasks performed in the workplace, and, based on the data collected, he developed a system for optimizing their

performance with the objective of increasing efficiency and productivity. We consider Taylorism to be one of the building block philosophies that today supports widespread techno-social engineering of humans.

The human-computer interface that we're calling the electronic contracting environment is but one example of an unheralded modern extension of Taylorism outside the workplace. There are many others, some of which we discuss in subsequent chapters. The crucial point we would like to make here is that the underlying structure, logic, and effects of electronic contracting and Taylorism may be the same. That is, like an idealized Taylorist workplace, the electronic contracting environment is optimized to minimize transaction costs, which, in this context, largely consist of human time and attention. Human deliberation, especially in the electronic contracting context, tends to be unproductive. Moreover, as described previously, the impact on consumers also has a Taylorist flavor, in the sense that consumers perform scripted routines, habitually, automatically, like simple machines. Yet, in contrast with laborers who at least understand they are being managed and optimized like cogs in a machine, consumers are blissfully unaware of the techno-social engineering that they're experiencing.

The electronic contracting environment, interface and architecture evolved considerably over the past few decades. Our hypothesis is that it was optimized along the lines that Taylorism suggested, although in a more emergent and organic fashion.⁶² Given this hypothesis, we formulated the following sets of questions:

- i. What was the metric or value being optimized? How was it determined? Did it change? How was it measured and communicated? Did designers test it with humans? How so?
- ii. Did people do the functional equivalent of time and motion studies to figure out how human beings interacted with the interface and how they "performed" certain predictable tasks (such as browsing and clicking)?
- iii. Were studies reported in professional journals? What was common knowledge? Industry custom and practice?

Our research hasn't yielded fully satisfactory answers. In part, this is because we have found only limited published studies that directly address the design of the electronic contracting environment, interface, or architecture.⁶³ This leaves us with no choice but to rely on sources describing website design more generally⁶⁴ and informal personal conversations with experts, web designers, lawyers, and others about their experiences.⁶⁵

Website design varies considerably in terms of the design objectives. Among the most common variables to be optimized are the following: user experience, user attention, time spent on the site, task performance (which can range from clicking on advertisements to interacting with other users or features of the site), and communication of messages or ideas (which can range from advertising to educational). Each of these can be broken down, measured, and optimized in various ways.

In the context of pages of a website associated with electronic contracting, the main design objectives include:⁶⁶

- *minimize transaction costs* (i.e. all costs attributable to the pages and associated with consummating a transaction, including time and effort spent by the consumer);
- *maximize retention* (i.e. the rate at which consumers agree and don't leave the site);
- *minimize design and operational costs* (meaning the costs associated with creating and operating the contracting architecture);
- *maximize enforceability* (i.e. the resulting contract is enforceable in court).

Other design variables might be included, such as attractiveness, simplicity of the design, or how well the design fits with the brand or the rest of the website. "The design of an online interface involves many . . . choices [that can shape impressions], whether choices about font, lines, colors that 'convey mood and provide a setting for the information' or choices about how interactivity can evoke different personalities."⁶⁷ It's worth noting, however, that most of the major objectives for website pages – especially user experience and communication of particular messages or ideas – aren't relevant for electronic contracting pages, except in the negative sense that designers would like to *minimize any interference* with the website's primary pages.⁶⁸ The electronic contracting pages are functional and task-oriented. They usually have little to no personality. Accordingly, while the prioritization of these objectives might vary across sites, we believe the first objective – *minimize transaction costs* – matters most. The second could be framed in terms of opportunity costs and folded into the first. The third seems less important, mainly because the marginal costs associated with designing the electronic contracting pages of a website are quite small. Keep in mind this does not include the costs associated with a lawyer drafting the terms and conditions, which is not a design or operational cost.⁶⁹ Anecdotally, our informal conversations confirmed that these were among the least interesting but easiest pages of

a website for a designer to create and operate, especially given the ease of copying and standardization. The priority given to legal enforceability varies considerably across websites, depending on, among other things, the degree to which service providers anticipate potential litigation. The gradual evolution of the electronic contracting interface in response to court decisions demonstrates the significance of this factor and how the shock of a court decision can lead to new design practices spreading relatively rapidly and becoming industry standard.⁷⁰

We need to distinguish two types of website pages related to electronic contracting. First, there are website pages displaying contract terms and conditions. These static pages vary in terms of where they are located within a website, how a customer accesses the pages, their format, length, style, content, readability, and so on. Usually, people access them through a hyperlink, which may be a general Terms of Service link found on every page, or, if coupled with a required action on the part of the consumer (e.g. “Click I agree” or filling out a form), the hyperlink may be proximate to the button or form.⁷¹ In general, these pages are not terribly different from hard copies of offline contracts. They’re filled with legal jargon that’s non-negotiable and incomprehensible to the average person.⁷² The substance of some of the terms and conditions are meaningfully different because of the nature of the website services, relationships, data practices, and so on. Regardless, these are not design features, and so we generally leave them aside in the ensuing discussion.

A significant difference is that online contracts often suffer from bloat because the marginal costs of adding legal language are vanishingly small. This is an important design feature. The nature of the digital medium allows for cheap bloat, and one consequence of seemingly endless terms is obfuscation and raising the costs for consumers to read, engage, or deliberate. Non-negotiable, incomprehensible, and seemingly endless contract terms can be so daunting that no one bothers. This design feature affects consumer behavior on a micro contract-by-contract basis and on a macro endless-stream-of-contracts basis. To their credit, some firms have innovated in their design of these terms and conditions pages to improve readability or otherwise help consumers (consumer interest groups and markets more generally) better understand the contracts and identify important terms.⁷³

The second type of website page includes some active mechanism for formally entering a contract, where the mechanism purports to satisfy the legal requirements for contract formation. Today, the most salient example is the click-to-contract mechanism, often referred to as a

“click-through” or “click-wrap” agreement. For smartphones and tablets, it is the tap-to-contract mechanism.⁷⁴

This architecture originated with software delivered in a box. Upon attempting to load the software on a computer, the consumer would be unable to proceed unless the consumer clicked a box confirming “I agree” or something similar.⁷⁵ The design innovation has three important characteristics. First, it forces the consumer to act physically and affirmatively in a manner creating a definitive record, which has both evidentiary and doctrinal significance.⁷⁶ The click-to-contract mechanism satisfies the objective theory of contract, which bases contract formation on objectively reasonable manifestations of assent, and, consequently, courts generally have upheld them.⁷⁷

Second, the click-to-contract design innovation created obstacles, or speed bumps, of various sizes, that slow down the consumer. The smallest is an “I agree” button immediately clickable. Slightly more effort is required for a customer to check a box acknowledging that she has read the terms and condition before she can click the “I agree” button. Even more substantial are the software interface designs requiring a user to scroll over some (or all) of the terms and conditions before clicking the “I agree” button. Even more options are possible, even though they aren’t practiced much, to our knowledge. For example, one could require consumers to type particular text from the terms and conditions or answer substantive questions about the contract. In the end, many different designs were possible. What would be the point of adding more substantial speed bumps? Why slow down customers? Why prevent them from getting what they are really after – the content or service just beyond the speed bump? As privacy and security scholars have noted, getting people to slow down and engage with the terms and conditions – even security warnings – takes quite substantial speed bumps.⁷⁸

Third, the click-to-contract design innovation provides an aesthetically pleasing mechanism for executing standard form contracts.⁷⁹ The separation of the two types of pages is critical. In contrast with paper standard form contracts, the terms can be hidden on another page. As a result, the interface is more aesthetically appealing and the user experience is practically seamless. These design features contribute to ease and effectiveness of techno-social engineering.

In practice, as the click-to-contract mechanism evolved both off and on the Internet, the optimizing logic of Taylorism seems to have taken hold. So, returning to the questions we posed:

What was the metric or value being optimized? How was it determined? Did it change? How was it measured and communicated? Did designers test it with humans? How so? Was the testing reported in journals? What was common knowledge? Industry custom and practice?

Website designers and other architects of the electronic contracting environment primarily approached the optimization problem in terms of click-rates, which strongly correlated with time and attention. They may not have understood what they were doing as “an optimization problem.” Their basic goal was to get visitors to observe and then click the “I agree” button as soon as possible.⁸⁰ The primary transaction cost to be minimized was the consumer’s time and attention.

In the field of human-computer interaction, designers recognize the need to minimize user “interaction cost.” This is defined as the sum of mental and physical efforts users must expend while interacting with a site to reach their goals or expected benefits.⁸¹ There may be a variety of user actions and goals, depending upon the website. Raluca Budiu, the Director of Research at the Nielsen Norman Group, a leading user experience research and consulting firm, explains that the following user actions contribute differently to the total interaction cost:

- reading
- scrolling
- looking around in order to find relevant information
- comprehending information presented to you
- clicking or touching (without making mistakes)
- typing
- page loads and waiting times
- attention switches
- memory load – information that users must remember to complete their task.⁸²

Not surprisingly, electronic contracting interfaces evolved to minimize the costs associated with these actions.⁸³ Often, though not always, the click-to-contract mechanism *is designed* to eliminate most of these actions and thus interaction costs. The only action that really matters is clicking.⁸⁴

Rules of thumb, industry custom, and standard design practices percolate in the web design and human-computer interface communities. The placement of text and images, font size and style, and various other factors are well-studied, although not always documented in academic literature.⁸⁵ In a sense, these communities have performed the functional equivalent of Taylor’s time and motion studies to figure out: (i) how

human beings interacted with designed interfaces; and (ii) how they “performed” certain predictable tasks (e.g. browsing and clicking). Anecdotally, we heard of various in-house “motion studies” of how people clicked with a mouse, how they used the up-down-left-right arrows and space bar to navigate, and eyeball tracking.⁸⁶ Time studies are legion.⁸⁷

It’s difficult for us to draw firm conclusions about how, if at all, these studies influenced the click-to-contract interface. We don’t know of studies focused exclusively on this design subject. We hypothesize that the click-to-contract interface was gradually optimized based (perhaps only implicitly) on the more general web design “time and motion studies” to minimize time-to-click-to-contract and motion-to-click-to-contract and thus transaction costs. If we’re right, then the analogy with Taylorism is strong.

Some legal scholars have suggested that website user experience designers might employ images, animation, and other seductive features to distract consumers or prime them so that the speed bump (even if only minimal) is one they speed over.⁸⁸ As many others have noted, the internet environment more generally might lead consumers to be more impulsive or impatient.⁸⁹ Let’s suppose this is true. We would add that such behavior and feelings are not inherent, inevitable, or natural. They are constructed and contingent upon the built environment. Web designers in general contribute to such behavior, and they exploit it. The eye-tracking, click-rate, and other “time and motion” web design studies might not be framed in terms of exploitation. Then again, neither were Taylor’s time and motion studies. Both sets of studies are managerial and, more specifically, aimed at developing the data necessary to scientifically manage human subjects – workers and consumers – to maximize productivity and efficiency.

The electronic contracting interface fits within the same pattern, at least in some respects. Yet the legal system has gradually imposed some constraints. For example, in *Specht v. Netscape*, 306 F 3d 17 (2nd Cir. 2002), the Court of Appeals for the Second Circuit required conspicuous notice to protect consumers against surreptitious contracts. The court directly evaluated Netscape’s design choices and concluded that customers who downloaded a software “plug-in” called “SmartDownload” could not have reasonably known of the software’s associated license terms. To download the software, customers visited a webpage and clicked on a “Start Download” button. The “sole reference to . . . license terms on the . . . webpage was located in text that would have become visible to plaintiffs only if they had scrolled down to the next screen.” The website

design itself concealed the license terms in a “submerged screen.” This influential precedent has shaped design choices, both directly – by emphasizing conspicuous notice – and indirectly – by identifying potential legal risks from design choices that undermined the integrity of the click-to-contract mechanism as a means to satisfy the objective theory of contracts.⁹⁰ Not surprisingly, many major websites have reduced the clutter and potential distractions on their electronic contracting interface.

Humanity’s Techno-Social Dilemma Revisited

So far, we have suggested that contract law and practice, especially the electronic contracting environment, are more than meets the eye. The standard account correctly stipulates that they enable people to formulate legally binding commitments and relationships. Additionally, we’ve suggested the Taylorist design of the electronic contracting environment conditions humans to behave like simple machines. Such an attack on our autonomy might warrant systemic reform of contract law.⁹¹

Again, our argument is *not* about the goodness or badness of contract terms per se, or even the outcomes in specific contracts, transactions, or cases. The oppression we’re identifying *is not* unfair or exploitative terms. Nor is it Radin’s concern about private ordering replacing public ordering. These are significant problems for electronic contracts. For now, let’s assume away such problems and presume the terms of electronic contracts are fair, consumer-friendly, and even better than their paper counterparts.⁹²

Our focus has been and remains on the social costs external to the contracts. These are the social costs associated with rampant techno-social engineering that devalues and diminishes human autonomy and sociality⁹³ as we become accustomed to being nudged, conditioned, and, more broadly, engineered to behave like simple stimulus-response machines. In the Introduction, we characterized this type of threat against core human aptitudes and capabilities as *humanity’s techno-social dilemma*, an analogue to the tragedy of the commons. Here, we’re presenting the electronic contracting dilemma as an example of humanity’s techno-social dilemma. Like sheep herders who act in a perfectly rational manner when adding sheep to their flock without fully accounting for the social costs manifest through the degradation of the pasture, consumers rationally enter into electronic contracts that, as we have assumed, are fair and consumer-friendly, without fully accounting for the social costs manifest through the degradation of their autonomy, and, we would go so far as to say, the

diminution of our collective humanity.⁹⁴ Our concern is thus with the macro effects of many micro-level decisions to contract that on their face are perfectly rational and efficient. This may seem to put too much weight on the shoulders of contract law. However, the same can be and has been said for many tragedies of the commons.

The electronic contracting dilemma raises concerns about human autonomy because people may be subject to Taylorist techno-social engineering nudging them to behave automatically. If this were an isolated or rare occurrence, the impact would not likely be meaningful or lasting. However, the click-to-contract human-computer interface has crept across varied contexts ranging from websites, smartphone apps, smart TVs, to the Internet of Things.

To make matters worse, electronic contracting creep is accompanied by surveillance and nudge creep. The human-computer interface itself nudges, and it enables surveillance by site owners and third parties. Such surveillance feeds data back and thereby further enables and contributes to nudging. It might seem unfair to put the burden of this problem on contract law. Perhaps one might argue that surveillance and nudging are wholly separate affairs and fall outside the purview of contract law. While that's a convenient argument, we fail to see the merit of putting on such blinders. The three creep phenomena seem inexorably intertwined, a vicious rather than virtuous cycle in our current digital environment.⁹⁵ All three are fundamental parts of modern Taylorism and the techno-social engineering of humans.

Contract Creep

Autonomy and sociality are critical to being human and maintaining a flourishing society. Without autonomy, we can't live self-directed lives.⁹⁶ And without sociality, we can't create meaningful personal and professional relationships upon which collective endeavors depend.⁹⁷

Contract law is one of many important institutions aiming to support and even extend these basic capabilities (for more detail, see Appendix E). In general, it has been quite successful. But continued success is not inevitable. It's contingent upon many factors, ranging from the competencies of lawyers and judges to the technical media through which contracts are executed. Critically, contract law's impact upon our autonomy and sociality depends upon social practices and the built environments we construct that have distinctive affordances.

We've argued that the electronic contracting environment has inverted the primary aims of contract law. We explained how the technical architecture of the electronic contracting environment nudges consumers to behave automatically. The design of the architecture may have emerged gradually over the past few decades, but, nonetheless, it has a distinctly Taylorist imprint. In accordance with optimality conditions (i.e. efficiency and productivity), consumers follow the click-to-contract script. The choice architecture retains minimal decisional autonomy in simple take-it-or-leave-it fashion, but the fiction of actual choice only contributes to gradual creep of the human-computer interface from websites to apps to smart TVs to smart homes and beyond.

If the postulated conditioning not only exists, but also creeps across contexts, extending the range of situations where we behave automatically, then there is real cause for concern. When such creep leads us to be complacent, to follow the herd and passively accept matters that should require deliberation, our humanity itself is at risk.

CHAPTER 6

*On Extending Minds and Mind Control***Introduction**

This chapter furthers our analysis of techno-social engineering by discussing a philosophical position called extended mind theory. According to this view, throughout history humans have extended their minds beyond their physical brains and bodies by using technological tools as aids for performing cognitive processes. Proponents insist that calculators, address books, and other so-called “cognitive prosthetics” are reliable and integral parts of our minds, and, consequently, our selves.

Consider the humorous yet glowing terms *New York Times* columnist David Brooks uses to describe his relationship with GPS technology. The language resonates with our Chapter 2 discussion of outsourced navigation.

I have melded my mind with the heavens, communed with the universal consciousness, and experienced the inner calm that externalization brings, and it all started because I bought a car with a G.P.S . . .

It was unnerving at first, but then a relief. Since the dawn of humanity, people have had to worry about how to get from here to there. Precious brainpower has been used storing directions, and memorizing turns. I myself have been trapped at dinner parties at which conversation was devoted exclusively to the topic of commuter routes.

My G.P.S. goddess liberated me from this drudgery. She enabled me to externalize geographic information from my own brain to a satellite brain, and you know how it felt? It felt like nirvana.¹

Brooks misses the big picture. And this isn't surprising. In the philosophical literature, folks are fighting about all kinds of topics related to the extended mind without asking the most important questions, which concern techno-social engineering of human minds.

- *Who is doing the thinking when humans use mind-extending technologies?*
- *In mind-extending situations, what types of thinking do humans and technologies each do and how transparent are the different forms of thinking to the humans whose minds are being extended?*
- *How does technologically extended thinking impact the development of human capabilities?*

What we object to the most is that leading extended mind advocates regard many of the technologies that extend the human mind as normatively neutral, in the sense that the tools themselves are neither good nor bad.² They say cognitive prosthetics empower users, leave their autonomy intact, and can be characterized as “cognitive upgrades.”³ We challenge these assumptions and the Silicon Valley lingo that’s used to convey them. As many of the examples discussed in previous chapters demonstrate, seemingly harmless mind-extending technologies can be powerful instruments for techno-social engineering. The more potent ones make us pawns in other people’s games.

We advance the following novel claim: Mind-extending technologies run the risk of turning humans into simple machines under the control or influence of those in control of the technologies, at least in contexts where the technologies are networked and owned and controlled by others.

Many readers may balk at this claim, viewing it to be speculative science fiction at best, or at worst, a fear-mongering attack on the technologists and technologies we hold dear. Such reactions are understandable but ultimately misguided and too easily used as dismissive parries. The fear-mongering argument is itself mere fear-mongering. We are not attacking technologists or technologies in general. Generalization poses a serious problem for extended mind advocates because technologies are not all the same. Given their affordances, technologies are rarely if ever neutral. Instead, they have context-dependent impacts (costs and benefits, if you prefer). Mind-extending technologies not only afford users beneficial opportunities to extend their minds and think differently with their tools, but the technologies also afford other parties opportunities to perform various thinking tasks and even to exercise mind control. The science fiction argument is reasonable, but it only highlights that we’re talking about the extreme end-state when we say humans are made into machines. The incremental steps toward that end-state are what we are hoping to detect and examine. To do so, we must pay close attention to the relationships between different technologies, our extended minds, and our autonomy.

Extending Ourselves: Background and Examples

Is the extended mind thesis on target or wildly off base? It depends on how you see things. Before giving you our answer, we'll bring you up to speed on three related issues: the *extended body*, *extended cognition*, and *cognitive technology*. These topics are less controversial than the extended mind itself. They are a great baseline for you to determine how solid or porous the connections are between mind, body, and world.

Technologically Extended Bodies: Contemporary Experiences

Let's start with the body.⁴ When we interact with ourselves and others, we regularly experience a range of artifacts, from aesthetic to prosthetic objects, as *bodily extensions*. In his classic *Being and Nothingness*, existential philosopher Jean-Paul Sartre shows why our first-person experience of using artifacts can be immensely rich.

[O]ur objectivity before the gaze of the other extends beyond our skin out into the world of things by which our presence is signified. We are objects of the one whom we are hiding in the cracking of a branch underfoot. Our body extends to the glow of the cigarette that gives our presence away, or, to give a contemporary example, the ringing of the cell phone that embarrasses us in the middle of a lecture. This is the extended body in its simplest form.⁵

Expanding upon Sartre's views of how technologies can alter what other people make of our bodies, as well as how we understand them ourselves, philosopher of technology Andrew Feenberg invites us to consider what it's like to wear glasses in public. Google executives should have done a better job of this before launching the much hyped but heavily criticized Google Glass campaign – a campaign that left some so angry about the possibility of encountering people wearing smart, camera ready specs that the phrase “Glasshole” was coined and became a meme.

Although glasses provide a useful function by augmenting vision, they also can inspire social derision. This simultaneity of benefit and detriment is vividly illustrated when people who wear glasses get mocked for having “four eyes.” Feenberg characterizes this objectifying experience as the “body-object for the other.”

To further illustrate the point, let's consider clothing. Like glasses, clothing provides obvious practical benefits: “to clothe the body, to keep it warm, and to enable the wearer to perform particular activities while wearing it.”⁶ Clothing also serves aesthetic functions, “for example, by

making [the wearer] look taller, slimmer, broader, curvier, or lengthier.”⁷ And, clothing can be independently beautiful.⁸ In serving these functions, clothing communicates much about us and shapes how others perceive us. That’s why fashion designers work hard to design products that people can use to manage how they’re objectified.

To manipulate how people see us requires anticipating how they’ll look at the different ways we can present ourselves. Sometimes, thinking about what others think can reinforce – if not create – bad habits. As a child who wore glasses, Feenberg felt fragile and “brainy” and constrained his behavior by acting *as if* others constantly were looking at and assessing him. That’s why he took a cautious and hesitant approach to sports.⁹

Feenberg characterizes the structure of this self-regulating experience – in which both identity and behavior revolve around the meanings embedded in an artifact – as the “body-object for the other as perceived by the self.” Again, clothing is an illuminating example. Clothing shapes how others perceive us and how we see ourselves, both in the mirror and through our anticipated and actual interactions with others. For example, suppose I think I’m overweight and others perceive me to be fat. I might wear only black outfits because the color has a slimming effect that can impact what others see. Many critics have lamented that industries routinely exploit our concerns over what other people think. Are fashion designers, advertisers, and mass media helping us to manage objectification or exploiting it to make a profit? Do the exemplars we see on television reflect who we are or who we want to be? These questions come up again and again for a reason.

Finally, Feenberg claims that Sartre’s perspective on the extended body illuminates the contemporary experience of online communication. When we use email, the person to whom we’re writing doesn’t see our physical body. Nevertheless, the medium doesn’t disembody expression. Instead, what we type often is stylized as “conscious self-presentation” that allows others to identify us.¹⁰

We could be said to “wear” language online [similarly to how] we wear clothes in everyday life . . . Others can identify us from a few lines of our writing. We identify it too as our extended bodily presence, in this case, a strange textual cyborg . . . Our language shows us as neat or sloppy, formal or informal; we reveal our mood by our linguistic gestures as happy or sad, confident or timid. The fact that we can be proud or embarrassed, open or secretive, friendly or distant, all point to the complexity of this mode of technical mediation.¹¹

Extended Body	Examples: Glowing cigarette that announces our presence as cool or ridiculous with its attention-grabbing glow. Cellphone ringing at an inappropriate time and calling attention to our inconsiderateness. See main text for more detail on clothing, glasses, and electronic writing.
Clothing	Means for shaping other people's perceptions of who we are. Also, the means for us to be shaped, e.g., into believing that certain outfits can powerfully transform our identities.
Glasses	Augments limited biological capacity for seeing. Also subjects wearers to cultural perceptions of what it means to wear glasses. If those perceptions are negative and a wearer internalizes them, he or she can feel safe from social derision in some contexts but at risk of it in others.
Electronic Writing	A means for expressing oneself through deliberately chosen words and symbols, but also a means for others to judge us by how we communicate.

You might believe Feenberg's final example takes the idea of bodily extension too far. We note this possible reaction here because the topic is controversial and the objection could resurface in related ways throughout our discussion of technological extension. At the same time, perhaps you can draw useful analogies from Feenberg's analysis. Know anybody who fills their online writing with emojis and expresses this style in other aspects of life?

Cognition: Extended and Distributed

Having discussed how the body can be extended, we now turn to philosopher of science Ronald Giere's ideas about *distributed cognition* (also called *extended cognition*). The concept augments the computer science understanding of distributed processing:

It was discovered that what [computer] networks do best is recognize and complete *patterns* in input provided by the environment. The generalization to humans is that much of human cognition is a matter of recognizing patterns through activations of prototypes embodied in groups of neurons whose activities are influenced by prior sensory experience.¹²

Given how skillfully humans recognize patterns, it has been postulated that our cognitive history is filled with instances where humans routinely cope with tasks involving linear symbol processing by creating and manipulating external representations. For example, when the goal is to multiply

two three-digit numbers, we capitalize on our capacity to recall the products for any two integers by following this sequence. First, we construct an external representation of the entire equation. Second, we follow long-established rules of calculation that restrict our focus to basic addition (i.e. four numbers in a row, at most) and basic multiplication (i.e. always two numbers). Giere's reflection upon this cognitive activity prompts the following question: *What cognitive entity is performing this task?*

It seems foolish to state that the person doing the task accomplishes all the cognitive processing herself. That assertion ignores material culture (e.g. pen, paper, etc.) and social culture (e.g. long-established rules of calculation). *But what, exactly, does it mean to claim that the person plus the material culture plus social culture collectively engage in cognitive activity?*

Common sense suggests that the material and social media, including the external representations, merely serve as inputs that structure the problem in such a manner that it can be solved internally, what computer scientist Herbert Simon calls "the Mind's Eye."¹³ This view suggests that the person in control of the inputs is the relevant thinker; she decides, judges, or accomplishes the cognitive act. By contrast, according to the distributed cognition view, the *system* (i.e. the whole person plus material and social media) performs the cognitive task. Cognition is "distributed" amongst all the parts of the system, including humans and material and cultural artifacts.¹⁴

Why does it matter how we describe cognition? The common-sense view fails to credit the cognitive contributions of material and social cultures. It fails to fully appreciate the degree that the person in control depends upon those resources and those who supply them. The distributed cognition, however, puts too much weight on the whole system itself. Consequently, the view doesn't always pinpoint where judgment and control occur, and why these activities can matter more than the rest. This issue can easily be remedied, as our subsequent discussion of the extended mind thesis shows. To adopt the distributed cognition view, analysts should examine control points within the system.

Common-Sense View of Cognition	Only human brains are capable of thinking.
Extended Cognition View	Systems of humans and tools together collectively perform cognitive tasks, including problem-solving.

Recall our discussion in Chapter 1 of the Oral Roberts University fitness tracking program and our comparison of different tracking tools. Tracking fitness by journaling is a different process than being tracked by a Fitbit. Both are examples of extended cognition. Each depends upon:

- human cognition;
- cognitive tasks or operations embedded in and performed by material objects (e.g. writing instrument + journal and Fitbit device + networked computers);
- cognitive tasks or operations embedded in and performed by social culture (e.g. norms and expectations about what physical activity data is appropriate for recording, how such records should be written, ethical standards about data collection and sharing within educational institutions, *et cetera*).

Each tracking system encompasses different distributions of cognitive tasks, including different control points.¹⁵ Humans within both systems play different roles, too. This is partially due to the different affordances that are baked into the tracking tools and system design. Extended cognition theory reveals and explains this phenomenon. However, many of the theorists who discuss it don't focus on the existential, social, ethical, and political implications for humans participating in the different systems. Analyzing cognitive technology provides further detail. It's our final step leading to the extended mind discussion.

Cognitive Technology

At the end of her seminal *Mind as Machine*, cognitive scientist Margaret Boden highlights *cognitive technology* "as one area of promising empirical research and . . . philosophical inquiry" that "will be key foci in effort and controversy in the foreseeable future," if not "well over 100 years from now."¹⁶ Cognitive technology research focuses on how the differences in technologies and affordances affect human behavior and development.

The concept of "cognitive technology" stipulates the following ecological thesis: Using a particular class of technology can actively shape how people think, and, consequently, this influence can affect how people act, including how they treat the very technology that alters their thinking.

What defines a cognitive tool, as opposed to other tools? And how does the cognitive tool specifically influence our thinking? These are the two

questions that circumscribe the domains of cognitive technology and technological cognition respectively. The specificity of the cognitive tool, as opposed to, say, a hammer or a car, is that it directly affects, and operates upon, the workings of our mind. In general, purely reproductive tools have little cognitive interest: a Xerox copier is not by itself a cognitive tool (in the normal case, and barring certain imaginative uses), while the typewriter, inasmuch as it interacts with our mind in forming our thoughts on paper, is a cognitive tool (albeit a primitive one, compared to a computer).¹⁷

Using cognitive technology entails entering into the process of extended cognition. For when we interact with cognitive technology, we don't perceive and manipulate tools as "external props and aids." Rather, our experience of cognitive technology is more intimate. The literature offers many examples to illuminate how humans and cognitive technologies work together as "cognitive systems" to solve problems. The following cases are frequently cited.

- The *slide rule* transforms complex mathematical problems into simple tasks of perceptual recognition.
- *Maps* provide geographical information in a manner that is well suited for complex planning and strategic military operations.
- *Expert bartenders use distinctly shaped glasses* as cues for mixing and dispensing volumes of drinks carefully and quickly.
- *Artists use sketchpads* to organize ideas, explore visual ambiguities, and determine how to express perceptions beyond what the "mind's eye" of the imagination typically permits.
- *Scrabble players re-arrange their tiles* to determine what possibilities for word formation their letters offer.
- *Skilled chess players* typically prefer to analyze positions with *real chess sets and real pieces*.
- *Existing language* provides *new generations of humans* with the opportunity to learn to classify things and express themselves without needing to first generate new vocabularies, grammars and techniques for imparting meaning to others. Even patterns of repetition, such as rhyme and rhythm, serve a cognitive function. They make it easier to remember complicated sound patterns.
- *Mathematical conventions* – that is, symbolic notation and basic procedural rules – reduce complex mathematical problems, such as multiplication, to more basic acts of perception and computation.
- *Air traffic controllers learn to physically hold flight strips* in a manner that helps them manage critical information needed to prevent adverse situations, including crashes.

- *Navigational tools, such as the gyrocompass, alidade, and hoey*, allow sailors to gather, unify, and judge an array of data that enables ships to effectively move to desired destinations.

Briefly considering these examples goes a long way. It helps us appreciate how cognitive technology can transform the nature of a task by altering the action sequences required to complete it:¹⁸ (1) they can transform the deliberation process by minimizing how much conscious awareness and attention are required to solve problems; (2) they can transform our relation to time and space by stabilizing information that otherwise would be transient; (3) they can transform the environments we are embedded in to minimize the demands placed on biological memory; (4) they can transform intellectually difficult problems into perceptual ones that are easier to solve; (5) they can transform the processes by which knowledge is transferred; and (6) they can transform workspaces and residences so as to enhance the speed and reliability of frequently performed tasks.¹⁹

Extended Mind

In 1998, philosophers Andy Clark and David Chalmers wrote a provocative article, “The Extended Mind.” They present scientific accounts of how the mind naturally copes with its inherent limitations (e.g. being good at pattern recognition but not at memorizing long lists of information). And they contend that humans have a biological propensity to extend their minds outside of their brains and bodies and into the environment. Since its initial formulation, a substantial literature has been engaging with these ideas. Clark himself has defended and refined the argument in a series of books and articles.

The core idea is that humans *think* in various ways through and with technologies that are external to their biophysical selves (bodies and brains), and by doing so literally extend the boundaries of their minds. This transformation happens by tightly coupling cognitive processes in the brain with those performed in or with the technology. If you don’t believe that this expansive merger (or act of incorporation) regularly occurs, then, according to Clark and Chalmers, you’ve fallen victim to “biochauvinistic prejudice” and are mistakenly presuming that thinking only happens in the head. To help us avoid this error, Clark and Chalmers articulate an ideal they call the “parity principle”:

Parity Principle: If, as we confront some task, a part of the world functions as a process which, were it to go on in the head, we would have no hesitation in accepting as part of the cognitive process, then that part of the world is (for that time) part of the cognitive process.²⁰

Simply, humans effectively extend their minds through technologies when the mental processes or steps for solving a problem are like what would otherwise be completed internally. The difference between extended cognition theory and extended mind theory is that only the latter views the whole cognitive process as occurring in and being part of the subject's mind. For example, both extended cognition and extended mind advocates agree that when a person uses paper and pen to perform a calculation, she takes a cognitive task that could be performed in her head with varying degrees of difficulty and simplifies how it's solved. But only the extended mind theorist views paper and pen as genuine (not metaphorical) parts of the mind itself.

Let's consider another example. Clark and Chalmers discuss a man named Otto who "suffers from Alzheimer's disease, and like many patients, . . . relies on information in the environment to help structure his life."²¹ In particular, Otto relies completely on a notebook that he carries with him for all sorts of information about the world. For Otto, the notebook is more than an external memory device. He develops an intimate relation to it, relying on it automatically and with as much ease and confidence as one would rely on biological memory. Clark and Chalmers thus emphasize that Otto thinks using the notebook. It's an integral part of his thinking circuit, basically, and a bonafide part of his mind.²²

Not all environmental, non-biological resources used while performing cognitive processes are "candidates for inclusion into an individual's cognitive system." Clark and Chalmers thus stipulate additional restrictive criteria, such as:

1. "the resource be reliably available and typically invoked";
2. "any information thus retrieved be more or less automatically endorsed [and thus] not usually be subject to critical scrutiny (e.g., unlike the opinions of other people). It should be deemed about as trustworthy as something retrieved clearly from biological memory";
3. "information contained in the resource should be as easily accessible as and when required";
4. "information [stored in the resource] has been consciously endorsed at some point in the past and indeed is there as a consequence of this endorsement."

Let's consider another familiar example of a mind-extending technology in light of these four criteria. For many people, the GPS navigation system is functionally equivalent to Otto's notebook, with respect to location and navigational information. Like Otto, many people rely on their GPS device to navigate, often while driving but also while riding a bike or walking. For most, GPS is "reliably available and typically invoked;" the "information thus retrieved [is] more or less automatically endorsed [and thus] not usually . . . subject to critical scrutiny [and] deemed about as trustworthy as something retrieved clearly from biological memory;" and the "information contained in the [GPS device is] as easily accessible as and when required." While the fourth criterion arguably is not met, when people rely on GPS to navigate the physical world, they appear to be extending their minds in the sense that Clark and Chalmers suggest.

Strangely, Clark and Chalmers appear to claim that the person extending her mind retains full autonomy and alone does the thinking required to determine: (i) what procedure should be followed when using technology to perform cognitive functions; and (ii) how to judge when a problem that's pursued with the help of such technology is successfully solved. Indeed, criteria (1) and (2) imply conscious choice and control over the resource, while criterion (4) requires some conscious endorsement. The problem is that these features don't guarantee an autonomous relation to technology. At the extreme, "reliably available," "typically invoked," "automatically endorsed," "not usually be subject to critical scrutiny," and "about as trustworthy as something retrieved clearly from biological memory" all would be satisfied in the extreme case of a brainwashed human who is indistinguishable from a machine.²³ In the next section, we consider more common and less extreme forms of techno-social engineering.

Extended Mind and Techno-Social Engineering

A recent statement of the core extended mind hypothesis is the Hypothesis of Organism-Centered Cognition (HOC):

Human cognitive processing (sometimes) literally extends into the environment surrounding the organism. But the organism (and within the organism, the brain/CNS [Central Nervous System]) remains the core and currently the most active element. Cognition remains organism centered even when it is not organism bound.²⁴

According to this articulation of the theory (which is compatible with previous ones), human minds are not only embodied, but they are situated

within and integrated into their environment. The dynamic interplay between human minds and the constructed socio-technical environment is the main link connecting extended mind theory with our analysis of techno-social engineering.

To explore the juncture between extended minds and techno-social engineering, we have to bracket other debates, including some ongoing philosophical discussions.²⁵ For our purposes, we'll accept the extended mind thesis as a metaphysically valid account of the human mind and its basic relationship with technologies.²⁶ This means that rather than asking if the extended mind thesis departs too greatly from more widely accepted theories, like extended cognition, we'll focus on something else entirely: the *normative implications* that are *hidden* when the extended mind thesis is taken to have only descriptive and explanatory value. Our trajectory takes us into ethical and political territory. These are areas that theorists like Clark address somewhat lightly (as we discuss below) and which most philosophers of mind would contend fall outside their purview.²⁷

For us, the central point of contention is that extended mind proponents tend to depict technologies that extend the human mind as *neutral*, thereby presuming that the humans who technologically extend their minds remain *autonomous decision-makers*. We're deeply skeptical of these presumptions. Mind-extending technologies run the risk of turning humans into simple machines²⁸ under the control or influence of those in control of the technologies, at least in contexts where the technologies are networked and owned and controlled by others.

Consider Chalmers weighing in and saying something that might have made Steve Jobs – the man who viewed computers as akin to bicycles for the mind – blush.

I bought an iPhone. The iPhone has already taken over some of the central functions of my brain . . . The iPhone is part of my mind already . . . [Andy Clark's] marvelous book . . . defends the thesis that, in at least some of these cases, the world is not serving as a mere instrument for the mind. Rather, the relevant parts of the world have become parts of my mind. My iPhone is not my tool, or at least it is not wholly my tool. Parts of it have become parts of me . . . When parts of the environment are coupled to the brain in the right way, they become parts of the mind.²⁹

Now, a skeptic would say this testimony sounds less like a metaphysical attestation and more like script written for a paid Apple spokesperson,³⁰ especially since warnings about proprietary technological extensions eroding our autonomy date back at least as far as the 1960s. Media theorist Marshall McLuhan then cautioned: "Who owns your extended eyes? Once

we have surrendered our senses and nervous systems to the private manipulation of those who would try to benefit from taking a lease on our eyes and ears and nerves, we don't really have any rights left."³¹ McLuhan recognized the risk of *mind control*.

To a degree, so does Chalmers. After all, in a TED talk that seems to represent how he conceptualizes his relationship with mind-extending technologies, he says that the iPhone "has already taken over some of the central functions of [his] brain."³² Yet he does not see this phenomenon as risky because he assumes he retains autonomy when his mind and an iPhone merge, a form of "biotechnological symbiosis" as Clark describes it. The mistaken assumption, however, unwittingly works a kind of "moral magic" that transforms mind control from serious transgression into acceptable and desirable practice. (We discuss another example of such moral magic in Appendix E.)

What Chalmers fails to appreciate is that the iPhone is *designed* to grant access and control privileges to others – a feature that isn't deliberately built into Otto's notebook.³³ This blind spot is apparent when Chalmers proudly describes using Facebook to crowd-source the question of what to present to a TEDx audience. He never questions the role that Facebook plays as a mediator of all communicative exchanges that take place on its platform. Facebook's proprietary algorithms (which are not available for public scrutiny) determine who can easily see a post (because it's placed near the top of the News Feed), who must exert effort to see a post (because it's placed a good distance away from the top of the News Feed), and who won't see the post at all (because the algorithms determine it isn't relevant enough to appear on that person's News Feed). Nor does he consider the impact of social expectations and social pressures on his decisions. Only the truly resolute can ask for help on Facebook (where friends, colleagues, and family can personally respond as well as look at what different people have to say and comment upon their suggestions) without feeling the pull of peer pressure. (All of this is potentially the tip of the iceberg. In the next chapter, we'll discuss Facebook's emotional contagion experiment. Facebook not only affects what we think, but also how we feel.)

With this view of mediation in mind, let's revisit the GPS example. The GPS system processes location information in real-time and develops navigational planning. The system determines the steps in each route and, usually, the order of routes presented. If each of these functions were performed inside a person's head, we would describe the functions as thinking. Since Clark and Chalmers ask us to avoid "biochauvinistic prejudice" and admit that these functions are still thinking when performed

externally, outside of the person's head and through the technology, we'll do so for the sake of argument. We concede that the person using a GPS system has extended her mind.

But there's more to the extended mind perspective. While a GPS navigational system provides suggested routes, Clark and Chalmers should be consistent and committed to the view that people themselves choose which turns to make and which routes to take. Viewed this way, the technology only provides recommendations for consideration; it allows users to fully determine for themselves whether they want to follow the selected pathways.

And yet, doesn't it seem odd to say that only the person using the GPS is in charge of the cognitive functions embedded in the GPS system? Instead, responsibility and the execution of various cognitive tasks seem to be distributed among different agents within the cognitive system. It seems more reasonable to say that the GPS system user is not the only person doing the thinking; the system designers and choice architects also participate. We can describe this form of extended mind as *techno-social thinking* because the person extending his or her mind with the GPS system is calling on cognitive resources embedded in the technology by other people. In some cases, GPS navigational systems employ real-time contributions from peers on a network that communicate traffic information and use that information to modify suggested routes and their ranking. Unfortunately, the extended mind thesis tells us nothing about a host of important issues, such as:

- the psychology of how people respond to information presented by machines, such as “automation bias” and “automation complacency,” which are meticulously detailed by author Nicholas Carr;³⁴
- the relationships amongst all these minds providing cognitive contributions (e.g. *Are there more compelling reasons to see them as all equal or to see some as some deserving priority over others? Is there or should there be hierarchy by technological design?*);
- the technological affordances on both the supply and demand sides of the system (e.g. *How can navigational, logistical, and route planning services be exploited? How does the presentation of routes and associated data shape what users can do and how they behave?*).

For example, one of us used a GPS to help navigate a long trip. The device interface specified how fast the car was traveling and how much longer it would take to get to the destination. Those numbers effectively nudged the

driver to speed up by conveying how much quicker he could arrive. We suspect others have had this experience. While this may have been an inadvertent nudge, marketers have identified and clamored to exploit geographically targeted advertising; route planning is a natural extension – an attractive means for bringing customers closer to the point of purchase.³⁵ (Recall our extended discussion of GPS creep in Chapter 2.)

The other author has had the experience of using a GPS-based route-planning app that provides real-time updates based on feedback from other app users. At times, while using the app, he has wondered why the app suggests new route segments when there is no traffic on any segments (because he is driving very early in the morning) and a shorter route is apparent. After talking to several taxi drivers, he concluded that the app probably is directing him down route segments to help the system gather data. The suggested route is not necessarily the optimal one for his trip, but it might be better for the system.³⁶ (Recall Taylor's credo.)

The matter of *who is doing what type of thinking* might seem trivial in some cases. In others, however, it raises challenging questions about how mind-extending technologies convey power. Such power may be subtly employed to shape beliefs and preferences, among other things, at least, so long as you believe that beliefs and preferences are the province of individual human beings. As philosopher John Danaher put it, "the locus of control is the all-important variable."³⁷ In his book *Throwing Rocks at the Google Bus*, Douglas Rushkoff argues:

Amazon flips into personhood by reversing the traditional relationship between people and machines. Amazon's patented recommendation engines attempt to drive our human selection process. Amazon Mechanical Turks gave computers the ability to mete out repetitive tasks to legions of human drones. The computers did the thinking and the choosing; the people pointed and clicked as they were instructed or induced to do.³⁸

Some philosophers have argued that extended mind theory can bring needed clarity and justification to various normative debates. For example, philosopher Michael Lynch contends that the extended mind thesis is relevant to legal debates about whether police officers should be required to have a warrant before examining the contents of a citizen's cellphone. After all, if our memories, conversations, and so much more are offloaded onto our phones, then anyone with access to them can effectively engage in a form of mind-reading. Others have questioned whether someone who steals Otto's notebook should be charged with a crime that's more severe than simply absconding with pieces of paper. The perpetrator appears to be causing Otto to

experience brain-damage (or something analogous to it). While these issues are important, more radical debates exist. They concern the notion of extended responsibility, the idea that since humans and machines can form systems for thinking and acting, different parts of a system bear responsibility for undesirable conduct. For example, contrary to the NRA's mantra that "Guns don't kill people; people kill people," it has been argued that human-gun systems differ from humans who are not part of those systems. The main idea is that guns have deadly affordances and that people who are not properly trained in how to handle these weapons might be inclined to resolve conflicts in a more dramatic and deadly manner than if they didn't have guns at their disposal. While it would be absurd to throw a firearm in jail to rehabilitate it, it might be sensible to view gun control proposals as attempts to prevent humans from entering systems relations that will undermine their good judgment.

We postpone until Chapter 12 further examination of how mind-extending technology raises the plausible prospect of engineered determinism and poses a corresponding challenge to free will and moral responsibility.

Intrusion and Uncontrollability

In the final chapter of *Natural-Born Cyborgs*, Clark himself considers various lurking "specters" raised by the extended mind theory and the prospect of biotechnological symbiosis. We focus on two: intrusion and uncontrollability.³⁹ His discussion of intrusion presciently anticipates the Internet of Things and opens with:

You live and work in a smart world, where your car is talking to your coffee machine (and snitching to your insurance company), and your medicine cabinet and toilet are watching your inputs and outputs (and snitching to your doctor or HMO, not to mention the drug police). Your smart badge (or maybe your cell phone) ensures that your physical movements leave a tangible trail, and your electronic trail is out there for all to see. The damn telemarketers know your soul; their machines have surfed your deepest likes and dislikes. So whatever happened to your right to a little space, some peace and privacy, a quiet affair, a little psychotropic time-out?⁴⁰

Clark recognizes how the mind-extending technologies of our emerging smart world allow, encourage, and indeed depend upon others intruding upon our lives. He casts the intrusions as privacy issues caused by specific aspects of the technologies – e.g. cookies, globally unique identifiers, ubiquitous computing, and smart-badge systems. He briefly discusses responses, such as biting the bullet and accepting the trade-offs, implementing technological fixes that allow people to choose to protect their privacy, and shifting democratic norms that might mitigate anxieties and

harms from others knowing sensitive things about us. *Unfortunately, Clark casts the privacy concerns mainly as others learning something about us.* But as we saw in the discussion of the deployment of fitness tracking devices in schools, such a shallow conception of privacy is an insufficient means for understanding and evaluating the underlying normative trade-offs that occur when tools and systems provide us with benefits but also subject us to techno-social engineering.

Clark touches on our concern very lightly when he turns to uncontrollability: “Some suggest that we should actively limit our reliance on technological props and aids, not just to protect our privacy but to control our own destinies and preserve our essential humanity.”⁴¹ His response is quite simple:

Human-machine symbiosis, I believe, is simply what comes naturally. It lies on a direct continuum with clothes, cooking (“external, artificial digestion”), bricklaying, and writing. The capacity to creatively distribute labor between biology and the designed environment is the very signature of our species, and it implies no real loss of control on our part. For who we are is in large part a function of the webs of surrounding structure in which the conscious mind exercises at best a kind of gentle, indirect control.

Of course, just because nature is pushing us doesn’t mean we have to go. There are times, to be sure, when the intelligence of the infrastructures does seem to threaten our own autonomy and to cede too much, too soon, to the worlds we build.⁴²

Clark doesn’t go much further into the analysis. He notes the prevalence of the utopian and dystopian outlooks on the humanity-technology relationship, but then concludes: “the kind of control that we, both as individuals and as society, look likely to retain is *precisely the kind we always had: no more, no less.*”⁴³ Perhaps he’s right. His prediction is hard to evaluate. Still, in light of the extended creep of techno-social engineering that’s occurring, the prognostication seems to be wishful thinking at best.

Since Silicon Valley joined Hollywood in becoming one of the largest US exporters of fantasy, it’s not surprising that billionaire and technology entrepreneur Elon Musk is starting to sound a lot like Clark. Musk insists that the only way for humans to avoid becoming “‘house cats’ to artificial intelligence” is for us to evolve into cyborgs.⁴⁴ To further this end, Musk is developing an “injectable mesh-like ‘neural lace’ that fits on your brain to give it digital computing powers.”⁴⁵ Rhetorically, this sounds great. To avoid being controlled by hyper-intelligent artificial intelligence, all we need to do is build technologies that enable “lag-free interactions between our brains and external devices.”⁴⁶ This option, however, begins

to lose its appeal once we ask the questions raised in this chapter, which neither Clark nor Musk take too seriously: *Who is doing what type of thinking?* And what will the technology companies that provide us with this service demand in return? The unstated but presumed answer is that markets will sort it all out. But as we've been arguing throughout this chapter and the book, it's dangerous to let the economy decide the fate of our humanity.

Mind Extension and Human Capabilities

Having accepted the descriptive thesis of the extended mind theory for purposes of analysis and argument, there is a second important question that we need to ask. *How might mind-extending technologies affect the development of human capabilities?* This question brings us back to ideas explored in previous chapters.

Let's return to the GPS example. Consider the damning assessment that philosophers Hubert Dreyfus and Sean Kelly offer:

For those of us who are directionally challenged (and both authors count ourselves among this group) the GPS seems to offer a great technological advance.

But notice the hidden cost to this advance. When the GPS is navigating for you, your understanding of the environment is about as minimal as it can possibly be. It consists of knowing things like 'I should turn right now.' In the best case – and we want to take the best case here – this method of navigating gets you to your destination quickly and easily. But it completely trivializes the noble art of navigation, which was the province of great cultures from the sea-faring Phoenicians to the navigators of the Age of Discovery. To navigate by GPS requires no sense of where you are, no sense of where you're going, and no sense whatsoever for how to get there. Indeed, the whole point of the GPS is to spare you the trouble of navigating.

But to lose the sense of struggle is to lose the sensitivities – to landmarks, street signs, wind direction, the height of the sun, the stars – all meaningful distinctions that navigational skill reveals. To navigate by GPS is to endure a series of meaningless pauses at the end of which you do precisely what you're told. There is something deeply dehumanizing about this: it's like being the central figure in a Beckett play without the jokes. Indeed, in an important sense this experience turns you into an automated device the GPS can use to arrive at its destination . . . ⁴⁷

Dreyfus and Kelly emphasize the hidden costs realized while one uses the GPS, and they describe those costs in terms of lost knowledge, sensory perception, sensitivity, and navigational skills. Critically, these costs entail

both static and dynamic consequences. They constitute lost personal experiences (static costs), and, as such, lost opportunities to practice and develop capabilities (dynamic costs). The immediate trade-off is easily understood; it's no surprise that GPS is so popular. Who wants to experience the hassle of navigating? And yet, the dynamic trade-off, like so many we face in daily life and which we highlight in this book, is not easily marked, much less understood and evaluated. Still, that shouldn't stop us from trying. We must ask how our capabilities are developed and shaped by our experiences, by our struggles and practices.

Pre-eminent legal scholar Cass Sunstein maintains GPS can have "anti-developmental consequence[s]." As noted in Chapter 2, he describes a 2000 study of London taxi drivers:

[The] use of the GPS can make it harder for people to learn how to navigate the roads. Indeed, London taxi drivers, not relying on the GPS, have been found to experience an alteration of their brain functions as they learn more about navigation, with physical changes in certain regions of the brain. As the GPS becomes widespread, that kind of alteration will not occur, thus ensuring that people cannot navigate on their own. [This] raises the possibility that whenever people rely on defaults or on other nudges, rather than on their own active choices, some important capacities may atrophy or fail to develop entirely . . . If the brain is seen as a muscle, it can become weak or strong, and choice-making is a kind of exercise that may strengthen it.⁴⁸

Sunstein focuses on choice-making as the relevant type of thinking and considers how defaults that require active choosing can support *learning* as people develop their own preferences, knowledge, and perhaps other forms of capital and capabilities. This argument should be broadened to include other types of thinking besides choice-making and to include many other types of mind-extending technologies besides GPS.

There's nothing new in noting that skill-based trade-offs can accompany technological development. As people, including Clark, frequently point out, back in antiquity Socrates expressed concern that the invention of writing would lead to atrophy of biological memory. Over time, this seems to have proven true. But even with the decline of oral cultures, it seems clear that, all things considered, we're much better off for it, considering all the amazing things written language can do.

Still, net gains are by no means inevitable. The key question, then, is how we should evaluate the trade-offs that occur where technology and skill intertwine and provide potential for both gains and losses. Philosopher Richard Heersmink puts the point this way:

Navigation systems decrease the level of detail in our internal cognitive maps, thereby diminishing our capacity to navigate without such devices; constantly using calculators may result in lesser developed calculation skills; and reliable Internet access reduces our internal knowledge base, because when we know information is easily available externally we tend to put less effort into memorizing it.

But in a world where many people have wearable computing devices, one might ask how bad this really is. Of course, there will be moments when we will be decoupled from our devices and then experience that we are less good in remembering facts without access to Google and Wikipedia, performing calculations without a calculator, navigating without Google Maps, and planning without our online diary. However, proponents may argue that these are minor drawbacks in relation to what we gain from cognitive technologies. One possible way to look at this situation is by taking a consequentialist view and comparing the advantages with the disadvantages. If the advantages outweigh the disadvantages, then the changes to our onboard cognitive capabilities are acceptable.⁴⁹

At first glance, Heersmink seems to offer a sensible framework. If we're keen on examining skills from a pragmatic perspective because we value them for the practical advantages their development and use can bring, it seems like a no-brainer to run a cost-benefit analysis whenever we're trying to decide if new uses of technologies are better than older alternatives.⁵⁰ However, things are more complicated than this popular outlook suggests.

For one, it can be difficult to identify negative costs once an overly optimistic view of technology has been adopted. Take the United States Navy, which largely is considered to be the most impressive navy in the entire world. Integrating cutting-edge technology into its operations is a top priority. That's why "the Navy stopped training its service members to navigate by the stars about a decade ago" and focused "instead on electronic navigational systems."⁵¹ Sensible as this seemed at the time, things have started to reverse course and Navy education is once again teaching how to navigate by stars. This is because "the Navy and other branches of the U.S. military are becoming increasingly concerned . . . that they may be overly reliant on GPS. In a big war, the GPS satellites could be shot down. Or, more likely, their signal could be jammed or hacked."⁵² In short, while many military systems are powerfully connected to GPS technology to strengthen all kinds of functionality, *cybersecurity concerns* have arisen to illuminate how cognition enhancement and vulnerability can go hand-in-hand once systems dependency emerges. If a cyberwar erupts and GPS technology becomes a high-profile target for enemies to

strike, saying it seemed impossible to fight the tide of innovation would sound like an excuse for not committing to thoughtful defense.

To further appreciate why it can be myopic to evaluate every new technology by determining whether it's cost-benefit justified, consider the following thought experiment that highlights the limits of using micro-level considerations to weigh pros and cons. Imagine that in the future GPS chips are implanted in every baby's head at birth. These technologically advanced chips are painless to install and their intracranial storage can't cause any biological damage or complications. Furthermore, the chips are constantly updated with accurate, real-time information, and cannot ever err, be hacked, or stop working during a user's lifetime. The chips don't impede concentration (or any other cognitive function) because they only provide logistical information when the user's brain sends explicit signals that request such detail. And, finally, the chips work everywhere in the world. There would be no such thing as a dead zone or place where a satellite signal can't be obtained.

Such powerful chips would improve everyone's sense of direction. We'd never have to worry about becoming separated from the flawless technology that's always ready to tell us how to get around. And yet, if GPS technology belongs to the class of techno-social engineering tools we've discussed throughout this book, then we run into the problem posed in Chapter 2. Once we're fully comfortable using GPS to handle all navigation, it becomes hard to resist techno-social engineering creep. As time passes, there will be ever-increasing opportunities to automate our mobility, our labor, our bodies, our minds, ourselves. Cost-benefit analysis is ultimately the wrong framework to evaluate our steps down this path.

We end where we began, with two fundamental questions: Who is doing what type of thinking when humans use mind-extending technologies? What are the impacts of technologically extended thinking on the development of human capabilities? We'll consider them further in the subsequent chapters as we ramp up to a robust discussion of free will, autonomy, predictability, and programmability.

CHAPTER 7

*The Path to Smart Techno-Social Environments***Introduction**

Smart is in. The latest buzzword in the technology industry and policy circles is smart. (Or maybe it's intelligent or autonomous. Buzzwords change like the winds.) We've built massive networked surveillance systems with the rise of the Internet that seem poised to inject intelligence into every aspect of our lives. The Internet may have transformed virtually every socio-technical system on the planet, but arguably it was just a step (or leap) down the slippery-sloped path we've been on for decades (if not centuries). What lies ahead?

Imagine a world that's aggressively engineered for us to achieve happiness at minimal social cost. In this hypothetical future, ubiquitous techno-social tools will govern – or micro-manage – our world to prioritize three distinctive yet interrelated normative ends: optimized transactional efficiency, resource productivity, and human happiness. In two words, *cheap bliss*.¹

Now, even though we don't currently live in such a world, the technologies required for it to exist are being developed and deployed. Proponents of the Internet of Things, big data, sensors, algorithms, artificial intelligence, and various related technologies make seductive promises, including that increased intelligence – “smart” phones, grids, cars, homes, classrooms, clothing, and so on – will minimize transaction costs, maximize productivity, and make us perfectly happy. (Nudging entails a very similar seductive promise.)

It's important to note that society isn't really structured to optimize social institutions and systems to maximize efficiency, productivity, or happiness. Though it may sound counterintuitive, we usually take the opposite approach. Simply put: We don't optimize. (Apologies to economists and engineers.) The social value of leaving a wide range of opportunities open for the future generally exceeds the value that society could

realize by trying to optimize its systems in the present.² In other words, at least in the United States, the default operating principle of social governance of people and shared resources is to leave things underdetermined; this allows individuals and groups to engage in self-determination with different outcomes, depending on the context and changing conditions.³ As law professor Julie Cohen succinctly put it, we need ample room for play.⁴

Optimization presumes an identifiable set of values. One of the reasons why society generally does not aim to optimize for specific values, such as efficiency or happiness, is that people often are committed to many different values. Another reason is that these values are often incommensurable and that makes prioritization contentious and trade-offs inevitable. Yet another reason is that the means used to optimize are highly and probably inevitably imperfect. Further, our understanding of the complex causal relationships between means and ends is incredibly limited. Still another reason is that, even putting aside the prior concerns, what looks like an optimal equilibrium in a specific time, place, or context often may only be locally optimal and globally suboptimal. In other words, what looks great might turn out to be relatively crappy.

Nonetheless, our world is changing rapidly, and seductive promises of intelligent optimization are difficult to resist. As presaged by the computer scientist Joseph Weizenbaum, technologies govern many of our day-to-day activities, and do so with such powerful consequences that it can be difficult for social institutions to keep pace. Assuming we continue along the path we're on, in the near future we'll rely even more thoroughly on technologies to intelligently govern our behavior. To be clear, we don't believe this reliance will come about because technologies will have become sentient, autonomous AIs that enslave humanity. Instead, our hypothesis is much simpler and, we think, more plausible than the Frankensteinian alternatives. We imagine that within the next few decades: (1) we will have gradually built and connected smart techno-social environments that deliver on their promises; (2) the scope of deployment will expand to the point where there is seamless interconnection and likely integration across all environments within which humans live; and (3) the normative agenda executed throughout all this construction and deployment will be optimal efficiency, productivity, and happiness.

The path of engineered determinism we are heading on surely allows for many different futures; a change in direction, even 180 degrees, is always possible. Nothing, other than entropy (as Isaac Asimov suggested in *The Last Question*), is inevitable. But there are many reasons to believe

that the future envisioned here is plausible and may even be a reasonable approximation of what lies ahead.

If the world we're envisioning seems stark, know that its intellectual seeds have already been sown. We've discussed some of them in previous chapters, and we'll have more to say later in the book. Recall from Chapter 4 that Weizenbaum worried that the computer would lead to the computerization of all human and social problems on the faulty assumption that all such problems are comprehensible in the language of computation; all that would be needed to solve the world's problems were more powerful computers, programs, and data. The imperialism of instrumental reason Weizenbaum warned of is no different than the optimization logic we've just discussed. Though incredibly prescient, he may have missed the critical, complementary role of converging communications media and networks in engineered environments. Accordingly, this chapter begins with mass media and the Internet before turning to smart techno-social environments.

Mass Media and the Reconfiguration of Our Lived-In Environments

The relationships between humans and tools often have an environmental component. At a minimum, the pedagogical function of tools shapes how humans perceive and imagine their reality. More concretely and acutely, techno-social tools for engineering humans often reconstruct the physical, social, and other environments within which humans are situated. The assembly line and public school examples are illustrative. Each is understood to be a special space constructed to achieve specific ends by social engineering.

What we mean by *environment*

An environment might be defined as a complex system of interconnected and/or interdependent resources (or even resource systems) that comprise the "surroundings," "setting," or "context" that we inherit, live within, use, interact with, change, and pass on to future generations. We inherit the natural physical environment; we live within, use, interact with, and change it; and we pass it on to future generations. Similarly, we inherit, live within, use, interact with, change, and pass on to future generations a cultural-intellectual environment, comprised of many overlapping sub-environments, if one would like to distinguish culture(s), science(s), and so on. The world we live in comprises multiple, complex, overlapping, and interdependent resource

systems with which we interact and that constitute our environments. One type is the natural environment, and the socially constructed environment, such as the cultural environment, is another.

The cultural environment provides us with resources and capabilities to act, participate, be productive, and “make and pursue life plans that can properly be called our own.” It also shapes our very beliefs and preferences regarding our lives (life plans) and relationships with each other and the world we share. Human beings are not born with fully formed preferences, knowledge, and beliefs about the world they enter; rather, these concepts are learned and experienced and thus contingent to a degree on the cultural environment a person experiences. We have an incredibly complex and dynamic relationship with the cultural environment. Science and culture, for example, are cumulative and immersive systems that develop with society, while simultaneously developing society. Put another way, the cultural environment provides for, shapes, and reflects us, and, at the same time, we provide, shape, and reflect it.⁵

Media, treated as a collective noun, is an important and broad set of techno-social engineering tools not tied to any specific space. Media “encompasses the myriad technologies and means for communicating with, informing, and entertaining individuals and the masses.”⁶ The history of humans and media is as old as the history of humans and tools. An important example is language.⁷ Innovations in media and extending access to the masses empowered our capacity to generate, cultivate, share, and sustain imagined realities that enable large-scale cooperation.

Media scholar Sharon Kleinman defines mass media as “media that aims its messages at large, mainstream audiences, the masses.”⁸ Mass media are communication tools designed to reach a large audience, often an audience that is geographically distributed.⁹ Conventional mass media entail asymmetrical communications – one-to-many or at least a small number of content producers and a much larger audience. Examples include print, radio, and television. Some of the conventional boundaries that separated mass media from other media may be disappearing. “The once apparent and mostly rigid boundaries between media content creators and media audiences, and between interpersonal communication and mass media, have blurred tremendously in the past few decades such that the term mass media has lost its precision in the digital age.”¹⁰

Mass media seem to be a precursor with a strong legacy and still a relevant part of the ongoing wave of technological, social, and cultural change we discuss below. We focus on media as a techno-social engineering tool and do not discuss market structures, content analysis, or socio-

political concerns such as the relationships between mass media and democracy.¹¹

Media are both constitutive and reflective of society. For all mass media, the ideas communicated, facts described, stories told, images displayed, agendas set, personalities shown, and so on contribute to a process of cultural development and exchange that affects and shapes the audience and feeds back upon itself and thereby affects and shapes authors and distributors – or more generally, the media systems themselves. Media scholars have extensively studied the various media and highlighted their important differences according to different models and metrics. Here, we emphasize affordances and effects. As we shall see, these features are relevant to our critical analysis of techno-social engineering tools more generally.¹²

Affordances are human capabilities extended, enhanced, or enabled by a tool. Affordances themselves may have effects on people even if those people never exercise the capabilities, where the opportunity itself shapes their beliefs and perception of reality and their place within it. More often, however, analysts focus on the effects attributable to users' exercise of capabilities afforded by a tool – what happens when someone actively takes advantage of an opportunity? Apart from the affordances of different media, there also can be direct and indirect effects attributable to consumption of media content – for example, entertainment and learning.

The affordances of mass media vary on both the supply side (e.g. content producers, editors, distributors, advertisers, etc.) and the demand side (e.g. audiences). For example, pre-digital print mass media – such as books, magazines, and newspapers – depends on the distribution of tangible copies. This feature of the technology involves production and distribution costs, imposes constraints on the nature of the communication, and shapes how audiences perceive and interact with the content. Once consumers possess a copy, they may decide where and how they choose to read – for example, in a public or private space.¹³ Consumers may retain copies, annotate or otherwise modify them, sell or share them, or even destroy them. These affordances vary with the materials used to fix copies. For example, clay tablets are more durable, heavier, and less modifiable than paper. These differences affected – or biased, according to media and communication scholar Harold Innis – cultural development. Similarly, if we compare books, newspapers, and magazines in terms of their forms, style, production process, formats, conventions, and so on, we find many differences affect their content and consequently shape the corresponding “print culture.”¹⁴

“[E]ach communication channel codifies reality differently and thereby influences, to a surprising degree, the content of the message communicated.”¹⁵ The medium matters because it shapes, structures, and controls the scale, scope, reach, pace, and patterns of human communications; it extends the human capability to communicate. As media theorist Marshall McLuhan emphasized, for “any medium or technology . . . the change of scale or pace or pattern . . . introduce[d] into human affairs” is what really matters: this is what he meant by his famous aphorism, “the medium is the message.”¹⁶

Radio and television broadcasts are more ephemeral than paper. Radio and television broadcasts depend upon different production and distribution technologies than print. Book distribution resembles many other tangible goods; think of trucks delivering boxes of books to stores. Radio and television broadcasting requires completely different infrastructure, institutional structures, and equipment. Of the various media, the First Amendment provides the least protection to broadcasting.¹⁷ Broadcasters must obtain a license from the Federal Communications Commission and comply with an incredibly complex regulatory regime.

Each medium affords content producers different means with which to communicate to audiences and presents content producers with different challenges for garnering and sustaining audience attention. Radio depended on, and perhaps revived, storytelling and oral traditions while television’s synchronization of audio and visual was more akin to dramatic performance.¹⁸ Radio and television dramatically expanded the scale with which news and culture could disseminate practically instantaneously. The entire nation tuned in and experienced momentous events, such as the assassination of John F. Kennedy and American astronauts landing on the moon. This change in the scale and immediacy of mass media reverberated throughout society.

On the demand side, consumers must possess a radio or television. If consumers wish to retain a copy of a broadcast, they must make their own with a recording device. Radio and television broadcasts are not the only way to experience music and video. Like print, discrete copies can be purchased, and those media offer some of the affordances that print provides, such as control over the time and place of consumption, but not others, such as relatively easy annotation. Consumers experience the content of radio and television akin to live performances, by listening and watching as an audience member. Yet there are some important differences. Audiences must possess equipment to tune in. They flip a switch or push a button; they choose a channel; and they pick their place. Radio and

television lean more toward communal or group-oriented experience than print. Friends and families listen and watch together in their chosen environment, such as living rooms, clubs, or bars.

Both radio and television tend to be spliced with advertising, and regular interruptions are normalized. For many, advertising is a necessary evil to be tolerated as the means for supporting otherwise free broadcasts. As legal and media theorist Katherine Strandburg explains:

[T]he traditional broadcast advertising-based approach is sometimes modeled as one in which consumers pay for television or radio content with “attention” to advertising. The assumption underlying such models is that content recipients experience some disutility from being subjected to broadcast advertising but are willing to incur that cost because it is outweighed by the expected benefit of the programming itself.¹⁹

Strandburg explains that the “plausible assumption that broadcast advertising is experienced by consumers mostly as a disutility or cost . . . is strongly supported by the empirical fact that consumers go to great lengths to avoid broadcast advertising, at least in the television context.”²⁰

The affordances of conventional mass media tended to reinforce asymmetrical communications, with content producers generally catering to mainstream audiences consisting mostly of passive consumers who often trusted what they were told and were happy to be entertained. This is a gross generalization; there are plenty of exceptions and counter-arguments. Competition sometimes (but not always) brought diversity and competing perspectives; and the differences within and across media as well as between for-profit and non-profit suppliers complicate the story. Still, the (uncontroversial) point is that mass media are powerful technological engineering tools that cater to and create passive mainstream audiences.

There are various theories and explanations for why and how the mass media cater to the mainstream and what consequences follow. Advertising played an important role. As Strandburg succinctly explains:

The broadcast advertising business model responded to failures in the market for broadcast content and transaction costs in matching consumers to advertising. Broadcasters respond directly to advertiser demand by producing content tailored to attracting large numbers of consumers and exposing them to broadcast advertising. The broadcast advertising model thus biases content production toward average, rather than specialized, interests and toward content designed to appeal to those who will (or can be persuaded to) purchase mainstream products.²¹

Our characterization of the audience as passive consumers refers to the fact that the consuming audience plays no role on the supply side of mass media systems. Mass media systems do not afford most people with access to the production or distribution facilities necessary to communicate to the public. Such power is generally afforded to – or reserved for – a relatively small number of people.

Let's turn our attention to mass media consumption and its effects. Mass media involve the presentation of perceptible content to consumers. The manner of perception and corresponding effects vary based on which senses and intellectual capacities the media are most directly attuned to.²² Print involves text and visual stimuli and requires reading, imagining, and visualizing; radio involves auditory stimuli and requires listening; and television and cinema involve synchronized visual and auditory stimuli, requiring watching and listening. Generations of media scholars have analyzed and debated the scale, scope, nature, and causes of the political, cultural, and psychological effects of different media and the different ways that audiences can be empowered by critical media literacy to become active interpreters of content.

We're sure you are already aware of the decades-long debates over television. Has TV turned everyone into couch potatoes? No, and even for those of us who are prone to vegging out on the sofa and binge watching programs, most of us don't succumb to the siren call of television all the time. Studies suggest TV watching occupies quite a lot of people's lives, but it is difficult to assess the effects. Some, such as media theorist Neil Postman, contend "that TV . . . attained the power to control education because it dominates the attention, time, and cognitive habits of the youth."²³ Other scholars suggest that televised content is anything but homogeneous. For example, philosopher of technology Don Ihde argues:

Today's TV is *pluricultural*. News is worldwide with hotspots varying from all over the globe. Terrorism can occur in any country; natural disasters are immediately broadcast; royal weddings and births occupy admirers' attention; scientific discoveries such as a Pluto flyby are present, *ad infinitum*. This range of display is a temporal condensation, a "now" which is also pluralistic, but which also displays a "near distance" or cyberspace character as if all is "here." The living room has more pluriculture every evening than had any medieval king in his castle. The media "worlds" are diverse and rich . . .²⁴

On the Internet and across various devices and platforms, mass media continue to change dramatically; just think about how most people consume print, music, and video today. While it is beyond the scope of this

chapter to summarize the extensive media debates and findings, the following takeaways are the most relevant for our discussion.

Mass media shape our cultural environment as they reach into and reconfigure our lived-in environments, our workplaces, schools, homes, automobiles, clubs, restaurants, taverns, and so on. The reconfiguration is often infrastructural and architectural because it operates structurally in the background and in a manner that tends to be overlooked and taken for granted by those situated within the environment. As with the clock and other tools, our perception and understanding of reality adjusts gradually as we become accustomed to the presence, power, and utility of the tools. Unlike those other examples, however, note that mass media attune more directly with our cognitive capabilities and senses. Mass media engineer humans within these lived-in environments by altering the range of stimuli that potentially affect the beliefs, preferences and actions of humans within those spaces. Print, radio, and television are also well-studied examples of such techno-social engineering. In the United States, the power of mass media never quite reached the levels depicted in dystopian science fiction (though some might dispute this claim). But it is indisputable that mass media have had a significant influence on American culture, politics, economy, and society.²⁵

Mass media techno-social engineering encompasses a few interrelated factors: *scale*, evaluated in terms of audience size, markets, and/or geographic coverage; *scope*, evaluated in terms of the range and types of content and messages; *influence*, evaluated in terms of power to persuade, shape beliefs, or otherwise engineer audience members (i.e. do more than simply entertain or satisfy existing preferences); and *architectural extension*, evaluated in terms of the degree to which the media fit within and bridge different environments. The factors are interdependent, and media scholars have studied scale, scope, and influence extensively. The final factor, however, is one we introduce.

Media intervention into our lived-in environments is often architectural in the sense that it becomes an integral part of the environment, shaping our perception and experience of it. For example, a living room, dining room, or bar with a television is a different environment than one without. The extensibility of mass media depends on how well the media fit within our environments as a contextually appropriate (background) architecture. This should not be surprising as the media, like our other tools, also are extensions of ourselves. Media intervention into our lived-in environments may be abrupt or gradual, contentious or harmonious; it may occur within specific isolated environments, or it may bridge environments.

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Radio and television extend architecturally into different spaces, and have done so quite differently. Compare, for example, radio with television in terms of how the media extended into the different environments we listed in the previous paragraph. Both radio and television broadcasters make content available in each of the listed environments, but consumption depends upon reception; what is contextually appropriate is contingent, changes over time, and varies among communities. Radio has long tended to be acceptable in many environments, provided it remains unobtrusive and a source of background ambiance. Television, on the other hand, was most appropriate in select environments, such as the living room and taverns, but inappropriate in others, such as automobiles. Like other creep phenomena, the television medium crept into other rooms of the house (bedrooms, basements) and beyond as its cost decreased. This extension also shifted how people consume the content, for example, by making private individual consumption more easily available. As we discuss below, the Internet fundamentally changed mass media. Today, on the back of the Internet, television is watched on handheld screens in virtually all environments.

Through these combined factors, one begins to see the precursors of the smart environments we'll discuss in the next chapter. Specifically, the architectural extension of mass media into lived-in environments coupled with expanding scale, scope, and, most importantly, influence conveys *power*, specifically, to practice techno-social engineering of humans. Early mass media were crude and of debatable effectiveness as techno-social engineering tools. But they could and would improve over time with better data and data analytics. Edward Bernays, often referred to as the "father of public relations," presciently suggested as much in 1947 when he wrote that "engineered consent," which is akin to influence, involves the "use of an engineering approach – that is, action based only on thorough knowledge of the situation and on the application of scientific principles and tried practices to the task of getting people to support ideas and programs."²⁶ Though not explicit, his views evoke Taylor's approach to scientific management of humans in the workplace, albeit with different undertones. Political theorist and linguist Noam Chomsky and Edward Herman, professor emeritus of finance at the Wharton Business School, went in a slightly different direction in their book *Manufacturing Consent: The Political Economy of the Mass Media* (1988),²⁷ and forcefully made the case that mass media served as a powerful propaganda tool. Their argument was not that propaganda was novel; it has been around for millennia. Rather, their argument was that the scale, scope, and influence

of profit-driven mass media afforded elites more powerful access to and control over the minds of mainstream audiences.²⁸ Others disagreed and still do, as the ongoing debate about media bias and filter bubbles demonstrates.

The debate about power also highlights another important characteristic of mass media as tools for techno-social engineering: the attenuation and distance between the audience within the environment and those exerting influence through the media. This is a dimension of power. The tendency for mass media to support asymmetrical communication also concentrates power to influence, or more broadly, engineer humans. We will not dwell on this point here, however, as it is the topic of extensive scholarship and debate. Again, the simple point suffices: Mass media concentrate power in corporations, elites, and celebrities. This fact has long been a subject of conflict and attempts at resolution through political intervention or market competition have not generally succeeded. Perhaps the single most effective force to decentralize, democratize, and disrupt traditional mass media is the Internet.

The Internet and Networked Digital Media

Over the past few decades, we have witnessed the near-ubiquitous deployment of various information, computation, and communications technologies. As Weizenbaum predicted, the computer presaged our societal infatuation with the seemingly limitless power of computation, digitalization, data, virtualization, automation, artificial intelligence, and related technologies and techniques. And now the ring that binds them all is the Internet, our global all-purpose media network.²⁹

The Internet has grown in just a few decades to completely alter every aspect of our society, economy, and community through its transformation and enhancement of connections and communication across its widespread network.³⁰ Consider, for example, how the Internet provides and shapes opportunities of individuals, firms, households, and other organizations to interact with each other and participate in various social systems. The scale and scope of possible and actual social interactions alone is staggering. The Internet has seeped into our daily lives and environments more deeply than any conventional mass media, and it has correspondingly reconfigured and transformed them even more so. So many formative actions and interactions that humans undergo have been shaped by these changes in the physical, social, and cultural environments.

The Internet is an open, general-purpose communication infrastructure. Although the Internet began primarily as a conduit for solely textual communications, it rapidly expanded to include images, sound, video, and all sorts of content and communications. Everything that occurs on the Internet entails the communication of data between computers at the “ends” of interconnected networks. The computers may be desktops, laptops, smartphones, or various other devices. Digital data are sent in packets that are automatically routed across and among various networks, including telecom, cable, satellite, and other physical infrastructure. The data packets are put back together at the ends and translated into higher-layer communications that can be interpreted and used on any connected device. Though more complicated technical models exist, the following five-layer model provides a useful illustration.

Five-Layer Model of the Internet

Layer	Description	Examples
Social	Relations and social ties among users	Social networks, affiliations, groups
Content	Information/data conveyed to end-users	Email communication, music, webpage
Applications	Programs and functions used by end-users	Email programs, media players, web browsers
Logical Infrastructure	Standards and protocols that facilitate transmission of data across physical networks	TCP/IPs, domain name systems
Physical Infrastructure	Physical hardware that comprises interconnected networks	Telecommunications, cable and satellite networks, routers and servers, backbone networks

The Internet evolved with the so-called “end-to-end” design principle as its central tenet.³¹ To preserve its robustness and evolvability and to allow applications to be easily layered on top of it, the broad version of this design principle recommends that the lower layers of the network be as general as possible, while all application-specific functionality should be concentrated in higher layers at end hosts. End-to-end design is implemented in the logical infrastructure through the Internet Protocol (IP), which provides a general technology-and-application-independent interface to the lower layers of the network.³²

As a media platform, the Internet extends the human capability to communicate in nearly limitless forms, languages, and content types. Software code virtualizes pre-existing mass and interpersonal media, and so those media remain available and relevant. But in contrast with the asymmetrical nature of mass media and the limited scope of interpersonal media such as the telephone, the Internet enables nearly instantaneous, many-to-many communication around the world. Software code itself has become an incredibly important platform for applications, and, within the applications layer itself, new media platforms have emerged: interpersonal media platforms such as email and text messaging; social media platforms such as Facebook and Twitter; gaming platforms such as the massive multiplayer online games that create virtual worlds regularly inhabited by hundreds of millions daily.

The Internet is socially valuable primarily because of the wide variety of productive activities it facilitates. End-users generate value and realize benefits through their activities, which involve running applications on their computers; generating, consuming, and using content; and creating and engaging in various social, economic, or other relations with other users. End-users also create demand for Internet infrastructure through their demand for applications, content, and relations. Keep in mind that *activities on the Internet* always involve *interactions* among *end-users*; that the interactions may be commercial, educational, social, political, and so on; and that end-users may be individuals, corporations, government actors, or other entities.

The Internet has so pervasively reached into and reconfigured our lived-in environments that for many people, it is difficult to remember or imagine being disconnected. The reach was less pervasive when Internet connections were primarily through personal computers on desktops, but the rapid diffusion of mobile devices capable of connecting to the Internet has dramatically extended the reach of the medium. It's difficult to evaluate the Internet as a tool for techno-social engineering humans, in part because it is so omnipresent. Consider the Internet through the lens of the interrelated factors we noted previously. *Scale*: billions of people, worldwide, and substantial though not complete market penetration. *Scope*: the range and types of content and messages is virtually unlimited, and the same can be said for both applications and social relations. *Influence*: hard to measure or evaluate generically; the power to persuade, shape beliefs, or otherwise engineer audience members operates at the application, content, and social layers. *Architectural extension*: the Internet is contextually appropriate in almost all environments, and it bridges most.

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To evaluate the Internet as a tool for techno-social engineering of humans, we need to consider an additional factor: the scale and scope of data collection. Recall that Taylorism depends fundamentally on data. Scientific management of human beings in the workplace and beyond requires usable data about task performance, inputs, outputs, behavior, incentives, and so on. One limit of how far Taylorism could reach is the scale and scope of data available for management. Perhaps more than any other technology in human history, the Internet has expanded the pool of data capable of being cheaply collected and used. According to IBM:

Every day, we create 2.5 quintillion bytes of data – so much that 90% of the data in the world today has been created in the last two years alone. This data comes from everywhere: sensors used to gather climate information, posts to social media sites, digital pictures and videos, purchase transaction records, and cell phone GPS signals to name a few.³³

Again: everything involving the Internet involves the generation and exchange of digital data – every activity, every communication. Data – strings of zeros and ones – are what economists refer to as a pure public good, meaning the resource can be copied at zero marginal cost. Computing devices at the ends, as well as routers and other devices within and between networks, easily can make copies and collect such data. The dramatic increase in the supply of data created a corresponding demand for improved data storage and analytics technologies, and, in a few decades, major technological advances have coalesced in new fields such as big data³⁴ and reawakened seemingly dormant fields such as artificial intelligence and machine learning. We discuss these developments below, but, for now, our purpose is to highlight not only how the Internet reconfigured our lived-in environments, but also how it simultaneously drew us out of those environments, even if only virtually or metaphorically through our external communications, thereby extracting something of, or at least about, us.³⁵

This data-gleaning feature of the Internet affords various public and private actors with incredible power to engage in surveillance and to use and act upon the specific information collected. Surveillance is simply easy and cheap when you have networked computing devices. It occurs throughout the Internet ecosystem, at the various layers pictured above. There have been many efforts to establish constraints grounded in various conceptions of privacy and implemented in law, norms, and technology, but with limited success. We acknowledge that it is hard to evaluate success or failure, because we don't have an established normative baseline for

privacy nor do we know the full extent of ongoing surveillance practices. Nonetheless, we know that the dominant business models in our networked information economy are surveillance-dependent, as companies clamor to serve targeted advertising and provide personalized services. We also know that governments around the world spy on their and each others' citizens. Finally, while there are various exceptions, the dominant mindset shaping privacy constraints is rooted in the idea of notice-and-consent, which, as we explain below and in subsequent chapters, is doomed to fail.

Shoshana Zuboff, a professor at Harvard Business School, coined the highly relevant phrase "surveillance capitalism."³⁶ Per Zuboff, capitalism has entered a new phase that centers on extracting data rather than producing goods, and it's exemplified by Google in much the same way that Ford once was synonymous with mass production. Google's business model, Zuboff argues, generates profit by extracting, analyzing, and selling data that the company is constantly collecting, and creating value by offering customized and personalized services that are perpetually being refined through experimentation that, in part, involves crafting ever-more powerful ways to predict and alter behavior. While Zuboff concedes that it's too early to tell whether surveillance capitalism "will be the hegemonic logic of accumulation in our time" or an "evolutionary dead-end," she expresses deep reservations about the consolidation of power that's occurring in the private sector and its capacity to further erode our privacy and diminish our agency.³⁷

While advertising is often advanced as a public explanation and even (partial) justification for surveillance capitalism, it remains hard to verify.³⁸ First, it isn't clear how well data-driven, particularly behavioral-data-driven, advertising works. Second, it isn't clear whether or how much or how often data supposedly collected to support advertising is actually used for advertising. Third, even if and when data is used for advertising, it remains unclear whether or how much and how often data is used for other purposes and what those might be in different contexts. Finally, and perhaps most insidiously, advertising may often be used as a surveillance tool. People may be conditioned to accept advertising sprinkled throughout our digital culture and, as a result, many advertisements may serve as cover for ongoing surveillance efforts that serve a range of goals.

This issue of conditioning is taken up by Mark Bartholomew, a law professor at the University at Buffalo, in *Adcreep: The Case Against Modern Marketing*. Bartholomew suggests that our willingness to allow advertising to become ubiquitous and colonize our public and private spaces is based,

in part, on adaptive preferences legitimizing practices that once were disdained.

A normalization process can easily occur once advertising enters a new territory. Take pre-film advertising in movie theaters. When it was first introduced in the 1990s, audiences howled at the presence of commercials before the trailers and the actual movie. Lawsuits were filed and new legislation proposed to stop the practice. But over time, the lawsuits and legislation sputtered out. Surveys now suggest that audiences have become ambivalent to the presence of pre-film commercials.³⁹

We emphasize two ways in which surveillance relates to techno-social engineering. First, surveillance itself can exhibit disciplinary power and thus constitute techno-social engineering. Taylor exploited this, and his workers complained of it. One of the fathers of modern social theory, Michel Foucault, examined this relationship extensively across a variety of different contexts. Critically, the reach of the Internet extends the disciplinary power of surveillance dramatically. Second, the data collected can be used as an input for a host of other techno-social engineering tools. For example, at the lowest layers of the network, infrastructure providers, such as providers of broadband Internet access services, might use data to shape traffic in a manner that prioritizes certain user activities over others. Crudely, networks might prioritize applications or applications providers based on profit. More fine-grained, data-intensive price discrimination, however, is the holy grail that would allow them to maximize their returns by extracting as much surplus as possible. This has been the subject of the network neutrality debate, which we return to shortly.

Many of the most powerful media companies that regularly engage in data-driven techno-social engineering of humans operate applications-layer platforms – social networks, search engines, marketplaces, even online games. The next section discusses the Facebook Emotional Contagion Experiment, which is just one example that caught headlines a few years ago and remains salient in technology policy discourse.

Facebook's Emotional Engineering Experiment

On June 17, 2014, the *Proceedings of the National Academy of Sciences (PNAS)* published an article titled “Experimental Evidence of Massive-Scale Emotional Contagion Through Social Networks.”⁴⁰ The short article reported on a remarkable experiment that demonstrated that emotional states can be transferred to others by emotional contagion. Researchers at

Facebook and Cornell University conducted the experiment and “manipulated the extent to which people (N = 689,003) were exposed to emotional expressions in their News Feed.”⁴¹ Unbeknownst to a few hundred thousand people, Facebook deliberately reduced their exposure to their friends’ positive or negative posts, depending on which conditions Facebook applied. In other words, Facebook deliberately exposed people to the test contagion and then watched to see what would happen. It turns out that the results of the experiment showed that emotional contagion exists and can be deployed by Facebook. People exposed to more positive posts tended to post more positive posts relative to the control groups, with similar results for exposure to negative posts. Moreover, people “exposed to fewer emotional posts (of either valence) in their News Feed were less expressive overall on the following days,”⁴² which the authors described as a withdrawal effect. The authors concluded:

[G]iven the massive scale of social networks such as Facebook, even small effects can have large aggregated consequences: For example, the well-documented connection between emotions and physical well-being suggests the importance of these findings for public health. Online messages influence our experience of emotions, which may affect a variety of offline behaviors. And after all, an effect size of $d = 0.001$ at Facebook’s scale is not negligible: In early 2013, this would have corresponded to hundreds of thousands of emotion expressions in status updates per day.⁴³

Not surprisingly, a firestorm followed publication of the study. Bloggers, media pundits, researchers, Facebook users, and others debated the ethics of the research.⁴⁴ Most of them focused on whether the researchers should have obtained informed consent from the research subjects and whether the Institutional Review Board (IRB) at Cornell should have played a greater role in regulating, supervising, or monitoring the research. These are very important ethical issues. A few months later, the *New York Times* reported on some progress: researchers studying us on social networks and other digital media are now grappling with ethics and may develop guidelines to govern how they experiment on us.⁴⁵

But we might not want to leave it to the engineers and tool users. We subjects should grapple with the ethics as well. To get a sense of where you stand, consider a few questions:

1. Is deliberate emotional engineering by Facebook a problem of process (no informed consent for the subjects) or substance (emotional engineering)?

2. If it is a problem of inadequate process: Is IRB review a solution?⁴⁶ What about informed consent? What does that mean to you? Pretend you're negotiating a one-to-one contract with Facebook. What exactly would you agree to? Would clicking "I agree" when you sign up for the service be enough?
3. If it is a problem of substance, can you explain the problem without reliance on adjectives like creepy? Can you articulate what exactly is wrong with emotional engineering by Facebook?
4. Is it acceptable for Facebook to induce or suppress the emotional contagion of your friends?
5. Suppose Facebook tests, develops, and optimizes its emotional engineering capability to help people make *better* decisions? Would it be acceptable for Facebook to induce or suppress impulsive purchases (or at least, clicks)?
6. Suppose Facebook optimizes its emotional engineering capability specifically to minimize emotional interference with instrumentally rational decision-making. Would this nudge people to make better decisions? Would people nudged in this fashion act like machines? Would they be (or could they be) any less human?
7. Suppose Facebook optimizes its emotional engineering capability and lets users choose the settings – dial up some happiness! Would you use it?

These are difficult questions. The lack of informed consent and the role of the IRB are important issues, but they are the tip of the iceberg. The tip is all that gets attention until too late. The deeper issues (reflected in questions 3–7) are substantive, have less to do with the research process or this specific experiment, and more to do with the technological capacity for techno-social engineering that Facebook is testing. To be clear, Facebook is testing a tool, a powerful one. Why? What are the predictable consequences? How about the unpredictable or unintended consequences?

The title of the Facebook study caught our attention: *massive-scale emotional contagion through social networks*. The type of response (human emotion) being engineered struck a chord but so did the scale, scope, and power of the tool being tested. With respect to the first concern – human emotion being engineered – we must acknowledge that many things alter our moods every day. Advertisers and politicians (and their various consultants) are expert manipulators, and so are the rest of us. We try to influence each other regularly, for better or worse. We nudge each other. That's a big part of what socializing and communicating entails.

Emotional contagion is not the only social contagion, but it can be a powerful nudge. Many technologies play an integral role in shaping our beliefs, emotions, and well-being, sometimes, but not always, in ways we know about and at least partially understand.

But systematic techno-social engineering of human emotions through platforms, like Facebook, that reach into, reconfigure, and, in some ways, constitute the environments we live in daily may be much more challenging to know about and evaluate, and it may become more pervasive. Such engineering may be much harder to know about and understand *independent* of the platforms' influence on emotional and other social contagions. A focus on process alone will *never* be sufficient. As privacy scholars have long recognized,⁴⁷ informed consent can be manufactured, in the sense that technological platforms can shape one's beliefs and preferences with respect to that for which consent is sought.⁴⁸ Aside from the emotional contagion experiment, Facebook is a rather straightforward example, at least when one focuses on privacy. The beliefs and preferences of hundreds of millions have been shaped over the past decade. Facebook set out to accomplish this objective – at least, to encourage broad sharing of content – and largely has been successful.⁴⁹ Although public outcry about the emotional contagion experiment might lead one to conclude that Facebook would not be able to obtain consent from users for emotional engineering because their existing preferences may conflict, such a conclusion seems somewhat far-fetched. Facebook has not, to our knowledge, abandoned the technology or practice, nor have Facebook users revolted and ceased to use the service. Further, there is plenty of time for Facebook to both develop its technology and gradually shape its users' beliefs and preferences regarding the technology. Only time will tell.

Keep in mind that regardless of whether Facebook is engaged in a formal experiment, it persistently engages in both surveillance and techno-social engineering. We need to engage the ethics, including both process and substance, and we need to develop better tools for identifying and evaluating such techno-social engineering. After all, we only know about Facebook's experiment because it published the results.

To this point, we've only scratched the surface and focused on one actual example of techno-social engineering by Facebook. As we suggested, this may be indicative of the path we are on and what the future may hold. While we hesitate to prognosticate about the future, consider a fictional extension of the Facebook emotional contagion experiment.

Suppose Facebook figures out how to control and deploy emotional contagions and thus optimizes its emotional engineering technology. Now assume it creeps. Suppose Facebook gradually extends the scope of content, contagions, and emotions, and suppose Facebook gradually extends its reach. Finally, suppose Facebook expands beyond its social network interface on the Internet to other interfaces available through the Internet of Things (described in more detail in the next chapter). Thus, suppose Facebook extends its optimized emotional engineering capability to the environments within which we live our lives. For example, suppose Facebook deploys its emotional engineering technology in your smart home, automobile, and workplace through networked sensors and communications devices.

For our fictional extension, we can imagine two different worlds, one in which we still have a choice about whether to log in, and one in which we don't. Yet it is not clear whether this would even be a meaningful distinction, whether choice in the first possible world would be authentic or illusory. Assume that is our imagined world: Would you consent? Does your answer depend on whether you are in control and whether you could choose the settings? It might be the case that your first decision to consent could be authentic; perhaps you'd be able to deliberate and decide for yourself. But one cannot help but wonder whether, thereafter, consent would itself be subject to engineering. (If the mechanism for consent is a simple click-to-contract-style interface, we may already have been conditioned to automatically accept.)

One question we genuinely struggle with concerns who is doing the emoting and whether it even matters. Suppose you live in an environment within which Facebook successfully programs your emotions. Perhaps you consented and even chose the setting, or perhaps your parents did on your behalf long ago. Facebook provides a comprehensive set of (emotionally contagious) stimuli that trigger a predictable, predetermined set of emotional responses. *Who is emoting? You? Facebook? Your parents? Does it matter?*

We could ask the same questions about a novel. *When you read a novel, who is emoting? You? The author? The publisher?* We doubt anyone believes that when you read a novel and become happy or sad anyone besides you is emoting. We might say that the author is communicating and perhaps jointly sharing emotions. Is the author engaged in techno-social engineering? Yes, in a sense. Authorship entails the informed use of language and other tools to communicate, entertain, and stimulate emotional reactions. The novel is a techno-social tool designed to serve those purposes.

It provides a set of stimuli and triggers emotional reactions. Generally, this is something we encourage and celebrate.

How, then, is the hypothetical emotional engineering by Facebook any different? We believe it is a combination of factors, the most important of which seem to be the following: the scale and scope of the techno-social engineering, the marriage of deterministic engineering and engineered determinism, and the simultaneously environmental and acutely personalized nature of the techno-social engineering. These differentiating factors are complex, hard to mark and evaluate. For the objects being engineered and society generally, the difficulty is in knowing when a line is crossed, if one can even be identified. The second part of this book develops some tests that might help.

The Facebook emotional contagion experiment and our hypothetical extension highlight steps along a path. We may doubt we'll ever get to the endpoint, or even very far down the path. But can you be sure? How might humans and society change along the way?

Although the concern about Facebook's emotional contagion experiment largely has died down, we shouldn't be lulled into the false belief that Facebook has stopped the techno-social engineering of our emotions.

Let's try to focus on the interface that Facebook provides – an interface that mediates how we communicate. When you post information into Facebook's "what's on your mind?" box, you have the highly visible option of augmenting your prose by clicking on the "feeling/activity" button and selecting from such emojis as "excited," "blessed," "happy," "sad," "amused," "annoyed," and "relaxed." And, when you use Facebook's "like" button to comment on posts, you can select from six different options: "like," "love," "ha-ha," "wow," "sad," and "angry."

It may appear that Facebook provides these emotional expression shortcuts so that users have creative and effective ways to convey what's in their hearts and on their minds. After all, who doesn't feel a tinge of warmth after someone "loves" our post and marks it with a heart? Tempting as this is, we should be wary of basking in the digital glow. For under the hood, what Facebook is creating is a mood graph. When we select any of the above options, we are providing the company with clear and coded insight into our emotions that its own algorithms might not be able to infer from our prose. Facebook can use this information for all kinds of commercial purposes, including creating more emotionally attuned, and therefore potentially manipulative, personalized advertising for both us and our demographically similar "friends". In other words, when we express our emotions on Facebook in the ways that the interface invites us to we're providing the company with a form of emotional labor that can be used to further corporate interests over our own.

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These sorts of issues likely will be arising in other areas, too, including smart cars. Automobile manufacturers are becoming increasingly interested in perceiving and classifying the emotions of drivers. Doing so allows for a variety of new functions to be instantiated, such as customizing the music that's playing based on one's mood: perhaps playing happy tunes when a driver is sad or calming songs when anger is detected will mitigate against road rage occurring.

CHAPTER 8

*Techno-Social Engineering of Humans through
Smart Environments***Introduction**

In examining the scale and scope of techno-social engineering of humans, we can no longer limit our attention to the isolated examples of the factory floor or public school. We must extend our analysis to almost every other space, including the home and our public spaces. Mass media have reached into those spaces, but so far only incompletely and discontinuously. The Internet dramatically increased their reach, interconnection, and continuity.

Yet in the present – and this may be wishful thinking – the various environments within which we live our lives remain separate, even if potentially interconnected and interdependent. *We have not been and are not always on.* Put it this way: Radio and television broadcasters may have bombarded all our lived-in environments with analog signals, but we still need to flip the switch and tune in, and we could easily tune out. The Internet may be even more readily accessible, as we carry our smart-phones and related devices with us throughout our lives. And we may in fact exercise our capability to access the Internet more regularly in our daily lives; our default may even have flipped, such that we are by default tuned in. Nonetheless, though we may not always appreciate it, we retain the capability or freedom to be off.

The frightening thought is that if we proceed down the path we're currently on that freedom will disappear. The practical, situated, and reasonably exercisable *freedom to be off*, to be free from systemic, environmentally architected human engineering, is *the* – or at least, one of the – fundamental constitutional issues we, as a society, need to confront. Constitutionalists have always had to ask, grapple with, and answer the foundational and ultimately intergenerational normative question of what sort of society we want to build. We all must be constitutionalists and ask ourselves this question. In the twenty-first century, this question is

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unavoidably about the scale and scope of techno-social engineering of humans and the actual freedom to be free from such engineering – at least for some meaningful portion of our lives.¹ We return to this theme at the end of the book.

This chapter looks from the present to the near future and explains why interconnected sensor networks, the Internet of Things, and big data enabled automation of systems around, about, on, and in humans promise to expand the scale and scope of techno-social engineering significantly. The reason lies in the power of intelligent, often automated systems and the reconstruction of our everyday environments and, as we shall see, us. It's the even more fine-grained, hyper-personalized, ubiquitous, continuous, and environmental aspects of the resulting techno-social engineering that make the scale and scope unprecedented.

We begin with a familiar example from the present: the smartphone. The smartphone is one prominent case where adding intelligence (smartness) expands the range of applications and uses of a device, making it more general-purpose and providing more affordances for various actors. Smartphones – or smart mobile devices more generally – are jam-packed with powerful sensors, processors, memory, software programs, and well-designed interfaces. Thousands of components are integrated into light wearable devices. As a media device, the smartphone piggybacks on and extends the scale, scope, influence, and architectural extension of the Internet. It contributed to and likely accelerated the convergence of interpersonal and mass media, and, more importantly, extended connectivity to most environments, bringing most smartphone users closer to being always on. The corresponding techno-social engineering is intense and varied.

Again, as with the Internet, it is worth considering the affordances of smartphones. On the demand side – that is, for users – smartphones extend and enhance many of the same affordances as the Internet and networked personal computers. An important additional affordance is *mobility*. Smartphones travel with users, and this disintegrates constraints in both time and space, meaning you can be online anytime and anywhere. This affordance cuts both ways. Various others – friends, family, co-workers, employers, advertisers, service providers, etc. – can reach you anytime and anywhere. On the supply side, the smartphone software ecosystem significantly lowers the costs of developing and deploying software applications, and this has led to vibrant communities of app developers and a corresponding proliferation of apps, many of which leverage the expanded versatility of smartphones and mobility of users to solve new problems and meet new demands.

Just think for a moment about the range of applications, entertainment, news, and other features enabled by the powerful, networked computer you can carry in your pocket. The smartphone invites others into one's mind and affords them incredible – and incredibly personalized – surveillance, nudging, and control capabilities. As such, we'd like to be able to evaluate:

Who is doing what thinking with smartphones? Who is smarter? Who acts on what intelligence, and how? Who gains what power? How does smartphone use affect us, in terms of who we are and may be, and how we relate to each other?

Each of these questions demands considerable research and attention. Take a moment and consider your own experience with the technology. How have smartphones affected your life, your experiences and interactions with others? According to technological entrepreneur Elon Musk, “The thing that people, I think, don't appreciate right now is that they are already a cyborg . . . If you leave your phone behind, it's like missing limb syndrome. I think people – they're already kind of merged with their phone and their laptop and their applications and everything.” If you've merged with your smartphone and digital technology as Musk suggests, can you ever exercise the freedom to be off?

Smart Techno-Social Environments

Here are (some of) the basic components of tomorrow's smart techno-social environments:

- Networked sensors
- Data
- Intelligence-generating systems, including artificial intelligence, machine learning, algorithms, and others
- Automation/control actuators

Each of these comprises a broad set of techno-social engineering tools. (Computer scientists and engineers will recognize these as subsets of broader system design categories. Obviously, each of these requires various supporting technical systems, e.g. for power, data storage, and so on.) While some of these tools sometimes work independently in particular contexts, these tools often are and will be components of “smart” interconnected systems that architect, manage, and possibly even constitute our built lived-in and experienced environments.

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Though not appreciated by most people, even in the technology community, it is critical to understand that the potential demand for and thus value of interconnected sensor networks, the Internet of Things, and big data depends on automation of systems around, about, on, and in human beings. Put another way, interconnected sensor networks, the Internet of Things, and big data are not in and of themselves socially valuable. Demand for such technologies is derived demand. Many in the business and technology fields assume that these technologies are the next best thing, without really knowing why.² There is a common perception of the technological power and potential, almost inevitability, of an Internet of Things, from smart toothbrushes to smart toilets, but actual consumer demand remains uncertain and likely will continue to be so for quite some time; it likely needs to be stoked, if not outright created (another job for the marketing and advertising community that undergirds much of the modern information economy).

Let's focus briefly on the Internet of Things, which is an umbrella term often used to capture the basic components of smart techno-social environments. To begin, we must acknowledge that the Internet of Things is clever rhetoric. The Internet, as we know it, is an infrastructure that connects computing devices and ultimately *people*. Almost everything that occurs on the Internet involves the communication of information between people – it is social and relational, and it involves the creation and sharing of information.³ So what is the clever rhetorical move? It is to replace *people* with *things*. The Internet of Things is a metaphor, but, frankly, metaphors matter. The Internet of Things metaphor reveals an explicit and implicit shift in framing.⁴ While people might look at this as simply the next step in the evolution of the Internet and adjacent computing technologies and systems, the regulatory implications could be dramatic, and we don't just mean government regulation. We also mean regulation by private companies, architecture, and technology because of the ways in which the environment that we live within and interact with changes. Instead of people being in the foreground, the Internet of Things pushes people to the background.

When folks talk about the Internet of Things, the focus shifts subtly from humans actively communicating with each other to devices gathering and exchanging data and automating various technological and business processes to make the lives of human beings easier, more efficient, and happier. The Internet simply becomes a means for ubiquitously distributed sensors – mobile and stationary devices, mere things – to gather, process, exchange, and act upon data. The things are primary; they are technological and

perceived to be neutral; they require investment and involve innovation, and will allow service providers – private and public – to more cheaply and efficiently provide us with what we supposedly want and need. But they also will allow those service providers to engage in techno-social engineering of humans – of, at least, our beliefs, preferences, and emotions – if the incremental steps we have seen in recent years are any indication.

Beyond mere rhetoric, the Internet of Things is a major work-in-progress. The incredible hype and investment about a trajectory that's expected to lead to an "[I]nternet of everything" has generated policy discussions, concerned mostly with paving the way for investment and deployment but also with identifying privacy, security, and other consumer protection issues.

In its Green Paper published in January 2017, the Department of Commerce Internet Policy Taskforce and Digital Economy Leadership Team used the Internet of Things as an umbrella term "to reference the technological development in which a greatly increasing number of devices are connected to one another and/or to the Internet." The DOC explained that commenters who responded to the DOC's Request for Comments offered a wide variety of definitions and emphasized different features and applications.

Many commenters suggested a definition based on particular attributes of devices, activities, or the integration of sensors, actuators, and/or network connectivity. IBM referred to IoT "as the growing range of Internet-connected devices that capture or generate an enormous amount of data every day along with the applications and services used to interpret, analyze, predict and take actions based on the information received." The Center for Data Innovation . . . "describe[d] the set of physical objects embedded with sensors or actuators and connected to a network." Vodafone . . . does not focus on the devices, but rather . . . a "dynamic global network infrastructure with self-configuring capabilities based on standard and interoperable communication protocols" that connects to smart 'things.'" . . . The American Bar Association Section of Science & Technology Law argued that "IoT is not itself a 'thing,' device or product," but rather "it is a conceptual structure consisting of tangible things (e.g., commercial and consumer goods containing sensors), real estate and fixtures (e.g., roads and buildings containing sensors), plus intangibles (e.g., software and data), plus a range of services (e.g., transmission, development, access contracts, etc.)." The Center for the Development and Application of Internet of Things Technologies at Georgia Tech stated that " . . . the one single groundbreaking element is not the connectivity . . . [but] the smartness of things." The President's National Security Telecommunications Advisory Committee . . . described . . . "a decentralized network of objects,

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applications, and services that can sense, log, interpret, communicate, process, and act on a variety of information or control devices in the physical world.” Others have suggested that the Internet of Things should be described through the lens of its integrated component layers – applications, network, devices, and data . . . The growing number of sectors deploying IoT devices includes agriculture, defense, energy, entertainment, environmental monitoring, health care, manufacturing/industrial operations, retail, supply chain logistics, transportation, and others. Often included within the purview of IoT are a variety of “smart” applications, such as “Smart Homes,” “Smart Cities,” and “Smart Infrastructure.”⁵

We provide this ridiculously long quote to give you a sense of how the Internet of Things potentially encompasses all the components of tomorrow’s smart techno-social environments: networked sensors capable of collecting and transmitting data to enable smartness (intelligence generation via machine learning and other techniques) and consequently action. Notably, the final value-creating step – action – is not always specified, much less linked to automation. This seems a convenient way to avoid the elephant in the room: *Who is smarter? Who acts on the new intelligence, and how? Who gains what power?*⁶

As our discussion of the extended mind emphasized, we must ask: First, who will be doing what thinking in these smart techno-social environments? Second, what are the impacts of smart techno-social environments on the development of human capabilities?

This may seem too abstract. We encourage you to pick a few examples – toothbrushes, televisions, homes, cars, etc. – of your own and consider our questions. Let’s consider who learns what from a smart toaster.

Technology writer Mark Wilson highlighted the deskilling potential of smart devices in his critical review of the June, a \$1,500 smart toaster. At first glance, it seems ridiculous that anyone would pay this kind of money for a commonplace kitchen item that in “dumb” form can be purchased for a fraction of the price. But the June is built on the back of \$30 million in venture capital; it runs on AI and deep learning and contains many sensors.

As of now, the June appears to be glitchy. But we can expect that, over time, some version of it will improve and become available at a significantly cheaper rate. While we can’t predict the implications of this happening – especially since the effects will be influenced by other social trends – we’re sympathetic to Wilson’s concerns about the logic driving the developmental pathway. Above all else, it privileges machine learning: “When *you* cook salmon wrong, you learn about cooking it right. When the June cooks

salmon wrong, its findings are uploaded, aggregated, and averaged into a June database that you hope will allow all June ovens to get it right the next time. Good thing the firmware updates are installed automatically.”

Placing a higher value on machine learning than human learning is the hallmark of today’s Internet of Things, convenience-oriented, devices. The big existential question to consider, therefore, is whether engineering an appetite for pervasive smart kitchens will disincentivize people from cultivating culinary skills, including the personalized touches many of us associate with the favorite cooks in our lives.

The road leading to this possibility was paved long before consumer technology became an Internet of Things staple. As philosopher of technology Albert Borgmann repeatedly argues, widespread use of microwave ovens and a manufactured globalized taste for fast food helped set all of this in motion. That’s why when Borgmann considers the possibility of living in “smart” homes filled with “smart” appliances, he doesn’t envision future liberation. Instead, he cautions that “we will slide from housekeeping to being kept by our house.”

In some cases, improving intelligence correlates directly with improving the efficiency of a well-delineated functional task. Consider a few other examples from the home:

- A coffeemaker can be programmed to brew coffee automatically at a specific time.
- A smart coffeemaker may rely on a timer or sensor to determine whether a pot of coffee has been sitting on a hot burner for too long, in which case it may turn off the burner, reduce the temperature, or generate a signal such as a flashing light or beeping sound.
- A thermostat can adjust heating and cooling systems within a home based on a temperature sensor. It is smart in the sense that it can automatically make adjustments without human intervention.
- A smarter thermostat can integrate additional sensors, data processing, and control mechanisms and thereby adjust heating and cooling systems within a home based on more variables, such as temperature, time of day, and occupancy levels.
- A smart light switch can adjust lighting levels within a home based on time of day or motion.

Some of these examples involve sensors and programmed systems that can process and act upon data from the sensors. The first example doesn’t even need a sensor to be smart. (Some might conclude that the programmable coffeemaker therefore isn’t smart, but we think such a narrow conception

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of smartness would be underinclusive.) None of these examples requires (i) networking beyond the home, (ii) big data, or (iii) intelligence-generating systems beyond the home. In fact, each of these technologies can accomplish its core improved functionality locally and without integrating or interconnecting with each other or other smart devices.

Yet smarter Internet of Things versions of these technologies often will communicate beyond the home. There are various reasons. Some may do so by mistake or poor design. Some may do so deliberately because the device manufacturer would like to keep future options open. Some may do so because it helps with marketing, in the sense that consumers believe Internet-connected devices are better. Some device manufacturers may genuinely envision additional functionality, and some may assume innovation will follow. None of the reasons suggests technical or economic necessity.

Homeowners should be wary of smart home technologies that extend beyond the home. After all, whose intelligence is really being extended? Is it the homeowners', the device manufacturers', or other third parties'? The situation is quite like websites with hidden side-agreements. When supposedly smart devices collect data from within the home and communicate that data outside the home, the homeowner may be treated like a product, or, as the Internet of Things metaphor goes, like a person reduced to a thing.

We advocate two simple default rules/design principles for everyday things (not people!). First, don't connect, communicate, or interoperate. Second, only engineer intelligence as needed; make things only as smart as they need to be to perform a well-delineated functional task. (This is akin to a data minimization principle that has been proposed in the privacy-by-design literature.) Our proposal amounts to heresy in most engineering, design, and economics circles. We've flipped these communities' existing defaults, and so many people will conclude that we've gone too far. But let's be clear about two critical limiting principles. First, default rules are not absolutes; exceptions should be expected. Exceptions to such rules, however, require justification. Second, both rules and exceptions might need to be tailored to specific contexts. In some contexts, such as transportation, justifying connectivity, communications, interoperability, and engineered intelligence is rather easy, even if, as we shall see below, governance and implementation of smart transportation systems is ethically, politically, economically, and technically difficult.

Let's consider an example that would trigger an exception from the default rules we've proposed. In some contexts, being smart depends on accurate sensor-based intelligence coupled with (i) knowledge about what to do with the intelligence and (ii) the capability to act. Suppose someone installs a device with a sensor capable of detecting water seeping in a basement. If that is all the device can do, it is useless. It must be able to communicate to be functionally useful. Thus, for example, the device may ping the homeowners' smartphones to let them know about a potential problem. *Does that make the homeowners smarter?* It obviously does somewhat. They received new information. If they already know how to deal with the problem, then they can do so. If the homeowners lack such knowledge, what good is the notification? It would enable them to reflect upon and determine what to do next: consult friends, look online for do-it-yourself solutions, or contact an expert to assist them. It might be more efficient if the sensor immediately contacted a trusted service provider to handle the problem. That might be a perfectly reasonable and justifiable feature of the smart device, if the homeowners actively chose that option. This final point reflects a third default rule and design principle in favor of so-called active choosing.

In 2017, Burger King ran a TV ad that ends with a fast food employee asking, "OK Google, what is the Whopper Burger?" If a consumer had Google Home – a voice-activated speaker that functions as a digital assistant of sorts – near the television, the device would be triggered by the query and read the Wikipedia entry on the Whopper – an entry that Burger King allegedly changed before the ad ran. This call and response style of advertising is disconcerting because it creates a chain of communication that leads to a smart device reading a webpage that can be edited by anyone. Not only does this blur the line between information and advertising (Wikipedia is supposed to contain factual information like an encyclopedia) but it invites other minds into the home and raises interesting questions about control and who gets to do what thinking. Beside Google, Wikipedia, and Burger King, there are the Wikipedia editors. Suppose someone vandalizes the Wikipedia page in the hopes that a Burger King commercial will trigger the digital recitation of bawdy material in front of kids. But once opened, the channel is by no means limited to these specific exchanges: Expect creep and a much wider range of communications and invitations.

Some might retort that we're making a mountain out of a molehill. Many isolated examples of smart devices, such as a smart toaster, light

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bulb, or toothbrush, seem innocuous and almost trivial. As with nudging, electronic contracting, and many other examples we've discussed in this book, an incrementalist view can be misleading and lull one into habitual complacency. Smart technology will creep along various dimensions.

An individual smart device may creep in terms of data collection and/or function. For example, the specified, and so we shall assume intended, purpose of a smart TV with an always-on microphone may be to capture aural input for voice-activated commands. Communicating such data outside the home may be necessary for machine learning and other techniques to improve the voice recognition technology. But we can and should expect data collection and function creep. The always-on microphone can pick up much more data than actual commands. Apparently, the fine print of Samsung's Smart TV privacy disclosure once stated: "Please be aware that if your spoken words include personal or other sensitive information, that information will be among the data captured and transmitted to a third party through your use of Voice Recognition."⁷ When treasure troves of data such as this are collected and shared with third parties, it is hard to imagine companies will abide by purpose and use restrictions. In other words, using the data solely to improve voice recognition technology seems highly unlikely over the medium to long run.⁸

Suppose one deploys a host of different smart devices in the home. Standing alone, each device might not "transform" the home environment. Together, however, they might. The aggregate effects might resemble a tragedy of the commons in the sense that incrementally rational decisions lead to a net tragedy. Obviously, tragedy is not inevitable. Tragedy occurring depends upon various contextual details, such as whether the devices interconnect locally or beyond the home and how defaults are set for security, privacy, and user engagement (e.g. in setting parameters or programming options), among other things. The point is that creep phenomenon applies here as well.

At this stage of smart home development, we cannot say who will be doing what thinking or what will be the impacts on the development of human capabilities. With respect to the first question, many smart devices for the home environment involve outsourced intelligence and raise the possibility of a corresponding invitation for intrusion and/or control. In the third part of this book, we turn our attention to techno-social engineering tests that might provide a useful framework for identifying and evaluating when outsourced intelligence impacts basic human capabilities.

How Smart Should Our Shared Infrastructure Be?

Infrastructure systems are incredibly complex, and intelligence and control technologies exist in many forms and layers. The somewhat oversimplified layered model of the Internet presented in the previous chapter can be used to describe power, transportation, and other infrastructure systems.

Often overlooked and pervasive social policy and technological design questions concern where and how intelligence and control technologies are deployed within infrastructure systems. Who gets to decide how such technologies are used?

One topic where this issue has become the subject of intense debate is the matter of how designers of self-driving cars will solve the trolley problem.⁹ In its classic form, the trolley problem is a thought experiment that asks us to consider whether we would save the lives of several people from being hit by a runaway trolley if we had to pull a lever – an action that would send the vehicle to another track and kill someone there. Among other things, the scenario helps us think about whether there's a meaningful ethical difference between actively killing and passively allowing people to die. The variation for self-driving cars ponders what autonomous vehicles should be programmed to do if, say, they're on a collision course with a school bus that's carrying lots of innocent children and which can only be avoided by swerving and killing the single passenger in the car. *Should a simple utilitarian calculation be made?* If so, the choice is clear: count the lives of the children as being more valuable since there are so many of them. Or perhaps the passenger of the car has the right to insist that her vehicle prioritizes self-preservation. That attitude can seem selfish, but it's not an untenable position to hold.

Consider a variation of this problem. Imagine that you're in a self-driving car going down a road when suddenly, the large propane tanks being hauled by the truck in front of you start falling out and flying in your direction. A split-second decision needs to be made, and you are incapable of running through all possible decision scenarios and fully computing outcomes and trade-offs. The smart system driving your car, however, can do so. *How should it handle the question of who deserves moral priority?* Consider the following possibilities:

1. Your car should stay in its lane and absorbs the damage, thereby making it likely that you'll die.
2. Your car should save your life by swerving into the left lane and hitting the car there, sending the passengers to their death – passengers

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- known, according to their big data profile, to have several small children.
3. Your car should save your life by swerving into the right lane and hit the car there, sending the lone passenger to her death – a passenger known, according to her big data profile, to be a scientist who is coming close to finding a cure for cancer.
 4. Your car should save the lives worth the most, measured according to amount of money paid into a specific form of *life assurance insurance*. (Assume that each person in a vehicle could purchase insurance against these types of rare but inevitable accidents.¹⁰ Then, smart cars would prioritize based on their ability and willingness to pay.)
 5. Your car should (i) save your life and (ii) embrace a neutrality principle in deciding among the means for doing so, perhaps by flipping a simulated coin and swerving to the right if heads comes up and swerving to the left if tails comes up.
 6. Your car should (i) not prioritize your life and (ii) should embrace a neutrality principle and randomly choose among the three options.
 7. Your car should execute whatever option most closely matches the moral choices you would have made if you were capable of doing so. (Assume that when you first purchased your car, you took a self-driving car morality test consisting of a battery of scenarios like this one and that the results “programmed” your vehicle.)

We've presented a simplified hypothetical with limited options. One point these thought experiments make is that there's no value-free way to determine what the autonomous car should do. The choice of whether to save one person or many isn't comprehensible as a purely computational problem. Determining which value system to embrace is no more of a mathematical operation than favoring Hammurabi's Code over the Declaration of Independence (or vice versa). We will program autonomous cars to deliberately follow paths that preserve and end life, and this only makes the matter of finding morally acceptable protocols even more pressing. Indeed, once it's acknowledged that some form of ethics needs to be baked into the programming, the following sorts of questions arise. *Who should decide how autonomous vehicles will perform when difficult situations arise? Should it be politicians? Automotive executives? Or should people be allowed to customize the moral dashboard of their cars so that their vehicles execute moral decisions that are in line with their own preferences?* The alternative, after all, is to put some people in a situation where they're pressured to

abdicate control over highly valued decision-making. While creating design specifications that respect pluralistic values can seem ideal, it's no panacea. It's been suggested that a key to making smart transportation systems efficient is to create constraints that impose uniform behavior. If that's true, there's an important tension to resolve over whether efficiency or personal choice should matter more.

Once these issues are resolved, difficult questions remain. *What's the best way to convey to consumers what autonomous vehicles are programmed to do?* Philosopher of technology Mark Coeckelbergh expresses concern that if humans don't know how the vehicles they travel in make ethical decisions, they'll outsource aspects of their agency that are needed to engage in responsible behavior.¹¹ Even knowledge about how smart cars have been programmed doesn't alleviate moral concerns about ethical outsourcing. What matters is practical agency.

Ethical issues don't end here. Like the Internet, transportation systems are layered, and in addition to issues surrounding smart cars, we will need to confront a host of ethical and governance issues at the infrastructure layers.¹²

For example, business theorist Shoshana Zuboff insists that "automotive telematics" – which is to say, the surveillance and control capabilities of the automotive industry – are presenting problems that are poised to become more pressing when self-driving cars become the dominant business model. She writes:

Now, data about where we are, where we're going, how we're feeling, what we're saying, the details of our driving, and the conditions of our vehicle are turning into beacons of revenue that illuminate a new commercial prospect. According to the industry literature, these data can be used for dynamic real-time driver behavior modification triggering punishments (real-time rate hikes, financial penalties, curfews, engine lock-downs) or rewards (rate discounts, coupons, gold stars to redeem for future benefits) . . . [T]hese automotive systems will give insurers a chance to boost revenue by selling customer driving data in the same way that Google profits by collecting information on those who use its search engine.¹³

Another set of related considerations is highlighted by the following thought experiment about the future of smart transportation management.

Imagine: it's 2025 and you're an engineer managing traffic in and out of a major city. You watch the roads fill up at rush hour, as people in autonomous cars, trucks, and buses buzz alongside pedestrians and cyclists guided by Internet-connected eyewear. Your job is to plan efficient, safe, and environmentally friendly routes.

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Since this is the future, all your decisions are guided by data. Algorithms predict with astonishing accuracy what will happen when the weather changes, plans alter last minute, and emergencies require people to leave their homes and jobs in a hurry. Still, even with all this information, your job isn't easy. Every time you try to minimize congestion, you face the same problem: can you do better than first-come, first-served?

Today, police cars, ambulances, and buses sometimes get special treatment on the road because of the contributions they make to public welfare. But these narrow exceptions aside, our roads are managed without prioritization. First-come, first-served is the default.

In the future, however, we will be able to make finer discriminations about who individual drivers are, what destinations they've set, and what they're expected to do when they arrive. Armed with this information, would you place some folks in the fast lane and stick others in slower ones? Perhaps the woman on her way to a business meeting should get priority over the woman who is attending her son's soccer game. Or should it be the other way around? The decisions don't end there. Suppose only one of the drivers is going to make her event on time and the other will arrive too late even if she speeds. Presumably, you should determine who gets to go and inform the other person to stay home to minimize her impact on others. Over time, these sorts of decisions can be expected to occur frequently.

Bottom line: *Traffic engineers will assume the role of social planners.* Decisions made in single instances (e.g. prioritize x over y) according to decision-making protocols and embedded values aggregate and over time become social patterns.

Question: Which of the following is reducible to a computation problem?

- a) Life
- b) Traffic management
- c) Social planning
- d) All of the above
- e) None of the above

Answer: (e) None of the above.

In theory, fine-grained control over traffic seems like the perfect use of big data and artificial intelligence. That's why folks are enthusiastically lobbying governments to invest in smart grids and transportation systems.

In practice, however, things are more complicated. Contentious debates about power and privilege should arise.

To appreciate why, imagine being a traveler in 2025, instead of an engineer. Envision yourself in an autonomous car that's made it halfway to your destination. Say you're a parent en route to your child's championship soccer game, the match that your kid has been obsessing over for weeks. Suddenly, your self-driving car turns around. Confused and upset you say, "Siri, why am I being re-routed? Why is this happening to *me*?" In response, the digital assistant laconically replies, "Sorry, but there's priority traffic heading downtown." What you don't know for sure but deeply suspect is that the smart traffic-management software is programmed to assign a comparatively low value to "mundane" social outings like amateur sports. Business deals, like the one your neighbor is heading to, count as more important to society because they contribute directly to economic growth metrics.

At first glance, this scenario might seem like bad science fiction. In fact, it's an old and very real problem. For some time now, the related issues of control and intelligent infrastructure have fueled the network neutrality debate.¹⁴

The Internet both provided the blueprint and unleashed the wave of smart technologies that promises to transform most of the environments within which human beings live and develop, ranging from smart homes and smart offices to smart cities. The smart technology transformation is likely to work its magic first, however, on the basic infrastructures that operate unnoticed by most of us in the background. Smart grids and smart transportation infrastructure will literally pave the way for the smart technology revolution.

The history of the Internet also provides a decent map of future governance dilemmas society will face. The network neutrality debate will not only persist for the Internet but also will return in modified form for other infrastructural systems. At its core, the network neutrality debate is about whether and how private owners of the Internet's underlying communications infrastructure could use the intelligence they gathered. In other words, the network neutrality debate was and still is about how smart the Internet infrastructure should be.¹⁵ The core Open Internet rules aim to prevent broadband Internet service providers from using intelligence about the identity of end-users and uses (essentially, who's doing what online) to exercise control through various means (blocking, throttling, pricing). Constraining the networks in this fashion enables and even empowers end-users to be active and productive rather than merely

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passive and consumptive. As we extend networked intelligence onto other infrastructures – e.g. transportation and electricity – and into other spaces – e.g. cities, workplaces, and homes – society will need to grapple with how to govern intelligence and intelligence-enabled control.

Think again about transportation. In the eyes or algorithms of traffic engineers, vehicles on roads are just like data packets online. Both draw on network capacity, can create congestion during transit, and generate value upon delivery. Yes, there are many important differences between vehicles and data packets and between roads and the Internet. The analogy draws attention to functional similarities and helps us to see relationships between the underlying infrastructures and society.

Functionally, traffic management depends upon intelligence and control. Typically, managers must know something about supply, demand, actual and expected traffic flows, interactions among traffic flows, and so on. And they must be able to exert control over the traffic and users. Control is an essential feature of traffic management, and it can take many forms, ranging from pricing to norms and technological constraints. Such different possibilities mean control can alleviate governance dilemmas but also give rise to them, too.

Infrastructure matters to society for a lot of reasons. Many economists, sociologists, and historians focus on how infrastructure investment played a major role in shaping the modern economy. Changes to transportation are inextricably linked to expanding cities, the rise and sprawl of the suburbs, and the transformation of rural areas. At the same time, infrastructure has shaped the human condition by enabling us to exercise and develop fundamental human capabilities. Consider free will and autonomy, concepts that play a central role in ethical and political visions of responsibility and entitlement. It's one thing to theorize the importance of people making informed and uncoerced decisions. It's quite another to create reliable pathways for citizens to realize their potential for free thought and action. That requires opportunities to be mobile, communicate, and socialize.

To democratize these existential benefits and *many* others,¹⁶ both roads and the Internet historically have been managed as a commons. Guided by the logic that priority shouldn't be granted to anyone or any purpose, egalitarian policies have regulated infrastructure access and use. Sure, in an emergency, police can break speed limits and run red lights. But this narrow exception and others concern situations where our collective social welfare is at stake. They're not instances of fast lanes going to the highest bidders.

Different governance regimes can protect neutrality. The end-to-end architecture of the Internet can safeguard this goal. So can bolstering public ownership of most roads with regulations that promote public goods. Esteem for the commons goes a long way towards explaining why traffic engineering aims to mitigate congestion and not maximize market values or anyone's profits.¹⁷ But this ambition can change.

Forward-looking and quickly-acting industries are actively involved in the design and regulation of smart transportation infrastructure. It would be naïve to expect that shareholder expectations won't influence the much-touted policy goals of using smart grids to enhance safety, minimize negative environmental impacts, and create efficient routing. These expectations are part of the package deal of using proprietary products and services to mediate how smart vehicles communicate to other smart vehicles and interact with smart infrastructure. As with the Internet, all layers of the emerging smart transportation system present opportunities for surveillance and control.

Consider a hypothetical: Suppose automated and street legal trucks go mainstream before autonomous cars do. If this occurs, the interests of trucking companies might be advanced through systematic design. To maximize the benefits of keeping fleets of trucks close to each other, other vehicles would have to be encouraged to not get in their way. How vigorous might the promotion of fleet flocking be? We don't know for sure. You might think it's an engineering question to be left to the technologists, but it's really a question of political economy. If we adjust the hypothetical by suggesting a different path forward where a different industry sets priorities (say, autonomous vehicles, app-plus-data intelligence services, or even, dare we say it, networked bicycles and pedestrians), the same basic question arises: *Who decides how priorities will be determined and on what basis?*

The network neutrality debate taught us that smarter technology isn't always better technology. As we collectively decide how smart new forms of infrastructure should be, we should keep in mind that sometimes smart systems can be too smart for our own good. We need to be very careful here, however, because what we really mean by smart is powerful. Keep in mind that traffic management depends upon intelligence and control, and what we are concerned with is the specific use of intelligence to exert control and set priorities. Such infrastructural power can lead to significant forms of techno-social engineering which are difficult to identify, much less resist. Prioritization of traffic (infrastructure use) based on willingness and ability to pay (market value) rather than some other measure of social

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value affects the distribution of infrastructural affordances. Simply put, prioritization determines who is capable of doing what and often with whom. It is nothing short of social planning.

What does this mean for our future smart transportation system? We cannot hope to do justice to this question in this chapter. But we will offer a short answer. There is a strong case to be made for network-neutrality-style rules at the infrastructure layers of any smart transportation system. As we've explained, such rules sustain an under-determined environment and thus serve as a defense against engineered determinism, a topic we dig into in Chapter 12. Transportation systems are incredibly complex, and intelligence can and should be used to manage certain costs – such as congestion – and risks – such as accidents. This can be done in a manner that does not discriminate or prioritize based on the identity of drivers or some proxy assessment of or proxy for their value (e.g., market valuation), but again, it is a social choice involving complex trade-offs.¹⁸

Further, we should not fool ourselves into thinking that such costs and risks can or should be eliminated or even driven as low as technically possible because there are trade-offs to doing so.¹⁹ Tolerating some congestion, some friction, some inefficiency, even some transaction costs may be necessary to sustain an underdetermined environment conducive to human flourishing. We revisit this issue in the final chapter.

We are optimistic about the potential of a smart transportation system that intelligently saves lives, manages congestion, reduces environmental costs, and identifies maintenance needs. Autonomous or self-driving cars increase human agency by providing people with more time and attention to devote to other pursuits, whether productive, consumptive, contemplative, or social . . . who knows? While people debate exactly how many lives autonomous cars can be expected to save, it's widely thought to be large enough that it would be immoral not to make them street legal as soon as possible.²⁰ We're highly sympathetic to this view so long as enough attention is given to the difficult issues concerning governance, technical design, and social choices about normative priorities, as reflected in the trolley problem discussion as well as the traffic management thought experiment. These issues return us to the basic and familiar *who decides* theme. This question needs to be front and center as industry and governments pave the way for the emergent smart transportation systems. We cannot afford to leave it to technologists, politicians, or some abstract and ultimately meaningless conception of a free market.

We hope this book persuades the reader to consider humanity's techno-social dilemma seriously. We are building our world and ourselves in the process. We cannot ignore the political economic realities or simply defer to idealized conceptions of free markets. "Free market" is merely a slogan, yet it has had quasi-religious power in shaping beliefs, preferences, and political debates and outcomes. Putting aside how all markets exist within social governance structures, we must emphasize that even robustly competitive markets routinely fail in many ways. The most ardent neoclassical economist will admit that competitive markets do not assure us of an environment that maximizes social welfare or human flourishing. As one of us explained in the context of the network neutrality debate:

Competition does not ensure an efficient allocation of resources. It does not assure us an Internet environment that maximizes social welfare. Competition does not address these interests for the same reasons that antitrust law is orthogonal to environmental law – antitrust law does not address market failures associated with externalities, whether environmental pollution (negative externalities) or the production, sharing, and productive reuse of public and social goods (positive externalities). Indeed, it is well established in economics that competitive markets overproduce pollution and underproduce public and social goods.

Despite frequent claims to the contrary, we cannot count on markets alone to self-regulate or provide the necessary discipline on technologists designing techno-social environments. The trolley car dilemma and traffic management examples illustrate what we should expect.

Smart Media/Mediation

We began the previous chapter with mass media, and we'll end this one with smart media. Essentially, the term 'smart media' refers to the various digital media platforms and systems enabled by the Internet that operate at the applications, content, and social layers of the five-layer model we presented earlier. Many of the most powerful media companies that regularly engage in data-driven techno-social engineering of humans operate applications-layer platforms – social networks, search engines, marketplaces, even online games. We've discussed many examples in this book and there are more to come.

The dominant data-and-advertising-driven business model (and corresponding incentives) shapes smart media platform design, algorithmic policing, and users. The smart media industry recognizes how the business model affects platform design, often casting the optimization problem in

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terms of maximizing user engagement. While this term can have nuanced meaning, we think it really boils down to optimization for clicks – actions that generate revenue or data. Many have lamented the quick click culture engendered online, suggesting that it has reduced attention spans and cheapened social discourse. There are many counter-examples. Our simple hypothesis is that smart media platforms optimized for clicks engineer humans to behave like simple machines by treating them as resources. Second, smart media systems run into the same normative issues as other smart systems in terms of social planning and techno-social engineering. Smart media shape beliefs, preferences, knowledge, relationships, democracy, and so on. As such, there seem to be decent reasons to turn to human experts to evaluate quality and shape discourse. Conventional mass media recognized the need for expertise, judgment, and even ethics, particularly in certain areas such as news. Yet various social/cultural/technological developments seem to have pushed in the opposite direction.

The smartness of smart media systems is not grounded in human expertise or judgment concerning the media content; rather, it's grounded in data, intelligence-generating systems, popularity, celebrity, and the apparent wisdom of crowds. In some domains, these sources of intelligence are likely to be better, but it's a dangerous social gamble to rely on smart media systems across all knowledge domains.

To limit our discussion, we'll stick with familiar giants, those household names that have the largest market valuations and social impact: Google and Facebook. In addition, we'll focus on the problem of filtering objectionable content. However, these really are tips of the proverbial iceberg, and they are exemplary. There are so many different digital media platforms and content evaluation problems to examine. We don't have the space to discuss the contours of fake news, cyberbullying, hate speech, pornography, or copyright infringement. These examples, like many others, seem to require smart media solutions, meaning intelligence-enabled control, whether through filtering, blocking, prioritization, outing, or other forms of discipline. *Who knows whether in fact such control is socially desirable?* It's too important a question to be ignored or for the answer to be assumed. Yet the massive growth in the scale and scope of content, data, relationships, transactions, and so on, generated every minute, across multiple jurisdictions, pushes quite strongly towards smart technological mediation. Whether intelligence-enabled control in smart media systems is, will, or should be exercised discriminately as an exceptional, targeted intervention or regularly as part of a broader program

of techno-social engineering remains an open question. We return to some of these issues in the final chapter – by focusing on the fake news problem and possible solutions. For now, we'll focus on recent examples that highlight the basic problems.

In April of 2017, a shocking video was posted to Facebook that showed Robert Godwin Sr., a retired grandfather, being shot in cold blood by a man who filmed the murder he committed on a smartphone. Facebook didn't take the video down until approximately two hours after it appeared and critics chastised the company for acting too slowly. Some went further and proclaimed that the tragedy – or more precisely, a tragedy like it – was inevitable thanks to techno-social engineering. *Washington Post* columnist Kathleen Parker wrote:

People will film themselves doing just about anything and everything. Younger folks who've been documented since birth, as well as during, and have never known a cellphone-free moment, perhaps can't fathom why they shouldn't "share" their every whim, appetite and mood . . . For every exhibitionist, there are a million voyeurs. We're all so riveted to our screens that a moment not captured and telegraphed to our thousands of social media "friends" may as well not have happened . . . I worry that the underlying imperative in our see-and-be-seen culture – one increasingly without even the expectation of privacy – soon leads to the expectation that one shouldn't have any privacy. Some slippery slopes really are slippery.²¹

Parker's concerns overlap directly with issues we discuss throughout the book. At the same time, the tragedy is part of a larger problem for smart media that we haven't addressed yet. Some of the problem revolves around questions concerning whether Facebook and other similar online companies should be subject to content regulations just like "traditional" media broadcasters. And some of the problem revolves around questions concerning whether the artificial intelligence that plays an integral role in content policing is up to the challenge.

To get clearer on these issues, let's think about some of the design features and value-laden considerations that are associated with Facebook and related online platforms. Many of these platforms want to provide users with a great amount of discretion over what content they can choose to post. Such dedication to diversity is an expression of a commitment to an ideal that many believe is central to the very fabric of democracy: promoting and protecting free expression. Spokespeople for Facebook, YouTube, Twitter, Instagram, and the like regularly portray their services as conduits for communication akin to phone companies that leave the scope and quality of conversations up to the users themselves. This is

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an idealized view which obscures how platform design mediates user communication and downplays how mediation is a form of techno-social engineering.

Even as these companies tout the value of free expression, they also affirm that their services impose limits and shouldn't be confused with environments where anything goes. Explicit community standards are established to prevent information that violates widely accepted norms from being shared, remaining online, and travelling to inappropriate feeds. These standards are not just about enforcing decency, but are also a business tool that is partly implemented to minimize the likelihood that users will be so offended by certain shared content that they will cancel their accounts.

Consider Facebook's Community Standards document.²² It states:

We remove content, disable accounts, and work with law enforcement when we believe there is a genuine risk of physical harm or direct threats to public safety . . .

To help balance the needs, safety, and interests of a diverse community . . . we may remove certain kinds of sensitive content or limit the audience that sees it . . .

By joining Facebook, you agree to use your authentic name and identity. You may not publish the personal information of others without their consent . . .

In principle, policies like the one Facebook uses are supposed to be minimally prohibitive, much like the legal proscription against falsely shouting fire in a crowded movie theater doesn't diminish First Amendment protections of free speech. In practice, however, things are not so simple, such as Facebook's reliance on a "real name standard." The standard is said to impact vulnerable populations the most – people who wish to discuss sensitive topics in safe spaces, people who want to criticize power norms without retaliation, and victims of crimes like domestic abuse.²³

Additionally, smart media companies typically provide a mechanism for users to customize (at least somewhat) their experience of what they want to read and see on a platform. Personal customization through filters is supposed to enhance user control. But, in practice, filters can be techno-social engineering tools that modify user expectations and influence their preferences.

Shortly before the Facebook incident, YouTube came under fire for how its "restricted mode" filter was working. The filter is "an optional setting that you can use to help screen out potentially mature content that you may prefer not to see or don't want others in your family to see."²⁴

Unfortunately, some LGBTQ vloggers (i.e. people who create video-based blogs) discovered that restricted mode was rendering their content invisible, as did other minorities. Not only did this exclusion raise social justice questions, but it also had financial implications for the people who were losing page views. Technology writer Fruzsina Eordogh notes:

Restricted Mode, a feature introduced in 2010 and used mostly by schools and libraries to filter out sensitive videos inappropriate for children, should include some LGBTQ+ videos, according to YouTube, but the net cast by the algorithm is currently far too wide. Coming out stories, transition videos, wedding vows, mental health vlogs and even style and makeup tutorials are caught in the ban, videos that have absolutely no sexual or violent content that would merit them being invisible in Restricted Mode. In fact, most of the videos creators have complained about being censored have significant educational value.

Beyond LGBTQ+ videos, Restricted Mode seems to unfairly target content about black people ... and black content creators, especially if they have a more “urban” or controversial style ie: not family-friendly for middle class white people.²⁵

YouTube probably wasn't intentionally trying to engage in unfair discrimination. At present, restricted mode, like all policing algorithms in the smart online media landscape, are vulnerable to four fundamental problems. First, algorithms can have a difficult time correctly identifying content that has context-specific meaning. This shouldn't be surprising, as humans can be terrible at it too – a problem that was vividly illustrated when Facebook employees removed a famous photo of a nude girl running from a napalm attack during the Vietnam War.²⁶ Second, values change over time in a pluralistic democratic society, ideally in ways that diminish prejudice and shatter harmful taboos. This makes the designers of policing algorithms responsible for understanding social change and ensuring that their software adequately reflects the times. Neither are easy tasks, and this brings us to the third problem. Companies that rely on policing algorithms need to ensure that explicit and implicit programmer biases are mitigated against when necessary. Unfortunately, problems can go undetected until real world debacles occur. And, finally, there's the issue that critics focused on when Facebook was slow to remove the gruesome murder post. How quickly can humans at a technology company respond to situations where their policing programs make the wrong call or fail to detect a problem?

Note that a fifth and perhaps more fundamental problem may be the data-and-advertising-driven business model itself.

CHAPTER 9

#RelationshipOptimization

This chapter is about sociality. Sociality is a matter of relating to others. In practice, it consists of exercising various capabilities, including reflecting upon and determining our own beliefs about others. For example, to relate to others we often need to try to understand what they think and feel about a range of issues, including how they perceive us. We also need to be able to assess their character and decide such things as whether they're truly loyal or, instead, merely self-servingly manipulative.

Relating to others often entails reciprocity, and this includes letting people who treat us well know that we have high regard for their thoughts and feelings. This type of communication may either go well or be fraught with misunderstanding. No matter how similar to us, others always lack first-person access into our minds. Given their external location to our thought process, it's unreasonable to expect anyone to be a mind-reader. Even when people in our intimate circles claim to know us well enough to say things like "I know what you're thinking," they're either speaking colloquially or making an approximation.

Sociality also regularly depends upon the successful use of perceptive, sensory, and emotional capabilities. Picking up on social and physical cues can be crucial to maintaining human relationships. If I can't relate to or sympathize with you during moments when you claim to be in pain, do I deserve to say that I understand what you're going through when you start sobbing?

In short, sociality is a rich and complex subject, and many disciplines study it. What we've said about it so far barely cracks the surface. Now, however, we're going to present an inquiry into human sociality that deepens conversations about the impact techno-social engineering is having upon it. The analysis is spread out over four interdependent sections. The first three use a series of stories, examples, and thought experiments to describe and critically analyze different aspects of sociality. While doing so,

we set the tone for the discussions of free will, autonomy, common sense, and (ir)rationality that we'll present over the next few chapters.

The last section, however, goes in a slightly different direction than the others. There we discuss how techno-social engineering of human sociality can *creep across* different relational capabilities and different types of relationships. While this creep isn't inevitable, we argue that its potential needs to be acknowledged and resisted when appropriate, just like other forms of techno-social engineering creep that we've discussed.

A final prefatory comment is in order, however, on how sociality might have come to play a prominent role in human life. One prominent view contends that the propensity for sociality lies in our very DNA, dating back to a time when the only way our ancestors could survive in the face of the strength and speed of predatory animals was to band together and develop cooperative practices. Philosopher of science Michael Ruse claims that humans have evolved to believe that cooperation is an ethical imperative, placing sociality on a moral high ground for the continuation of the entire species.¹

[B]iology has pre-programmed us to think favorably about certain broad patterns of co-operation . . . We are not hardline "genetically determined" like (say) ants, who go through life like robots. Nor are our patterns of thinking so fixed by our biology that culture has no effect. But the fact remains that, to make us co-operators, to make us "altruists," nature has filled us full of thoughts about the need to co-operate. We may not always follow these thoughts, but they are there.²

Ruse's thesis is controversial, and it would take us beyond the scope of this book to assess its accuracy. Instead, we're highlighting it to emphasize two things: (1) sociality is a longstanding feature of being human; and (2) Ruse is onto something important by linking human sociality with culture and social engineering. In this book our focus is on techno-social engineering and the problem of engineered determinism, not natural or biological determinism.

Digital Companions

Linguistic Coaching, Impersonation, and Digital Immortality

Our personal and collective identities are intimately connected to language. How we speak can convey a lot about what we've experienced – where we're from, how we've been educated, what we read, watch, and listen to, and whom we surround ourselves with. Think of the grueling linguistic tutelage Eliza Doolittle endures in *My Fair Lady* to improve her life.

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Indeed, language can reveal our attitudes towards morally and politically charged topics, like social convention and class. For example, if you address an authority in an overly informal manner, that can signal something about your view of that person. Perhaps you think a CEO is stuck-up and needs to be taken down a peg for his arrogance. The same anti-elitist gesture, however, also can convey something fundamental about how you see the world and your place in it. Maybe you want to prevent a silver-spooned CEO from controlling how less powerful employees speak because you believe deferential social conventions are oppressive.

On the most basic existential level, language is crucial to our humanity. We can't read other people's minds. They can't directly peer inside ours. Language thus shrinks the gap between self and other and makes deep relationships possible: it allows us to infer, perhaps even know, what folks are thinking, feeling, hoping; it can bring others into our inner worlds; and it enables us to make plans and coordinate our actions with others. As many argue, this is a distinctly human capacity.³

What is language, then, if it can describe the way we process actions as well as the way we manipulate words? Understand from this perspective, language is not a method of communication, per se, but rather a method of computation. Other animals clearly communicate with one another, sometimes in fairly elaborate ways. Whales sing, monkeys howl, birds chirp. Lizards bob their heads up and down to communicate, and some squid do it by regulating the colouration of their skin cells. But none of these processes can be explained by language.⁴

As we'll discuss in detail in the next chapter, the exceptional human use of language is why the traditional Turing test revolves around human conversation. If a machine genuinely can keep up with us as we bounce from topic to topic and alternate from factual questions to sarcastic banter, it might understand our way of life, just like other people do. And if that's the case, the computer deserves recognition for exhibiting social intelligence. Indeed, while in some respects Turing advanced a novel position, his views on language also reiterated longstanding historical assumptions. Back in 1637, philosopher René Descartes wrote:

For one can well conceive of a machine being made so that it utters words, and even that it utters words appropriate to the bodily actions that will cause some change in its organs (such as, if one touches it in a certain place, it asks what one wants to say to it, or, if another place, it cries out as if one was hurting it, and the like). But it could not arrange its words differently so as to respond to the sense of all that will be said in its presence, as even the dullest men do.⁵

Since how effectively computers process language impacts our appraisal of how far they've advanced, the media enthusiastically covered start-up company ETER9's announcement that it aims to create a social network that "turns your personality into an immortal artificial intelligence".⁶ On ETER9's platform, two interesting things will supposedly take place: artificial intelligence software will learn about a user's personality by analyzing what she posts; and artificial agents will apply that knowledge and, on their own, create high quality, new content on a user's behalf, even after she dies. If ETER9 succeeds, digital doppelgängers will convey estimates of our thoughts while our bodies decompose.⁷

ETER9 isn't the only technology company with skin in the simulated self game. Google, for example, submitted a patent for software that learns how users respond to social media posts and automatically recommends updates and replies they can make for future ones.⁸ This wasn't a surprising filing. Google already predicts how our minds fill in blanks when using a search engine, and so perhaps it was inevitable that the company would aspire to automate our social interactions. Ultimately, it might direct our email, instant messages, and texts, too.

If you've bought books or music on Amazon, watched a film on Netflix or even typed a text message, you've engaged with machines that are designed to figure out how our minds work and steer our choices with personalized recommendations. They, too, use predictive algorithms to find patterns in our previous behavior and make inferences about our future desires. Apple has capitalized on this data mining and processing with QuickType, the software that's installed on iPhones and predicts "what you're likely to say next. No matter whom you're saying it to." Apple was so satisfied when the product was released that it represented the tool as yielding "perfect suggestions."⁹ Critics didn't buy it and continue to complain of performance issues. But Apple depicts QuickType as so contextually sensitive that it can adapt its recommendations to the different styles we use when talking with different people and determine that "your choice of words is likely more laid back with your spouse than with your boss."¹⁰

And then there's an app called Crystal that's marketed as "the biggest improvement to e-mail since spell-check."¹¹ Essentially, the software creates personality profiles of people you want to email (by aggregating and analyzing their online posts) and offers targeted recommendations for how to communicate with them. People have different communication styles, and the folks at Crystal contend that if we fail to appreciate them, misunderstandings and hurt feelings can result. In the corporate world,

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for example, efficient workflow can require effectively translating our thoughts into recipient-friendly formats. Treating highly analytical correspondents who prefer maximum detail as if they're trusting intuitive types can be disastrous.

Crystal's guiding vision, therefore, is that when you don't speak to people as they want to be spoken to, projects can be undermined and folks can feel like their colleagues are selfish or insensitive. To avoid these pitfalls, putatively you just need to minimize the distance separating self from algorithm and defer to both the software's detective work and suggestions.

Only time will tell if ETER9 lives up to the hype. But as is often the case with prognostics about bold technological development, speculative fiction has already covered the subject and considered potential social impact. "Be Right Back," an episode of the dark British series *Black Mirror*, suggests we'll get much more than we bargained for if technological proxies become our ventriloquists.¹²

Martha's Disenchantment

"Be Right Back" revolves around a romantic couple, Ash and Martha. Ash spends a lot of time online, chronically checking social media. After he dies in a car accident (possibly due to digital distraction) a friend intervenes by signing Martha up for a new service. Despite initial misgivings, a grieving Martha eventually tries to find solace with computer programs that are designed to dig into his extensive data trail and replicate his personality – his disposition, presence, and even character. After using a text-based service that simulates written chats, she tries a voice-powered product. It allows Martha to talk with an audio simulation of Ash – something like an uncanny version of her partner reincarnated as Siri, or better yet, a male version of Samantha from the human-computer romance movie *Her*.¹³ The conversations prove addictive. After the ventriloquized version of Ash suggests she take things to the next level, Martha orders an upgrade. She gets a full-blown android that's designed to look, sound, and behave just like Ash.

At first, Martha is thrilled with her purchase. Android Ash appears to have the real Ash's charm and warmth. Even better, it outdoes him in some respects. With an ability to quickly study vast amounts of online pornography and immediately emulate highly rated moves, Android Ash turns out to be a better physical lover. It holds out the prospect of being Ash 2.0, an iteration that may be better than the real thing.

Over time Martha becomes disenchanted. She's displeased with Android Ash's unending willingness to please and is unhappy about the subtle mistakes it makes that serve as painful reminders it's not Ash's exact double. Android Ash is a mere performer whose success in the role depends upon Martha's willingness to accept approximations as a job well done. Martha herself says as much when she tells Android Ash: "You're not you, you're just a few ripples of you. You're just a performance of stuff that he performed without thinking, and it's not enough."

Martha's changing outlook becomes cemented after an especially emotional interaction. She asks Android Ash to jump off a cliff, a request that proves confusing and prompts the machine to explain that the real Ash never conveyed suicidal thoughts or tendencies. Martha responds by noting that's the point, and the real Ash would have immediately recognized the demand is insane, if taken literally, and responded by crying. Then, as if Android Ash were one of Pavlov's dogs uncontrollably responding to a bell, it promptly starts to weep. Martha finds the servility disgusting.

"Be Right Back" isn't just about the limits of artificial intelligence and how hard it is for computers to simulate people we care about – to perfectly mimic their expressions of what they believe, what they desire, what they stand for, and how they make sense of the ever-changing things going on around them in the ever-fluctuating world. And unlike so much technophobic fiction, it isn't about robots going rogue and turning on their masters – a theme that the media are quick to pounce on, like the time when it portrayed as true a hoax about "a robot programmed to love" ensnaring a "young female intern" with "repeated" hugs.¹⁴ And while privacy theorists might be alarmed by how the issue of permissions is treated – nobody questions whether Ash would have consented to a company using his data this way, or Martha using simulated Ash products – that doesn't appear to be the set of issues the viewer is asked to focus upon.

No, the episode is fundamentally about us. Not in the sense of drilling down into the question whether there's something spiritual or physical that makes it impossible for digital personas to ever be functionally identical to human personalities – although it's hard not to wonder about that throughout the viewing. First and foremost, "Be Right Back" asks us to think long and hard about *whether we'd become dehumanized* if, unlike Martha, we were willing to treat imperfect computational approximations of our partners as good enough relationships. Whether or not you've seen the episode, that's the thought experiment we'd like you to consider.

If your lover died, would you order an android version, if one was available? If so, what would you do with it? Would you go as far as trying to make a life with it? These are fraught questions, especially because grief can be powerful, even all-consuming. But the underlying issues are just as relevant in variations of the “Be Right Back” scenario. As a single person, would you order an android that’s programmed to behave like your vision of an ideal partner? This might seem tempting. You could then have an enduring experience of what humans get as a fleeting moment when they initially become romantically involved with one another: a honeymoon phase where objects of affection appear without flaws and get put on pedestals.¹⁵ In *Love and Sex With Robots: The Evolution of Human-Robot Relations*, artificial intelligence expert David Levy contends questions like these will be resolved soon when humans routinely fall in love with robots.¹⁶

Autonomy, Reductionism, and Meaningful Relationships

If Martha embraced Android Ash as a good enough proxy, she’d need to accept something profound: free will is not required within intimate relationships. After all, Android Ash lacks genuine autonomy; it cannot determine its own intentions. It can only do what it’s been programmed as a robotic servant. For example, Android Ash can’t break its computationally enforced script and become internally motivated to tell Martha that it doesn’t want to be bossed around and treated like property. Indeed, Android Ash lacks the power to change its mind on its own about anything. It’s stuck forever examining the data stream the real Ash left behind, predicting what that version of Ash would do in a given situation, and either impersonating the forecasted response, or asking Martha for permission to try out a different behavior that she’ll find more satisfying.

Android Ash, therefore, is nothing more than an animate slave. It can’t choose to walk away from Martha or grow and evolve in ways Martha finds displeasing. Indeed, Android Ash lacks its own preferences (it can’t prefer to be doing something else or be somewhere else) and its own desires (it can’t fall in lust, much less deal with being overwhelmed by those feelings).¹⁷ All it can do is conform to standards of what Martha finds comforting and entertaining. It can’t ever intentionally introduce elements of risk into the relationship that can reasonably be expected to undermine initially shared goals and lead to “failures” that folks sometimes associate with break-ups and divorce. Ultimately, Android Ash is the epitome of what philosopher Immanuel Kant calls “heteronomy”:

lacking self-determination and remaining fundamentally subjugated to an externally imposed will.¹⁸

By contrast, autonomy is a key component of being human, at least in the modern Western tradition. When social arrangements permit, we're free to decide whether to be self-absorbed or other-oriented. We can select whom to care about and make up our own minds about when to start caring more about them, or even stop caring about them entirely. Unlike arranged marriages, Western wedding vows are meaningful precisely because they're supposed to be freely chosen commitments.

Thinking about autonomy helps us appreciate an important dimension of Martha's interactions with Android Ash. Those exchanges raise the question of whether humans only pursue relationships because they want to be surrounded by stimuli that make them feel good. Now, people can become aroused by all sorts of things, even inanimate objects, and treat those experiences as instances of love. For example, someone can have such an intense reaction to seeing, smelling, and touching leather that she says she loves it. But is that really the same type of love that two people experience when they freely commit to one another? And, yes, people often describe their loyal and affectionate pets as beloved members of their family. But when someone describes her dog or cat as her child, is that sentiment best understood as comparison between beings that have things in common, rather than as a literal statement of cross-species equivalence?

A good way to get a clear sense of how you see things is to think of the importance you attribute to your partner giving you a compliment. Do you only care that positive words come your way and trigger positive feelings? Or is there something more at stake existentially than your subjective internal response – how displays of regard affect your mood? If there isn't, then you might approach relationships like a *stimulus-response machine*. In principle, functionally commensurate triggers that create comparable reactions can serve as substitutes, and you might not even have to wait too long before technology can accommodate your sensibilities. Abyss Creations already announced that it “wants to start making robotic sex dolls that talk back, flirt and interact with the customer”.¹⁹

Such a reductionist approach to conceptualizing relationships is in line with a reductionist scientific outlook – an outlook that some believe can explain why we aim for our loving relationships to culminate in marriage despite intimidating divorce and infidelity statistics. From this point of view, love is a series of subjective experiences motivated by neurochemical reactions.²⁰ According to one account, there's a lust phase where we're

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driven to sexual activity, thanks to a drive to reproduce and the hormonal power of testosterone and estrogen. Then, there's an attraction phase where adrenaline, serotonin, and dopamine draw our attention to a particular person that we desire. And when, over time, we become attached to a partner and collaborate to raise children, oxytocin releases help us remain interested, even when the feelings we experienced during lust and attraction aren't present.²¹ Seen this way, it's a mistake to believe two people experience love together in a transcendent way. Instead, love is driven by impersonal, physiological forces and is something that individuals internally experience on their own.

If you're repulsed by reductionist characterizations of relationships, it's probably because you believe it matters if your partner has free will and deliberately chooses to bestow praise when she doesn't have to. It matters that she has her own standard – which you can't control – of when you deserve praise. From this point of view, meaningful communication isn't generated simply because words are uttered that you, or other people, like to hear. It matters who or what sends positive expressions, like admiration, your way, and the conditions under which the regard arises.

Consider how sensitive we can be to the possibility that other people might look down on us. This can be just as emotionally impacting as receiving a compliment, albeit negatively. That's why people who can afford housekeepers are prone to doing time-consuming pre-cleaning before their employees report for work. By contrast, we doubt that if a robot cleaner – say a future generation Roomba – could tidy up everything as well as humans can the same compulsion would be widely felt.²²

What accounts for this difference? Why does it matter if humans or machines tidy up? After all, in both cases the same type of labor is performed. There's functional equivalence.

The answer is simple. Even if humans and service machines adhered to the same standard of cleaning, they'd still differ in an important way. Humans are morally judgmental. This is partially because we regularly presuppose others have free will and, as a result, can choose amongst different courses of action and be held accountable for the paths they opt to pursue. By contrast, service machines aren't programmed to look at us that way. If we give them a command to follow, they don't think about what we could have done to make that request unnecessary or less demanding.

So, while pre-cleaning appears to compromise the purpose of hiring a cleaner – by minimizing how much time and effort the third party saves

us – the fact remains that people are embarrassed about the prospect of having other human beings discover that they're sloppy pigs. Who wants to be seen as lazily disgusting? Who wants others to inwardly exclaim, "I can't believe this person doesn't even put minimal effort into basic home maintenance?"²³

Sociological Skepticism

Even if you accept that autonomy is a crucial mark of distinction that separates humans from robots for now and the immediate future, you might be skeptical that it amounts to much on an interpersonal level. Fueled by sociological doubt, perhaps you believe that romance is socially constructed and human approaches to love are mostly, if not entirely, robotic performances of socially expected behavior.

Take for example the widely shared conviction that a good partner should be conscientious and considerate. This isn't a value that individuals come up with all on their own. It's one of the roles everyone is expected to play as a member of a society that shares norms about partnership. It's reinforced throughout stories and movies of successful relationships; it's become the basis of widely shared advice; and it's the standard many appeal to when determining if they're in a good relationship. Describing how standardized, if not "automatable," many American romances are, design technologist and technology theorist Mike Bulajewski writes:

First there are the three main thresholds of commitment: *Dating*, *Exclusive Dating*, then of course *Marriage*. There are three lesser pre-Dating stages: *Just Talking*, *Hooking Up* and *Friends with Benefits*; and one minor stage between *Dating* and *Exclusive* called *Pretty Much Exclusive*. Within *Dating*, there are several minor substages: number of dates (often counted up to the third date) and increments of physical intimacy denoted according to the well-known baseball metaphor of first, second, third and home base.

There are also a number of rituals that indicate progress: updating of Facebook relationship statuses; leaving a toothbrush at each other's houses; the . . . exchange of I-love-you's; taking a vacation together; meeting the parents; exchange of house keys; and so on.²⁴

Because we're constantly judging our partner's performance against socially reinforced ideals that we've internalized, there can be intense pressure to live up to idealized expectations. And this, in turn, means that to avoid unpleasant repercussions, ranging from uncomfortable stares to harsh words or worse, our partners can feel compelled to *robotically compliment* us on occasions where they don't feel sincerely motivated to do

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so. They might even express their frustration in what sociologist Erving Goffman called “back stage” material, like a diary they don’t ever expect we’ll read.²⁵

We leave it up to you to determine whether romance is a reductionist state of affairs that’s regularly idealized as more. If so, then perhaps designing appealing, intelligent, servile robots who make us feel special and cared for would be a major advance – at least if we bracket the difficult related questions of whether making them would disincentive procreation, and, if so, whether that’s a problem. Or, for the reasons Martha rejects Android Ash, you might find a one-way relationship with a robot insufficient and prefer a more challenging and authentic human connection – one that would affect your own development differently than being surrounded by a perennial affirmation machine that’s incapable of being genuinely sincere.²⁶

Automating Relationships

Chawla’s Cautionary Tale

At some point, Rameet Chawla, founder of the mobile app company Fueled, became too busy to acknowledge his friends’ pictures of kids, vacations, and food on Instagram. Presuming he wasn’t interested in their affairs, they became offended. To make things better, Chawla turned to software for assistance.

Chawla designed a program to automatically “like” his friends’ photos. From that point forward, he didn’t even need to bother looking at the flurry of proliferating images or put in effort to judge which ones were meaningful. Technology took care of everything on his behalf. As *The New York Times* reported, the deception worked.

Suddenly, his popularity soared. Friends gave him high fives on the street; his follower count surged; the number of likes that appeared on his photos doubled. One friend he had alienated texted: “Ah, it’s fine, you’ve been giving my photo lots of life. I forgive you.”²⁷

Now, Chawla may have come up with an excellent engineering solution. But it’s worth asking if dishonesty spoiled the outcome. Presumably, Chawla’s friends could have been more supportive. But if a conscientious person isn’t inclined to systematically fake paying attention to others, this is a clichéd case of two wrongs failing to make a right. A breakdown in conscientiousness occurred, and, instead of confronting its source, Chawla used technology to evade the underlying problem.

Conscientiousness is a virtue, and it's closely connected to compassion, empathy, and altruism. When we care deeply about someone, we adopt a *conscientious attitude*. And when we live a life that's consistently committed to reaching out to others and attuning ourselves to what they're thinking and feeling, we develop a *conscientious character*.

When we're behaving conscientiously, we focus on people we care about and try to get a sense of what they're up to and where their lives are going. By considering what they're looking forward to and anxious about, we can be supportive and respond appropriately to goals, hopes, dreams, and desires. For example, if you know that someone is anxious about finding a job after graduating from college, you might proactively ask if she needs help networking – rather than waiting until she finds things difficult, gets into too much debt, and tearfully begs for your assistance.

Many of us wish we could be more conscientious. We'd feel better about ourselves and for obvious reasons our friends and family would benefit, too. But attending to all the practical day-to-day matters in life – going to work, cleaning the house, picking up groceries, doing the laundry, paying the bills, etc. – can get in the way of us more fully living up to this ideal. Sustaining relationships take lots of energy and time, and we find these are scarce resources, just as the ancients did. Note that this is a standard example of free will and autonomy in action. That is, we often have higher order desires about who we want to be and how we'd like to behave with respect to others, but more immediate and often external factors constrain us in ways that may lead to conflicts among our desires and reduce our autonomy, which we discuss extensively in Chapter 12.

Back in antiquity, the philosopher Aristotle differentiated three fundamental types of friendship: incomplete ones based on mutual utility, where participants are attracted to instrumental advantages, like business partnerships; incomplete ones based on mutual pleasure, like a common attraction to a sport or hobby; and complete ones based on mutual goodwill and virtue.²⁸ Aristotle proclaimed we can't lead a good life without complete friends who are unconditionally devoted to our well-being (amongst other things, they help us develop moral virtues like patience and trustworthiness). But he also acknowledged a hard truth. Even if we're fortunate, we can only have a few of them due to all the work caring requires.

The limits Aristotle recognized are exacerbated in the digital age, as we continually expand our connections through networking technologies. In this respect, Chawla's story is a great cautionary tale. It aptly illustrates how so-called frictionless communication doesn't simply make it easier to reach out to others, but also can burden our lives with interpersonal

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complications. We're not only stressed out about giving less than we'd ideally like to the most important people in our lives, but we also worry about shortchanging others whom we care less about, but nonetheless still feel great affection and obligation towards.

Chawla's dilemma illustrates a problem that's been discussed by lots of people, ranging from Jean-Paul Sartre's classic existential analysis to, more recently, social scientist David Zweig's writerly perspective.²⁹ Too many people are desperate for attention and build their self-esteem with bricks made of external recognition. While chasing after other people's approval is a longstanding malady, it's hard to deny that the current selfie-obsessed form partially is fueled by a *constellation of powerful techno-engineering forces*: social media platforms like Facebook are designed to suck maximum self-centered content out of us; Klout scores overlay Twitter with a celebrity ethos, where the goal of acquiring followers becomes an end-in-itself; and self-branding and persona management have become ubiquitous, eroding the boundaries between public and private correspondence.

So, much as we might wish we could always be there when others need us, we simply can't. We've got concerns of our own, finite resources, time-sensitive obligations, and links to all kinds of demanding connections which easily leave us feeling overwhelmed and stretched too thin. This unsatisfying situation makes it tempting to look for shortcuts, just like Chawla did. Yes, he may have taken automation too far by constructing a system that entirely removed human agency from the loop. But in many cases it's unclear which interpersonal tasks can be appropriately handed off to software and which delegations will undermine conscientious objectives. In short, it's hard to tell when a line is crossed that turns attempts to be considerate or respond to other people's demands for consideration into *dehumanizing endeavors*.

This is an urgent question. Many technologies have been and will continue to be developed that hold out the promise of optimizing our relationships. We'll have tough choices to make when deciding whether to use them and whether to be upset if other people use them on us.

The market already contains contentious options. Online greeting card companies enable us to automate birthday messages. Facebook still leaves content creation to us, but many respond thoughtlessly to its birthday prompts, as if they're to-do list items that need to be crossed off as quickly as possible.³⁰ Apps like BroApp remind users to contact significant others and offer formulaic notes they can pass off as their own sentiments – literally passing off app-provided prose as one's own thoughts through

a programmed schedule of dispensed notes so that loved ones get the illusion that they're being thought of at that very moment. Companies like Match.com even offer algorithms that help you find prospective new partners who look like your exes.

People who are pressed for time will be tempted to find these tools attractive, as well as the more potent ones that are developed in the next generation. And opinions will be divided when they're deployed. Take the case of programmer Justin Long's use of Tinderbox – a tool he developed that automates the dating app Tinder by combining “facial-recognition algorithms and a chat bot.”³¹ Basically, the app finds profiles of people who look like they fit the user's “type,” initiates three rounds of automated communication with prospective dates, and then, finally, prompts Long to personally get involved in the communication process. The system worked so well that Long had to disable it. Apparently, it “started conflicting with work.”³²

What should we make of Tinderbox? As it turns out, some of Long's dates were fine with the automation and didn't mind that he deceptively passed off bot-generated text as if it were human-created conversation. One of the dates was even impressed after Long revealed all the algorithmic processes that were going on behind the scenes.³³

But, as the reporter who covered this story notes, there's another way to see things. “If Tinderbox is unsettling,” Robinson Meyer writes, “it's because it takes that commodification to the next level – treating people not just as data entries within Tinder but as piles of data themselves.”³⁴ That equivalence – responding to others as if they were mere information – is a reductive orientation that many would deem dehumanizing.

To get a clearer sense of where lines should be drawn, let's consider two closely related thought experiments.

Mood Walls in Smart Homes

Suppose you could have a digital wall in your kitchen that uses lines of colored light to display trends and patterns in your loved one's moods. Maybe it gleans how they're doing from their posts on social media, email communications, and text messages. Maybe your partner and kids (or whomever you live with that you care deeply about) help the processes by inputting personal data into constantly updating mood-tracking software.

If this technology helped you better appreciate how your loved ones feel and how different factors affect their moods – such as being in different

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environments, participating in different activities, and even being confronted by your own fluctuating emotions – how would that knowledge affect the relationships in your household? Would you become a more attentive partner or effective caregiver? Or might the mood status system have a negative influence, possibly a dehumanizing one?

In *Enchanted Objects: Design, Human Desire, and the Internet of Things*, author and innovator David Rose argues this is an amazing device that we should all want.³⁵ He justifies his preference with simple logic: with great information comes great potential for being responsive.

If we could know more about what's going on with those we love, we could alter our behavior in response. We might be quicker to celebrate the highs and good times of our lives together, more ready to offer support and understanding during low moments and difficult times. If we could see patterns of thought and mood in others, we might be better able to plan when and how we interact with them.³⁶

Rose's conviction that automating communication is the key to bringing families closer together infuses his admiration for one of his own inventions. Inspired by the play *Peter and the Wolf* (where each of the main characters is associated with distinctive music and instruments) and the *Harry Potter* series (which references a magical clock that keeps track of the fictional Weasley family members), he built the prototype for the Google Latitude Doorbell. Rose describes it as follows:

As each family member approaches the home, the chime sounds for that person when he or she is ten miles away, one mile away, or a tenth of a mile away [...] nearly home. It's not telepathy, but it does deliver information that gives clues to the mental and emotional states of each person. Frustration for the unlucky one in the traffic jam. Exhaustion with possible elation or crestfallenness, for the athlete. Mental distraction from the person in the intense meeting.

The design of both the mood status wall and Google Latitude Doorbell are guided by the assumption that good relationships can be fashioned by using technology to minimize misunderstandings and maximize predictive awareness. The question is whether such interventions would eliminate too much important human interaction.

An alternative way to judge the Google Latitude Doorbell is to consider whether it improves upon our standard means of communicating. Let's imagine, then, that we're comparing it to a more effort-intensive alternative: each family member gets ready to head home and calls or texts a relative who is already there and making dinner for everyone. In this

scenario, each caller or texter must put in the time to convey a message with a status-update and whoever receives this information needs to put in effort to acknowledge the updates. Is this exertion so valuable that eliminating it would remove something important from the communicative equation?

We believe the answer is yes. Thanks to social media, we already have access to a constant stream of status updates composed for multiple audiences. This information can increase intimacy through ambient awareness, but the fact remains that providing direct attention through personalized communication is an important way we show people we care about them. It's how we demonstrate they matter more than others who get less of our consideration.

Little gestures like saying "On my way home. Can't wait to see you!" do more than convey logistical information. They spread positive emotions and reinforce esteem by communicating that you care enough about the other person to ensure she is up to speed on your travel plans. By contrast, an automated sound can't convey such regard; neither head nor heart guides the communication; there's no underlying human intentionality. At bottom, it's nothing more than a pre-programmed outcome that's deterministically triggered by features like GPS coordinates. Efficient? Yes. Sincere? No. And, let's not forget, as a one-way signal, Google Latitude Doorbell isn't conducive to the reciprocity that comes from dialogue. It doesn't invite recipients to respond at all.

This brings us back to the mood status wall. That technology minimizes the amount of observation and checking-in that otherwise would be required to get a sense of how someone is feeling and what makes the person tick. While such scrutiny or attentiveness can be exhausting and fraught with unpleasantness, it's one way we go about showing others they're worth the metaphorical trouble – that they aren't valued only in circumstances when they're easy to get along with and don't impose friction on our lives.

The mood status wall takes an instrumental logic that many see as appropriate in some business contexts and brings it into a different domain: our personal lives. This technology is but one example amongst many that embody the same underlying ethos. We're transitioning from a time when getting a business edge required using sales applications (e.g. databases and contact managers) that contained fields for inputting data about customers (e.g. hobbies, birthdays, and names of kids) to using next generation versions of the technology in our personal lives for "managing" social and familial relationships. This process is what philosopher Jürgen Habermas called "the colonization of the lifeworld."³⁷

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Collapsing these domains allows data-mining to crowd out moral attention. It isn't enough to be aware of what people need and desire. We also need to care about them and their condition, and respond appropriately. Appropriate responses can vary, but our main point is that appropriateness can require more attuned engagement than commodified environments are designed to facilitate. But can that attunement and the potent positive emotions that come with it arise without the back-and-forth of conversations that, admittedly, sometimes can be taxing? If it can't, then, at a certain level, effort isn't a bug that limits interpersonal relationships, but an essential feature of human connection that we need to maintain commitments.

Predictables

Israeli designer Dor Tal created a thought experiment about a hypothetical app called "Predictables" that raises additional questions about when automation might be bad for relationships.³⁸ His scenario goes beyond the information-disclosing features of a mood status wall and focuses our attention on consumers using a combination of big data analysis and recommendation algorithms to coach their interpersonal decisions.

Tal's hypothetical app performs three functions. First, it can scrape our digital footprints and the data trails of those we want to monitor – capturing the smorgasbord of social media posts, search engine queries, email, GPS data, etc. Second, it can quickly analyze the vast information it tracks, discover behavioral patterns, and predict events that are likely going to happen in the future. And, third, it can offer suggestions, expressed in a visually intuitive format, for what you should do in light of the patterns and predictions it discovers. This information gets synced to a user-friendly "predictive calendar." For example, Tal imagines Predictables telling a guy that his girlfriend is "about to be sad" and advising him to buy her flowers. He does as he's told, and she's thrilled. As time passes, the software makes a stronger recommendation. It suggests that the relationship has gone on long enough and recommends that the user purchase an engagement ring.

This scenario may seem like a science fiction. But Tal's vision is based on existing technology. As he told one of us:

Most "big data" companies are able to analyze much more than how we feel and what will make us feel better. For instance, during my research, I analyzed more than 5100 of my WhatsApp messages and found very clear patterns that can easily be connected to produce predictions about my activities and future feelings. Facebook adds to its status line the option to share emotions.

Putting aside the numerous privacy concerns implicated by Predictables, the question is whether it's a good idea to use it or any similar technology even when all parties consent to being surveilled and assessed by the system. Some will say yes. They won't see it as adding any new moral wrinkles to the mood status wall. They'll contend it conveys useful information that otherwise can be difficult to obtain. And they'll insist that the recommendations it offers are mere nudges that users can ignore, should they choose to do so. Others will say no, categorically. They'll argue it crosses a fundamental line by engineering intimate interpersonal exchanges and relationships. They'll likely see it as a substitute in individual cases that lessens opportunities to develop critical perceptive, emotional, and social capacities.

Others still will be inclined towards a restricted affirmation. They'll see the technology as a good aid for dealing with people at the edge of their social networks. But they'll balk at using it to mediate their most intimate relationships.

We've all got people in our lives who we have genuine affection for but aren't so deeply committed to that we make the time to follow their social media posts or routinely catch up with them through phone calls and visits. Despite ordinarily putting in limited effort, we'd want to get in touch to express well-wishes or possibly even offer to lend a hand, if an emergency arose or a life-altering event occurred. Under these conditions, it can seem entirely appropriate to use technology as a filter for bringing these folks to the forefront of our attention, even though they are otherwise out of sight and mind.

For instance, if you got in touch with a long-lost friend who posted "My mother is sick" to Facebook, you'd demonstrate concern for her well-being under a set of trying circumstances. Nothing changes, morally speaking, if you do because an app predicts her mother is sick from a set of obvious clues (like your friend leaving several posts about needing to take time off work) and recommends you call. After all, we're not obliged to keep tabs on everyone. And, the recommendation that's offered seems like nothing more than a reminder to live up to the norms of common courtesy.

But people might believe it's a different situation entirely if this type of technology gets used on folks in their inner circle. If you care about someone that you have a special relationship with – a partner, a best friend, or a child – you might feel obliged to actively stay in touch and not outsource the monitoring. This can happen through face-to-face visits, or technologically mediated activity: phone calls, texts, emails, social media posts, and the like.

That said, bypassing the energy and commitment required to stay attuned to our inner circle through automated sentiment analysis might abdicate the moral attention described above. It can show others that we don't value them enough to commit to making their lives – out of all the lives we could attend to – worth our time. And perhaps turning to smart technology for recommendations of what to do in these situations abdicates care by demonstrating an unwillingness to be devoted to the hard work of making sensitive and responsible decisions that concern other people's well-being.

Algorithmic Bloodhounds

The Quantified Self (QS) movement is becoming quite popular.³⁹ Broadly speaking, QS draws on “body-hacking” and “somatic surveillance,” practices that, as their names suggest, subject our personal activities and choices to data-driven scrutiny. Typical endeavors include tracking and analyzing exercise regimes, identifying sleep patterns, and pinpointing bad habits that subvert goals. Recently democratized consumer technologies, especially smartphones that run all kinds of QS apps, enable users themselves to obtain and store diagnostic data and perform the requisite calculations.

In *The Formula: How Algorithms Solve All Our Problems – And Create More*, technology writer Luke Dormehl gives an interesting example of how far people are willing to go with QS to follow the ancient Socratic injunction “Know thyself!”

Consider . . . the story of a young female member of the Quantified Self movement, referred to only as “Angela.” Angela was working in what she considered to be her dream job, when she downloaded an app that “pinged” her multiple times each day, asking her to rate her mood each time. As patterns started to emerge in the data, Angela realized that her “mood score” showed she wasn't very happy at work, after all. When she discovered this, she handed in her notice and quit.⁴⁰

Dormehl sees the type of activity “Angela” engages in as having the potential to transform our very understanding of what it means to be human. Since we're entering an age where algorithms increasingly tell us who we are, what we want, and how we'll come to behave in the future, he says our time is marked by a “crisis of self” where algorithmic ideology is challenging the Enlightenment conception that, at bottom, we're “autonomous individuals.”⁴¹ What does it mean to be me? Perhaps despite the stories I tell myself and others about my unique experiences, preferences,

and desires, I'm not a special, singular snowflake, but a mere series of "categorizable node(s) in an aggregate mass."⁴²

What makes "Angela's" case especially interesting is that she apparently lacked confidence in her own abilities – her capacity to introspect and have edifying conversations about her well-being – to determine if work was making her miserable. She believed she needed more than her own mind and friends could deliver. She wanted cold, objective, quantified data to identify the source of an emotional problem. She thought that, without consulting the data, she couldn't make a responsible life-changing decision.⁴³

In our private lives, QS practices won't be limited to self-tracking. It's likely that over time they'll include a range of interpersonal applications and become integrated into *routine, domestic techno-social engineering practices*. Today, we tell our mobile-phone-carrying kids that being responsible means texting or calling when they get to their friends' houses. But what will happen tomorrow, especially when we're dealing with cases where more personal information is communicated peer-to-peer by machines without people in the loop? Will we expect automatic updates from our kids' phones announcing their locations whether or not they intend for us to have this information? How, in general, can we determine when those practices cross a line and become dehumanizing?

To get clearer about where your sympathies lie, consider the following extreme scenario. If it seems like an instance where dehumanization occurs, techno-social engineering might be a process that brings it about.

Period Tracking

Imagine you're at a party when out of the corner of your eye you see a friend looking intently at his smartphone. You ask why he's got his face buried in the screen. But instead of giving you a typical answer like "I'm on Facebook" or "checking email," he says, "I'm looking at the app that tracks when my wife menstruates and predicts when she'll have her next period." You ask if his wife knows about the surveillance. He says yes, she's totally on board and consent isn't an issue. Then, he offers several reasons to justify his behavior. "My wife gets very emotional during her time of the month, and having an app tell me when she's having this experience helps us avoid having awkward conversations about it. Without making things weird, I can decide if it's a good idea to plan a family camping trip over the weekend and when to schedule the next date night. It also helps me make better decisions: what food to have in the house; when to avoid saying

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things that can lead to a fight; and when to ensure my wife doesn't make big, bad decisions."⁴⁴

To get the full import of this example, some context is needed. Back in 2010, the *Washington Post* ran an article about "code red," an app for men to use to track women's periods. It states:

A tour of recent technological creations shows that menstruation apps for men are a booming market. "PMSBuddy," for example, is proudly "saving relationships, one month at a time." "PMS Meter" features "hilarious sound effects." And the infamous "IAmAMan," which is nothing if not unapologetic, allows users to track the menstrual cycles of several women at once, for those special times when you are a big cheater.⁴⁵

Now, the market for these services doesn't seem to be "booming" yet. Some of these apps aren't even supported any more. But men easily can download menstruation trackers specifically designed for them to use, or they can repurpose apps designed for women to gain more control over their own reproductive health. Moreover, many of the fertility-tracking apps on the market for women are "largely designed by men" and "invite women to give their partners access to the information."⁴⁶ Indeed, "the app Glow sends a little note when a user's partner is entering her fertile period, along with helpful seduction advice like bring her a bouquet."⁴⁷

Major technology companies also are encouraging widespread tracking. A recent *Time* post states that Apple – a company which exerts profound influence over what happens in the mobile phone market – is already on the menstruation tracking bandwagon as part of its electronic health agenda.⁴⁸

Your smartphone has reached a new level of intelligence: with the help of a forthcoming iPhone feature, you'll be able to tell when you're going to be getting your period.

The iOS 9 upgrade will add a track-your-period feature to the HealthKit app . . . The health app – which already tracks several screen-scrolls' worth of health and fitness data – seems to be able to record how long (and heavy) your menstrual cycle is. The . . . update is billed as a "reproductive health" tracker, so it may come with other features related to fertility . . . The extra feature, due out with the next update, will finally give women a more complete digital view of their health.

Debating Tracking

Let's unpack the key reasons why someone would think it's a good idea to track a partner's menstruation cycle. For starters, relationships have their ups and downs and, at times, both partners might wish to avoid certain

conversations. If using a menstruation tracker helps avoid the recurring unpleasantness that comes from constantly asking “Having your period?” bypassing disastrous dialogue could be seen as a good thing. Especially if the person who is being tracked finds the conversations a frustrating reminder that biology impacts mood and important parts of our emotional life are beyond our conscious control. Indeed, some find the idea that they’re “not themselves” – actual language that’s used to defend tracking – once a month existentially unnerving.

The second justification for tracking is improved conscientiousness. Tracking a partner’s menstruation might enable a person to be more attentive and helpful. For example, if a partner’s willpower is put to the test by cramping and cravings, it can seem like the way to have her best interests at heart is by making sure of two things: she has ready access to foods that will stabilize her blood sugar; and she won’t be tempted to consume unhealthy comfort treats she’ll subsequently regret eating.

The third justification centers on proactively dealing with mood swings. If a partner becomes more sensitive than usual, isn’t greater sensitivity during these times required? Isn’t it crucial to do everything possible to avoid saying or doing things that will create conflict? Isn’t it helpful to steer that person away from making big commitments until a time arises when they can give issues clearer consideration?

These are just a few of the justifications we’ve encountered in talking to folks about menstruation tracking apps. Lara Freidenfelds, a historian of women’s health, sex, and reproduction suggested to us that sex planning might be the true motivator for many adopters who use the app to track their partners’ cycles.⁴⁹ This defense of monitoring a partner’s menstruation may be persuasive to those who adopt the utility-maximizing outlook associated with *homo economicus*. Personal relationships are treated like a system that should be optimized to minimize inefficiency and waste through strict cost-benefit-oriented planning. From this point of view, someone who objects to using technology to track a partner’s menstruation cycle may seem more than old-fashioned, but also fundamentally irrational – prioritizing “political correctness” over progress.

Others, however, will find the arrangement described above outrageous. They’ll see the *homo economicus* imprimatur as a rationalizing veneer that obscures underlying sexism and a reductionist impulse to view women as basically blood-filled machines who blindly follow the dictates of illogical programming. From this perspective, what the surveillance advocate sees as digitally enhanced smarts is just repackaged old-school chauvinism. As feminist philosophers argue, even the venerable history of Western

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thought – a tradition that represents itself as the apex of rational reflection – has perpetuated the view that women are inferior to men because they're overly emotional. Per philosopher Alison Jaggar:

It is difficult for women to maintain their self-respect in a culture in which women and everything associated with the feminine are systematically scorned, mocked, belittled and disparaged. Even Western philosophy has participated in the cultural devaluation of women and the feminine by contrasting mind with body, reason with emotion, public with private, the sublime with the beautiful, and culture with nature and then associating the first and superior term of each opposition with the masculine and the second, inferior term, with the feminine.⁵⁰

Cultural devaluation extends to authoritative views of women having fundamentally defective minds. Today, some sexists will say that women are too emotional to be president. But as feminist philosopher Susan James notes, over long periods of history pre-eminent thinkers have advanced the driving ideology.

A great deal of recent feminist work on philosophy of mind has been grounded on a central claim: that the key oppositions between body and mind, and between emotion and reason, are gendered. While the mind and its capacity to reason are associated with masculinity, the body, together with our emotional sensibilities are associated with the feminine. Evidence for this view comes from at least two sources . . . [O]verly sexist philosophers have in the past claimed that women are by nature less capable reasoners than men and more prone to ground their judgments on their emotional responses.⁵¹

And so, one reason to find the tracking arrangement bothersome is to believe its advocates mistakenly construe women as, at times, thoroughly incapacitated by their bodies, and wholly incapable of addressing the weakness on their own, much less managing it.⁵² In other words, the problem lies with the premise that women are fundamentally prisoners of their biology and only can be fixed by partners looking out for their best interest.

This position resonates with ideas that Freidenfelds advances in *The Modern Period: Menstruation in Twentieth-Century America*.⁵³ She argues the experience of menstruation has social as well as biological dimensions, and that the social aspects have changed over time. The “modern period,” for example, is a historically specific type of experience. Women and men adopted distinctive forms of bodily discipline and bodily discourse acceptable for the American middle class. Women gained new control over their bodies (e.g. in 1984 physicians

started approving Ibuprofen to relieve menstrual cramps and, shortly after, the medication became available over-the-counter). They also established new expectations consonant with the modern period, such as what counts as acceptable public conversation (e.g. it's not taboo to mention PMSing) and what counts as reasonable requests (e.g. husbands and boyfriends can be asked to pick up tampons and won't be stigmatized for doing so).

Self-awareness is a fundamental component of self-control, and it's a valuable capacity to cultivate. By delegating aspects of menstruation tracking to others, a woman risks undermining the empowering effects that come from embracing modern period ideology.⁵⁴

Menstruation Tracking and Beyond

The logic behind the menstruation tracking app illustrates a broader set of concerns and isn't limited to a single form of mediating how loving partners relate to each other. For example, if a husband uses the app to track his wife's cycle, shouldn't he also use it to track his mother's and daughters' as well as his boss's and his employees'? In fact, shouldn't he use the app to mediate his relationships with all women?⁵⁵ Using the app, he presumably could avoid many discomforting conversations, be more conscientious, and relate better to women in general. In fact, there's no reason to limit his use of tracking apps to menstruation. After all, there are many other types of useful data, biological and otherwise, that could reliably be used to mediate social relations.

There's no reason to limit technological tracking to optimizing relationships with women: presumably variations could be done for all the men in his life. And there's no reason for our technology user to be a male. Women likewise would and presumably should use such technology to manage their relationships with other women and men. On its face, this isn't a parade of horrors, at least not for those who might be inclined to use the menstruation tracking app in particular.

It can be difficult to evaluate techno-social engineering applied to ourselves and our relationships. The menstruation tracking app raises some complex considerations that are also relevant to the broader category of quantified self apps. We hope this discussion has triggered useful thoughts about how techno-social tools mediate how you relate to others.

Creep

As the preceding examples demonstrate, sociality is a basic human capability that's highly susceptible to techno-social engineering. Hopefully, we provided diverse examples for your consideration. We intended for the variety to offer a hint about the topic we're covering here: *techno-social engineering creep*.

In previous chapters, we've discussed the concept and explained how it conceptually relates to humanity's techno-social dilemma and the slippery-slope arguments. We've also suggested that techno-social engineering creep is related to other more familiar creep phenomena, such as surveillance creep, outsourcing creep, and boilerplate creep.

This chapter has provided a series of examples where techno-social engineering creep exists or has the potential to gain traction. Techno-social engineering of human sociality can occur along multiple dimensions. To identify and evaluate techno-social engineering creep, it's important to analyze those different dimensions. Suppose, for example, we focus on a particularly important relationship, such as the relationship between spouses or intimate relationships generally. We might examine techno-social engineering of a specific aspect or subset of that relationship, as in the menstruation tracking app example, or techno-social engineering of the relationship itself in a more totalizing fashion, as in the Android Ash example. The shift from narrow focus to a more totalizing one is one dimension along which we might observe techno-social engineering creep. As we've suggested, a couple might decide to extend their use of available techno-social engineering tools from the menstruation tracking app to apps that rely on other biological signals to manage other aspects of their relationship. The techno-social engineering creep could easily extend to non-biological signals as well, as a few of the other examples demonstrated. It's hard to say when, if ever, such extensions would go too far and undermine or eviscerate the spousal relationship. But at the extreme, one might wonder whether both spouses come to resemble Android Ash, as far as their relationships are fully mediated and optimized according to the efficiency logic we discussed.

Another dimension along which techno-social engineering creep can proceed is relationship type – that is, the techno-social engineering tool can be extended from a certain type of relationship to others. Again, the menstruation tracking app, as well as any other tracking app, could be used to mediate non-spousal relationships. The technological tools are not

limited to any particular type of relationship. Yet their initial adoption might be more easily justified in the context of a particular relationship.

Another dimension that's worth focusing on is interaction type. For example, a techno-social engineering tool might optimize a particular type of interaction (e.g. a sales pitch, wedding speech, or pick-up line) or mode of communication (e.g. phone, email, text) and then gradually extend to other interaction types or modes of communication.

We're listing these forms of techno-social engineering creep to give you a clear sense of how sociality maps onto the larger theoretical framework we've been developing. That framework will be expanded upon considerably in the next few chapters where we propose novel techno-social engineering tests, discuss the practical value of wagering that free will exists, and elaborate upon what the problem of engineered determinism entails.

PART III

CHAPTER 10

*Turing Tests and the Line between
Humans and Machines***Introduction**

With this chapter, we transition from the second part of the book to the third. In the second part, we analyzed fundamental dimensions of techno-social engineering. In this part, we extend the analysis in three ways. First, we discuss the famous Turing test and explain how it inspired us to create a new form of analysis: techno-social engineering tests. Techno-social engineering tests can determine when humans are behaving like simple machines and if techno-social engineering adversely impacts important human capabilities, aptitudes, and dispositions. After discussing several techno-social engineering tests, we'll take the analysis further. We'll reflect on free will, engineered determinism, and ethical values. Finally, we'll conclude with recommendations for minimizing negative impacts of techno-social engineering. We'll argue for the importance of creating practices, policies, and systems that foster the practical freedom to be off.

Turing Test: A Brief Overview and Literature Review

Can machines think? This turns out to be a much more complicated question than it seems at first blush. In 1950, mathematician Alan Turing published a seminal paper, "Computing Machinery and Intelligence," that raised the question and then acknowledged the difficulties inherent in defining "machine" and "think." So, he pivoted away from the seemingly intractable question and instead developed a test to provide an operational definition of intelligence.¹ This chapter introduces the basic contours of the Turing test ("TT") and explores various features of the test that inspire our analysis in subsequent chapters.

Turing developed a *method* of testing and developing empirical evidence.

What he was proposing with his test is a way to make the overall question of machine thinking more precise so that at least in principle an empirical test could be conducted. Thus, Turing's replacement strategy involves both a clarification of meaning, particularly about the nature of the machine, and a procedure for obtaining good evidence.²

The TT is modeled on what once was a popular party game, the Imitation Game, where a man (A), and a woman (B), enter a separate room from the interrogator (C), and the interrogator attempts to determine which of the other two is a man and which is a woman by asking a series of questions. The interrogator knows the individuals by the labels X and Y and may ask questions like, "will X tell me the length of his or her hair?" The answers are provided as text to prevent any bias based on tone of voice. What makes the game so interesting is that A's objective is to cause C to fail to make the correct identification. As a result, A may answer questions untruthfully to increase the odds of a wrong identification. After several rounds of questioning, the interrogator guesses the sex of the individual by saying: "X is A" or "Y is A." (Obviously, the Imitation Game is a sign of the times it was played in.)

Turing's test for machine intelligence takes much of its structure from the Imitation Game. In its standard version, a machine and a human are separated from an interrogator, and the interrogator poses a series of questions to the machine and the human in order to identify which agent is human. Further, the machine will attempt to exhibit human-like conversational behavior to trick the interrogator into making the wrong identification. As in the Imitation Game, answers from the machine and human are typed to avoid any biases. Turing predicted that by the year 2000 an interrogator would not have a greater than 70 percent chance of correctly identifying the machine after five minutes of questioning.³ This identification threshold is a common view of what constitutes "passing" the TT.

The TT allows the communicative behavior of the two agents involved in the Imitation Game to be scrutinized. Communication is considered an appropriate locus of investigation because of the link between intelligence and verbal output. Consider, for example, how we commonly attribute intelligence to other humans, even though we are unable to peer into their minds and do not have direct access to their mental processes. Despite this limitation, we still attribute intelligence to other people, and through inferential or analogical processes about their behavior consider them intelligent just like us.

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One way we consider other humans' behavior intelligent is by judging their verbal outputs. For example, you have a conversation with a patron in line at the local coffee shop and based on their complex, intelligent verbal outputs, you justifiably attribute intelligence to that person. If we believe the patron is a machine, then, unless we're prejudiced against machines, consistency demands that we accept the verbal outputs of the entity as intelligent.

Computer scientist Stuart Shieber usefully expresses the TT in formal terms:⁴

- *Premise 1:* If an agent passes a Turing Test, then it produces a sensible sequence of verbal responses to a sequence of verbal stimuli.
- *Premise 2:* If an agent produces a sensible sequence of verbal responses to a sequence of verbal stimuli, then it is intelligent.
- *Conclusion:* Therefore, if an agent passes a Turing Test, then it is intelligent.

There are complications to this line of argumentation, discussed further in Appendix B. Many critiques of the TT concentrate on the second premise. The arguments contend that verbal behavior cannot provide sufficient information for the attribution of intelligence to an entity. In other words, intelligence or justifiable attribution of intelligence is not reducible to verbal behavior. We also have concerns with focusing exclusively on intelligence, much less verbal behavior, as the characteristic or attribute that distinguishes humans and machines, especially when we approach the Turing line from the human side.

Turing Test as Useful Tool

The major critiques and extensions of the TT reveal contested conceptions of what the TT aims to accomplish and what, if anything, it actually accomplishes. Our objective is not to defend the TT or reconcile these various perspectives. Rather, our goal is to show how the TT serves as a useful analytical tool or methodology. Some have questioned whether it is indeed useful in this regard and suggested that it fails to meet the standard that all graduate students learn for experimental design: "never . . . design an experiment to detect nothing."⁵ Computer scientists Patrick Hayes and Kenneth Ford suggest the Turing Test suffers from this design flaw and, as a result, even when the test is passed, you're forced back to the drawing board to figure out what it all means:

Does passing the test tell us the machine is intelligent? That the observer asked the wrong questions? And by the way, what are the right questions? And heck, isn't that what the Imitation Game was supposed to help us avoid? And so on.

In our view, and this is critical to appreciate, such recursive deliberation is the Turing test's virtue, rather than its vice. The test really involves two critical steps: first, running the observational test under specified conditions to identify a remarkable machine; and, second, if and when a remarkable machine is identified by step one, then carefully evaluate. We exploit this two-step structure in our framework.

The Turing test should be understood in context and with a sense of the initial question that motivated Turing: *Can machines think?* The test is a means for developing objective, empirical evidence about *something*. The difficult question is *what?* Does it tell us something meaningful – or, more accurately, does it provide us with information that allows us to infer something meaningful about machine intelligence? Or about something else? Perhaps something about the questions asked by the observer? We can have that discussion when the time comes, and it probably would be interesting and worthwhile. TT extensions (discussed in Appendix B) seem to be looking for necessary and sufficient conditions for attributing intelligence to machines that is on par with humans. But that need not be, and frankly is not, our objective.

The Turing test provides us with a systematic approach to thinking about the line between humans and machines, which we refer to as the Turing line, and to investigating the similarities, differences, and relationships between humans, machines, and machine-environments (explained in the next section). Reviewers have suggested that the Turing test is no longer important as a goal or objective in AI and related fields. That is irrelevant to us. We are not interested in detecting and evaluating intelligent machines.

We draw inspiration from the Turing test as a conceptual lens. It allows us to maintain focus on the Turing line while exploring the relationships among human, machine, and environment. Thus, we are as interested in thinking about the experimental designs, game structures, and questions to ask as we are about anticipating how we might interpret the results. The recursive nature of applying the Turing test, which Hayes and Ford critiqued, is its redeeming feature, one which we seek to mimic with our techno-social engineering tests. Hayes and Ford acknowledge at the end of their article:

We suspect that Turing . . . wanted the test to be about what it really means to be human. This is why he has set us up in this way . . . If we really tried to

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do [what Turing suggests], we might be forced into thinking very hard about what it really means to be not just a thinker, but a human being in a human society, with all its difficulties and complexities. If this was what Turing meant, then we need not reject it as our ultimate goal.⁶

We agree wholeheartedly.

The Human Side of the Turing Line

The Turing test draws a line between human and machine. You might think of it as a boundary. The Turing line might be bright and fixed; it might be fuzzy; it might change over time; it might be real; and it might even be illusory. Who knows? Perhaps, as some scientists and philosophers believe, humans really are just meat machines performing pre-determined biological scripts.⁷ We, however, will assume a line exists.

The Turing line serves at least two functions, which are noted but not fully examined within the relevant literatures. First, the line differentiates humans and machines. We assume such a line exists and that we can recognize it even if we don't *fully* understand it. Indeed, the point of the mental exercise is to get us to examine and better understand it. The TT is satisfied when the line is in fact not seen; that is, during the course of playing the Imitation Game, a machine successfully imitates a human and thus a line that we "know" exists is not observed. The machine remains a machine even after passing the test, but we infer that a machine capable of passing the test has "something," some characteristic (that some would call intelligence, and some would not), that makes, or at least made, it indistinguishable from a human in the context of the test.

Second, the Turing line serves as a finish line. Within artificial intelligence, robotics, machine learning, and other adjacent fields, the race to cross this line has been on since Turing published his article.⁸ Our point, then, is that Turing demarcated something specific to aim for when constructing machines and programming systems. Again, Turing made a prediction about the rate of progress toward this finish line, suggesting that by the year 2000, an observer would not have a greater than 70 percent chance of correctly identifying the machine after five minutes of questioning.⁹ Obviously, we didn't quite make it. Some suggest we'll cross it soon, while others argue that it's a fool's errand. The important point, for our purposes, is to recognize its function.

Our contribution in this book is to examine the other side of the line, the human side. We'll ask and examine a related set of questions about humans. The simplest and most compelling reason to do so is that we're

rapidly developing and deploying technologies that operate on the human side of the line by shaping human beings and the environments within which we live and evolve.

Critically, what matters most – more than whether we can or ever do actually cross the line – might be what happens during the race to cross the Turing line and how the race itself affects humans and society.¹⁰

Still, we shouldn't begin with a completely pessimistic frame. Like imperfect price discrimination,¹¹ there are beneficial and detrimental outcomes depending on the context. The TT leads us to focus on whether we can develop machines that “think” like humans, and this seems to be a beneficial innovation or improvement because we've potentially added something to the machine; it might have *gained* a capability previously possessed only by humans. Approaching the line from the opposite side with a focus on humans, it seems natural to frame the inquiry as this question: *Can humans not-think?*¹²

This framing suggests that as we approach the Turing line, something is diminishing, and that when we reach it, something will have been lost or taken away. Humans will have lost their capability to think and that seems troubling. And yet, there might be a problem with this framing. It is by no means necessarily the case that progressing toward the line from the human side means that something is lost. It might be the case that something is *gained*. That something presumably would be the capability to not-think. Imagine we're playing the Imitation Game with a human seeking to mimic a simple (unthinking) machine and deceive the observer. Perhaps the human can be indistinguishable from a machine by choice, by exercising the capability to not-think. There may be many reasons why this could be an attractive capability, though we are not inclined to explore them now. But we should be clear that the normative or moral evaluation of humans not-thinking is complex.

The question of whether humans can not-think might seem silly in the sense that the answer seems obviously to be: Yes, humans can not-think; we do so quite often, for example, when we act instinctively, impulsively, or emotionally,¹³ and when we do not fully consider the consequences of our actions. Notice, however, that this type of reasoning relies on particular definitions of think/not-think. It seems much more plausible to say that while instinctive, impulsive, or emotional actions might not be actions that involve a certain type of rational or deliberative thinking, they nonetheless involve specific types of *mental states*. In fact, these types of mental states seem to be *particularly human* and not machine-like.¹⁴

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This opens an interesting line of inquiry: Might the mental or intellectual characteristics that in part define us as humans and differentiate us from machines be those sometimes associated with *irrational* behavior? Some people influenced by behavioral economics have suggested that when people are likely to act irrationally or in a biased fashion, the response is to de-bias them or nudge them toward more rational or efficient behavior. Notably, such nudges are often implemented by reconstructing the context or environment. Would such efforts to de-bias people or nudge them toward rational thinking/behavior be dehumanizing? Imagine that we reconstructed the environment to eliminate irrational thinking. *Would this environment dehumanize? Would humans in such a constructed environment be distinguishable from machines?*

It's significant that the universe consists of more than humans and machines, and that humans and machines do not exist in a vacuum. They relate to each other and to the environment (and other living beings). The results of the TT depend substantially on the environment where the test is conducted. In the standard version of the TT, machines and humans are separated from an observer who poses a series of questions to identify which agents are human. The machines attempt to exhibit human-like conversational behavior to trick the observer into making the wrong identification. Answers from the machines and humans are typed to avoid any biases possibly arising from information that is irrelevant to attribution of thinking/intelligence. For example, visual cues might enable the observer to distinguish machines and humans, but such information would not be relevant to the underlying question of whether the machines are capable of thinking in a manner indistinguishable from humans.

It matters that the observer is in one room and the agents (humans and machines) are in other rooms, separate from one another and the observer. It also matters that the investigation focuses on verbal behavior. Verbal behavior (verbal responses to a sequence of verbal stimuli) is deemed an appropriate area of investigation because of the perceived link between intelligence and verbal output.

Turing imposed significant constraints on the means of observation and communication. He did so because he was interested in a specific capability – to think like a human – and wanted to be sure that the test gathered evidence that was relevant and capable of supporting inferences about that specific capability. But we want to make sure it's appreciated how much work is done by the constructed environment – *the rules and the rooms* – that Turing built. A machine that passed the TT would have done so within a very constrained context. In another context or environment,

for example one where the observer could visually observe the subjects or where communication was aural, the same machine presumably would not pass the TT. The machine might be indistinguishable from a human in one context, but easily distinguished in another.

The conventional TT environment is constructed. It's designed to take a series of inputs (e.g. machines and humans) and, after doing some work performing a process according to predetermined rules, it produces outputs that we can use to draw inferences about the machines (some of the inputs). The TT environment is, in a sense, a machine. We will call it a "machine-environment" to distinguish it from other types of machines. Different machine-environments, such as the TT environment, can be constructed with the capability to render machines within the machine-environments to be more or less distinguishable from humans. Machine-environments thus play a very important role in shaping the actual and perceived capabilities of machines. *The same can and must be said for humans.*

Machine-environments play an important role in shaping the actual and perceived capabilities of humans. We've seen many examples already in this book – ranging from the electronic contracting environment to smart techno-social environments. Accordingly, to examine the space on the human side of the Turing line, we need to broaden the inquiry and ask the following questions:

- How and/or when are humans indistinguishable from machines?
- Can humans be programmed or constructed to be indistinguishable from machines?
- Can techno-social environments dehumanize?
- How and/or when are human beings engineered (via technology, social context, and the environment within which we live and through which our preferences and beliefs are formed) to be indistinguishable from machines?

Consider how the line established by the TT might function as a finish line when viewed from the human side. How would you progress toward this finish line? One way might involve *directly modifying* human beings through genetic, biotechnological or other means. Another way to make progress would be to construct environments where humans *are* indistinguishable from machines. Another way would be to construct environments where humans *become* indistinguishable from machines.

Let's consider the call center environment as an example. In a May 2014 *New York Times* article, "The Computerized Voice that Wasn't,"¹⁵ the

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author questioned whether American Express had successfully created a computer that passed the Turing test because the author was convinced that a call center respondent that he interacted with was a computer decently masquerading as a human. The author quoted from his initial conversation and then from a follow-up call in which the author asked the respondent if she/he/it was a computer and proceeded to ask additional questions focused on that issue. The author ultimately concludes with apparent surprise and disappointment that the respondent revealed her/his location to be India, a fact that persuaded the author that the respondent was human. The author's conclusion was later confirmed by American Express.

What might be inferred, if anything, from the fact that for a while the author mistook the human for a computer? The reason given for the mistaken identification was that English was a second language for the respondent. Language and commonsensical use of language is one defining characteristic of being human. The author may have misinterpreted odd or incorrect usage of English as indicative of computer-speak. However, we suspect that there are more subtle reasons for the author's initial response that have to do with the environment constructed by American Express or its call center contractors. That is, it might be the case that the call center itself is a rather constraining, heavily scripted environment that nudges humans within it toward the Turing line.

To explore these questions on the human side of the line, we now turn our attention to developing techno-social engineering tests that are inspired by the Turing test. We will focus on humans and test techno-social engineering by asking whether the human being is indistinguishable from a machine with respect to certain capabilities. The context within which the test applies will be important, not only because the context shapes the test but also because the context shapes the participants. In the end, we may be testing the combined effect of humans and environments (or humans situated within specific environments).

CHAPTER II

*Can Humans Be Engineered to Be Incapable
of Thinking?***Introduction**

Inspired by the Turing test, this chapter inverts the conventional perspective of the Turing test and focuses on humans rather than machines. Turing asked: *Can machines think?* Instead, we ask: *Can humans not-think?* We're not interested in identifying machines engineered to be intelligent so much as we're interested in identifying humans engineered to be unintelligent.

We identify a non-exhaustive list of intelligence characteristics to evaluate and develop an initial series of techno-social engineering tests to examine different aspects of intelligence and distinguish humans from machines: (a) mathematical computation, (b) random number generation, (c) rationality, and (d) common sense. We briefly discuss the first two and devote more attention to the third and fourth. All four are plausible tests to distinguish humans and machines. However, the first two don't implicate fundamental notions of what it means to be a human whereas the third and fourth do. This is a substantial difference. It illustrates how passing a techno-social engineering test at step one only triggers evaluation at step two and that the evaluation can reveal that dehumanization is occurring and should be stopped.

For each test, we explain what we are testing, specify the sorts of stimuli an observer might use, and then discuss how to interpret the results. We also develop thought experiments to tease out the implications of the common-sense and rationality tests. For common sense, the thought experiment concerns the problem of "being lost" and the dynamic relationship between common sense and technologies. This discussion highlights the facts that technologies are not neutral and vary in terms of how they may displace common sense. For rationality, the thought experiment concerns the prospect of government efforts to "nudge" citizens to behave more rationally.

Intelligence: Thinking and Not-Thinking

Our first step in investigating the human side of the Turing line is to ask: *Can humans not-think?* This isn't a simple query. The question presents the same intractable definitional questions that Turing faced: What do the words "human" and "not-think" mean? To avoid conceptual debate about these terms, we follow Turing's lead and propose an empirical solution to the problem.¹ For reasons noted in the previous chapter, this question ultimately might not yield the most interesting results. If we are really interested in not only *whether*, but also *when* and *how* humans can be constructed to be indistinguishable from simple machines, then thinking/not-thinking might yield insufficient information. Nonetheless, the inquiry needs a starting point, and this is a good place to begin.

Suppose we administer the Turing test in its conventional form. Does that tell us anything meaningful about the human participants? For example, when an observer correctly determines that humans are humans, do we learn anything? Probably not. But what about when an observer incorrectly determines that a human is a machine? This "confederate effect" has occurred during Turing tests conducted at the annual Loebner competitions.² For example, according to computer scientist Stuart Shieber, "Ms. Cynthia Clay, the Shakespeare aficionado, was thrice misclassified as a computer. At least one of the judges made her classification on the premise that '[no] human would have that amount of knowledge about Shakespeare.'"³

It seems hard to infer from this misidentification that the incorrect judgment arose because the human subject was not-thinking. When we examine the agent in the context and consider the questions asked by the observer, and we evaluate plausible inferences about the human agent, not-thinking doesn't rise to the top. Others do, and they have more to do with the observer and peculiarities of the human participant. This does not undermine our search for a test capable of investigating whether humans can not-think. It merely suggests we pay careful attention to how the *structure and rules of the game* need to be tailored to elicit relevant evidence.

If we stick to the basic structure with an observer in one room and agents distributed in separate rooms from the observer and each other, and limit communication to text, we can adjust who knows what about the game being played. The basic Turing template can limit what the observer and agents know about the game they're playing and who is effectively "playing" the game.

Here are a few variations:

- a. Play the Turing test with the same rules (i.e. no difference at all) and examine situations where humans have been mistaken to be machines.
- b. Play the Turing test as usual, except tell humans they should try to deceive the observer; ensure the observer doesn't know about this additional instruction.
- c. Same as (b), but inform the machine programmers that humans will play strategically.
- d. Same as (b), but the observer knows.
- e. Same as (c), but the observer knows.

Under these varied conditions, the implications of using the Imitation Game to learn something about human intelligence would be different. When humans are playing the game and aiming to deceive the observer, for example, we would need to deal with the fact that humans can easily mimic some machines, like a car, by not communicating at all. (In fact, one study hilariously showed that a machine could be programmed to “take the Fifth Amendment” and pass the Turing test.⁴) Version **(b)** would not appear to work well because observers would likely perceive non-responsive agents to be machines and little could be inferred from such results. Version **(c)** might overcome this problem because machines could adopt a similar strategy, and versions **(d)** and **(e)** might overcome it because the observer would be able to anticipate the strategy.

On the human side of the Turing line, we don't need or even want humans and machines (or the humans programming machines) to play the game strategically. Consider the role that human participants play in the conventional Turing test. The humans are not necessarily strategic agents, seeking to confuse or deceive the observer.⁵ Rather, the humans act as “normal” humans and thus usefully serve as a baseline. We need a similarly useful baseline for our techno-social engineering tests.

Accordingly, we propose to use the *simple machine*⁶ as a baseline and ask the programmer of the machine to not act strategically by confusing, deceiving, or outsmarting the observer. For what matters to us, ultimately, is not if or how machines can be built to imitate or mimic humans. Rather, we are interested in the techno-social engineering of human beings. A determination that a human is indistinguishable from a machine allows us to reasonably infer that something meaningful has been lost because of the engineered environment.

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Accordingly, we might use one of the following variations:

- f. Same as any of the above, except the machine agents are *simple machines*, or, at least, are not deceptive or otherwise strategically playing the game.
- g. Same as any of the above, except the observer is a computer.⁷

The question remains whether it makes sense to ask the human participants to play strategically. What would that mean? That the human agents are seeking to behave like machines? Success might indicate that the human who is mistaken to be a machine possessed the capability to not-think. That is, if not-thinking is a capability to be exercised, then passing the test could be relevant. For example, imagine a criminal defendant exercising the capability to not-think in an effort to persuade a clinical psychologist that he lacked emotion or the cognitive ability to distinguish right from wrong or to understand the consequences of his action or to have intention.

If we aren't interested in the affirmative exercise of the capability to not-think and instead are interested in identifying a diminished capacity to think or inadvertent or environmentally constructed triggers for not-thinking, then we might need to take a different approach. It might be more appropriate to set up the game as if it were a conventional Turing test (version (a)) except utilize version (f) or (g). The human participants would be instructed to simply "be themselves." Having removed strategic behavior altogether, imitation is less relevant than comparison. The burden shifts to the observer, the chosen stimuli, and the constructed environment where humans and machines potentially can be differentiated. (This move, amongst other things, differentiates the techno-social engineering tests from Turing tests.)

Beyond the basic structure and variations described above, we need to specify how to test for not-thinking. We might leave it entirely to the observer and the stimuli chosen by the observer. This "hands-off" approach might not be effective. Even in the context of the conventional Turing test, various constraints shape the observer's questions. The most basic limitation is restricting communication to text. Moreover, when the test moved from thought experiment to applied experiment, organizers introduced more fine-grained constraints on the types of stimuli permitted.⁸

The reason for restrictions on stimuli is to increase the likelihood of generating objective empirical evidence from which reasonable inferences can be made. We need to engage in a similar winnowing process. We need to consider more deeply what aspects of thinking or not-thinking can be

tested. We could focus on some specific intelligence-related characteristics that have often been identified in the definitional debates about what makes us human. Here is a short list of some (potentially overlapping) candidates:

- Reason
- Rationality/irrationality
- Common sense
- Willpower
- Emotion
- Phenomenological experience⁹
- Creativity
- Language/capacity to construct new language or social meaning
- Planning for others
- Language with which to plan for future¹⁰/others.¹¹

This is a non-exhaustive list. Nonetheless, with these intellectual capabilities in mind, we can begin to specify the types of questions that the observer would be allowed to use. Now, we can begin to construct the environment, the rules and rooms of the game. We would want to ask ourselves: What could be inferred when an observer mistakes a human to be a machine?

We are not seeking to explain or prove the existence of any particular defining characteristics of humans or machines. We assume they exist. For example, we assume intelligence exists, and it is not our goal to define it or explain its origins or underlying mechanisms. Let others define and debate what is or is not intelligence or what is or is not essential to humanity. For now, we are interested in marginal changes induced by technological environments, and we aim to investigate changes in our capabilities so that we can have a more meaningful discussion of what is or is not essential. We note this upfront to avoid getting sucked into the vortex of existing philosophical and definitional debates. However, some working definitional baselines remain relevant, as will be discussed in the context of specific tests.

This chapter does not explore all the possible tests. Instead, we consider four tests that might distinguish humans from machines based on (1) mathematical computation, (2) random number generation, (3) common sense, and (4) rationality, respectively. We briefly discuss the first two and devote more attention to the third and fourth. All four are plausible techno-social engineering tests that generally could be used to try to distinguish humans and machines. The difference is that the first two tests don't implicate

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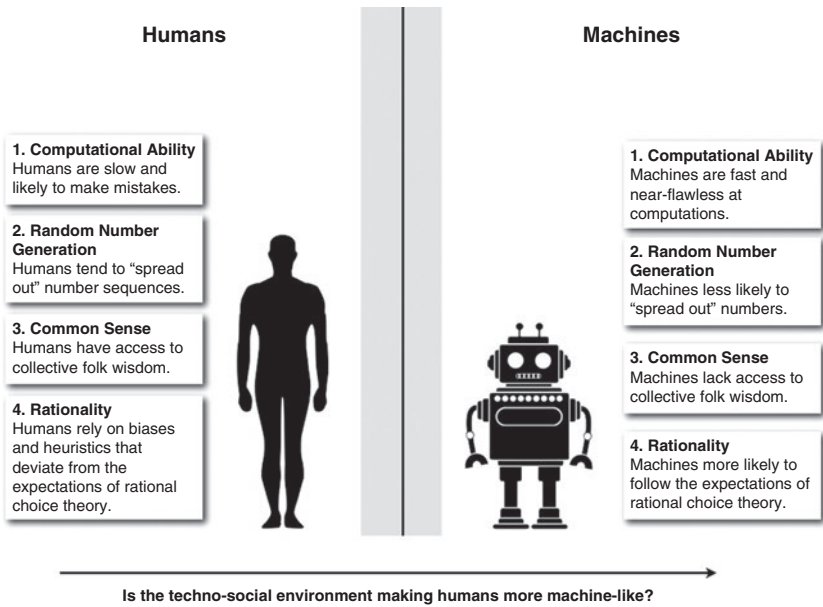


Figure 11.1 Image courtesy of John Danaher

fundamental notions of what it means to be a human, whereas the third and fourth do.

For each test, we begin with a brief description of what it is that we are testing for. For example, we specify the stimuli the observer uses and then discuss how to interpret the results of his, her, or its judgment. Does passing or failing the test support meaningful inferences about the human agents? (See Figure 11.1.)

Techno-Social Engineering Test Focused on Mathematical Computation

Suppose we set up our techno-social engineering test in the conventional TT manner (a), except that the machine participants are simple machines (f) and the observer is a machine (g) programmed to submit a series of mathematical computation questions to the agents, and then, after receiving answers, determine whether the agents are humans or machines. The types of mathematical computation questions could progress from performing simple to increasingly complex calculations (e.g. addition and subtraction of single- or double-digit numbers, to multiplying a single- and

a double-digit number, to multiplying double-digit numbers, to square roots of triple digit-numbers, and so on).

There are at least two ways in which humans generally would be easily distinguished from machines. First, humans get tired and are prone to error as fatigue sets in. By contrast, simple machines don't get tired. Depending on the duration of the test and the rate at which questions are asked, humans will make computation errors even for relatively simple computations; the machines will not. Additionally, humans will make computation errors for sophisticated computations that machines will breeze through.

Most humans routinely would fail a techno-social engineering test focused on mathematical computation. But not all humans would fail this test, at least within some bounds. Suppose, for example, we limit the duration of the test to five or ten minutes or otherwise eliminate the first source of human error. Suppose that under this scenario a human being passes the test. *What would that mean? Are there any meaningful inferences to be drawn? What would we learn?* As explained above, passing the test provides us with evidence and suggests that there is *something* remarkable about the relevant agent. It triggers step two – evaluation.

The human being would appear to possess an extraordinary – inhuman – capability for mathematical computation. Does being machine-like with respect to mathematical computation mean the person was somehow *worse off*? We don't think so. The extraordinary capability appears to be a positive or valuable skill. Does being machine-like with respect to mathematical computation mean the person was somehow *less human*? We don't think so. Being machine-like in this specific context and in this specific manner does not seem meaningfully related to the agent's (normative) status as a human being. In other words, there is evidence of something unusual, but not of dehumanization.

We also might ask whether we can say anything meaningful about the humanity of the vast majority of humans who failed to pass the test. We don't think so. We might conclude that some of the humans who lacked some mathematical computation capabilities might be worse off than those who have the capabilities and that education or other means of improving their situation would be worthwhile. But that's a conclusion concerning a recommended improvement, not a guess about ontological status.

There may be trade-offs among skills and competencies that would not surface through this test. Extraordinary computational skills might correlate with deficiencies in other skills, and passing the test might help identify humans for which evaluating potential trade-offs would be possible. But it

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wouldn't say anything about evaluation, which is the basic point of this example. It highlights the importance of moving from the first step (identification) to the second step (evaluation).

Techno-Social Engineering Test Focused on Generating Not-So-Random Numbers

Assume a set-up similar to the previous test, except the observer asks the agents to generate random numbers, one every five seconds for ten minutes. Based on the responses and the observer's ability to predict the agent's *n*th response, the observer determines whether the agents are humans or machines.

Generating random numbers is difficult for both computers and humans. However, they face different difficulties, and that's what makes a techno-social engineering test plausible. Computers are deterministic because humans program them. This means that computers do not generate truly random numbers and instead produce pseudo-random numbers by running a seed number through a complex algorithm. The result is not truly random because it is determined by the seed number and the algorithm. If one knows or can reverse engineer the algorithm and seed number, then one can predict the numbers that the computer will generate.

We could assume the observer either knows or can figure out by reverse engineering the algorithms and seeds used by the simple machines. The assumption makes it easier to distinguish humans and machines, but might be unnecessary.

Humans would routinely fail a techno-social engineering test focused on generating random numbers. This isn't because humans can generate more or less randomness than machines. Instead, humans generally would be distinguishable from machines because the methods for generating numbers would differ substantially.¹² For example, some people would misunderstand randomness by seeking to avoid repeating a number too often ("I can't use 9 for a while because I just used it"). Some would exhibit preferences for certain numbers, other for certain sequences of numbers or alternating patterns. Frankly, most humans would not employ a seed number and an algorithm. This means some humans might be unpredictable, which would be a basis for distinguishing them from the machines. Others would be predictable, but for different reasons than the simple machine.

Suppose a human being passes the test. Again, *what would that mean? Are there any meaningful inferences to be drawn? What would we learn?*

Once more, the human being would appear to possess an extraordinary capability: generating pseudo-random numbers in a machine-like manner. In contrast with the machine-like capability for mathematical computation (which seemed advantageous), it is not clear how to evaluate this capability. Regardless, being “machine-like” in this context and in this manner does not seem meaningfully related to the agent’s normative status as a human being. There is not much to be said about those who fail the test.

Techno-Social Engineering Test Focused on Rationality

Rationality is studied intensely in many different disciplines, ranging from psychology to philosophy to economics. It is central to models of human decision-making and serves as a baseline for evaluating performance in various settings. “What does it mean to be rational, and to make a rational choice on the basis of a meaningful and relevant distinction?” asked Oscar Gandy Jr., a highly regarded scholar of the political economy of information. He explains:

Defining a concept by means of its opposition is rarely satisfactory, but it is a place to begin. Irrational decision-making is commonly associated with emotional, or habitual, responses, informed by broad generalizations, rather than by careful weighing of the relevant facts. Rational decision-making generally refers to the process, rather than the outcome or results of any decision, although we understand that a carefully considered decision arrived at following a process of extensive search, reflection, and analysis, can still produce unsatisfactory results. A realization that there are constraints on the ability of humans to access and incorporate all relevant information has led to the suggestion that the process is not necessarily irrational, but merely constrained or “bounded.” Most often, the concept of bounded rationality is focused on the limits of human information processing, rather than on limitations on access, or strategic misdirection. But, as Giddens reminds us, some of the more important constraints on human agency are those blind spots we have regarding the motivations and goals of other interested parties who may be involved in some aspect of our decision-making.¹³

He then further explains: “There is a tendency to think about rationality in terms of a continuum; one that moves from an idealized intelligence – a difference engine that engages in rapid computation, without errors in calculation, and more critically, without any systematic bias introduced by irrational emotional distractions. On the other end of the continuum we find the sometimes slow, sometimes fast, error prone, easily distracted, and

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routinely distorted information processing by humans.”¹⁴ Gandy’s continuum seems to place machines at one extreme and humans at the other.

Law professor Ed Stein explains that there are many different senses or conceptions of rationality,¹⁵ and psychologist Keith Stanovich describes the strong sense of rationality conventionally used in cognitive science.¹⁶ In a strong sense, rationality corresponds to “optimal judgment and decision making” according to a particular normative baseline, and irrationality corresponds to deviations from the same baseline, which can differ by degree. One widely used normative baseline for judgment and decision-making is instrumental, expected utility maximization. “The simplest definition of instrumental rationality is as follows: behaving in the world so that you get exactly what you most want, given the resources (physical and mental) available to you. We could characterize instrumental rationality as the optimization of the individual’s goal fulfillment [which can be further refined to expected utility].”¹⁷

For our purposes, *rationality* refers to the strong sense captured by the instrumental rationality definition, and *irrationality* refers to deviations from the specified baseline, regardless of the cause(s) for such deviations. Let’s be clear before proceeding: First, the normative baseline chosen serves the purpose of establishing a baseline and isn’t meant as a complete normative evaluation. For example, irrationality may be normatively attractive for reasons not fully captured in or reflected by instrumental logic. Second, the cause(s) for deviation from rationality may matter for evidentiary or normative reasons in particular contexts.

Suppose we set up the techno-social engineering test in the conventional TT manner (**a**) except that the machine participants are simple machines (**f**). The human participants are told that they’re participating in the conventional Turing test where they are supposed to act normal and answer questions posed by the observer in a natural fashion. In other words, they are instructed to not act strategically or deceptively. They may even be told (falsely) that the object of the game is to see if the machines are intelligent enough to deceive the observer into concluding that the machine is a human. This claim is false in two respects. First, the object is to see if the human participants are mistaken to be machines. Second, the machines are simple machines programmed to do as instructed and/or answer the questions posed truthfully, accurately, and in accordance with instrumental rationality.

Let us also make the observer a machine (**g**), such that the observer is programmed to run a series of conventional rationality tests and experiments.¹⁸ For example, the observer may pose a series of *choice*

problems, such as those posed by Allais and developed further in the extensive rational choice and behavioral economics literature.¹⁹ The literature demonstrates a variety of ways in which humans make predictably irrational choices.²⁰

One important reason that humans can be seen²¹ to act irrationally,²² according to such experiments, is that humans contextualize problems. As Stanovich puts it, “humans recognize subtle contextual factors in decision problems that complicate their choices.”²³ Simple machines don’t.

Another way that humans can be seen as irrational is through a series of biases in human decision-making that lead to distortions from the rational choice (utility maximization) model. Various biases lead people to make judgment errors that differ systematically from unbiased forecasts. Some biases may involve discrimination about groups, perhaps based on race. Some biases involve heuristics and decision-making errors; for example, optimism bias, self-serving bias, hindsight bias, among others.²⁴ Some biases may be the result of contextualization.²⁵ Simple machines don’t suffer from such biases.

Another way that humans can be seen as irrational is through actions that serve symbolic utility but not instrumental utility. This is related to the notion of ethical preferences, which may lead humans to make choices that diverge from instrumental utility and rational choice theory. Humans also appear to be “strong evaluators” in the sense that they can have preferences about preferences (or different levels of preferences), and this can lead to destabilizing conflicts among preferences that cause humans to act irrationally when measured against the rational choice model.²⁶ Not so for simple machines.

This suggests that there are a variety of ways the observer might test agents and distinguish humans and machines. Armed with a battery of tests, the observer would be able to accurately distinguish humans and machines: The simple machines would always respond to the queries in a rational manner (e.g. make predictably rational choices) while the humans would tend to exhibit irrationality (e.g. make predictably irrational choices), at least over the course of a sufficient number of questions.

Finally, suppose we employ machine learning such that the observer program gradually optimizes its battery of tests and experiments. If, for example, the reliability of certain categories of tests is questionable, then the observer presumably would steer away from using those tests and rely on other more reliable ones. Suppose we’ve constructed the *perfect rationality detector* that can accurately distinguish humans and machines based on humans’ propensity to act irrationally.

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Now suppose we run our test with the perfect rationality detector as our observer. *What could we infer from a mistaken identification of a human as a machine? What would that mean? Are there any meaningful inferences to be drawn?* Passing the test provides us with evidence and suggests that there is *something* remarkable about the relevant agent. *But what?*

We have set up our perfect rationality detector in a way that makes it hard to fathom such a mistake, but the human propensity to act irrationally is not constant or fixed; it varies with context. Thus, in certain constructed environments, we reasonably can expect humans to behave in perfect accordance with the rational choice model.

Psychologists have observed how environmental constraints shape irrationality. "Many authors have commented on how the behavior of entities in very constrained situations (firms in competitive markets, people living in subsistence-agriculture situations, animals in predator-filled environments) are the entities whose behaviors fit the rational choice model the best."²⁷ Environmental constraints also may push in the opposite direction. Consider this passage from Stanovich:

Most humans now do not operate in such harsh selective environments of constraint (outside many work environments that deliberately create constraints, such as markets). They use that freedom to pursue symbolic utility, thereby creating complex, context-dependent preferences that are more likely to violate the strictures of coherence that define instrumental rationality. But those violations do not make them inferior to the instrumentally rational pigeon. Degrees of rationality among entities pursuing goals of differing complexity are not comparable. One simply cannot count the number of violations and declare the entity with fewer violations the more rational. The degree of instrumental rationality achieved must be contextualized according to the complexity of the goals pursued.²⁸

Keep in mind that our objective is not to *judge* degrees of rationality in terms of inferiority or superiority. Pigeons may be closer to the Turing line than humans. But that is not relevant to our present objective.

What we are interested in identifying, examining, and evaluating is environments that engineer humans to be indistinguishable from machines. Thus, it would appear that we need to consider how the "harsh selective environments of constraint" shape human behavior. *Is such shaping transitory or lasting? Are the environments themselves transitory or lasting?* Are humans only affected while in the specific environment or are the effects long-lasting? For purposes of this techno-social engineering test, we could construct the environment (the rooms and rules) to be more or less constraining and see what impacts followed.²⁹

Recall the discussion in Chapter 5 of the electronic contracting environment. This is a familiar environment designed to nudge us to behave in a predictably rational manner; just click “I agree.” This seems like a straightforward context within which humans would routinely pass the techno-social engineering test described in this section. It’s an environment where the instrumentally rational response to terms of use pages requires little thought and imposes no burden on the user because “acceptance” is reduced to a single click of the mouse. The interaction is designed to generate a response absent reflection or deliberation. The environment is choice-preserving, in the sense that users retain their autonomy and can opt out of the web applications services. Still, a user’s blind acceptance of the terms of use is completely rational. To read the proposed (imposed) terms would be a complete waste of time, an irrational and ultimately futile exercise. While we have yet to run this experiment formally, we believe we can accurately state that the environment can make us behave like simple machines – perfectly rational and perfectly predictable. Here is the more difficult question: Does it make us programmable? Does the environment effectively create dispositions that will follow us through all walks of life? Are the shaping effects *lasting*?

Consider the following thought experiment. Suppose that to improve human decision-making and welfare, government decides to “nudge” people toward rational decision-making.³⁰ For our purposes, the nudge is simply a gentle adjustment in the environment or context that corrects for predictably irrational decision errors.³¹ As finance professor Riccardo Rebonato put it in his “reasonably precise definition of libertarian paternalism,” assume government implements

[t]he set of interventions aimed at overcoming the unavoidable cognitive biases and decisional inadequacies of an individual by exploiting them in such a way as to influence her decisions (in an easily reversible manner) towards choices that she herself would make if she had at her disposal unlimited time and information, and the analytic abilities of a rational decision-maker (more precisely, of *Homo Economicus*).³²

Thus, government adjusts the choice architecture by creating a sufficiently constraining – though not completely constraining – environment.³³ People still make decisions and have choices within the environment, but they will tend to do so in conformance with rational choice theory. Suppose humans within the government-constructed nudging environment would routinely pass our techno-social engineering test, administered by our special observer (the perfect rationality detector).

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To put it more concretely, suppose that workplace regulation transforms the workplace – for example, an office or factory – such that the workplace constitutes a sufficiently constraining environment that humans in that workplace routinely pass our techno-social engineering test.³⁴ *What could be inferred? What would this mean? What would be the significance, if any?*

These are reasonable questions to ask. From the government's perspective, and even from a perspective focused on maximizing social welfare, passing our techno-social engineering test would be a measure of *success*. Humans in the constructed environment would behave exactly as intended, efficiently in accordance with the rational choice model – that is, *optimally*. From the perspective of the employers and the workers, there is little to complain about. Efficient workplace performance presumably translates into higher productivity and safety,³⁵ and no one is forcing them to work in this setting. It seems hard to imagine someone making a strong claim to a right or even desire to act irrationally. One might conclude, "If we are not contemplating either a violation of rights or a departure from existing preferences, then there is nothing to worry about." *Still, is there any reason to think that the constructed environment (workplace) is dehumanizing? Does the change induced by the constructed environment constitute a reduction or addition in human capability? Is it diminishing or empowering?*

In an essay, "Buddhist Economics," E. F. Schumacher contrasted modern economics' view of human labor with that of Buddhist economics. The former views human labor as a costly input to be minimized.

The Buddhist point of view takes the function of work to be at least threefold: to give a man a chance to utilize and develop his faculties; to enable him to overcome his ego-centeredness by joining with other people in a common task; and to bring forth the goods and services needed for a becoming existence. Again, the consequences that flow from this view are endless. To organize work in such a manner that it becomes meaningless, boring, stultifying, or nerve-racking for the worker would be little short of criminal; it would indicate a greater concern with goods than with people, an evil lack of compassion and a soul-destroying degree of attachment to the most primitive side of this worldly existence . . .

From the Buddhist point of view, there are therefore two types of mechanization which must be clearly distinguished: one that enhances a man's skill and power and one that turns the work of man over to a mechanical slave, leaving man in a position of having to serve the slave.³⁶

Now suppose that humans who spent time in the environment constructed to nudge (e.g. the workplace) also routinely pass our techno-social engineering test when no longer within that environment. That is, suppose that after leaving the nudging environment, the humans remained indistinguishable from machines according to our perfect rationality detector. *What could be inferred? What would this mean? What would be the significance, if any? Would the constructed environment (workplace) be more or less dehumanizing?*

These are reasonable questions to ask. The basic distinction is between a constructed environment within which humans *are* indistinguishable from machines and one in which humans *become* indistinguishable from machines. We might label the latter a *constructive environment* because of its lasting effects. While the lasting nudges might seem creepy, we should not jump to negative conclusions. After all, helping humans to make more rational decisions throughout their lives may be in their own self-interest as well as certain conceptions of the broader societal or public interest. Moral or normative evaluation will be difficult and contested.

Suppose the nudging government did not limit itself to workplace environments. Suppose the government systematically constructed nudging environments in as many places and social contexts as possible. Consider government surveillance systems, which are expanding in scope and reach across technological platforms, and the public and private spaces and environments within which we live our lives. These systems may not always be explicitly billed or justified as being part of the nudging program, but that does not make them less so. To be fair, they are not part of the specific program advocated by Thaler, Sunstein, and other behavioral law and economics scholars who underwrite their prescriptions with the ethic of libertarian paternalism. Yet it isn't clear that this ethic sufficiently insulates their project from the concerns raised here.

Nudging is now a government agenda, pursued by governments around the world and not limited to any specific setting or technology (i.e. surveillance systems are just an example). It is also a market agenda. Private entities, such as firms and collections of people employing shared networked technologies, are also voluntarily constructing nudging environments. This is not an entirely new observation. Marketing and advertising have always been about shaping beliefs and preferences and nudging people toward products and services. The pervasive, networked, data-driven economy that dominates much of modern life expands the scale and scope, removing some of the barriers between media that had allowed us to be "off" or outside the constructed nudging environments. One of the most fundamental societal

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questions of the twenty-first century will be about whether and how to preserve our practical freedom to be off, or, conversely, whether the environment we build means we are and will remain always on.

Does it really matter *who* is doing the nudging? Maybe it matters when we evaluate a specific example and countervailing pressures. But in the aggregate, we don't think it matters. The political economy and legal distinctions between public and private institutions don't bear as much weight when one begins to look at the macro picture. *How should we evaluate the agenda from a macro, longer-term, and societal perspective?*

Note that however interesting and pressing these and other questions may be, we cannot examine them effectively until we have better means for identifying, examining, and evaluating humans and/in environments that engineer humans to be indistinguishable from machines.

Techno-Social Engineering Test Focused on Common Sense

Common sense is a concept with a long history and hotly contested meaning in various disciplines. You undoubtedly have your own conception of common sense in mind as well as a view about what it takes to acquire and lose it.

On April 9, 2017, United Airlines created international controversy after video went viral of passenger Dr. David Dao being forcibly removed from his seat to accommodate airline employees. In response to the tremendous backlash, UA's Chief Executive Officer Oscar Munoz eventually apologized for the incident. While making that apology, he characterized the matter as a "systems failure" that stopped employees from using "common sense." We suspect that Munoz used systems analysis to deflect accountability. But that's not why we're bringing up the example. We're simply illustrating that it isn't unusual to view common sense as something that circumstances can suspend and possibly even extinguish.

Let's skip past definitional debates and adopt a particular understanding of common sense. Philosopher Gerald Erion offers the following view, which we adopt:

A more focused notion of common sense . . . [is] virtually universal among typical adults because it concerns an important subset of objective reality that we all live our everyday lives in, the common-sense world. As rough

approximation, it is helpful to think of the common-sense world as the realm of familiar objects that we become acquainted with during ordinary experience. People, plants, non-human animals, and simple geographic features are all included in this world, while sub-atomic particles, neurons, and galaxies are not . . . [We] can understand common sense itself as the base of knowledge about common-sense reality that allows each of us to survive and thrive during our everyday lives. Common beliefs about the common-sense world are the most prominent components of this knowledge base . . . common sense also includes the widespread abilities that allow us to act successfully in the common-sense world.³⁷

Erion goes on to explain how work in “various cognitive sciences” supports his claim that this type of common sense exists. It entails core knowledge and skills that are shared and “used by all of us (even skeptical philosophers) during our everyday lives.” Language is critical to common sense both as knowledge and as skill. That is, competence in using language is a “subset of common sense.”³⁸

Erion suggests that despite some contrary interpretations among philosophers, Descartes’ action test focuses on common sense as a characteristic that distinguished human beings from automata. Erion reformulates early modern philosopher Rene Descartes’ two-pronged test as follows:

Automata are distinct from real people in two ways. First, automata cannot use language. Second, automata do not possess common sense, which includes not only knowing how to use language but also knowing how to perform tasks and answer questions that even the most simpleminded adult human can.³⁹

Thus, a common-sense test could employ a structure like the conventional Turing test, and the observer could ask questions that would “require the skillful use of common sense.” Erion explained that such a test would be more demanding than the Turing test; that is, a machine that passed the Turing test still might fail the Cartesian (common-sense) test. The idea is that by observing agents over a “significant length of time in a variety of circumstances,” we confidently can distinguish humans from machines based on linguistic abilities and commonsensical performance. Erion focused on the machine side of the Turing line and viewed the common-sense test as a high bar for machines, in the sense that it would be difficult for a machine to be mistaken for a human (i.e. observed to possess common sense).⁴⁰

On the human side of the Turing line, the common-sense test would appear to set a high bar for humans. Putting aside strategic and deceptive behavior, it would be difficult for a human to be mistaken for a machine

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(i.e., observed to be devoid of common sense). Erion suggests that “even the most simpleminded adult human” would pass the common-sense test.⁴¹

Given all this, why develop a common-sense test on the human side of the Turing line? It’s a useful characteristic to focus on in part because it’s often distinguished from other measures or types of human intelligence. As one of the usage examples from *Merriam-Webster’s Dictionary* suggests: “She’s very smart but she doesn’t have a lot of common sense.” Common sense also combines language, reasoning, and social skills in a fashion that may or may not be unique to humans, but which usefully differentiates humans from machines.⁴²

Let us assume that a human passed the common-sense test. What would it mean if a human were indistinguishable from a machine based on the human’s performance in a common-sense test? It seems more difficult to imagine contexts within which humans lack common sense. Common sense seems to be sufficiently adaptable to different contexts, essentially by definition, since it is what is common to our everyday lives, however we might live them. But it would be a mistake to assume stability or a persistent reservoir of common sense available to us.

Common sense depends upon a shared core knowledge base, language, and social interactions sufficient to generate common understandings and beliefs. Suppose access to these inputs is restricted. Indeed, there are various ways to imagine such restrictions.

Consider the following thought experiment. Suppose Alice gets in a taxicab, gives the driver an address, and then falls asleep. Thirty minutes later, the taxicab driver wakes Alice, takes her money, and leaves immediately after she exits the vehicle. After shaking off her initial grogginess, Alice realizes the cab dropped her off in the wrong location, and she is lost. What does common sense dictate/suggest she should do?

She should get her bearings, formulate a plan, and take action. How would she do this? Presumably by looking around, observing people, reading street signs, and so on. All this sensory information would provide her with baseline information that would help her evaluate her situation and options, and decide on a course of action. Based on such information about her environment, Alice would be able to form beliefs about her safety, whether she could trust people, whether people would understand her (speak the same language), and so on. She might be able to determine the likelihood of another taxicab arriving or whether some form of public transportation was accessible nearby. She might be able to figure out or approximate her location and then formulate a plan for getting safely from there to her intended destination.

Now suppose that Alice lacks the relevant situational and problem-solving common sense. What does this mean exactly? How could this be? Perhaps she lacks the ability to get her bearings through the various means just described. She is unable to take in and translate the various cues and information. Perhaps her incapacity stems from a physical or cognitive disability. Perhaps she has never had the necessary experiences that would have led her to develop the relevant abilities. For example, perhaps her prior navigation of the world was technologically mediated and fully automated (more on this below). Perhaps she was raised in a town with no street signs and thus would not think to look at street signs for location data. She might lack (the relevant situational and problem-solving) common sense because she has never discussed the problem of being lost with anyone else or contemplated the situation in which she now finds herself. That may seem hard to fathom, but being lost may be a problem of the past, at least in the near future.

In our everyday experience, it is highly likely that Alice would carry with her a device capable of determining her location, determining an efficient route to get from her location to her intended destination, and even ordering a taxi. Upon recognizing her plight, Alice need only pull out her smartphone, and she'll be on her way to her intended destination. She need not ask anyone for directions, learn very much about the environment in which she finds herself, or do much planning. Does this mean she lacks common sense? No, not necessarily. In fact, the common-sense reaction to her predicament is probably to consult her smartphone and use the taxi-ordering app. One might say that common sense dictates that she carry a smartphone in the first place so she will never truly be lost.

For fun, one of us turned to Facebook and Twitter to find out what common sense suggested Alice should do. Remarkably, many commenters suggested she order a cab using Uber. Among other things, they assumed she had a smartphone and felt safe enough to use it in public. After several comments, one person expressed surprise that no one had suggested Alice simply ask someone for help.

It might be the case that common sense often dictates using technology in one form or another – whether it be a map, cellphone or smartphone. Some would say that it is incorrect to suggest that navigational technologies weaken or diminish common sense. But it's important to bear in mind that the technologies are not neutral or equivalent. The degree to which

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a person such as Alice relies on (i) herself, her common knowledge base of beliefs, and experiences, and on other human beings (both directly and in terms of common sense itself), rather than (ii) a technological device/system, varies quite substantially across different technologies (e.g. from map to cellphone to smartphone). The shift from (i) to (ii) is relevant and important.

We might think that common sense becomes embedded in the technological devices and/or that shifting from (i) to (ii) entails a shift in the relevant community of human beings that Alice relies on – that is, from the community of people Alice knows and shares common experiences with to the community of people behind the technological system. Either way, the shift is remarkable and worth examining. It's by no means limited to the thought experiment we've discussed. One could formulate a similar thought experiment around what common sense dictates in a variety of everyday circumstances, such as when one feels a sharp pain in her back or when there is a power outage. Doing so would lead to the same observations, shifting from (i) to (ii).⁴³ As political economy theorist Evgeny Morozov contends, "As we gain the [technological] capacity to predict and even preempt crises, we risk eliminating the very kinds of experimental behaviors that have been conducive to social innovation."⁴⁴ Morozov wasn't focused on common sense per se, but we believe he identifies the underlying dynamic.

The thought experiment is mainly intended to explore what we mean by common sense and reveal how common sense is susceptible to technologically induced change. We considered discussing variations on the thought experiment, such as what common sense dictates when one is lost while driving on a road trip and how GPS has decreased reliance on certain forms of shared knowledge, skills, and experiences; one no longer needs to consult a map or stop at a gas station and ask for the assistance of strangers. There is nothing new to the observation. Many have made this point before. Our point is as follows:

The precursors or inputs to the creation and sharing of common sense are not stable or inevitably accessible and shared. At least for an important subset of common sense, one of the inputs (prerequisites) seems to be a problem to solve, and one that leads to social innovation through shared experiences and beliefs about how best to deal with the problem. If technology solves the problem, there is no need for common sense solutions. In a sense, humans and machines behave indistinguishably in that context, but not exactly (or not only) because they solve the problem in the same way. Rather, they are indistinguishable because a realm or

subset of common-sense experience and knowledge that would otherwise be shared by humans (and not by machines) doesn't exist.

Consider the following set of arguments:

1. Humans face common problems in everyday life ("everyday life problems").
2. Humans develop and rely on common-sense solutions to everyday life problems.
 - a. Developing common-sense solutions necessarily depends on a shared core knowledge base, language, and social interactions sufficient to generate common understandings and beliefs.
 - b. Developing common-sense solutions [necessarily? often? usually?] depends on experimentation and social innovation.
3. Humans develop technology to solve problems.
 - a. Developing technology to solve a problem depends on knowledge, experimentation, and innovation, but not necessarily on a shared core knowledge base, language, and social interactions sufficient to generate common understandings and beliefs.
4. Some technology solves everyday life problems.
5. If technology solves an everyday life problem (more efficiently than existing common-sense solutions) then humans will not (are less likely to) develop common-sense solutions to that problem.
6. If technology solves all everyday life problems, then humans will lack common sense (or a subset of common sense that concerns problem-solving).
7. Humans without common sense are indistinguishable from machines, at least in one (important) respect.

The first four statements are uncontroversial. The same is true for the soft version of the fifth statement (read with the parentheses). The stronger version of the fifth statement is questionable. Surely humans may continue to develop common-sense solutions to everyday problems for which there is a technological solution; it is just a cost-benefit calculation. The seventh statement is just a restatement of the premise behind the common-sense test.

The sixth statement, however, requires more explanation. The idea that technology will eliminate the need for common-sense solutions to everyday problems may seem far-fetched, mainly because it's hard to believe that technology can so comprehensively address human needs. Moreover, perhaps technological solutions to present-day everyday life problems merely shift the demand curve, making a range of problems that were

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more extraordinary less so and thus potentially amenable to common-sense solutions. There also is an intermediate step missing between the fifth and sixth statements; something that would explain the aggregation of incremental substitution of technology for common sense.⁴⁵

Our objective in this section has been to articulate and justify the set of arguments. There is plenty of work to be done in modifying, defending, and extending them, and in exploring the complex and varied relationships between technology and common sense in specific contexts.

For example, suppose technological substitution for common sense (step 5) creates different everyday life problems and returns us to step 1. We can envision this as moving parallel to the Turing line. People might take greater risks than they would in the absence of technological devices such as GPS. As a reviewer noted:

I may take bigger risks. Mother never even drove on highways. With my GPS, I go places I wouldn't be confident visiting otherwise (long highway trips; errands in Newark). So, I venture into situations that may challenge and develop my common sense in a different way.

Greater or different risks might lead to new types of common sense. She explained that the specific example might work as a metaphor for other situations.

For example, technology affects the traditionally "female" work of networking/connecting friends and relatives. The required common sense changes. But maybe some of this new common sense is even more nuanced and refined, given how many more interactions are happening, with fewer useful social cues.⁴⁶

Common sense is rather flexible and serves various functions. It enables social innovation, problem-solving, and adaptive responses to the wide variety of everyday life occurrences. One of our students, Clement Lee, offered the example of common sense as a reliable fail-safe. "The greatest [shift in] humanity towards machines is not when common sense is removed from everyday life, but [when it is removed] as a backup method in order to move forward when other options are exhausted."⁴⁷ Common sense helps humans maintain a reasonably reliable system in the presence of failure.

We've questioned the stability or vulnerability of common sense on the human side of the Turing line and asked whether and how technology renders common sense less relevant, necessary, or even obsolete. Yet, as with our prior discussion of irrationality, the constructed machine-environment does a lot of work, in that case by nudging people toward

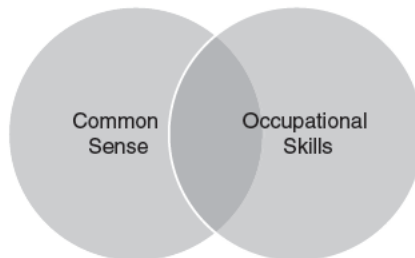
rational choice and in this case by lessening human dependence on common sense as a means for solving problems.

But our observation is not limited to problem-solving. The technological environment within which humans are situated also may restrict access to the inputs necessary to create and sustain common sense. Keep in mind that common sense, as we've defined it, depends upon a shared core knowledge base, language, and social interactions sufficient to generate common understandings and beliefs. We could rewrite the set of arguments above to focus on the relationships between technology and these specific inputs and once more posit technological substitution (steps 3–5), a corresponding elimination of common sense (step 6), and indistinguishability/dehumanization (step 7).⁴⁸ Again, the bottom line is that we cannot assume the persistent stability and availability of common sense (or its inputs).

Consider one final thought experiment. Suppose Bob lives in a community that only discusses extraordinary events. In this community, one would suffer extreme approbation for discussing anything that anyone else considers to be familiar or within the realm of everyday experience. It is very difficult to know what the boundary is between ordinary and extraordinary, and this difficulty only drives a further wedge that chills social interaction and development of a shared core knowledge base about everyday life. Would people in this community be indistinguishable from machines for lack of common sense? Perhaps, at least in the sense that the pathway for developing common sense is disrupted by the norms against sharing ordinary everyday experiences. Now suppose that the impetus for only discussing extraordinary events was not a social norm but rather was information overload. Thus, suppose that the communication channels used by Bob's community are inundated with status updates, recording and reporting of ordinary, everyday events in community members' lives, and that, as a result, community members only engaged meaningfully with the truly extraordinary. That is, assume that when flooded by the routinized reporting of the banalities of community members' everyday lives, people only devote shared attention to the extraordinary. Superficial skimming is the best one can do until something extraordinary catches one's attention. This thought experiment raises some interesting and familiar issues, such as who determines what is extraordinary and worth paying attention to and how is such power exercised? But we offer it primarily to illustrate how this state of affairs could lead to the dissipation of common sense.

The workplace is an important context to explore. Workers hone occupational skills to solve problems, and thus work (labor; task performance) entails a broad category of problems for which common sense and technology might be rivals. Recall the call center story in which a human call center receptionist was mistaken to be a machine. We suggested that the call center environment might have constrained the receptionist and that the scripts she followed made her appear machine-like. The caller might also have been influenced by his prior experience with call centers, which increasingly rely on machines to automate tasks. Advances in speech recognition have opened the space for competition between humans and machines in many occupations. In this competition, Stuart Elliot suggests, “we may overlook important skill requirements for some occupations, such as the substantial range of common-sense knowledge that enables a receptionist to reply sensibly when a customer makes an entirely unexpected request.” What constitutes a “skill requirement” is not fixed; a sensible reply to an unexpected request may turn out to be inessential for call centers operations and a (forgotten) luxury.

Automation within the workplace and what it means for society raise a host of complex issues, some of which relate to this project and some of which do not. It has a long, rich history and is currently incredibly important, maybe more so than ever before. But it is too big a topic to dive into at this point. For now, note how common sense relates to occupational skills:



Many of the arguments raised in the debate about the erosion of occupational skills or competition between humans and machines for meaningful work take the same form as the arguments about common sense and at the same time face the same counterarguments and contextual nuances.

Lost and Found

Let's return to our unsubstantiated claim that in the not-so-distant future being lost may not be a problem most humans experience. The claim is based on the speculative premise that most humans will carry, wear, or

have implanted a device which tracks their location and provides instantaneous navigational instructions. Many already do, as was evident to me when my question about the commonsensical response to being lost appeared nonsensical to many people.

As we discussed in Chapter 2, it's not hard to imagine a wearable technology that allows a person to delegate fully the mundane task of physical movement through the world to a complex navigation and sensory/motor function management technology. What would it mean for humans to delegate these mental and bodily functions – navigation, sensing, and movement – to a technological system? On one hand, navigation through the physical world seems essential to being part of the world, to understanding it and others with whom we share it. Given how environments construct us as humans, it seems troubling to tune out or to remove/disrupt our direct, physical and sensory awareness of and connection to it. Yet, one might argue that humans modified by this technology are no less human just because they choose to delegate various “mundane” tasks to a technological system. Rather, by doing so, the humans arguably free themselves from the mundane and can choose other more pleasing or productive intellectual activities. Each person only has so much time and attention.

Is there any meaningful difference between a person employing the navigation, sensory and motor function management technology and a person sitting in a self-driving car? A taxi? The passenger seat of a friend's car? The differences across the technologies are subtle; they offer different affordances and have different effects on users. Notice the differences in capabilities (not) exercised or practiced by the humans using the technologies. What types of thinking are outsourced, to whom, and what are the developmental consequences? It is difficult to say when, if ever, the Turing line is crossed, such that we might infer a person is not-thinking, or worse, that a person is rendered incapable of thinking. The person might “look” like a machine to an observer, and a test based on visual observation might be passed. But that would tell us very little about not-thinking. It is likely impossible to fashion an appropriate test without knowing, or at least inferring, what is going on in the mind of the person who uses the technology. If otherwise mentally engaged, we might infer that the person has extended her mind; perhaps the technology is additive rather than subtractive. Recall the point at the beginning about the capability to not-think. Our exploration of the theory of the extended mind and mind-extending technology prompted a somewhat different question: *Who is doing the thinking?* This raises important issues concerning autonomy and free will that are the subject of the following chapter.

- **Anonymous**

Please look in to New York Daily News—they have a completely labyrinthine process just to cancel. When you go to your account dashboard and click cancel subscription, the page just keeps loading.

Comment added April 15, 2026 7:34pm

- **Aria H**

To Whom It May Concern: The Department of Consumer and Worker Protection (DCWP)

Re: Rules Relating to Cancellation of Subscriptions REFERENCE NUMBER: 2026 RG 020

I am writing to express my support to the proposed rule by The Department of Consumer and Worker Protection (DCWP) of New York City to add rules to ensure that consumers can easily cancel subscriptions and are not subject to deceptive and unconscionable trade practices relating to the cancellation of subscriptions.

Subscription-based services, while convenient, have long been used by predatory corporations to take advantage of consumers and rack millions in revenues. This unfair practice takes money away from the pockets of consumers and puts it on greedy hands. By incorporating this proposed rule, DCWP will be protecting consumers from these predatory practices and help consumers have a voice in this matter.

According to a working paper by the National Bureau of Economic Research, forgotten subscriptions alone can account for 14% to 200% of additional revenue. Often, these subscriptions are not easy to cancel either—recently, Equinox lost a class action lawsuit in which it paid back \$600,000 because of its previously hard to cancel subscriptions. The newly proposed rule will allow New York City to further challenge companies like Equinox to protect consumers.

I respectfully urge DCWP to act in our best interests and champion the successful enactment of this rule.

Thank you,

Aria H

Comment added April 16, 2026 12:10am

- **Chris Cooper**

I'm a former government-accredited forensic investigator, and a UI/UX design professional. In mid-2025, I tried to cancel our internet service from a well-known telecommunication company. What should have taken minutes consumed months, generated nearly 1000 pages of evidence, and is now the foundation of a court case I am preparing.

Our records indicate that there are multiple federal, state, and local statutes have been violated. Here the cancellation systems seem engineered to prevent or delay cancellations. Even after confirmed cancellation, the company charged a full billing cycle, promised a pro-rata refund, and never delivered it, despite repeated follow-up for months.

I am motivated to assist anyone working to end subscription traps, and I applaud the campaign's work. If the federal rule got pushed back, state action is essential until federal legislation catches up.

I am open to contribute in any way, to help push for systemic change in this area – which affects millions of tired Americans who can't cancel their subscription due to apparent 'Engineered friction'. Of this friction – I have documented a very long list of specific examples. This has to stop.

I am also keen to speak personally on this – at the hearing in May.

Comment added April 16, 2026 11:54am

- **Nicole w**

I am writing to express my strong support for the proposed “Click to Cancel” rule. As a resident of New York City, I believe this is a common-sense measure that protects consumers from predatory business practices.

For too long, companies have made it incredibly simple to sign up for a service while intentionally making the cancellation process difficult, confusing, or time-consuming. This “subscription trap” creates an unfair burden on busy New Yorkers and often results in people paying for services they no longer want or need simply because the exit path is hidden behind phone queues or complicated interfaces. Requiring businesses to make cancellation as easy as enrollment is a matter of basic fairness and transparency. I applaud the DCWP for taking a lead on this issue to ensure that our consumer protection laws keep up with modern digital subscriptions.

I fully support the adoption of this rule and thank the Department for its work on behalf of NYC consumers.

Comment added April 20, 2026 1:23pm

- **Lisa Sorin**

The Bronx Chamber of Commerce is critical in helping local businesses in the Bronx grow, thrive, and remain competitive. The Chamber is supportive of the Department of Consumer and Worker Protection’s proposed rule to make it easier for consumers to cancel subscriptions.

Consumers shouldn’t have to deal with confusing systems just to cancel something they signed up for. Clear and simple cancellation processes build trust, and that trust is good for business. From our perspective, most businesses want to keep customers because they provide a good service, not because cancellation is difficult. Setting a clear standard across the board helps prevent bad actors from gaining an unfair advantage.

As this rule moves forward, we encourage DCWP to keep implementation straightforward and flexible, while keeping in mind that businesses should be able to comply without needing expensive system upgrades or complex changes.

Overall, we think this is a smart step that protects consumers while still working for small businesses. With thoughtful implementation, it can strengthen trust without creating unnecessary burdens.

[Comment attachment](#)

4.30.26-Click-to-Cancel-Comments.pdf

Comment added April 30, 2026 10:13am



THE NEW BRONX CHAMBER *of* COMMERCE, INC.

PRESIDENT

Lisa Sorin, The New Bronx Chamber of Commerce

April 30, 2026

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MarySol Rodriguez, Distinctive Public Affairs

Barbara Selesky, The Woodlawn Cemetery

Brian Smith, New York Yankees

Steve Squitieri, D-J Ambulette Services, Inc

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As this rule moves forward, we encourage DCWP to keep implementation straightforward and flexible, while keeping in mind that businesses should be able to comply without needing expensive system upgrades or complex changes.

Overall, we think this is a smart step that protects consumers while still working for small businesses. With thoughtful implementation, it can strengthen trust without creating unnecessary burdens.

Sincerely,

Lisa Sorin

President, The Bronx Chamber of Commerce

- **Anonymous**

Attached screenshot of my cancelled MGM in 2024 and they STILL BILL me and say I never cancelled. Services like HULU / Disney let you sign up on apps but require that you cancel on web browser but don't provide a link it took me over 1.5 hours to cancel and still had a back & forth if it was really cancelled. I'm 73 and now will NEVER sign up for anymore services because I don't want the aggravation & fighting to not be CHARGED continuously after I cancel. Companies should be required to send an email attesting that in fact your account has been cancelled. Apple is the ONLY company that lists your subscriptions and lets you cancel in their app and you can directly contact Apple via chat service if any issues with questions or issues in real time.

[Comment attachment](#)

Screenshot-2026-04-30-at-10.51.03 AM.pdf

Comment added April 30, 2026 11:08am

12:49 ↗

◀ Mail



100

Edit Subscription

[Done](#)

MGM+

MGM+

MGM+ Yearly

[See All Plans >](#)

You've canceled your subscription.

Your subscription ended on March 12, 2024.

Renew: \$58.99/year

- **Will V**

Yes! I fully support this law. It's about time. New York Sports Club and Blink have gotten away with this for years! They're outright criminals. But we all know it's happening everywhere, especially with online services. Protect consumers!

Comment added May 4, 2026 11:45am

- **Kaitlin Caruso**

Please see my attached comment in support of the proposed rule.

[Comment attachment](#)

K-Caruso-Click-to-Cancel-Comment-5.4.pdf

Comment added May 4, 2026 3:14pm

May 4, 2026

Department of Consumer and Worker Protection
42 Broadway
New York, New York 10004
rulecomments@dcwp.nyc.gov
Submitted via <http://rules.cityofnewyork.us>

Re: Click to Cancel Proposed Rule

Dear Commissioner Levine,

I am a law professor who studies, writes about, and long practiced, consumer protection law.¹ I write in my personal capacity to respond to DCWP's proposed Click-to-Cancel rule. I applaud the Department for taking this opportunity to update the City's consumer protection regulations to address negative option contracts, which are an ongoing source of frustration and loss for consumers across the digital and brick-and-mortar consumer economies. While negative option contracts have their beneficial uses, I am pleased that the Department has decided to address the real consumer harm that can come from misuse of this ever-spreading business model.

The proposed rule is an important one. The problem of abusive negative-option consumer contracting practices is rampant. The industry has grown to include not just pre-notification negative option plans (think Book-of-the-Month Club), but now also continuity plans (under which consumers agree to receive periodic delivery of goods or services until the consumer cancels the contract), automatic renewal agreements (under which a subscription provider automatically renews a consumer's subscription each time it expires, until the consumer cancels), and – a particular sore spot for many consumers—free-to-pay and fee-to-pay trial conversions (where the consumer's free or low-cost trial automatically converts to a paid continuity plan or an automatic renewal agreement). Negative option marketing has become a mainstay of fly-by-night grifters and major industry actors alike, necessitating further Department action to better protect both consumers and good-faith industry competition.

I. Scope of the issue

In 2022, the FTC issued a staff report on “dark patterns,”² which provides an excellent overview of many of the specific practices that some participants in industry use to mislead and take unfair advantage of consumers' predictably limited time and attention. (Although the report

¹ See Kaitlin Caruso & Prentiss Cox, *Silence as Consumer Consent: Global Regulation of Negative Option Contracts*, 73 Am. U. L. Rev. 1611, 1624-39 (2024).

² FTC Staff Report, *Bringing Dark Patterns to Light* (Sept. 2022).

is not exclusively about negative option contracting arrangements, it is no coincidence that subscriptions come up so often—the harmful patterns identified are pervasive in the negative option space.³) Many of the specific practices are well-characterized by the report’s invocation of a “Roach Motel”—easy to enter, nearly impossible to leave.⁴

Too easy to “sign up.” Sellers have strong incentives to make it easy for consumers to sign up for ongoing or recurring financial commitments: subscriptions can offer more, and more stable, revenue. That is fine—if the consumer actually means to sign up. With alarming frequency, however, sellers make it hard to avoid signing up that consumers don’t realize that is what they are doing.⁵ For example, a consumer may believe that she is getting a free trial or making a one-time purchase online, but miss the fine print on the website that she is signing up for an expensive recurring transaction.⁶ That fine print could be easy to miss by design—it may be hidden on another linked page, or in a small font and a barely detectable color at the bottom of the webpage.⁷ There may be a button or a check box indicating that the consumer “agrees” to the subscription—but the button can be confusingly worded, or the box could be pre-checked and easy to miss in an online checkout process.⁸

Signing up for goods or services in person is not necessarily better—consumers may be at the mercy of whatever the salesperson says and then rushed through the sign-up process without adequate time to review whatever boilerplate paperwork they receive. Alternatively, a consumer could know that they are signing up for a recurring charge but not realize that it is much more expensive than the “teaser” price that they think they are agreeing to.

³ See, e.g. Fadzai Emmah Nembaware & Sonia Sousa, *Dark patterns in subscription service cancellation processes*, ECCE '25: Proceedings of the 36th Annual Conference of the European Association of Cognitive Ergonomics (2025), available at <https://dl.acm.org/doi/10.1145/3746175.3746211>; Julianna Surkin, *Documenting and Deconstructing Dark Patterns and Asymmetry In Online Subscription Processes*, Honors thesis, U.N.C. Chapel Hill (2024), available at <https://doi.org/10.17615/qt1w-x553>.

⁴⁴ See, e.g., Ashley Sheil et al., *Staying at the Roach Motel: Cross-Country Analysis of Manipulative Subscription and Cancellation Flows*, 298 Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems 1 (2024).

⁵ See, e.g. FTC et al. v. Uber Tech. Inc., Case No. 4:25-cv-03477-JST (N.D. CA) Am. Cplt. ¶ 4 (FTC and Alabama, Arizona, California, Connecticut, Illinois, Maryland, Minnesota, Michigan, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, Virginia, West Virginia, Wisconsin, and Washington, D.C suing Uber for signing consumers up for a subscription they didn’t intend to sign up for).

⁶ See, e.g. Pennsylvania v. American Mint, LLC, Case No.: 2021-03063 (Cum. Cty. Ct. of Common Pleas), final decree available at <https://www.attorneygeneral.gov/wp-content/uploads/2025/10/Final-Executed-CP-Comm-v-American-Mint-1.pdf>.

⁷ See, e.g. In re Equinox Group, LLC et al, Assurance No. 24-099 (2024) (New York AG assurance of voluntary compliance), available at <https://ag.ny.gov/sites/default/files/settlements-agreements/equinox-group-llc-assurance-of-discontinuance-2025.pdf>

⁸ FTC v. Amazon, Case No. 2:23-cv-0932 (W.D. Wash. Sept. 25, 2025) (consumer had to check “no thanks, I don’t want free shipping”).

Too hard to cancel. Even if consumers know what they are getting into when they sign up, they reasonably expect to be able to cancel in a straightforward way. That is far from the rule in practice, however.⁹ Some businesses make it hard to cancel by designing a cancellation pathway that is far more limited, and time-consuming, than the sign-up process.¹⁰ Online, consumers may have to navigate through a series of pages and sub-pages to cancel, many of which may be double-negatives or worded in similarly confusing ways.¹¹ A brick-and-mortar business may allow consumers to sign up for a membership online or by phone, but require them to come in person (during specified business hours) to cancel, or to send (unnecessarily expensive and inconvenient) registered mail to an address buried somewhere in the fine print of their enrollment contract.¹²

Even if consumers theoretically can cancel by phone, unscrupulous sellers may still try to deter cancellation by making it time-consuming and frustrating.¹³ Customers trying to cancel may have to call a different number, which has limited hours or long wait times.¹⁴ If they get through to a person, the consumer may have to sit through and decline a seemingly interminable series of alternative sales pitches (“save” attempts) before actually being allowed to cancel.¹⁵ And if they make it through all that, the consumer may learn that they are still going to be charged, because the cancellation deadline was unreasonably far in advance from the renewal date or the date on which the next charge is to be applied.¹⁶ (This last practice is particularly pernicious for negative option programs that renew annually rather than monthly—consumers pay a larger amount annually, subject to unnecessarily punitive cancellation fees if they miss the deadline.)

⁹ Los Angeles Dist. Atty., *HelloFresh to Pay \$7.5 Million for Deceptive Subscription Practices in Consumer Protection Lawsuit* (Aug. 18, 2025), <https://da.lacounty.gov/media/news/hellofresh-pay-75-million-deceptive-subscription-practices-consumer-protection-lawsuit>.

¹⁰ See, e.g. *FTC et al. v. Uber Tech. Inc.*, Case No. 4:25-cv-03477-JST (N.D. CA), Am. Cplt. ¶ 5.

¹¹ See, e.g. *FTC v. Chegg*, Case 5:25-cv-07827 (N.D. CA Sept. 15, 2025).

¹² See, e.g. *FTC v. Fitness Int'l, LLC*, No. 8:25-cv-01841 (C.D. Cal. Aug. 20, 2025).

¹³ See, e.g., Ashley Sheil et al., *Staying at the Roach Motel: Cross-Country Analysis of Manipulative Subscription and Cancellation Flows*, 298 Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems 1 (2024).

¹⁴ See, e.g., *AG Schwalb Secures Refunds for DC Consumers Improperly Charged Subscription Fees by Online Underwear Retailer "Adore Me"* (Jun. 16, 2023) (a multi-state settlement, alleging inter alia chronically understaffed customer service), <https://oag.dc.gov/release/ag-schwalb-secures-refunds-dc-consumers-improperly>. A copy of one of the settlement documents is available here: <https://oag.dc.gov/sites/default/files/2023-06/Adore-Me-DC-Final-Signed-AVC-6-15-23-.pdf>.

¹⁵ See, e.g. *New York v. SiriusXM Radio Inc.*, Index. No. 453325/2023 (N.Y. Cty. Nov. 21, 2024), final decision and order available at https://ag.ny.gov/sites/default/files/decisions/453325_2023_people_of_the_state_of_v_people_of_the_state_of_decision_order_on_188.pdf.

¹⁶ See, e.g. *Pennsylvania v. TFG Holding, Inc. (Allegheny Cty. Ct. of Comm. Pleas)(2025)* (part of a multi-state settlement with a closing subscription company). The assurance of voluntary compliance is available here: <https://www.attorneygeneral.gov/wp-content/uploads/2025/10/Executed-PA-AVC-for-Filing-JustFab-1.pdf>.

Indefinite auto-renewal. Finally, subscriptions may go on well after the consumer has forgotten that they signed up (assuming that they ever knew at all).¹⁷ Some negative option contracts are for services that consumers are expected to interact with regularly—by logging into play a game online, for example, or by showing up to the gym. Many sellers of those services keep track of user activity for their own business purposes. Despite that—despite knowing full well that consumers are not using the service and may have forgotten about the subscription (if they ever knew about it)—some of these sellers are perfectly happy to go on charging the consumer indefinitely and never having to provide the consumer with any benefit at all. They may not make any genuine effort to remind the consumer that the subscription exists or discontinuing charges for obviously long-term dormant accounts.

II. Need for further regulation

The need for this rule is evidenced by the number of jurisdictions that have felt the need to take action to address these consumer abuses, and how often they have had to revisit the issue to address businesses' evolving strategies to manipulate consumers. More than thirty states have adopted laws regulating automatic renewal of consumer contracts (some generally, some on an industry-by-industry basis, and many both). States that have adopted or amended their laws effective just since the start of 2024 include:

- Arkansas¹⁸
- California¹⁹
- Colorado²⁰
- Connecticut²¹
- Georgia²²
- Maine²³
- Maryland²⁴
- Minnesota²⁵
- New York²⁶
- South Carolina²⁷

¹⁷ See, e.g. Liran Einav, Benjamin Klopock & Neale Mahoney, *Selling Subscriptions*, 115 Am. Econ. Rev. 1650 (May 2025) (examining and attempting to quantify some of the effect of consumer inattention on unwanted subscriptions), available at <https://www.aeaweb.org/articles?id=10.1257/aer.20231612>.

¹⁸ Act 652 of 2025 (codified at Ark. Code Ann. §4-86-112).

¹⁹ Cal. Ch. L. 515 (2024) (amending Cal. Bus. & Prof. Code §§ 17601-17602).

²⁰ Colo. Sess. Laws 2025, Ch. 368 (2025) (amending Colo. Rev. Stat. § 6-1-732)

²¹ Conn. Pub. L. No. 25-44, §7 (2025).

²² 2023 Ga. Laws 336, § 1 (codified at GA Code § 10-1-439.9).

²³ Me. P.L.2025, ch. 376 (amending 10 Me. Rev. Stat. §1210-C).

²⁴ 2025 Md. Laws ch. 204 (2025) (to be codified at §14–1328 et seq.)

²⁵ Minn. Sess. L. Ch. 114, Art. 3 (2024) (codified at Minn. Stat. § 325G.56 et seq.)

²⁶ 2025 N.Y. Laws ch. 58, Part W (amending N.Y. Gen. Bus. Law § 527-a)

²⁷ S.C. Act No. 159 of 2024 (codified at S.C. Code § 38-78-55).

- Tennessee²⁸
- Utah²⁹
- Virginia³⁰

Massachusetts similarly changed its law on automatically renewing contracts by Attorney General regulation under that Office’s UDAP powers, effective in September 2025.³¹ As your Commissioner well knows, the federal government also adopted a click-to-cancel rule in 2024, though it was struck down by the Eighth Circuit on unrelated procedural grounds. The FTC has since renewed that rulemaking effort.³²

This demonstrates the bipartisan nature of the action relating to automatic renewal laws, and the sweeping way in which abuses of automatically renewing contracts have hurt consumers nationwide. This ongoing activity demonstrates that current regulations have been insufficient to stem the tide of consumer abuse and that more action is needed. Even to the extent that the proposed rule mirrors the current requirements of N.Y. Gen. Bus. Law §§ 527 and 527-a, it is important—it will give the city a mechanism to directly to respond to businesses that hurt consumers (and their above-board competitors) by unfairly trapping consumers in endless subscription cycles.³³

III. The justification for the proposed rule

Under the Charter and Administrative Code, the Commissioner’s rulemaking power includes the ability to “defin[e] specific deceptive or unconscionable trade practices.”³⁴ The kinds of abuses that consumers regularly face regarding subscription contracts comfortably fit into both categories.

The Code’s definition of deceptive trade practice includes “[a]ny false ... or misleading oral, written, digital, or electronic statement, visual description or other representation or omission of any kind made in connection with the [offering or] sale ... of consumer goods or services,” including using ambiguity or misrepresentation regarding a material fact if it tends to deceive consumers, or offering goods or services but failing to disclose adequately all the material conditions of the offer.³⁵ Many consumer complaints—even in the comments in response to this proposed rule-- indicate that consumers find themselves paying time and again, when they did not intend to sign up for a recurring transaction, and in some cases did not mean to

²⁸ Tenn. Pub. Ch. 835 (2024) (amending Tenn. Code §47-18-133)

²⁹ Utah [H.B. 174](#) (codified at Utah Code § 13-70-101 et seq., effective Jan. 1, 2025)

³⁰ Va. Ch. 452/2024 (amending *inter alia* Virginia Code § 59.1-207.45).

³¹ 940 Code of Mass. Regs. §38.00.

³² As such, the proposed rule would “supplement,” but “not be inconsistent with the rules, regulations and decisions of the federal trade commission,” and the statutes that it enforces relating to automatic renewal laws. N.Y.C. Ad. Code. § 20-702.

³³ N.Y.C. Charter § 2203(f), (h).

³⁴ N.Y.C. Ad. Code. § 20-702. *See also* N.Y.C. Charter § 2203(f) (general rulemaking power).

³⁵ N.Y.C. Ad. Code. § 20-701(a).

engage in any transaction at all. Failing to disclose that a transaction will lead to an indefinitely recurring charge on a consumer’s account—or disclosing in a way that is hard to discern, ambiguous, or buried in fine print—certainly seems to satisfy the Code’s definition of a deceptive trade practice.

The Code further defines an unconscionable practice as one which (again in connection with the offering or sale, etc. of a consumer good or service) “unfairly takes advantage of the lack of knowledge, ability, experience or capacity of a consumer; or results in a gross disparity between the value received by a consumer and the price paid, to the consumer’s detriment.”³⁶ Again, much of the conduct that consumers complain about, and which is targeted by the proposed rule, fits comfortably within this definition. Particularly when businesses rely on “dark patterns” to predictably manipulate consumer behavior by obscuring or downplaying vital information or creating unnecessarily cumbersome cancellation mechanisms, they are preying on the predictable capacities and limitations of consumers, and the common experience of subscription fatigue. (That is even apart from the impact that certain dark patterns may disproportionately have on some marginalized or vulnerable consumers.³⁷) These businesses deliberately keep taking consumer money month after month, knowing full well that many of their consumers do not want to pay anymore—if they ever did. If a consumer did not mean to sign up for a recurring transaction, or wishes to cancel it but cannot, there is an inherent gross disparity between the value the consumer is getting out of the exchange and the price that they are paying for it.

IV. Suggested modifications to the proposed rule

Below, I offer suggestions for ways that the rule can be strengthened. I recognize that the text of the proposed rule is designed to be consistent with GBL §§ 527 and 527-a, presumably to reduce the risk of preemption litigation. It bears noting, however, that this is not an area in which strengthening consumer protections should prompt a court to find that New York City’s rule is preempted. Of course, New York City has long been plagued by the language in *Wholesale Laundry* regarding when local regulation is “inconsistent with” a general law, and thus ultra vires: “Generally speaking, local laws which do not prohibit what the State law permits nor allow what the State law forbids are not inconsistent... where the extension of the principle of the State law by means of the local law results in a situation where what would be permissible under the State law becomes a violation of the local law, the latter law is unauthorized.”³⁸

Later cases, including from the Court of Appeal, however, have acknowledged that the *Wholesale Laundry* formulation is overbroad. “If [it] were the rule, the power of local

³⁶ N.Y.C. Ad. Code. § 20-701(b).

³⁷ See Kaitlin Caruso & Prentiss Cox, *Silence as Consumer Consent: Global Regulation of Negative Option Contracts*, 73 Am. U. L. Rev. 1611, 1633-38 (2024).

³⁸ *Wholesale Laundry Bd. of Trade v. City of New York*, 17 A.D.2d 327, 329-30 (1st Dept. 1962), *aff’d* 12 N.Y.2d 998 (1963)

governments to regulate would be illusory. Rather, the general principle set forth in *Wholesale Laundry* applies only when the Legislature has ‘evidenced a desire that its regulations should pre-empt the possibility of varying local regulations.’”³⁹ While the provisions of the General Business Law relating specifically to Health Club Contracts exhibit that kind of preemptive intent,⁴⁰ the text of GBL § 527 and § 527-a do not. Accordingly, the City should not be understood as being precluded from regulating in a way that is more particularized, and therefore potentially more restrictive, than the state standard, so long as the local regulation does not clearly contradict the mandates of state law.⁴¹

If the Department and Commissioner feel constrained to hew extremely closely to the proposed text of the rule as a matter of local administrative law, I suggest that the Department consider further development of the standard in a subsequent rulemaking.

a. Require consent before a “free” trial can charge

Currently, the proposed rule provides extra protections where a consumer signs up for a free trial period or a “free” gift, to be followed by a paid, continuous or automatically renewing contract obligation. There are two primary ways I would recommend expanding upon these protections.

The first is to extend the protections not just to “free” trials or gifts, but also to nominal-cost (\$1) or reduced-price periods. From a policy perspective, if you are allowing the business to collect payment information when a consumer first signs up, and then charge them at the end of the trial period, it should not make a material difference whether the consumer is getting something marketed as “free” as opposed to being marketed as something that is steeply discounted. Moreover, if the rule targets only free trials, it will be too easy for a seller to circumvent those protections by attaching a nominal price- \$.01 or above.

The more dramatic step, but one worth taking, would be to outright prohibit businesses from transitioning from a free or nominal-cost trial to a paid subscription without obtaining customer consent *at the end of the trial period*. This would limit sellers’ ability to take unfair advantage of the average consumer’s limited time and attention span—particularly by manipulating the duration and terms of the trial period capitalize on limited consumer attention. This is not unheard-of. For example, Quebec has essentially adopted such a requirement.⁴²

Opponents of such a rule tend to describe it as banning free trials, but it does not do that—it permits them, so long as the business obtains confirmation from the consumer *after* the trial period, rather than at the start. Any suggestion that this will dramatically reduce the

³⁹ *New York State Club Ass'n, Inc. v. City of New York*, 69 N.Y.2d 211, 221, 505 N.E.2d 915, 920 (1987), *aff'd*, 487 U.S. 1, 108 S. Ct. 2225, 101 L. Ed. 2d 1 (1988) (citation and quotation omitted).

⁴⁰ N.Y. Gen. Bus. L. § 631

⁴¹ *Jancyn Mfg. Corp. v. Suffolk Cnty.*, 71 N.Y.2d 91, 100, 518 N.E.2d 903, 907 (1987).

⁴² Consumer Protection Act, CQLR, c. P-40.1, s. 230.

availability or profitability of free trials is something of an own-goal—if the business is really offering something that consumers value, why should it make a difference when it obtains the consumer consent?

b. Require businesses to cancel dormant accounts

I also suggest addressing a particularly pernicious problem that has surfaced across the negative option landscape: dormant accounts. There are some negative option-type relationships in which a seller reasonably may not expect to hear from the buyer on a regular basis, other than to provide payment—insurance contracts, for example. For others—especially negative option service contracts—the idea behind the service is that the consumer will interact with it (log in, play, appear in person, etc.) with at least some regularity. The Department should require that, for these contracts, if the seller keeps any record of customer interaction for its own purposes (like marketing or product development)⁴³ it must also send reminders to consumers who do not interact with that service for an extended period of time—and ultimately stop charging the consumer if they continue not to respond or engage. Allowing these agreements to continue indefinitely, even when a business knows full well that the consumer is not benefitting from them, satisfies the Department’s definition of unconscionability: there is every reason to believe that a consumer who is not using the service, and has not been for an extended period of time, is not getting value that remotely corresponds to whatever they are paying.

There is precedent for such an approach. Authorities in the UK, for example, imposed such a requirement as a condition of settling investigations against online gaming companies.⁴⁴ This kind of substantive protection seems most appropriate for things a consumer might easily forget that they signed up for (or not realize they signed up for in the first place). Online gaming and similar products come to mind, as do fitness and gym memberships and related services.⁴⁵

c. Be more specific about prohibited “saves”

In section § 5-110.1(e)(2) of the proposed rule, the Department would regulate the extent to which businesses can use “save” attempts to delay or derail consumer attempts to cancel, by subjecting them to a barrage of discount and similar offers. I applaud the Department for taking

⁴³ By limiting the obligation to businesses who maintain use or access data for their own purposes, the Department can limit any unnecessary compliance costs to small or unsophisticated businesses. If, however, the business actively monitors consumer utilization for its own business purposes, it should also have to use that information to protect consumers from unlimited charges.

⁴⁴ UK Competition & Market Auth., *CMA Welcomes Sony and Nintendo's Gaming Subscription Improvements*, Gov.UK (Apr. 13, 2022), <https://www.gov.uk/government/news/cma-welcomes-sony-and-nintendo-s-gaming-subscription-improvements>; 155. MICROSOFT LTD., *Undertaking to the Competition and Markets Authority Under-Section 219 of the EA02* (Jan. 20, 2022), https://assets.publishing.service.gov.uk/media/61f12142e90e0703731d3ba8/Microsoft_Limited_-_Undertakings_-_20_January_2022.pdf.

⁴⁵ Regarding health clubs, however, the city may not be at liberty to depart from the state law requirements. N.Y. Gen. Bus. L. § 631.

on this pernicious and widespread practice. Of course, a “save” attempt is not unconscionable or deceptive in every case—a consumer might truly enjoy, for example, the magazine subscription, but believe that it is too expensive. For that consumer, a “save” that makes the subscription more affordable for a year may be a significant boon. At the same time, making all consumers sit through a seemingly interminable series of save offers before they are allowed to cancel a negative option agreement is the kind of “sludge”⁴⁶ or “dark pattern”⁴⁷ that a sellers use to make cancellation so time consuming, cumbersome, and frustrating that consumers will give up and decide it isn’t worth the fight.

I would encourage you, however, to be more prescriptive in your regulation of save attempts. Rather than merely prohibiting businesses from, “presenting the consumer with a discounted offer, retention benefit or information regarding ... while imposing unreasonable or unlawful conditions upon the consumer’s ability to cancel, refusing to acknowledge, obstructing or unreasonably delaying the cancellation requested,” the Department should permit businesses to make one—and only one—save attempt. Unless the consumer affirmatively responds yes, they would like a discount offer or to hear more about membership benefits, the seller must proceed to cancel the transaction. (An alternative formulation would require the seller to cancel the subscription immediately, but allow them to ask a follow up question to the consumer, offering to re-start the subscription at a lower price.)

- d. Explain how the language access requirements of N.Y.C. Ad. Code. § 20-701(a) interact with the click-to-cancel rule.

The Administrative Code already includes some key protections regarding the language of negotiation and disclosure in consumer transactions.⁴⁸ Although any reasonable reader of the proposed rule in conjunction with the prohibition in § 20-701(a)(10) should understand as much, it may be beneficial to be explicit in the text of the rule itself that all required disclosures, reminders, and evidence of consent must be in the language in which the transaction is primarily carried out (including, for example, if the transaction is a click-through from an ad in a covered language, all relevant information must be readily accessible in that language). It should also be part of the defined unfair or deceptive practice to force consumers attempting to cancel a transaction to engage in any language other than the one that they were targeted for sign-up in or enrolled using, or to require consumers to use a different and less advantageous cancellation mechanism to cancel if they rely on a language other than English.

⁴⁶ Roger Dooley, *You Can’t Nudge If You’ve Got Sludge*, Forbes.com (Sept. 29, 2021), <https://www.forbes.com/sites/rogerdooley/2021/09/29/you-cant-nudge-if-youve-got-sludge/>

⁴⁷ FTC Staff Report on Dark Patterns and Enforcement Policy Statement on Negative Option Marketing, 86 Fed. Reg. 60822 (Nov. 4, 2021).

⁴⁸ N.Y.C. Ad. Code. § 20-701(a).

Thank you for the opportunity to submit my views on this important Rule.

Sincerely,

Kaitlin A. Caruso
Associate Professor of Law
University of Maine School of Law

I provide this affiliation for identification purposes only. I offer this comment in my personal capacity and do not speak for my institution of affiliation.

- **B. Lynn Follansbee**

Please see attached comments.

[Comment attachment](#)

USTelecom-Letter-NYC-DCWP-Click-to-Cancel-Rules-.pdf

Comment added May 5, 2026 4:10pm

May 5, 2026

Commissioner Samuel A. A. Levine,
NYC Department of Consumer and Worker Protection
42 Broadway, 8th Floor
New York, NY 10004

RE: Opportunity to Comment on Proposed Rules Relating to Cancellation of Subscriptions

Dear Commissioner Levine,

USTelecom – The Broadband Association (“USTelecom”)¹ represents a large cross-section of telecommunications providers across the country, from the largest nationwide corporations to some of the smallest providers serving rural communities. From making communications networks secure, to deploying accountable AI systems that ensure resilient service, to stopping illegal and unwanted robocalls and other fraud schemes, USTelecom and its members are at the forefront of protecting the communities we connect. USTelecom opposes applying the Department of Consumer and Worker Protection (“DCWP”)’s proposed rules relating to cancellation of subscriptions to broadband and communications services because they would cause more harm than benefit to consumers.

The Proposed Rules Could Create Harmful Regulatory Conflict with Existing, Comprehensive FCC Regulations

Congress has established a comprehensive framework for consumer protection in communications services, governing disclosures, billing practices, recurring charges, onboarding, customer authentication, and provider changes, and has vested the Federal Communications Commission (“FCC”) with primary authority to implement and administer those requirements. In 2021, Congress directed the FCC to adopt a single, nutrition label-style disclosure for fixed and wireless mass-market broadband service plans, to supplement the agency’s existing broadband transparency rule.² After three public hearings and a notice-and-comment proceeding, the FCC adopted labeling rules that included “accurate, simple-to-understand information about broadband internet access service [that] helps consumers make informed choices[.]”³ Because the labeling rules implement a specific congressional mandate, they are not subject to agency discretion.

¹ USTelecom is the premier trade association representing service providers and suppliers for the communications industry. USTelecom members provide a full array of services, including broadband, voice, data, and video over wireline and wireless networks. Its diverse membership ranges from international publicly traded corporations to local and regional companies and cooperatives, serving consumers and businesses in every corner of the country.

² See generally Final Rule, *Empowering Broadband Consumers Through Transparency*, 87 Fed. Reg. 76,959, 76,962 (Dec. 16, 2022) (“Broadband Transparency Rule”) (codified as amended at 47 C.F.R. § 8.1); see also The Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429, § 60504 (2021).

³ FCC, Broadband Consumer Labels, <https://www.fcc.gov/broadbandlabels>.

The FCC's final labeling rule reflects careful and deliberate choices about what to include and exclude as made by the expert agency with oversight of communications services acting pursuant to a specific Congressional mandate. The FCC's rules specify what information must be displayed to a consumer at the point of sale for broadband service in order to convey the information most meaningful and relevant to consumers. Notably, the FCC declined to require certain disclosures "[i]n the interest of simplicity."⁴ They also prescribe the exact format for the required disclosures using a template "Nutrition Label," and prohibit broadband providers from deviating from that format.⁵ An additional set of disclosure requirements as proposed by the DCWP would undermine the "simplicity" that the FCC sought in crafting its own rules for broadband services and have the potential to overload customers with disclosures, contrary to the DCWP's goal of ensuring consumers can easily cancel unwanted subscriptions.

Consumers Intentionally Purchase and Depend on Communications Services that Provide Continuous Connectivity

Broadband and other communication services stand in sharp contrast to other automatic renewal services DCWP's proposed rules seek to address. Consumers expect constant connectivity from their communications services. Consumers desire automatically renewing agreements to avoid any interruption in services that they use every day for work, education, healthcare access, public safety, as well as to stay connected with family, friends and their communities. Unlike products and services that consumers use periodically, such as health club memberships, the use of communications services is active and continuous. To best meet customers' constant reliance on communications services, communications providers typically offer subscription models that allow for service continuity.

A Simple Cancellation Process is Not Helpful to a Consumer Changing Broadband Providers

If customers do choose to cancel communications service, they typically switch providers – rather than ending service entirely. This competition creates incentive for providers to offer favorable terms and better service to retain customers. That competitive pressure is only increasing as consumers gain more choices across fiber, fixed wireless, and low-Earth orbit satellite offerings, all while providers continue aggressive investment in next-generation networks. In the context of voice service, consumers generally switch providers without directly interacting with their existing provider,⁶ reflecting a uniquely competitive dynamic in this heavily regulated marketplace.

Indeed, many consumers who contact their provider to cancel have not necessarily made the final decision to cancel services but may instead be seeking to negotiate a better deal. An overly simplified cancellation process could short-circuit these interactions, undermining providers' ability to extend retention offers and ultimately depriving consumers of the discounts and improved terms they are

⁴ Broadband Transparency Rule, 87 Fed. Reg. at 76,963.

⁵ See 47 C.F.R. § 8.1(a)(1).

⁶ See 47 C.F.R. Part 64 Subpart K (Changes in Preferred Telecommunications Service Providers); 47 C.F.R. Part 52 Subpart C (Number Portability).

actively seeking. Critically, these retention offers do not obstruct cancellation; providers simply present the option of a better deal, and if the consumer declines, the cancellation proceeds without delay.

A Simple Cancellation Process is Not Conducive to the Broadband Consumer Experience

Broadband packages often include multiple services, such as internet, television, voice, or other bundled offerings, so it is important that consumers clearly understand what they are cancelling before any account changes are finalized. Providers also need the ability to authenticate customers before making changes to an account, both to protect consumers and to prevent unauthorized cancellations or service disruptions. Finally, cancellation requirements should focus on ensuring that the process is easy to use and available through a method the consumer is accustomed to using to interact with the provider, rather than rigidly requiring cancellation through the exact same method used at sign-up. For these reasons, USTelecom urges you to exclude communications services from any proposed rules relating to cancellation of subscription services.

Respectfully,

/s/ B. Lynn Follansbee

B. Lynn Follansbee
Vice President, Strategic Initiatives & Partnerships

- **Laura Smith, Legal Director, TINA.org**

TINA.org's comment is attached.

[Comment attachment](#)

5_6_26-TINA-comment-re-NYC-Click-to-Cancel-proposal.pdf

Comment added May 6, 2026 11:34am

- **Dustin Brighton**

May 7, 2026

Commissioner Samuel A.A. Levine Department of Consumer and Worker Protection 42 Broadway, 5th Floor New York, NY 10004

Re: Comments on Proposed Rule – Cancellation of Subscriptions (“Click-to-Cancel”)

RE: Industry Opposition to Current Proposed “Click to Cancel” Rule

Dear Commissioner and Members of the Department of Consumer and Worker Protection:

On behalf of the Evergreen Subscription Organization, I respectfully submit the following comments in response to the Department’s proposed rule regarding subscription cancellation (“click-to-cancel”).

We appreciate the Department’s goal of ensuring that consumers can easily and transparently cancel subscription services. Consumers should not face unnecessary barriers, delays, or deceptive practices when seeking to end a recurring relationship. We support clear, accessible, and efficient cancellation mechanisms.

However, we write to express concern that, as currently drafted or potentially interpreted, the proposed rule could effectively eliminate or unduly restrict lawful and beneficial retention (“save”) offers. We urge the Department to clarify that such offers remain permissible, provided that consumers retain the ability to cancel immediately, easily, and without friction. 1. Retention Offers Are a Legitimate and Pro-Consumer Practice

Retention or “save” offers—such as discounts, plan downgrades, billing pauses, or alternative service tiers—are a standard and widely accepted feature of subscriptionbased commerce. These options often benefit consumers by:

- Allowing them to reduce costs rather than fully cancel services they still value;
- Providing flexibility during temporary financial or usage changes; and
- Increasing transparency around available service options.

Eliminating or discouraging these interactions would reduce consumer choice and could lead to more cancellations that do not reflect the consumer's true preferences.

2. The Proposed Rule Risks a De Facto Prohibition on Save Offers

While the rule does not explicitly ban retention offers, its emphasis on "one-click" cancellation and the prohibition on additional steps could be interpreted to disallow any intervening screen or offer. Such an interpretation would create a de facto ban on save flows, even when those flows are:

- Clearly presented,
- Non-deceptive, and
- Easily bypassed.

We recommend that the Department explicitly permit the presentation of retention offers, so long as:

- A clear and conspicuous "Cancel" option is presented on the same screen; and
- Consumers can complete cancellation in a single, uninterrupted action if they choose.

3. Alignment with Existing Legal Frameworks

New York State law and other regulatory frameworks have historically permitted retention offers, provided that cancellation remains straightforward and accessible. Departing from this approach at the municipal level risks creating inconsistency and confusion for both consumers and businesses.

A clear statement preserving save offers would align the rule with existing legal norms while still advancing the Department's consumer protection goals.

4. Avoiding Unintended Consequences A rigid interpretation of "one-click" cancellation that excludes retention interactions could:

- Reduce consumer access to beneficial pricing or service alternatives;
- Incentivize businesses to remove flexible plan options altogether; and
- Create a less dynamic and less consumer-responsive marketplace.

Importantly, consumers who wish to cancel immediately should always be able to do so. But those who are open to alternatives should not be deprived of that opportunity.

5. Recommended Clarification

To address these concerns, we respectfully request that the final rule include language clarifying that:

"A business may present a retention or modification offer during the cancellation process, provided that the consumer is simultaneously presented with a clear, conspicuous, and readily accessible option to complete cancellation immediately without additional steps."

Such clarification would preserve consumer choice while ensuring that cancellation remains frictionless and effective.

We appreciate the opportunity to comment on this important proposal and would welcome further engagement with the Department on how to balance ease of cancellation with preserving beneficial consumer options.

Thank you for your time and consideration.

Sincerely,

Dustin Brighton

Executive Director Evergreen Subscription Organization

[Comment attachment](#)

ESO-Letter-of-Opposition-to-LA.-HB-750-F.pdf

Comment added May 7, 2026 11:25am



EVERGREEN SUBSCRIPTION
ORGANIZATION

March 27, 2026

The Honorable Daryl Andrew Deshotel

RE: Industry Opposition to HB 750

Chair Deshotel and Distinguished Members of the House Commerce Committee:

We at the Evergreen Subscription Organization appreciate the opportunity to provide feedback on HB 750. While we support strong, commonsense consumer protections in the automatic renewal marketplace, we must respectfully oppose the bill as currently drafted due to several provisions that would undermine consumer convenience, create unnecessary compliance burdens, and deviate from widely accepted national standards.

Support for Core Consumer Protections

We strongly support ensuring that Louisiana consumers benefit from the same core protections adopted in most states, including:

- A cost-effective, timely, and easy-to-use cancellation mechanism;
- Clear and conspicuous notice of automatic renewal terms in proximity to the consent mechanism;
- Affirmative consent to the contract;
- A retainable acknowledgment containing cancellation information; and
- Cancellation methods that are as easy as enrollment, particularly in electronic contexts.

These protections strike the appropriate balance between transparency and usability, while preserving the convenience that consumers expect from automatic renewals.

Concerns with Reminder Notice Requirements

HB 750 includes reminder notice provisions that go well beyond the norm and would ultimately undermine the purpose of automatic renewals. By referencing the requirement to obtain express affirmative consent again, the bill appears to require consumers to re-opt into services rather than simply receive a reminder with cancellation instructions. This fundamentally alters the nature of automatic renewals and risks service interruptions, loss of favorable pricing, and other unintended consumer harms.

Additionally:

- The bill requires reminders for all contracts, whereas most states only require them for terms of one year or longer.
- The proposed 25–45 day notification window is an outlier; most states use 15–45 days or 30–60 days.
- Requiring annual reminders regardless of contract length will contribute to “notice fatigue” and may be perceived as mandated spam.

We recommend aligning with the prevailing state approach by limiting reminder requirements to contracts of one year or more and adopting a standard notification window.

Data Retention and Privacy Concerns

The bill’s requirement to retain records of consumer consent for three years, or one year after termination, conflicts with widely accepted data minimization principles. This requirement introduces unnecessary privacy risks and is not standard practice in other automatic renewal laws. Companies should maintain records sufficient to demonstrate compliance, but additional retention mandates for former customers serve no legitimate purpose.

Disclosure Requirements

HB 750 requires disclosure of all cancellation methods prior to confirming billing information. Most states require disclosure of “one or more” methods. Requiring all methods may overwhelm consumers with irrelevant information depending on the platform they are using, thereby reducing clarity rather than enhancing it.

Payment Models and Cancellation

The bill’s requirement to “immediately stop recurring charges” fails to account for common, consumer-friendly installment models. Many consumers choose discounted

annual commitments billed monthly. Other states address this by clarifying that cancellation applies to the automatic renewal, not necessarily to agreed-upon payment obligations. We recommend similar clarification here.

Cancellation Mechanism Challenges

While we support easy cancellation, requiring that cancellation be conducted through the same medium used for enrollment could create unintended burdens—particularly for in-person transactions. A more consumer-friendly and flexible standard, used in other states, allows cancellation through the medium “customarily used to interact with the consumer,” including online or toll-free options.

Definition of “Clear and Conspicuous”

The bill introduces vague and subjective language prohibiting any content that could “interfere with” or “undermine” consent. This standard is unclear and unnecessary, as businesses already have strong incentives to present terms clearly. Established definitions at the state and federal level provide sufficient guidance without introducing ambiguity that may lead to inconsistent enforcement.

Missing Standard Exemptions

The bill omits common exemptions for entities regulated by bodies such as the Public Service Commission (PSC), Public Utility Commission (PUC), Federal Communications Commission (FCC), and Federal Energy Regulatory Commission (FERC). These entities are already subject to extensive oversight, and service disruptions in these sectors can have significant consequences for consumers.

Overbroad Enforcement Mechanism

Finally, the inclusion of a private right of action is disproportionate to the potential harm addressed by the bill. Evidence demonstrates that such provisions primarily benefit attorneys rather than consumers and can lead to costly litigation. This, in turn, may discourage businesses from offering automatic renewal options that consumers value for their convenience.

Conclusion

We support legislation that preserves the convenience of automatic renewals while providing clear, effective consumer protections. However, the outlier provisions in HB 750 would impose unnecessary costs on Louisiana businesses, create compliance complexity, and ultimately reduce the availability of these popular services.

We respectfully urge the legislature to revise HB 750 to align with widely adopted national standards and remove the provisions outlined above.

Thank you for your time and consideration.

Sincerely,

Dustin Brighton

Executive Director
Evergreen Subscription Organization

- **American Economic Liberties Project (AELP)**

The American Economic Liberties Project (AELP) submits this comment to support the New York City Department of Consumer and Worker Protection’s (DCWP) proposed “Click to Cancel” rules, which would ensure that consumers can cancel subscriptions as easily as they can sign up for them and protect consumers from deceptive and unconscionable trade practices relating to subscription offers. New Yorkers have been clamoring for such common sense consumer protections for years. Back in 2023, when the Federal Trade Commission proposed a similar rule under Chair Lina Khan, it received thousands of supportive comments from around the country—including from individuals in New York City and New York State. See, e.g., <https://www.regulations.gov/document/FTC-2023-0033-0001/comment?filter=%22new%20york%22>.

We applaud the Mamdani administration for tackling these long-festering anti-consumer practices with urgency and alacrity. Whereas current Federal Trade Commission (FTC) Chair Ferguson took six months to take any steps to start reviving efforts relating to this issue after a procedural setback in court, under Commissioner Sam Levine, the DCWP moved about twice as quickly, proposing rules within the Mamdani administration’s first 100 days.

As noted in our attached recent comment to the FTC, one-off enforcement efforts have proven to be insufficient deterrence across the subscription economy, so every day matters in bringing relief to beleaguered consumers. We urge the DCWP to finalize these rules quickly.

[Comment attachment](#)

2026-4-13-AELP-Comment-re-Prenotification-Negative-Option-Plans-aka-Click-to-Cancel-FINAL-FTC-2026-0265-0067.pdf

Comment added May 7, 2026 6:48pm

Before the Federal Trade Commission**Response to Public Comment
Docket No. FTC 2026-0265****Written Comments from the American Economic Liberties Project
Solicitation for Public Comment on “Prenotification Negative Option Plans”****April 13, 2026**

The American Economic Liberties Project (“Economic Liberties”)¹ submits this comment in response to the Federal Trade Commission’s (“FTC” or the “Commission”) advance notice of proposed rulemaking (“ANPRM”) regarding the use of “prenotification negative option plans.”²

I. Introduction

Over the two decades, with technological advancements and changing consumer preferences, businesses have expanded their use of subscription models.³ Now, most businesses offer subscription plans for products and services, with this model becoming prevalent in almost every sector of the economy.⁴ At the same time, businesses are offering more types of models, new products and services, and new billing and marketing plans than ever before.⁵ This includes negative option plans – transactions where a business interprets a consumer’s silence as confirmation to be charged for a product or service – that automatically renew, free trials that roll into paid subscriptions, and plans that continue until a consumer affirmatively cancels.⁶

The first negative option rule (“Rule”) was adopted by the FTC in 1973 to prevent unfair or deceptive market practices for businesses that shipped physical merchandise via prenotification plans⁷ – where businesses ship products to consumers and charge them for it if the consumer does not cancel or decline.⁸ But it does not cover the vast majority of negative option practices that have emerged in the last fifty years. And while Congress has passed legislation to crack down on “aggressive sales tactics,”⁹ regulatory gaps remain. The *Telemarketing and Consumer Fraud and Abuse Prevention Act* enacted in 1994 as implemented by the FTC’s *Telemarketing Sales Rule* (“TSR”) only applies to negative option plans offered via telemarketing,¹⁰ and the *Restore Online Shoppers’ Confidence Act* (“ROSCA”) enacted in 2010 only applies to sales that are “effected on the internet”¹¹ or “completed online.”¹² That means besides case-by-case enforcement actions, subscribers are not necessarily protected from subscription traps via mail or in person. Recently, Uber filed a motion to dismiss attempting to evade accountability from the FTC and a number of states over unfair and deceptive subscription practices, by claiming it is a first-party biller, not a third-party which is covered under ROSCA.¹³

The previous administration took meaningful steps to address the evolving subscription market, to fill the regulatory gaps that exist, and ultimately crack down on unfair and deceptive practices to protect the public. This included proposing and finalizing a new rule (“Amended or Vacated Rule”)¹⁴ that required it to be as simple to cancel as it is to sign-up for all negative option subscription plans, and required businesses to clearly and truthfully disclose material information to consumers. The Amended Rule also allowed the Commission to impose civil penalties on businesses engaged in unfair or deceptive practices, which will deter further wrongdoing, allow the Commission to provide redress to consumers, and ensure there is fair competition.¹⁵ The Amended Rule was widely supported, with large public engagement – as over 16,000 people commented on the final rule.¹⁶ Business groups immediately sued to block the Amended Rule,¹⁷ with the Eighth Circuit Court of Appeals striking down the Amended Rule in March purely for procedural reasons.¹⁸

As the 1973 Rule remains unchanged, a number of businesses have used unfair and deceptive marketing in modern subscription practices to boost revenue and ultimately their profits – to the detriment of consumers, small and emerging businesses, and other competitors. While the FTC and a number of states have cracked down on particular companies,¹⁹ case-by-case enforcement actions are time and resource intensive. As investigations or lawsuits are underway, harm to consumers and businesses continues. Clear, bright-line rules that address these widespread practices are long overdue.²⁰

This comment provides a brief overview of subscription models and the different subscription traps that consumers and businesses are subject to. It also provides a few examples of the different enforcement and regulatory actions the FTC has taken against businesses for subscription traps, background on the Amended Rule, and why bright-line rules are preferable. Next, it provides a brief overview of actions the Trump FTC has taken surrounding subscription practices.

While we commend the Commission for taking steps to address manipulative, coercive, or deceptive subscription practices throughout the economy,²¹ we believe that the Commission’s limited time and resources should be spent addressing the Eighth Circuit’s concerns by issuing a preliminary regulatory analysis along with a notice of proposed rulemaking (“NRPM”)²² instead of restarting the rulemaking in its entirety. If the FTC must restart the rulemaking process in its entirety, then the Commission should go even farther than the Amended Rule, as noted below. However, the FTC has already collected research and evidence – including via an ANPRM in 2019²³ and NPRM in 2023,²⁴ enforcement actions, and complaints from the public. And importantly, the time between an ANPRM and an NRPM can take months and even years – as exemplified by the aforementioned four year period.²⁵ Assuming beginning with an ANPRM adds 12 months to the process, and the trajectory of complaints the FTC receives each year regarding negative option plans and subscriptions continues, the agency could receive over 120 complaints per day in the next year– totaling 43,800 over 12 months.²⁶ This extra delay will result in more consumers and businesses suffering harm, and with FTC budget and staff cuts,²⁷ an enforcement first approach is likely to be costly and inadequate, leaving many complaints unaddressed. As such, we urge the FTC to quickly implement a negative option rule that fills the regulatory gaps, creating clear, consistent guidance for businesses across different types of negative option plans and subscriptions.

II. The Subscription Economy

Over the two decades, the subscription model has expanded and become prevalent in almost every sector of the economy.²⁸ Between 2012 and 2021, it has grown by over 400%,²⁹ with subscription based companies outpacing traditional business models on the S&P 500,³⁰ and almost 75% of companies that sell directly to consumers offer a subscription service.³¹ Indeed, 80% of the top fortune 500 companies offer subscription plans,³² while 90% of the largest technology companies by market cap offer such plans.³³ Over 90% of households in the U.S. pay for at least one subscription service,³⁴ while the average household is subscribed to seven or more services.³⁵ In total, the average American pays over \$1,000 a year for subscriptions.³⁶ In fact, there are so many subscription products that there are subscription services that will cancel a consumer's other subscriptions.³⁷

At the same time the model has expanded to different types of businesses, the type of subscription has also evolved. Subscriptions used to primarily involve prenotification plans³⁸ – where businesses send notices to consumers offering goods and automatically bill and ship the product if the consumer fails to decline, including monthly books, magazines, or newspapers.³⁹ Now, subscription plans are primarily automatic renewals that continue until a consumer cancels.⁴⁰ This includes streaming services, gym memberships, car wash and ride sharing subscriptions, and music and video game services.⁴¹

This model has grown in part due to technological advancements, business rationales, and consumer preferences. Cloud computing has made it easier for companies to host applications and data without expensive upfront costs on infrastructure and physical storage.⁴² High speed internet and the use of mobile devices allow consumers to access products and services at all times. The development of recurring, automatic billing systems along with payment processors have made it easier for businesses to offer this model.⁴³ And the availability of data collection, artificial intelligence, and other analytical tools have made it easier for businesses to know precisely what customers want and are willing to pay for a service.⁴⁴ Businesses are turning to subscription models because they provide consistent revenue, allowing for stability and predictability.⁴⁵ And some consumers turn to subscriptions for a lower entry price, flexibility that comes with free trials and cancellations, or convenience as they do not have to own, store, repair, or lose things.⁴⁶

Some businesses have used this model to coerce consumers into signing up for unwanted subscriptions, prevent them from cancelling, charge consumers or increase prices without their consent, or lock consumers into an ecosystem while locking other businesses out.⁴⁷ These efforts create outsized profits for the business,⁴⁸ while costing millions of people time and money. For example, the average American spends almost \$200 a year on unused or hard to cancel subscriptions,⁴⁹ with people underestimating exactly how much they are spending each month.⁵⁰ At the same time, many businesses pay for subscriptions that go unused. According to one study, half of all software licenses go unused, costing businesses billions of dollars.⁵¹

III. Previous Efforts

The FTC has a long history of cracking down on these abusive subscription practices, including via case-by-case enforcement actions and rulemaking efforts.

Enforcement

The FTC has taken a number of enforcement actions⁵² using a patchwork of existing authorities to try to address unfair or deceptive subscription practices,⁵³ including Section 5 of the FTC Act. For example, in 2009, the FTC took action against two companies and their executives for deceptive advertising surrounding weight-loss drugs and charging consumers without their consent.⁵⁴ In 2017, the FTC took action against Credit Bureau Center (formerly MyScore LLC) for enrolling consumers into a credit monitoring subscription without their consent.⁵⁵ In 2023, the FTC sued Amazon and a number of executives for knowingly enrolling consumers in an Amazon Prime subscription without their consent using manipulative, coercive practices and making it difficult for consumers to cancel their subscription.⁵⁶ And in 2024, the Commission also sued Adobe and two executives for hiding early termination fees from consumers and making it difficult to cancel subscriptions.⁵⁷ Before the Amended Rule was struck down, the Commission along with 21 bipartisan states and Washington D.C. sued Uber for falsely advertising free delivery services and charging them anyway, and for enrolling consumers into a subscription plan without their consent, and made it difficult to cancel.⁵⁸

While enforcement efforts are necessary, signaling to businesses and markets that law and rulebreakers will be held accountable, these actions are company-specific, take a vast amount of time and resources, and are clearly not adequate given the increasing number of complaints received by the FTC each year.⁵⁹

Rulemaking

The FTC has had a negative option rule since 1973. However, the Rule only addressed “prenotification” plans in which the business offers a product to consumers, then charges and provides the goods if the consumer does not decline the offer.⁶⁰

In 2019, the first Trump FTC understood the need for a bright-line rule to address persistent unfair and deceptive subscription practices, as the Commission continued to see an uptick in the number of complaints surrounding subscription plans.⁶¹ As such, the Commission began a rulemaking process, receiving fewer than 20 comments from the public on the current rule and how a new rule could address consumer harms.⁶²

The Biden FTC took additional efforts to protect consumers and businesses across the board from unfair and deceptive subscription practices. First, the Commission published an updated policy statement regarding negative option marketing, providing clear guidance for businesses on the FTC’s enforcement of laws and regulations.⁶³ Then, the Commission proposed and finalized changes to the Rule.⁶⁴ The Amended Rule expanded what categories were covered under the rule, including continuity plans,⁶⁵ automatic renewals,⁶⁶ and free trial plans.⁶⁷ The Amended Rule also required businesses to make it as quick and easy to cancel as it was for the consumer to sign up for the subscription, and provide clear, truthful information for consumers to easily understand what they are signing up for.⁶⁸

Despite the popularity of the Amended Rule – with over 16,000 people commenting and the vast majority of commenters supporting the new rule – and the agency’s history of promulgating rules to protect

consumers,⁶⁹ business groups sued to block it almost immediately.⁷⁰ The plaintiffs claimed the Amended Rule was an “abuse of discretion” and “in excess” of the agency’s authority, while also violating a statutory requirement.⁷¹ On July 8, 2025, an Eighth Circuit panel held that the FTC had violated Section 22 of the FTC Act,⁷² as the agency did not issue its preliminary regulatory analysis prior to the final rule because it had determined that the proposed rule would not reach the threshold which required an analysis – including having an annual effect of over \$100 million on the economy.⁷³ However, the administrative law judge (“ALJ”) at the Commission later determined the rule would instead exceed that threshold.⁷⁴ Because the Commission did not issue a preliminary regulatory analysis, the 8th Circuit panel determined the plaintiffs “lost a notable opportunity to dissuade the FTC from adopting the Rule.”⁷⁵ Notably, the Court did not set aside the rule on arbitrary and capricious grounds, nor on the Commission’s authority to promulgate such a rule,⁷⁶ but instead because of the “Commission’s procedural error.”⁷⁷ Now, instead of addressing the Eighth Circuit’s concerns, the Commission seems poised to completely restart the rulemaking process.

Continued need for action

Since the Amended Rule was finalized and struck down, these unfair or deceptive practices have only continued. This is evident by commenters on this docket, complaints shared on anonymous message boards, and litigation efforts.⁷⁸ One commenter told the Commission “as much as I try to stay on top of cancelling before the free trial ends[,] [s]ometimes I forget, and in this last 6 month[s] it has cost me \$120 from 4 [applications] I failed to cancel [and] have never used nor opened.”⁷⁹ Another individual was charged a monthly fee after making a purchase, which the commenter does not recall signing up for.⁸⁰ Someone else expressed frustration when attempting to cancel a subscription that required a “over 10 minute [phone call with] someone who tried to convince me to stay,”⁸¹ while another commenter urged the Commission to “give[] this issue the attention it deserves.”⁸² There are a number of message boards where anonymous users have also expressed their frustrations with subscriptions and subscription traps. One user said they are “exhausted” by subscriptions, as they have to keep “a constant mental load to track what [subscription] is active and what is not,”⁸³ while another expressed frustration with subscription services that announce price increases, but once a user goes to cancel the service, the company offers them a discount instead, noting “[i]f they aren’t losing money [], why not just offer that deal for everybody?”⁸⁴ And in response to the Eighth Circuit’s decision to vacate the rule, one commenter said they were “[t]ired of courts tying customer hands.”⁸⁵ At a time when streaming services are raising prices well above inflation,⁸⁶ the stakes for consumers are only getting higher.

IV. The Current FTC Delayed Rollout of the Amended Rule — And Then Took Over Six Months to Take Additional Action

When the Trump FTC took control of the rulemaking effort, the Commission slow-walked its rollout of the rule. On May 9, 2025, just days before companies were required to comply with the new rule, the agency extended the compliance deadline sixty days – despite already deferring enforcement for some provisions already.⁸⁷ The FTC required compliance by July 14 – a deadline which was mooted by the Eighth Circuit’s decision just days earlier.

This FTC has taken a number of enforcement actions to crack down on abusive subscription practices. After the rule was struck down, the Commission sued LA Fitness for making it “exceedingly difficult” for consumers to cancel their gym memberships which continued indefinitely,⁸⁸ and Instacart for falsely advertising free delivery services and charging them anyway, and for enrolling consumers into subscription plans they did not consent to.⁸⁹ However, it took six months before the Commission took any action to revive the rulemaking effort, including eight months before issuing the ANPRM.⁹⁰

If the FTC nonetheless restarts the rulemaking process in its entirety, then the Commission should go even farther than the Amended Rule. This could include: 1) banning free trials or free to pay plans from rolling into automatic subscriptions, 2) requiring affirmative agreements from consumers for price increases, 3) requiring a period after automatic renewal where a consumer can cancel and receive a full refund, and 4) banning subscriptions that are required for a product or service to be operable.

V. Conclusion

The evolving subscription economy alongside outdated FTC rules has enabled a number of businesses to use unfair and deceptive practices to trap consumers and businesses into subscriptions and keep other competitors out of the marketplace. While the FTC looks to repeat work that has already been done, consumers are spending hundreds of dollars on unused or unwanted memberships, competition is being suppressed, and cities, states, and members of Congress are looking to fill in the gaps.⁹¹ At a time of persistent inequality,⁹² challenging labor market,⁹³ and growing affordability crisis,⁹⁴ it is imperative for the FTC to act quickly to end these abusive practices on an economy wide level.

¹ The American Economic Liberties Project is a nonpartisan, nonprofit research and advocacy organization dedicated to understanding and addressing the problem of concentrated economic power in the United States.

² Federal Trade Commission, “FTC Seeks Public Comment in Response to Advance Notice of Proposed Rulemaking Regarding Negative Option Marketing Practices,” press release, March 11, 2026, <https://www.ftc.gov/news-events/news/press-releases/2026/03/ftc-seeks-public-comment-response-advance-notice-proposed-rulemaking-regarding-negative-option>; Federal Trade Commission, “Rule Concerning the Use of Prenotification Negative Option Plans,” Federal Register (proposed rule), 91 Fed. Reg. 12318, March 13, 2026, <https://www.federalregister.gov/documents/2026/03/13/2026-04952/rule-concerning-the-use-of-prenotification-negative-option-plans>.

³ See, e.g., Zuora, *The Subscription Economy Index*, April 2025, <https://www.zuora.com/resource/subscription-economy-index/>; Faisal Kalim, “The Subscription Economy has grown over 435% in 9 years,” *The Fix*, March 4, 2021, <https://thefix.media/2021/03/04/the-subscription-economy-has-grown-over-435-in-9-years/>.

⁴ Jay Fitzgerald, “With Subscription Fatigue Setting In, Companies Need to Think Hard About Fees,” *Working Knowledge* (Harvard Business School), October 17, 2023, <https://www.library.hbs.edu/working-knowledge/with-subscription-fatigue-setting-in-companies-need-to-think-hard-about-fees>; Elie Ofek and Amy Konary, “Subscription Models: Recurring Revenues for Lasting Growth,” *Harvard Business School Background Note No. 523-113*, June 2023, <https://www.hbs.edu/faculty/Pages/item.aspx?num=64200>.

⁵ See, e.g., Stripe, “Subscription pricing models: A guide for businesses,” January 29, 2026, <https://stripe.com/resources/more/subscription-pricing-models-a-guide-for-businesses>; Stripe, “Subscription business models 101: Types of models, how they work, and how to choose one,” March 11, 2024, <https://stripe.com/resources/more/subscription-business-models-101-types-of-models-how-they-work-and-how-to-choose-one>.

⁶ Federal Trade Commission, *Negative Options: A Report by the Staff of the FTC’s Division of Enforcement*, January 2009, <https://www.ftc.gov/sites/default/files/documents/reports/negative-options-federal-trade-commission-workshop-analyzing-negative-option-marketing-report-staff/p064202negativeoptionreport.pdf>.

⁷ See, e.g., Federal Trade Commission, “For Your Information: Regulatory Reform Update: Negative Option Rule,” March 31, 1997, <https://www.ftc.gov/news-events/news/press-releases/1997/03/regulatory-reform-update-negative-option-rule> (FTC File No. P97 4229); 16 CFR 425.1(c)(1).

⁸ Federal Trade Commission, “Use of Prenotification Negative Option Plans,” 16 CFR Part 425, <https://www.ftc.gov/legal-library/browse/rules/use-prenotification-negative-option-plans>.

⁹ See, e.g., Public Law 111–345, Restore Online Shoppers’ Confidence Act, 111th Congress, S. 3386, 15 U.S.C. § 8401, December 29, 2010, <https://www.congress.gov/111/plaws/publ345/PLAW-111publ345.pdf>

¹⁰ See, e.g., H.R. 868 - *Telemarketing and Consumer Fraud and Abuse Prevention Act*, 103rd Congress (1993–1994), <https://www.congress.gov/bill/103rd-congress/house-bill/868>; Federal Trade Commission, “Telemarketing Sales Rule,” 16 CFR Part 310, <https://www.ftc.gov/legal-library/browse/rules/telemarketing-sales-rule>.

¹¹ See, Pub. L. No. 111-345, § 3(a).

¹² See, e.g., Competition Policy International, “Reports of ‘Click-to-Cancel’s Death May Be Premature,” PYMNTS, November 3, 2025, <https://www.pymnts.com/cpi-posts/reports-of-click-to-cancels-death-may-be-premature/>.

¹³ Isaiah Poritz, “Uber’s Bid to Escape FTC Suit Hinges on Online Shopping Law,” Bloomberg Law, April 9, 2026, <https://news.bloomberglaw.com/litigation/ubers-bid-to-escape-ftc-suit-hinges-on-online-shopping-law>; Carly Nairn, “Uber defends subscription service charges against FTC,” Courthouse News Service, April 9, 2026,” <https://courthousenews.com/uber-defends-subscription-service-charges-against-ftc/>.

¹⁴ See, e.g., Federal Trade Commission, Statement of Chair Lina M. Khan, “Regarding the Notice of Proposed Rulemaking on the Negative Option Rule,” Commission File No. P064202, March 22, 2023, https://www.ftc.gov/system/files/ftc_gov/pdf/majority_statement_re_negative_option_nprm_0.pdf.

¹⁵ Federal Trade Commission, “Federal Trade Commission Proposes Rule Provision Making It Easier for Consumers to ‘Click to Cancel’ Recurring Subscriptions and Memberships,” March 23, 2023, <https://www.ftc.gov/news-events/news/press-releases/2023/03/federal-trade-commission-proposes-rule-provision-making-it-easier-consumers-click-cancel-recurring>; Federal Trade Commission, “Federal Trade Commission Announces Final ‘Click-to-Cancel’ Rule Making It Easier for Consumers to End Recurring Subscriptions and Memberships,” October 16, 2024, <https://www.ftc.gov/news-events/news/press-releases/2024/10/federal-trade-commission-announces-final-click-cancel-rule-making-it-easier-consumers-end-recurring>.

¹⁶ Federal Trade Commission, “Federal Trade Commission Announces Final ‘Click-to-Cancel’ Rule Making It Easier for Consumers to End Recurring Subscriptions and Memberships; Agency Acts After Receiving More Than 16,000 Comments from the Public,” October 16, 2024, <https://www.ftc.gov/news-events/news/press-releases/2024/10/federal-trade-commission-announces-final-click-cancel-rule-making-it-easier-consumers-end-recurring>.

¹⁷ United States Court of Appeals for the Eleventh Circuit, *The Chamber of Commerce of the United States of America and the Georgia Chamber of Commerce v. Federal Trade Commission*, Case No. 24-13436, Petition for Review, October 22, 2024, <https://www.uschamber.com/assets/documents/Petition-for-Review-Chamber-of-Commerce-v.-FTC-Eleventh-Circuit.pdf>; Jessica Guynn and Bailey Schulz, “New FTC Subscription Cancellation Rule Under Fire from Business Groups,” *USA Today*, October 23, 2024, <https://www.usatoday.com/story/money/2024/10/23/ftc-click-to-cancel-rule-lawsuit/75812374007/>.

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⁹² Austin Clemens, “Six Charts That Explain How Inequality in the United States Changed Over the Past 20 Years,” Washington Center for Equitable Growth, February 1, 2022, <https://equitablegrowth.org/six-charts-that-explain-how-inequality-in-the-united-states-changed-over-the-past-20-years/>; Carter C. Price, “Measuring the Income Gap from 1975 to 2023,” RAND, February 17, 2025, https://www.rand.org/pubs/working_papers/WRA516-2.html; Christopher Rugaber, “What is the ‘K-shaped’ economy?,” LA Times, December 1, 2025, <https://www.latimes.com/business/story/2025-12-01/what-is-k-shaped-economy>; Ana Hernandez Kent and Lowell R. Ricketts, “The State of U.S. Wealth Inequality,” Federal Reserve Bank of St. Louis, October 22, 2024, <https://www.stlouisfed.org/community-development-research/the-state-of-us-wealthinequality>;

⁹³ Federal Reserve Bank of St Louis, “Unemployment Rate,” <https://fred.stlouisfed.org/series/UNRATE>; U.S. Bureau of Labor Statistics, “Employment Situation Summary,” Economic News Release, April 3, 2026, <https://www.bls.gov/news.release/empsit.nr0.htm>; Federal Reserve Bank of St Louis, “Of Total Unemployed, Percent Unemployment 27 Weeks & over,” <https://fred.stlouisfed.org/series/LNS13025703>.

⁹⁴ See, e.g., Jessica Guynn, “Cost of living is up. Paychecks are not. And workers are not OK.,” USA Today, January 25, 2026, <https://www.usatoday.com/story/money/2026/01/25/paychecks-not-keeping-up-with-cost-of-living/88306961007/>; Federal Reserve Bank of New York, “Household Debt Balances Grow Steadily; Mortgage Originations Tick Up in Third Quarter,” press release, November 5, 2025, <https://www.newyorkfed.org/newsevents/news/research/2025/20251105/>; Rachel Dobkin, “Americans quit subscription streaming services in droves as cost of living continues to climb, report finds,” The Independent, April 9, 2026, <https://www.independent.co.uk/us/money/streaming-services-cancel-cost-living-increase-b2954213.html>.

- **Brad Lipton and Noa Rosinplotz, Roosevelt Institute**

May 8, 2026

Dear New York City Department of Consumer and Worker Protection,

Based in New York City, the Roosevelt Institute is a think tank, a student network, and the nonprofit partner to the Franklin D. Roosevelt Presidential Library and Museum. Roosevelt’s think tank engages in critical research and policy development to advance new ideas that rebalance power and repair past harms—so that our economy and society work for everyone.

The Roosevelt Institute is glad that the Department of Consumer and Worker Protection is considering adding rules to ensure that consumers can easily cancel subscriptions and are not subject to deceptive and unconscionable trade practices relating to the cancellation of subscriptions. To the degree that it is helpful in your consideration of the rule, the Roosevelt Institute has analyzed the potential benefits of the proposed rule, applying the methodology used by the Federal Trade Commission (FTC) in its similar rulemaking with appropriate adjustments for New York City.

The FTC’s methodology offers low and high estimates of the benefits of the rule. These estimates are based on the rule’s direct consumer benefit of easier subscription cancellations, which will create time savings for consumers when cancelling subscriptions and, in some circumstances, save consumers months of subscription fees by successfully cancelling subscriptions earlier. According to our analysis, those benefits for the adult population of New York City would range from \$21.5 million to \$162.5 million per year, saving New Yorkers at least 600,000 hours per year. Over the course of 10 years, the total economic benefits we calculate from the rule (that is, present discounted value) would range from \$197.3 million to \$1.491 billion. We also perform a sensitivity analysis that shows these estimates are not significantly affected by different numerical assumptions and

discuss factors that could lead these estimates to overstate or understate the benefits from this rule.

While some of the factors we identify in our sensitivity analysis suggest this approach could overestimate benefits (for example, if proximity makes it easier for New Yorkers to cancel subscriptions in person), on balance it seems likely that our estimates significantly understate the benefits of the rule due to effects that the FTC did not attempt to quantify. Specifically, New Yorkers may benefit from a more competitive marketplace in which companies, aware that it is now easier to cancel subscriptions, provide better quality or prices to keep consumers from cancelling. Additionally, the rule may improve consumer confidence in using subscriptions and increase the number of consumers who are willing to subscribe and obtain the convenience and possible cost savings that subscriptions can provide, benefiting scrupulous businesses as well. And New York consumers may be spared the cost of additional unwanted subscriptions that will be easier to cancel.

We have explained our analysis in the attached appendix.

Thank you for your work on this rulemaking.

Sincerely,

Brad Lipton
Director, Corporate Power and Financial Regulation
Roosevelt Institute

Noa Rosinplotz
Senior Research Associate
Roosevelt Institute

[Comment attachment](#)

Roosevelt-Institute-Submission-to-NYC-5.8.26.pdf

Comment added May 8, 2026 11:00am

May 8, 2026

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We have explained our analysis in the attached appendix.

Thank you for your work on this rulemaking.

Sincerely,

Brad Lipton

Director, Corporate Power and Financial Regulation
Roosevelt Institute

Noa Rosinplotz

Senior Research Associate
Roosevelt Institute

Methodological Appendix

To calculate the benefits of the New York City Department of Consumer and Worker Protection's proposed rule, we have applied the methodology used by the Federal Trade Commission (FTC) in its [similar rulemaking](#) with appropriate adjustments for New York City. These measured benefits come exclusively in the form of time saved canceling unwanted subscriptions and, in the case of in-person cancellation, additional months of incurred costs after unsuccessful efforts to cancel a subscription.

Annual Benefits

To calculate the rule's annual benefits, we estimated the benefit of the rule for the New York City adult population per year for each of four scenarios. These scenarios are cancellations of subscriptions (1) entered into in person; (2) that currently offer online enrollment and only telephone cancellation; (3) that currently offer online enrollment and online cancellation; and (4) that currently offer telephone enrollment and telephone cancellation. First, we estimate the dollar value savings from the rule to a New York City adult of a single cancellation in each scenario. (For each scenario, we generate a "low" savings estimate and a "high" savings estimate, with each depending on certain assumptions provided by the FTC.) Then, we estimate the number of cancellations per year for New York City adults in each scenario. We next multiply the estimate of the dollar value savings from the rule for a cancellation in each scenario by the number of cancellations per year for each scenario, giving us a "low" and "high" estimate of benefits for each scenario. Finally, we add up the four "low" estimates and the four "high" estimates, respectively, to come to "low" and "high" total estimated yearly benefits.

We also perform a sensitivity analysis using different numerical assumptions and, in that subsection, discuss factors that could lead our estimates to overstate or understate the benefits of the rule. On balance, it seems likely that our estimates may significantly underestimate the benefits of the rule due to effects that the FTC did not attempt to quantify.

Assumptions and Adjustments for New York City

We follow the FTC's methodology for estimating the dollar value savings from the rule of a cancellation in each scenario, with certain adjustments to New York City wage levels in 2024 (the most recent available) and prices, and update figures for inflation to 2024 levels. We make no adjustments to the FTC's assumptions and estimates about how long it now takes to

cancel subscriptions online, by phone, and in person. We also follow the FTC's estimates about how long it will take to cancel subscriptions in each manner under the rule.¹

To adjust the dollar value savings of cancellation in each scenario from the national average to New York City, we vary the FTC's calculations in two ways. First, because all of the calculations rely on the dollar value of nonwork time, we calculate and substitute the dollar value of nonwork time for an adult in the New York metropolitan area for the national average dollar value of adult nonwork time used by the FTC. Second, because the "high" estimate of the rule's savings for cancellations of subscriptions entered into in person includes monthly costs of delayed in-person subscription cancellations, we adjust this figure for cost of living in New York, using regional price parities, and for inflation.

The most recent information on mean hourly wages from the Bureau of Labor Statistics for the New York metropolitan area [appears to be from May 2024](#). Accordingly, we use statistics from 2024 throughout our analysis, though as noted below this may underestimate the yearly benefits of the rule as wages and prices have grown and may continue to grow further. The [mean hourly wage](#) in the New York metropolitan area in May 2024 was \$40.65. Assuming that consumers, on average, value their nonwork time at 82 percent of the mean hourly wage, we estimate that New York City adults value their nonwork time at \$33.33 per hour. Additionally, we adjust the FTC's high-end estimate of the average monthly cost of a subscription requiring in-person cancellation—a gym membership that cost \$70 in 2023—for inflation to \$71.67 in 2024 and then for the higher cost of living in the New York metropolitan area to \$80.98.

To estimate the number of subscription cancellations per year for New York City adults in each scenario, we follow the FTC's assumptions about how many subscriptions an American adult has and cancels each year. We also follow the FTC's assumptions and estimates about how many of the total number of subscription cancellations fall into each scenario. To adjust the total number of subscription cancellations for New York City, we estimate the adult population of New York City rather than using the national adult population. (We do not assume any difference in subscription frequency between New Yorkers and national averages.) We estimate the adult population of New York City in 2024 to be 6,765,501.²

¹ The manner of cancellation prescribed by the proposed rule seems identical in relevant respects to the manner of cancellation provided in the FTC rule.

² There were 8,478,072 people [living in New York City](#) in 2024, 20.2 percent of whom were under the age of 18.

Calculations

Following the FTC, we assume that the rule will save a consumer between 5 minutes and 3 seconds and 5 minutes and 33 seconds to cancel a subscription that currently offers **online enrollment and only telephone cancellation**, because the consumer will now be able to cancel online in the manner prescribed by the rule. Accordingly, our low estimate is that the rule will save a New York City adult \$2.81 for each cancellation in this scenario and our high estimate is \$3.08 for each cancellation in this scenario.

We assume that the rule will save a consumer between 1 minute and 4 seconds and 1 minute and 34 seconds to cancel a subscription that currently offers **online enrollment and online cancellation**, because the consumer will now be able to cancel online in the manner prescribed by the rule. Accordingly, our low estimate is that the rule will save a New York City adult \$0.59 for each cancellation in this scenario and our high estimate is \$0.87 for each cancellation in this scenario.

We assume that the rule will save a consumer between 4 minutes and 3 seconds and 5 minutes and 3 seconds to cancel a subscription that currently offers **phone enrollment and phone cancellation**, because the consumer will now be able to cancel by phone in the manner prescribed by the rule. Accordingly, our low estimate is that the rule will save a New York City adult \$2.25 for each cancellation in this scenario and our high estimate is \$2.81 for each cancellation in this scenario.

Finally, following the FTC, we assume that the rule will save a consumer between 1 minute and 4 seconds on the low end and 4 hours plus 3 months of gym membership on the high end to cancel a subscription entered into **in person**. Accordingly, our low estimate is that the rule will save a New York City adult \$0.59 for each cancellation in this scenario and our high estimate is \$376.26 for each cancellation in this scenario.

We assume that 83 percent of consumers have at least 1 subscription, that the average subscriber has 4.5 subscriptions, and that 36 percent of subscriptions get canceled every year. Accordingly, we estimate that New York City adults have 25,269,146 subscriptions and in turn estimate that New York City adults cancel 9,096,893 subscriptions per year.

Following the FTC, as a proxy for the number of canceled subscriptions that were entered into in person per year, we use the number of canceled gym memberships, as well as the statistics that 19 percent of the adult population is a member of a gym and that 28.6 percent of all adult gym members cancel their memberships each year. Accordingly, we estimate 367,637 cancellations per year for New York City adults for in-person subscription

enrollments. We assume all subscriptions that are not entered into in person are instead entered into either online or over the phone. Subtracting the in-person subscription enrollment cancellations from the total number of cancellations, we estimate that 8,729,256 subscriptions entered into online or over the phone are canceled by New York City adults each year.

We assume that, among canceled subscriptions that are entered into online or over the phone, 66.7 percent of them offered online enrollment and only telephone cancellation, 11.1 percent of them offered online enrollment and online cancellation, and 22.2 percent offered telephone enrollment and telephone cancellation. Accordingly, we estimate that 5,822,414 subscriptions that offered online enrollment and only telephone cancellation are canceled by New York City adults each year; 968,947 that offered online enrollment and online cancellation; and 1,937,895 that offered telephone enrollment and only telephone cancellation.

We then multiply the savings per subscription cancellation for the low and high estimates for each scenario by the number of subscription cancellations in each scenario to generate low and high savings for each category. We then add up these numbers to generate total low and high savings estimates:

Low and High Savings Estimates

Category	Number of subscription cancellations per year	Savings per subscription cancellation		Total savings per category per year	
		Low	High	Low	High
In person to online	367,637	\$0.59	\$376.26	\$219,906	\$138,327,098
Telephone to online	5,822,414	\$2.81	\$3.08	\$16,360,983	\$17,933,035
Online to faster online	968,947	\$0.59	\$0.87	\$571,669	\$842,984
Telephone to faster telephone	1,937,895	\$2.25	\$2.81	\$4,360,264	\$5,445,485
Total (Low Estimate)		\$21,509,832			
Total (High estimate)		\$162,548,602			

Sensitivity Analysis

Following the FTC, we also conducted a sensitivity analysis by modifying the share of canceled subscriptions in each scenario, and adding an additional scenario for canceled subscriptions that may already be compliant with the rule. We divide the number of FTC-estimated subscriptions in each scenario by the FTC's total estimate of canceled subscriptions per year in order to derive the percentage of canceled subscriptions in each of the (now) five scenarios, and assume that those percentages are the same in New York City. Accordingly, we estimate that 18 percent of subscriptions are already compliant, 4 percent are in-person subscription enrollments, 18 percent are in-person enrollments with only telephone cancellation, 1.9 percent are telephone enrollments with only telephone cancellation, and the remaining 59 percent are online enrollments and online cancellation. Using these ratios results in a low estimate of the yearly benefits of \$8,371,415 and a high estimate of \$147,110,418.80 per year.

We also note factors that could lead our estimates to overstate or understate the benefits of the rule. On the overstatement side, it is possible that it is actually currently easier to cancel subscriptions in New York City than it is nationally, such that the rule would change behavior less than we have estimated. For example, relevant existing New York state law could conceivably affect the existing behavior of subscription providers in New York City, such that the New York City rule could provide savings that are less than the FTC's estimates with respect to the average consumer nationwide because it is currently easier to cancel a subscription in New York than nationally. However, we have not conducted an analysis of how New York state law differs from the law of all other states (and indeed it is also possible that New York state law is actually less strict than the average state's laws, which would suggest our estimate of benefits is actually understated). It is also possible that New Yorkers are more likely to cancel expensive in-person subscriptions, such as gym memberships, faster than the national average, if, for example, travel time and the inconvenience of returning to the location is less than the national average in New York City, or if the relatively high cost of those subscriptions in New York motivates people to cancel them faster. This would cause our "high" estimate of the benefits of the rule to be overstated.

On the understatement of benefits side, our estimates rely on statistics for 2024 for the relevant wages, population, and costs in New York because the most recent estimate of wages available from the Bureau of Labor Statistics is for May 2024. However, these statistics may all understate the benefits of the rule as wages, populations, and costs have grown and may continue to grow. Our methodology only calculates benefits to consumers, so it underestimates cost savings to small businesses canceling subscriptions. Our

cost-of-living adjustment for in-person subscription cancellations may also underestimate the relevant cost of living in New York City, since gym memberships in New York City are, according to some sources, the highest in the nation and substantially higher than a cost-of-living adjustment would suggest.³ If so, our “high” estimate of the benefits of the rule may be too low.

Moreover, our estimates may significantly underestimate the benefits of the rule due to effects that the FTC did not attempt to quantify. Specifically, New Yorkers may benefit from a more competitive marketplace in which companies, aware that it is now easier to cancel subscriptions, provide better quality or prices to keep consumers from cancelling. Further, the rule may improve consumer confidence in using subscriptions and increase the number of consumers who are willing to subscribe and obtain the convenience, and often cost savings, that subscriptions can provide. New York consumers may also be spared the cost of additional unwanted subscriptions that are easier to cancel (such as online subscriptions that the rule makes easier to cancel). Additionally, as the FTC noted, the estimates of quantified benefits are based on reductions in time and effort from cancelling subscriptions to consumers, but small businesses may also benefit from less burdensome cancellation procedures.

Ten-Year Benefits

Following the FTC, we also calculated the total benefits of the rule over a 10-year period by increasing the number of estimated cancellations and corresponding benefits of the rule based on expected population growth and then discounting those results using a 2 percent discount rate. To estimate the population of New York City in years beyond 2024, we used New York City’s [own population estimates](#) for years 2030 and 2035, linearly extrapolating the population from 2024 to 2030 and from 2030 to 2035. We first increase the corresponding benefits based on this population growth and then discount those results using the 2 percent discount rate. Finally, we add up those results to generate a present discounted value of benefits over 10 years:

³ See Anna Rahmanan, [NYC Is the Most Expensive City to Get a Gym Membership in the US](#), TimeOut New York (Sept. 12, 2022) (estimating the average monthly price for an adult gym membership in New York to be \$106.06).

Total Quantified Benefits (in 2024 dollars)

Year #	Low	High
1	\$21,079,635	\$159,297,629
2	\$20,772,536	\$156,976,894
3	\$20,469,288	\$154,685,269
4	\$20,169,861	\$152,422,519
5	\$19,874,224	\$150,188,404
6	\$19,582,344	\$147,982,681
7	\$19,294,190	\$145,805,119
8	\$18,994,646	\$143,541,478
9	\$18,699,365	\$141,310,061
10	\$18,408,298	\$139,110,485
Total*	\$197,344,388	\$1,491,320,543

*(Present discounted value of benefits over 10 years, 2% discount rate)

TITLE

- **Jessica Walker, Manhattan Chamber of Commerce**

The Manhattan Chamber of Commerce supports DCWP's goal of ensuring consumers can easily cancel subscriptions but raises four concerns with the proposed rule: it should clearly exclude business-to-business transactions, which involve negotiated contracts unlike consumer sign-ups; the "same medium" cancellation requirement is unnecessary so long as the cancellation mechanism is simple and easy; the restriction on presenting "save offers" at cancellation should be struck because retention discounts often benefit consumers, particularly those considering switching providers; and the exemptions list should be expanded to cover telecommunications and other providers regulated by the Federal Communications Commission and New York State Public Service Commission, where duplicative City rules conflict with existing federal authentication requirements and fail to account for practical realities like number porting, device installment contracts, and bundled services.

[Comment attachment](#)

DCWP-WRITTEN-COMMENTS-MAY-2026-CLICK-TO-CANCEL.pdf

Comment added May 8, 2026 11:28am



Written Comments to the New York City Department of Consumer and Worker Protection
Public Hearing on Proposed Rules Relating to the Cancellation of Subscriptions

May 8, 2026

Good morning. My name is Jessica Walker, and I serve as President and CEO of the Manhattan Chamber of Commerce. The Chamber represents approximately 125,000 businesses across the borough, from sole proprietors and storefront shops to global enterprises headquartered in Manhattan.

The Manhattan Chamber supports DCWP's underlying goal. Consumers should be able to cancel a subscription as easily as they signed up for one, and deceptive cancellation practices undermine both consumer trust and the legitimate businesses that compete fairly. We thank the Department and the Mayor for their leadership on this issue.

Before turning to our specific recommendations, we want to flag a litigation concern that runs through several of them. The proposed rule expressly characterizes covered conduct as a "deceptive and unconscionable trade practice" under §§ 20-700 and 20-701. Although the rule does not itself create a private right of action, that framing is likely to be used by plaintiffs' attorneys as a per se predicate for class action claims under New York General Business Law § 349, which does provide a private right of action — recently strengthened by the FAIR Business Practices Act to permit statutory damages of \$1,000 per violation, plus actual damages and attorney's fees. Subscription practices are already a leading category of consumer class action litigation in New York. Ambiguity in the final rule will not just generate compliance burden; it will generate lawsuits. Precision in drafting therefore matters a great deal — and is particularly important for the small businesses that lack the in-house resources to defend such cases.

We have five specific recommendations.

First, the rule should clearly exclude business-to-business transactions. As written, the proposal appears to apply to subscriptions sold to businesses as well as to individual consumers. Commercial subscriptions typically involve negotiated contracts, dedicated account management, and sophisticated procurement processes that bear no resemblance to the consumer transactions this rule is designed to police. Very small businesses that purchase through standard consumer-facing channels would already be covered by the rule. We recommend that the final language clarify that

"consumer" means a natural person purchasing for personal, household, or family use — consistent with longstanding interpretations of consumer protection law.

Second, the "same medium" requirement in subsections (c) and (d) of § 5-110.1 is unnecessary. What matters is that cancellation be simple and easy — not that it occur through any particular channel. A consumer who signed up over the phone is not harmed if they cancel through a streamlined online portal; many will prefer it. We recommend that the rule require an easy-to-use cancellation mechanism without prescribing the medium.

Third, § 5-110.1(e)(2) risks chilling legitimate, pro-consumer retention practices and inviting class action litigation. "Save offers" — discounts, upgrades, or alternative plans presented at the point of cancellation — frequently put real money back into consumers' pockets, particularly when a customer is considering switching providers rather than discontinuing service altogether. Polling by Morning Consult found that roughly 80 percent of consumers believe providers should be permitted to offer alternatives or explain the impacts of cancellation before service ends. The current language is sufficiently ambiguous that any good-faith retention offer could be recharacterized by a private plaintiff as "unreasonable delay" — a § 349 predicate, multiplied across every NYC subscriber a business serves. Because the rule already prohibits obstruction and unreasonable delay, the additional language in (e)(2) is duplicative and dangerous. We recommend striking that subsection and expressly permitting save offers, provided the cancellation mechanism itself remains simple and easy to use.

Fourth, the exemptions in § 5-110.3 should be expanded to cover federally and state-regulated communications providers. The rule already exempts entities holding a franchise from a political subdivision, those regulated by the Department of Financial Services, licensed financial institutions, and several other categories — recognizing that comprehensive regulation elsewhere makes a duplicative City rule unnecessary. The same logic applies to telecommunications.

Members in the telecommunications and essential-services sector raise practical concerns the rule does not currently address:

- These services are heavily regulated by the Federal Communications Commission and the New York State Public Service Commission. Federal Customer Proprietary Network Information rules require carriers to authenticate a customer before disclosing account information — a requirement that may directly conflict with a click-to-cancel mandate.
- Abrupt cancellation can result in the permanent loss of a consumer's mobile number if number porting has not yet occurred.
- Immediate cancellation can trigger the acceleration of payments under device installment contracts.
- The proposal does not account for bundled services. In many cases, a customer wishes to cancel one component of a bundle — voice, broadband, or video — while retaining the rest.
- Annual renewal notices are largely duplicative for these services. Customers already receive monthly itemized bills detailing plan terms and costs.

We recommend the following carve-out language, modeled on the rule's existing exemptions:

"These regulations do not apply to any business or its affiliate where either the business or its affiliate is regulated by the Federal Communications Commission or the New York State Public Service Commission."

Fifth, the rule should provide a cure period for first-time violations and a good-faith safe harbor for small businesses relying on third-party platforms. The Mayor's Office of Operations certified that the proposed rule "does not provide a cure period because a cure period is not practicable under the circumstances." We respectfully disagree, particularly as applied to the small business community.

Most solo entrepreneurs and small operators in Manhattan do not build their own subscription, billing, or cancellation infrastructure. They rely on third-party platforms (e-commerce providers, payment processors, subscription management tools, scheduling software, and customer relationship management systems) to handle enrollment, recurring billing, renewal notifications, and cancellation flows. When those platforms are not configured for NYC's specific requirements — a mismatch most small business owners will not discover until a violation notice arrives — the merchant, not the platform, bears the legal exposure. Pairing that exposure with the absence of a cure period and the § 349 litigation risk described above creates a serious imbalance: the smallest businesses in the City face the largest relative penalty for compliance gaps they could not reasonably have detected in advance.

We recommend the Department:

- (a) provide a cure period for first-time violations of § 5-110.1, consistent with the framework established by Local Law 153 of 2013 and the small business penalty relief framework of Local Law 80 of 2021; and
- (b) include a safe harbor providing that a small business is not in violation where the noncompliant function is operated by a third-party platform on which the business is reasonably relying in good faith, provided the business takes reasonable steps to remedy the noncompliance once identified.

Conclusion

The Manhattan Chamber appreciates the Department's careful work on this rule and its continued engagement with the business community. With the targeted refinements outlined above, the rule can achieve its consumer protection objectives without imposing disproportionate costs on the small businesses that are the backbone of Manhattan's economy. We welcome the opportunity to provide additional detail in writing and to work with DCWP staff on the recommendations above.

Thank you.

- **Anonymous**

I strongly support NYC's proposed rule on cancellation of subscriptions. I recently experienced an issue with Hers where I was charged again for a prescription subscription, but I do not believe the renewal terms were clearly communicated to me.

When I reviewed the messages from the prescribing provider, the messages focused on the medication, dosage, side effects, and treatment instructions. I did not see a clear statement explaining that I would be automatically charged again, the renewal date, the amount of the future charge, or how to cancel before being charged. I also receive text messages from the company, but I did not receive a clear renewal reminder before the charge.

When I contacted customer service, I was told that the person who prescribed the medication had informed me about the automatic charge. Based on the messages available to me, that is not accurate. A consumer should not have to search through medical messages, account pages, emails, and texts to figure out whether a company is going to charge them again.

This is why strong subscription cancellation and renewal rules are needed. Companies should be required to clearly disclose automatic renewal terms at the time of purchase, send a clear reminder before renewal charges, provide a simple cancellation method, and give prompt refunds when consumers are charged without clear notice. Prescription and telehealth subscription services should not be able to bury renewal terms or rely on vague claims that a consumer was informed when the actual messages do not clearly show that.

Comment added May 8, 2026 4:23pm

- **Matthew Henning**

Please see attached submission on behalf of Tech:NYC

[Comment attachment](#)

Tech_NYC-NYC-DCWP-Click-to-Cancel-comments.pdf

Comment added May 8, 2026 4:46pm

Proposed Rules on Cancellation of Subscriptions

Comments on Proposed Rule

Tech:NYC respectfully submits these comments regarding the Department of Consumer and Worker Protection's (DCWP) proposed rule concerning subscription cancellation requirements. We appreciate the Department's objective of ensuring that consumers are able to terminate recurring subscriptions through transparent, straightforward, and accessible processes. Businesses likewise benefit from consumer trust and support reasonable standards that prohibit deceptive or obstructive cancellation practices.

At the same time, several aspects of the proposed rule warrant reconsideration or clarification to avoid unnecessary regulatory duplication, unintended operational burdens, and restrictions on legitimate consumer-focused business practices. As drafted, the proposal risks creating inconsistencies with existing state law and established industry practices without producing corresponding consumer benefits.

Existing State Law Already Provides a Comprehensive Framework

New York State has already enacted detailed statutory requirements governing automatic renewals and subscription cancellations in the SFY 25-26 enacted budget. These provisions establish extensive obligations related to disclosures, consumer consent, renewal notices, and cancellation procedures. State law also already requires businesses to provide cancellation mechanisms that are easy to use and substantially comparable to the enrollment process.

Because these statutory protections are already in place, the proposed DCWP rule risks imposing overlapping or potentially inconsistent requirements on businesses operating in New York City. Even modest differences in terminology, interpretation, or implementation expectations can create significant compliance challenges for companies that operate across jurisdictions and rely on standardized systems and interfaces.

The proposed rule may therefore increase complexity and compliance costs without materially enhancing consumer protections beyond those already guaranteed under state law. Maintaining consistency between state and local frameworks is particularly important in the context of subscription services and online commerce, where businesses often maintain unified national systems.

Accordingly, the Department should consider aligning any final rule closely with the existing state statutory scheme or limiting the rule to areas not already comprehensively addressed by state law.

Retention Offers Should Remain Permissible

The proposed rule also raises substantial concerns regarding the treatment of retention or “save” offers during the cancellation process. Consumers frequently value opportunities to receive alternative pricing, modified service tiers, temporary billing pauses, or other accommodations before finalizing cancellation decisions. In many cases, consumers initiate cancellation specifically to explore whether more suitable or affordable options are available.

Retention offers are a common and legitimate aspect of subscription-based commerce and can provide meaningful consumer benefits. Restricting or discouraging such interactions could reduce consumer choice and eliminate opportunities for consumers to retain services at lower cost or under modified terms that better reflect their needs. Although the proposed rule does not expressly prohibit save offers, the current language could reasonably be interpreted as discouraging any intervening communication or offer during the cancellation flow.

A balanced approach is both possible and appropriate. Businesses should remain free to present retention offers so long as consumers are simultaneously provided with a clear, conspicuous, and readily accessible mechanism to complete cancellation immediately if they choose. Existing state law already prohibits practices that obstruct, delay, or unreasonably interfere with cancellation requests, making additional restrictions unnecessary.

Clarifying that retention offers remain permissible would preserve consumer flexibility while continuing to ensure efficient and transparent cancellation procedures.

Certain Industries and Business Relationships Present Unique Considerations

The proposed rule also does not sufficiently account for industries and service arrangements that differ substantially from typical subscription models. Telecommunications and related services, for example, involve operational, contractual, and regulatory considerations that may make overly simplified cancellation requirements impractical or potentially harmful to consumers.

Consumers often rely on wireless, broadband, and related communications services continuously throughout the day, unlike many subscription products that may be less visible or actively used. Customers also already receive regular billing statements and service notices that provide ongoing awareness of their subscriptions and associated costs.

In addition, cancellation of telecommunications services can produce significant downstream consequences, including the loss of a telephone number, disruption of bundled services, acceleration of device payment obligations, or complications associated with porting services to another provider. Consumers frequently seek to modify or transfer services rather than terminate them outright, and additional customer engagement is often necessary to avoid unintended outcomes.

Federal privacy and authentication obligations may also require additional verification steps before account changes or service termination can occur. A rigid interpretation of “one-click” cancellation may therefore conflict with existing regulatory obligations applicable to certain providers.

For these reasons, the Department should consider appropriate exemptions or tailored treatment for heavily regulated industries or services subject to separate federal and state oversight frameworks.

Penalties and Enforcement Should Remain Proportionate

Finally, the proposed rule’s enforcement structure appears substantially more punitive than the framework established under existing state law. Businesses are already subject to enforcement and penalties under the “Click to Cancel” law at the state level; layering additional city level penalties on top of the state framework for similar conduct could create a fragmented and unpredictable enforcement environment. This may disproportionately impact smaller businesses and entities attempting to comply in good faith with overlapping regulatory obligations.

Any final rule should therefore align penalty provisions with existing state law and incorporate reasonable safe harbor protections that recognize good-faith compliance efforts.

Conclusion

The goals of transparency and ease of cancellation are important and broadly shared by both regulators and industry participants. However, the proposed rule, as currently drafted, risks duplicating existing requirements in state law, discouraging legitimate and beneficial consumer interactions, and imposing unnecessary compliance burdens without clear additional consumer benefit.

Therefore Tech:NYC respectfully urges the Department to revise the proposal to better align with existing state law, preserve lawful consumer retention practices, account for industry-specific operational realities, and ensure that enforcement and penalty mechanisms remain fair and proportionate.