



**OFFICE OF THE ATTORNEY GENERAL
STATE OF ILLINOIS**



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STATE OF IOWA**

August 2, 2022

Via Online Submission

Federal Trade Commission, Office of the Secretary
600 Pennsylvania NW, Suit CC-5610 (Annex B)
Washington, DC 20580

ATTN: Staff Contact
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Bureau of Consumer Protection

RE: Digital Advertising, P114506, FTC-2022-0035-0001

We, the Attorneys General of Illinois, Iowa, Alaska, Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, Minnesota, Nebraska, Nevada, New Jersey, Oregon, Pennsylvania, Rhode Island, and Wisconsin, and the Executive Director of the Hawaii Office of Consumer Protection write to the Federal Trade Commission (“FTC”) in response to its June 2, 2022 Request for Information Regarding Digital Advertising Business Guidance Publication (“RFI”). As the FTC reviews and considers ways to modernize its business guidance titled “.com Disclosures: How to Make Effective Disclosures in Digital Advertising” (the “Guide”) we have compiled feedback and recommendations for your consideration in this Letter.

We believe the Guide establishes a clear standard that applies to all advertisers regardless of developments in technology and changes in digital media. This standard includes two main principles: (1) advertisers must guard against deception in advertisement, including by ensuring that advertising claims are truthful, and (2) where supplementation of an advertising claim by disclosure is appropriate, advertisers must ensure those disclosures are clear and conspicuous. However, we believe that the Guide can be strengthened by addressing certain problematic forms of deception in advertising that we have observed through our work on behalf of consumers.

In particular, based on our recent experiences bringing enforcement actions, interacting with consumers, and researching academic literature on consumer experiences online, we

recommend that the FTC revise the Guide to specifically address certain of the deceptive user interface designs known as “dark patterns.”

The purpose of our submission is to provide information to the FTC to assist the Commission in revising the Guide, both with regard to dark patterns and other deceptive advertising practices. Some of the information we present is likely already well-known to the FTC, and we commend the Commission for the work it has already done to draw attention to and address the harms dark patterns pose for consumers. Our goal is to highlight areas we view as important and provide recommendations on improvements to the Guide. We begin by summarizing some of our notable actions related to deceptive advertising generally, and dark patterns in particular. Next, we provide a survey of academic research and expert studies on dark patterns, highlighting research on certain sub-types of dark patterns that are especially relevant in the context of digital advertising disclosures. Then, we survey legislative and regulatory developments that have attempted to deal directly with dark patterns or with emerging trends in deceptive advertising practices. Finally, we provide responses to several of the formal RFI topics by identifying ways that the Guide could be improved in order to clarify the Guide’s requirements, including with regard to how advertisers’ use of certain dark patterns may be fundamentally incompatible with the goals and directives of the Guide.

At the outset, we note that our offices have a track record of protecting consumers from misleading and deceptive practices in advertising. In 2010, 50 attorneys general settled a multistate investigation into DIRECTV for its practices in hiding or failing to disclose material terms prior to consumers entering into satellite TV contracts.¹ In 2015, Classmates and FTD agreed to an \$11 million settlement with 22 states resolving the states’ allegations that the companies allowed third-party marketers to charge consumers for goods or services that consumers allegedly did not want and failed to disclose the automatic renewal of subscription services.² Our actions have addressed unfair and deceptive marketing practices targeting specific groups, including veterans and servicemembers. In 2016, attorneys general settled with USA Living and Fletcher’s Jewelers for false advertising, misrepresentations, and omissions in the course of enrolling consumers in usurious loans.³ State attorneys general have also addressed deceptive marketing in the healthcare and medical device industry, including bringing multistate actions against multiple companies for failure to disclose the serious and life-altering effects of surgical mesh devices.⁴ Recently, the consumer marketplace has become more complex as advertisers target consumers using tools that are more sophisticated.

State attorneys general have also been on the frontlines of combatting the use of dark patterns. Recently, many of our offices entered into a settlement with Intuit, Inc. after we alleged the use of dark patterns in their popular TurboTax product.⁵ We claimed that Intuit employed dark patterns to deceive users as to their eligibility for its free tax filing services, instead driving

¹ https://illinoisattorneygeneral.gov/pressroom/2010_12/20101215b.html

² https://illinoisattorneygeneral.gov/pressroom/2015_05/20150526.html

³ <https://ag.ny.gov/press-release/2016/ag-schneiderman-announces-coalition-settlement-national-business-targeting>

⁴ See, e.g., <https://www.texasattorneygeneral.gov/news/releases/icymi-multistate-coalition-reaches-60-million-settlement-cr-bard>

⁵ <https://ag.ny.gov/press-release/2022/attorney-general-james-secures-141-million-millions-americans-deceived-turbotax>; See also <https://oag.ca.gov/news/press-releases/attorney-general-bonta-announces-nationwide-settlement-against-intuit-deceptive>

customer traffic toward its paid products. In March, New York Attorney General Letitia James secured a \$2.6 million settlement with Fareportal, Inc., an online travel agency, for misleading consumers with deceptive marketing tactics, including dark patterns such as false scarcity and “confirmshaming.”⁶ ⁷ Four attorneys general recently filed a lawsuit against Google alleging that Google misled users about its tracking of location activity by utilizing dark patterns in account settings and in-product user prompts. The suit identifies Google’s use of dark patterns as evidence of the intent to deceive the user and limit their ability to keep certain areas of their life private.⁸ As attorneys general continue to vigilantly protect consumers from these deceptive and harmful practices, we encourage the Commission to guide businesses operating in good faith so that they can design user experiences that proactively avoid these issues.

I. Dark Patterns Overview (RFI Topics 1, 4)

Dark patterns, an umbrella term referring to certain recognizable forms of deception in digital design, are a pervasive force in online marketplaces, robbing consumers of agency and privacy.

Clearly defining “dark patterns” is challenging for both consumer protection law enforcement agencies and academics – in part because competing definitions and categorization schemes have been proposed. Indeed, one recent study identified *nineteen* different definitions.⁹ Many utilize the original definition created by whistleblower Harry Brignull, who refers to dark patterns as “deceptive designs,” which are “tricks used in websites and apps that make you do things that you didn’t mean to, like buying or signing up for something.” Web designers who employ dark patterns attempt to control consumers’ choices, either by modifying the decision space or manipulating the flow of information to the user. As a result, consumers suffer financial loss, invasion of privacy, and cognitive burden. In the broader economy, dark patterns diminish fair competition, undermine price transparency, and foment distrust in markets.

While the precise definitions are not settled, the concept of dark patterns is nonetheless useful in consumer protection work. Efforts to describe and classify dark pattern sub-types allow law enforcement agencies, researchers, and consumers to identify and transfer lessons from experiences with deceptive design techniques that emerge in varied contexts and industries. To aid in that effort of identifying instances of dark patterns in various commercial contexts, the Stanford Digital Civil Society Lab established a website called the “Dark Patterns Tip Line” that allows anyone to submit “sightings” of dark patterns across the internet. The number of reported sightings grows on a regular basis, demonstrating in real-time the widespread use of these manipulative tactics.¹⁰

⁶ <https://ag.ny.gov/press-release/2022/attorney-general-james-secures-26-million-online-travel-agency-deceptive>

⁷ “Confirmshaming” is defined as a choice framed in a way that makes the consumer’s preferred choice seem dishonorable or unintelligent, or otherwise guilt the user into making a certain choice.

⁸ <https://www.texasattorneygeneral.gov/news/releases/ag-paxton-sues-google-deceptively-tracking-users-location-without-consent>.

⁹ Arunesh Mathur, Jonathan Mayer, and Mihir Kshirsagar. 2021. *What Makes a Dark Pattern... Dark?: Design Attributes, Normative Considerations, and Measurement Methods* (hereinafter “*What Makes a Dark Pattern... Dark?*”). In CHI Conference on Human Factors in Computing Systems (CHI ’21), May 8–13, 2021, Yokohama, Japan. ACM, New York, NY, USA, 27 pages. <https://doi.org/10.1145/3411764.3445610>.

¹⁰ Dark Patterns Tip Line, <https://darkpatternstipline.org/> (last accessed 7/13/2022).

At the end of this letter, we have provided a list of studies that we recommend the FTC to consult while revising the Guide to better address dark patterns.¹ In general, this research demonstrates that the use of dark patterns is pervasive and that dark patterns are strikingly effective in convincing consumers to do what they would not otherwise do if presented with neutral interfaces. Two important takeaways from the academic research are summarized here: first, we summarize one of the largest empirical studies of dark patterns to discuss some of the different occurrences that the study found on a digital review of 11,286 shopping websites.¹¹ Second, we discuss several dark pattern categories that may be particularly relevant in the context of digital advertising disclosures. Other studies have proposed a number of “normative lenses” by which to evaluate the design and use of dark patterns, in terms of their effect on individual welfare, collective welfare, regulatory objectives, and individual autonomy.¹² In addition to providing explicit guidance on dark pattern typologies, the FTC could consider viewing the issue of dark patterns through one or more of these normative lenses to broadly guide its analysis.

A. Empirical Data on Dark Patterns

In perhaps one of the largest empirical studies on actively used dark patterns to date, Mathur, et al looked through a large sampling of the most popular shopping websites worldwide for two purposes: “first examin[ing] where, how often, and the technical means by which dark patterns appear; second, . . . compar[ing] and contrast[ing] how various dark patterns influence users.” This type of study is particularly helpful in shaping the FTC’s revisions to the Guide.

The study found 1,818 dark patterns employed in a survey of 11,286 websites, which fell under 15 types of patterns.¹³ The researchers identified 1,818 instances of dark patterns, including hundreds that were classified as “exhibit[ing] deceptive behavior.”¹⁴ This included third-party entities that would enable other shopping websites to “create and implement dark patterns on their sites.” The study found that the following dark patterns were deceptive, at least some of the time:

- adding additional products to users’ shopping carts without their consent;
- revealing previously undisclosed charges to users right before they make a purchase;
- charging users a recurring fee under the pretense of a one-time fee or a free trial;
- indicating (sometimes falsely) to users that a deal or discount will expire using a counting-down timer;
- using style and visual presentation to steer users to or away from certain choices;
- informing the user (sometimes falsely) about the activity of other users on the website (e.g., purchases, views, visits);
- displaying product testimonials with an unclear origin and in some instances reusing identical product testimonials on multiple websites; and

¹¹ Arunesh Mathur, Gunes Acar, Michael J. Friedman, Elena Lucherini, Jonathan Mayer, Marshini Chetty, and Arvind Narayanan. 2019. *Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites* (hereinafter “*Findings*”). Proc. ACM Hum.-Comput. Interact. 3, CSCW, Article 81 (November 2019), 32 pages. <https://doi.org/10.1145/3359183> .

¹² See *id.*

¹³ See *id.* at 2, 9.

¹⁴ *Id.* at 2.

- falsely indicating to users that limited quantities of a product are available, increasing its perceived desirability.¹⁵

Particularly noteworthy is that, in some instances, third parties provided online merchants with an option to display to consumers false information concerning the existence or number of orders placed by other consumers for a particular product, in order to create a sense of urgency or scarcity.¹⁶

While the study only categorized some of the dark patterns as explicitly deceptive, the Commission should still consider *all* of the dark patterns recognized in the study in updating the Guide, as they are all practices that are potentially abusive or manipulative.

B. Example Dark Pattern Sub-Types

While there are many different definitions and typologies of dark patterns, dark patterns share common deceptive, abusive, or at least manipulative components. By reviewing the suggested research summarized in this letter, the FTC may be better equipped “to make tough decisions about where the precise line is between persuasion and manipulation.”¹⁷ Since there are so many different dark patterns, and not all are universally recognized, this comment will next review specific dark patterns that are frequently recognized in the academic literature and that may be particularly relevant in the context of digital advertising disclosures.

Obstruction

Simply put, obstruction is making users jump through unnecessary hoops to reject a service.¹⁸ Specific dark pattern strategies implementing Obstruction include “roach motels,” “price comparison prevention,” “immediate currency,” and “immortal accounts.”¹⁹ Each of these specific dark patterns works differently, as detailed in the articles footnoted in this paragraph, but they are all aimed at making it easy for a consumer to do what the company wants him or her to do, and very difficult for the consumer to exercise a different choice.²⁰

Research has shown that Obstruction patterns, especially when coupled with other dark patterns, are powerful and could be considered dangerous based on their ability to strongly affect “purchase or disclosure decisions and their propensity to spark ex post consumer regret or confusion”²¹

Confirmshaming

Confirmshaming is a dark pattern where a choice is framed in a way that makes the consumer’s preferred choice seem dishonorable or unintelligent, or otherwise guilts the user into

¹⁵ See *id.* at 12.

¹⁶ See *id.* at 23-25.

¹⁷ Luguri, Jamie and Strahilevitz, Lior, *Shining a Light on Dark Patterns* (March 29, 2021). 13 *Journal of Legal Analysis* 43, 46 (2021) , University of Chicago Coase-Sandor Institute for Law & Economics Research Paper No. 879, U of Chicago, Public Law Working Paper No. 719, Available at SSRN: <https://ssrn.com/abstract=3431205> or <http://dx.doi.org/10.2139/ssrn.3431205>.

¹⁸ See Liguri, et. al, at 47.

¹⁹ See *id.* at 53.

²⁰ See *id.* at 49.

²¹ *Id.* at 98.

making a certain choice.²² Confirmshaming phrases disclosures in ways that may induce negative feelings in consumers, “guilting the user into opting in to something.”²³ For example, a disclosure presented alongside a selection option may read, “By purchasing this product, I agree to subscribe to a weekly newsletter containing deals and state-of-the-art information related to this product,” with a subsequent option reading, “No thanks, I don’t like being informed or saving money,” phrased to make the consumer feel bad about declining to subscribe.²⁴ To the extent that such language is manipulative, the Guide should consider emphasizing the use of neutral language in disclosures presented alongside product selection options. Another dark pattern that research has shown to be highly effective at creating confusion is the pattern referred to as “trick question.”

Trick Questions

Trick questions are the use of intentionally confusing prompts.²⁵ “The Trick Questions dark pattern can impose a cognitive burden on choices that withhold consent by using confusing language and double negatives.”²⁶

In a study to determine the effectiveness of dark patterns, a trick question was presented to participants after facing 3-4 other forms of dark patterns²⁷ (depending on selections) and this use of a trick question accounted for 11% of acceptances.²⁸

In a second, and more telling, study that aimed at isolating the effects of the various dark patterns, trick questions were found to have an effect on consumer’s decision-making that was “highly significant.”²⁹

The trick question had a striking effect on whether participants accepted or declined the program. For half of the sample that saw the trick question, 19.2 percent had accepted the program. However, after being exposed to the trick question that asked them to ‘confirm’ their answer, 33.4 percent accepted the plan by answering ‘yes.’³⁰

Notably, when the study asked participants that chose to “confirm” their answer, indicating whether they understood that their choice resulted in an acceptance, *half of the participants answered in a way that indicated they did not have awareness of that choice.*³¹

²² *Id.* at 53; *See also* Mathur, et. al, *What Makes a Dark Pattern... Dark?* at 5.

²³ Mathur, et al. at 6.

²⁴ *See, e.g.,* Deceptive Design, *Confirmshaming*, <https://www.deceptive.design/types/confirmshaming> (last accessed 7/13/2022) (examples of confirmshaming, including an option to decline a Gmail update stating “I don’t want smarter email”).

²⁵ *See* Liguri, et. al, at 47.

²⁶ Mathur, et. al, *What Makes a Dark Pattern... Dark?* at 7.

²⁷ The previous dark patterns were a false hierarchy screen, confirmshaming, and one or two roach motel dark patterns. *See* Liguri, et. al, at 61-63.

²⁸ *See id.* at 65.

²⁹ *Id.* at 75

³⁰ *Id.*

³¹ *Id.* 78 (emphasis added).

One scholarly article analyzed the Trick Questions dark pattern under four normative lenses as an example demonstrating how researchers may be able to critically assess any dark pattern.³² This approach may also be useful as a guide to regulators. The four normative lenses used were individual welfare, collective welfare, regulatory objectives, and individual autonomy.³³ The general analysis through these four lenses suggests looking at the pattern to determine whether the dark pattern undermines individual welfare and/or collective welfare, whether the dark pattern operates in such a way that could be violative of regulations, and whether it operates to undermine individual autonomy.³⁴ We agree with the article’s authors that asking these questions about specific dark patterns can be helpful, and we suggest that the FTC consider these normative lenses as it evaluates how to address dark patterns in the updated Guide.

C. Application to Digital Advertising Disclosure Guide

Context-specific comments on the intersection between dark patterns and digital advertising practices are provided below in response to various RFIs, but we initially make two broad observations on the relationship between dark patterns and the advertising disclosure standards set forth in the Guide:

First, while emphasizing the importance of effective disclosures is appropriately central to the Guide, we note that in many cases, dark patterns are so inherently misleading that they are unlikely to be curable through any disclosures – no matter how clear or conspicuous. For example, in a case where a website operator purposefully utilizes obstruction to make a monthly subscription difficult to cancel (*e.g.*, by placing cancellation options in a difficult-to-access portion of the website or by employing cancellation procedures that are onerous to comply with or navigate), it is unlikely that any disclosure language placed alongside an advertising claim could cure the reality of the intentionally misleading design.

Second, given that dark patterns generally exploit design choices to lead consumers to choices they would not have selected but for the unfair design, and given that dark patterns are extremely popular methods of influencing consumer behavior, we should expect to find instances where designers exploit dark pattern phenomena to create the formal appearance of compliance with the Guide’s “clear and conspicuous” requirements without actually conveying material information to reasonable consumers. Therefore, the Guide should identify scenarios where the use of dark patterns would be incompatible with the standards set forth in the Guide and should clarify that advertisers’ use of such dark pattern practices will not be tolerated.

Some dark patterns may be so deceptive and abusive that only an outright prohibition would be sufficient to protect the consumer when sellers’ tactics shift from persuasion into deceptive manipulation. To see some examples identifying that shift, we next look to relevant legal and regulatory developments, then turn to other specific questions raised in the RFIs.

³² See Mathur, et. al, *What Makes a Dark Pattern... Dark?* at 25.

³³ See *id.*

³⁴ See *id.*

II. Legal and Regulatory Developments (RFI Topic 2)

As noted at the outset, numerous state Attorneys General and the FTC have brought enforcement actions under existing UDAP statutes and the FTC Act in cases where dark pattern practices were determined to be unfair or deceptive. Where market participants engage in unfair or deceptive acts or practices through the use of dark patterns, such practices are already covered under our state UDAP authority, even if those laws do not explicitly refer to “dark patterns” using that name. At the same time, new and proposed legislation that specifically refers to or defines dark patterns may be instructive to the FTC in aiding how such practices are conceptualized in the Guide.

Regulatory developments combatting dark patterns in the United States have come from both federal and state governments. The California Privacy Rights Act (CPRA) and Colorado Privacy Act (CPA) both state that consent obtained through dark patterns is not adequate consent.^{35 36}

The CPRA defines dark patterns as “a user interface designed or manipulated with the substantial effect of subverting or impairing user autonomy, decision-making, or choice, as further defined by regulation.”³⁷ The CPRA allows both the California Attorney General and the California Privacy Protection Agency to enforce their regulations against companies that use dark patterns. The agencies can obtain injunctive relief as well as penalties of \$2,500 per violation or \$7,500 for each intentional violation or violations involving personal information that the business, service provider, contractor, or other person knows is under 16 years of age.³⁸

The CPA defines dark patterns as “a user interface designed or manipulated with the substantial effect of subverting or impairing user autonomy, decision-making, or choice.”³⁹ Section 6-1-1311 of the CPA permits the Colorado Attorney General to seek an injunction or monetary damages against companies that have deployed dark patterns to deceive consumers.⁴⁰ However, the Colorado AGO must first issue a notice of violation if a cure is possible and must wait 60 days after receipt of the notice of violation to bring an action.⁴¹

The Guide revision is an ideal place to provide guidance to companies based on existing federal laws given that there are currently no specific federal statutes expressly defining and targeting dark patterns. The FTC is well-positioned to update the Guide in a way that would provide guidance to companies that would lower instances of unfair and deceptive practices and hopefully prevent the need for state action under current Unfair and Deceptive Acts or Practices (“UDAP”) statutes.

Two pieces of proposed federal legislation that directly address dark patterns are the Deceptive Experiences to Online Users Reduction (DETOUR) Act and the Setting an American

³⁵ <https://www.caprivacy.org/cpra-text/>

³⁶ https://leg.colorado.gov/sites/default/files/2021a_190_signed.pdf

³⁷ <https://www.caprivacy.org/cpra-text/>

³⁸ *Id.*

³⁹ https://leg.colorado.gov/sites/default/files/2021a_190_signed.pdf

⁴⁰ *Id.*

⁴¹ *Id.*

Framework to Ensure Data Access, Transparency, and Accountability (SAFE DATA) Act. While these laws have not been passed, the FTC may find it fruitful to consider the conceptual approaches suggested by legislators in these Acts.

The Senate introduced the DETOUR Act in 2019 and sought to use the Commission’s power to limit online platforms’ use of dark patterns.⁴² The DETOUR Act would prohibit large online operators from designing, modifying, or manipulating user interfaces with the purpose or substantial effect of obscuring, subverting, or impairing user autonomy, decision-making, or choice to obtain consent or give up user data.⁴³ The most recent update regarding the DETOUR Act came in December 2021 when the bill was referred to the Committee on Commerce, Science, and Transportation.⁴⁴

In 2021, the Senate introduced the SAFE DATA Act, which incorporates the DETOUR Act and focuses on prohibiting the use of dark patterns on platforms aimed at users under 13.⁴⁵ The last update is from July 28, 2021, when the bill was also referred to the Committee on Commerce, Science, and Transportation.⁴⁶

The FTC can also learn from other worldwide actors in this space. The European Union has taken a strong stance against the use of dark patterns. The EU’s Digital Services Act (DSA) aims to protect consumers and to provide a safe online environment.⁴⁷ Dark patterns are prohibited under the DSA.⁴⁸ The DSA is part of the EU’s strategy of “[a] Europe fit for the digital age” in which the EU plans to set standards for technology to positively shape Europe’s digital future.⁴⁹ The DSA will apply across the EU in 2024.

Revisions to the Guide that directly address the use of dark patterns would assist consumers and companies alike and could result in reducing consumer harm and maximizing consumer benefits and autonomy. A robust national guidance that supplements and adds additional federal guidance to existing state law could significantly improve protection for consumers.

Having briefly surveyed the landscape of research, legislation, and regulation concerning dark patterns, we now turn to our recommendations in response to several of the FTC’s specific requests for information. We have selected certain requests for which we have experience and knowledge to offer feedback and those that we believe are important for the overall purpose of the Guide. We hope our responses to these select requests will be useful in the FTC’s project to revise the Guide as a whole.

⁴² <https://iapp.org/news/a/ongoing-dark-pattern-regulation/>

⁴³ <https://www.warner.senate.gov/public/index.cfm/2021/12/lawmakers-reintroduce-bipartisan-bicameral-legislation-to-ban-manipulative-dark-patterns>

⁴⁴ <https://trackbill.com/bill/us-congress-senate-bill-3330-detour-act/2171150/>

⁴⁵ <https://iapp.org/news/a/ongoing-dark-pattern-regulation/>

⁴⁶ <https://trackbill.com/bill/us-congress-senate-bill-2499-safe-data-act/2138774/>

⁴⁷ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/digital-services-act-ensuring-safe-and-accountable-online-environment_en

⁴⁸ https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_2348

⁴⁹ https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age_en ; https://ec.europa.eu/commission/presscorner/detail/en/QANDA_20_2348

III. Use of Hyperlinks and Multiple Webpages for Qualifying Disclosures (RFI Topics 8 & 9)

The 2013 Guide’s discussion of placement, labeling, and permissible use of hyperlinks to direct users to information across multiple webpages is helpful. The following principles are particularly clear in the 2013 Guide, and the FTC should carry them into any subsequent versions of the Guide:

- Essential material information (*e.g.*, disclosures that are “integral” to the claim) must appear on the same page as the claim and cannot be relegated to a hyperlink’s click-through page.
- If it is permissible for a disclosure to be located on a click-through page (*i.e.*, disclosure is not “integral” to the claim), it needs to be prominent on the click-through page, not buried in other content.
- If important disclosure information is to be accessed through a hyperlink, the hyperlink’s label needs to appropriately convey the nature and importance of the link.
- If important disclosure information is to be accessed through a hyperlink, the hyperlink must be proximate to the claim.

We identified three areas for consideration as the FTC considers future revisions to this topic in the Guide. These areas have been identified, based not on shortcomings of the current Guide, but, rather, are being suggested based upon the technological realities of 2022 and how consumers interact with certain advertisements, including those on social media platforms.

A. Dark Patterns: Information Hiding

The Guide’s concern that, in some cases, hyperlinks could be used to make a disclosure inappropriately distant from a claim (as opposed to being proximate to the claim) is underscored by the developing literature on dark patterns. Researchers examining dark patterns have identified one attribute common to several dark patterns, referred to as “Information Hiding.” Information Hiding is characterized by “obscur[ing] or delay[ing] the presentation of necessary information to users.” The Information Hiding attribute is observed in many different types of dark patterns, including “Hidden Subscription” (“mislead[ing] users into believing they are signing up for a one-time offer or free trial when in reality they are signing up for recurring fees”), and “Hidden Cost” (“hid[ing] relevant cost information until right before the user completes the transaction and is unlikely to change their course of action”).⁵⁰ (See [Mathur et al.](#))

In subsequent editions of the Guide, the FTC should consider specifically addressing these dark patterns that exploit Information Hiding, including by providing examples of Information Hiding that utilize hyperlinks and multiple pages to obscure or delay a consumer’s access to necessary information.

⁵⁰ See Mathur, et. al, *What Makes a Dark Pattern... Dark?*

Additionally, the Guide should take into account ways in which new platforms and advertising channels potentially constrain advertisers' ability to provide hyperlinks and/or display disclosures. Two such types of constraints are discussed next.

B. Platform-Specific Unavailability of Direct Hyperlinks

Whereas the examples in the 2013 Guide focus on information published on traditional webpages accessible through computer or mobile device web browsers, several of the RFI topics recognize that, today, many online advertising claims are made through platforms other than websites and web browsers. For example, online ads within social media platforms are often viewed by consumers through dedicated smartphone applications, which applications may or may not provide a mechanism for advertisers to provide direct links to content on the broader Internet. This raises the issue of whether and how the abovementioned principles relating to using hyperlinks and multiple webpages to effectuate qualifying disclosures apply in those contexts.

For example, in certain types of social media platform posts, the platforms disallow the posting user from including an embedded hyperlink alongside a post: the user is permitted to post, in non-hyperlinked text-only form, a URL that is not “clickable,” and/or the user may include the phrase “Link in Bio,” signaling that readers of the post may access a related hyperlink accessible separately on the posting party’s user page. Complicating the situation further, the link contained on a user’s “Bio” page frequently directs to a “landing page” containing multiple hyperlinks for various different purposes. Accordingly, in some situations on social media platforms, it may not be technologically possible for a user of the platform to provide a direct hyperlink alongside an advertising claim—and the next best option may require a consumer to navigate through multiple pages before arriving at the related information.

Several statements in the 2013 Guide suggest that a reference to a “Link in Bio” alongside an advertising claim is unlikely to be an effective way of making an effective disclosure – and therefore, that any advertisement claim that is dependent on such a disclosure to avoid being deceptive should not be disseminated (*e.g.*, p. ii, “When using a hyperlink to lead to a disclosure . . . [advertisers should] take consumers *directly* to the disclosure on the click-through page;” p. iii, “If a disclosure is necessary... and it is not possible to make the disclosure clearly and conspicuously, then that ad should not be disseminated.”).

In its revised version of the Guide, the FTC should consider clarifying that, in the event that direct hyperlinking is unavailable in a social media platform, a mere reference to a “Link in Bio,” along with a link contained on a separate “Bio” page, which, in turn, directs a user to a click-through page containing additional information, may not be an effective way to make a necessary disclosure.

C. Standards Applicable to Space-Constrained Advertisements

Since 2013, the use of “space-constrained advertisements” have become more prevalent and sophisticated. The Guide’s admonishment on p. iii “if a particular platform does not provide

an opportunity to make clear and conspicuous disclosures, then that platform should not be used to disseminate advertisements that require disclosures” should be construed in the context of emerging trends in space-constrained advertisements, especially short-form videos. Moreover, we think the Guide should be clarified to specify whether space-constrained ads are subject to a different standard for assessing whether a disclosure is sufficiently clear and conspicuous from that employed in other less space-constrained contexts. We note that on p. 15 of the Guide, a list of factors is introduced for determining “whether the disclosure should be placed in the space-constrained ad itself or on the website to which the ad links,” including “how important the information is to prevent deception, how much information needs to be disclosed, *the burden of disclosing it in the ad itself*, how much information the consumer may absorb from the ad, and how effective the disclosure would be if it were made on the website” (emphasis added).

We note that the “burden of disclosing [information] in the ad itself” factor is not specifically mentioned elsewhere in the Guide, and we think the Guide could be clarified to explain that while the fact of burden may be considered by the advertiser when deciding on an effective and non-deceptive advertising strategy, the fact that it may be “burden[some] [to] disclos[e] [information] in the ad itself” is not a factor that could justify or excuse the omission of a disclosure alongside a claim where such a disclosure would be necessary to prevent the claim from being deceptive. As a consequence, to the extent that advertisers elect to use space-constrained ads, they are required to exclude from those ads any express or implied claims that would require a spatially proximate disclosure in order to avoid being deceptive.

IV. Advertising and Other Practices on Mobile Devices (RFI Topic 11)

Since 2013, mobile devices have become a pervasive feature in everyday life. Between 2011 to 2017, the percentage of adults in the United States who owned a smartphone increased from 35% of the population to 77% of the population, while the percentage who own a tablet increased from 3% to 51% from 2010 to 2017.⁵¹ These statistics have only increased in the intervening years, with some sources finding that 1.43 billion smartphones were sold globally in 2021.⁵² Some of the unique features of advertising on mobile devices are already addressed by the Guide and remain effective, including, on p.10, that advertisers should optimize a website for mobile devices to limit the need to scroll to view all of the website’s content; and, on p. 18, that due to size limitations of mobile devices, some disclosures cannot be clear and conspicuous where the font size is too small and cannot be enlarged.

Many online advertisements use button size and placement to lead consumer attention to certain things.⁵³ Particularly for mobile users, who experience more difficulty in selecting smaller buttons due to the imprecision of touchscreen devices and mobile webpages, insufficiently large, inconveniently placed, or duplicate buttons may make it difficult for

⁵¹ <https://www.pewresearch.org/fact-tank/2017/01/12/evolution-of-technology/>.

⁵² <https://www.statista.com/statistics/263437/global-smartphone-sales-to-end-users-since-2007/>.

⁵³ See, e.g., *Disguised Ads*, Deceptive Design, <https://www.deceptive.design/types/disguised-ads> (last accessed 7/13/2022) (example of dark pattern with multiple confusingly placed download buttons).

consumers to access information that is critical, decline services they do not want, or avoid advertisements they do not wish to click.

Additionally, we have serious concerns about the lack of disclosures on mobile and smartphone apps, in terms of what the apps or devices *do*, rather than merely what they say or display to consumers. In revising the Guide, FTC should consider the research on dark patterns concerning privacy, including issuing guidance on dark patterns that coerce consumers into sharing more personal data than they otherwise intended to. Additionally, many privacy policies are written in dense, legal terminology that dissuades users from reading and understanding the terms, a practice that could be construed as a dark pattern.⁵⁴ More effective disclosures in plain terms for consumers could be further encouraged in the Guide. In particular, we are concerned about the failure of companies to provide clear and conspicuous disclosures regarding the types of data that they collect, how they use and share that data, and consumers' rights with regard to their data.

V. Issues Unique to Specific Audiences and Demographics in Seeing, Hearing, and Comprehending Disclosures (RFI Topic 12).

A. Online Platforms and Style Conventions

For consumers who habitually use online platforms, the conventions of ordinary webpage layouts may inform their browsing habits and the areas of a page they pay attention to.⁵⁵ When unconventional disclosure styles are used, consumers may experience unnecessary confusion or difficulty noticing important disclosures.⁵⁶ There are several examples of dark patterns that deceptively draw consumers' attention toward and away from certain areas. Such dark patterns can be described as "covert," pushing a user to "select certain decisions or outcomes," but "hid[ing] the influence mechanism from the user."⁵⁷

For instance, when consumers encounter a page or a series of pages where green buttons must be pressed to continue, they may begin to ignore text inside these buttons, believing that the text involves only proceeding to the next section. Although the use of color to create contrast would be sufficient to draw a consumer's eye to the text, the use of particular colors and conventions that are ordinarily used for other purposes may cause consumers to lose track of important disclosures that are hidden strategically.⁵⁸ By placing a critical disclosure with white

⁵⁴ <https://cbw.sh/static/pdf/gunawan-2021-pacmhci.pdf>

⁵⁵ See Peep Laja, *10 Useful Findings about How People View Websites*, CXL, <https://cxl.com/blog/10-useful-findings-about-how-people-view-websites/> (last accessed 7/13/2022) (speaking to common trends among people that view websites).

⁵⁶ See Mathur, et al., *What Makes a Dark Pattern... Dark?: Design Attributes, Normative Considerations, and Measurement Methods*, CHI Conference on Human Factors in Computing Systems (CHI '21), May 8–13, 2021, Yokohama, Japan, at 8 (using color and style to steer users).

⁵⁷ Mathur, et al. at 8.

⁵⁸ See also Dark Patterns Tip Line, <https://darkpatternstipline.org/sightings/created-opt-out-language-that-was-confusing-and-counterintuitive-2/> (last accessed 7/13/2022) (example of a dark pattern where a confusing mix of placement, color, and text creates a confusing user experience).

text within a green button, consumers may be misled to believe that the text is insignificant.⁵⁹ Placing text strategically can lead consumers to pay more or less attention to certain text or disregard certain disclosures altogether, especially when disclosures in a symmetric accept/decline style are used.⁶⁰

While the Guide encourages the use of color and contrast to make hyperlinks or important information easily noticeable,⁶¹ it does not address how the *strategic* use of colors and placement could become manipulative. These unconventional practices can mislead consumers into ignoring critical disclosures or agreeing to terms that they are unaware of and would otherwise not agree to.⁶² Guidance to avoid these problems may be effective in further ensuring clear and conspicuous disclosures.

B. Users of Free Subscription Trials

There is potential for deceptive and unfair business practices in businesses offering free subscription trials. Advertisers may use certain tactics that obscure the total cost of the subscription, the terms of the free trials, and tactics that make it difficult for consumers to cancel their subscriptions. Many of these services require consumers to input their billing information and automatically charge for renewal, leaving consumers to pay for services that they intended only to sample for free. For longer-term services, consumers may become saddled with significant unexpected costs. And, when consumers try to cancel these services, websites often make it difficult to receive a refund or cancel the subscription by hiding links in obscure locations,⁶³ or require consumers to contact a sales representative by phone.⁶⁴

The Guide notes that such unexpected fees should be disclosed on the same page as, and immediately adjacent to, statements about the product's basic cost⁶⁵ – expected fees, such as reasonable shipping and handling charged, though, can be displayed on the checkout page, since consumers expect these charges.⁶⁶ However, on many sites, the webpage listing additional fees is often delayed until the last page in a series of pages such that consumers who have already invested significant time inputting their shipping, billing, and contact information will simply accept these unexpected fees because they have already gone through the trouble of filling out multiple forms.⁶⁷ In the context of subscription fees, a consumer may not realize until the end of

⁵⁹ See, e.g., Dark Patterns Tip Line, <https://darkpatternstipline.org/sightings/persuaded-me-to-use-the-browser-with-button-colors/> (last accessed 7/13/2022) (discussing how an opt-in button is highlighted in blue, while an opt-out button is grayed out).

⁶⁰ See, e.g., <https://webtransparency.cs.princeton.edu/dark-patterns/> (last accessed 7/13) (showing an example of the “misdirection” dark pattern where “visual interference” in color and placement is used.”)

⁶¹ See, e.g., *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at 17.

⁶² See Mathur, et al. at 8 (using color and style to steer users).

⁶³ See, e.g., *Roach Motel*, Deceptive Design, <https://www.deceptive.design/types/roach-motel> (last accessed 7/13/2022) (examples of difficulty opting out of subscriptions).

⁶⁴ See, e.g., Mathur, et al. at 15 (discussing examples of “Hard to Cancel” dark patterns that impose additional cognitive burdens on users).

⁶⁵ *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at 10.

⁶⁶ *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at A-16.

⁶⁷ *Hidden Costs*, Deceptive Design, <https://www.deceptive.design/types/hidden-costs> (last accessed 7/13/2022).

the sign-up process that they must enter their credit card info and will be billed automatically if they do not timely cancel before the next billing period. In such cases, charges, including “expected” charges, are sprung on consumers with the hope that consumers will accept the cost rather than waste the time spent filling out their information or seek out an alternative service.⁶⁸ As noted above, these practices may fall into deceptive dark pattern typologies like “Obstruction” for which additional or clearer disclosures may not be effective in curing the underlying problem. We recommend that the FTC consider ways to address these issues, whether by requiring specific kinds of clear and conspicuous disclosures or other means.

C. Consumers of Negative Option Plans Using Check Boxes

For consumers that purchase products that include negative option plans, the Guide notes that negative option plans should be carefully displayed such that a consumer will pay adequate attention to the disclosure, as it might not be directly related to the product the consumer is trying to purchase.⁶⁹ In addition, the Guide’s corresponding example 20 shows how options that are not pre-selected and must be selected to proceed to checkout are likely to be sufficiently clear and conspicuous.⁷⁰ There are no guidelines, however, as to the language or design of such options.

Requiring consumers to select a box manually, rather than the advertiser displaying pre-selected options, may prompt consumers to begin reading disclosures and the options they are selecting;⁷¹ but, if a series of options or disclosures contain conflicting sentence structure, even if they use “plain” syntax as the Guide suggests,⁷² a consumer may be misled into unintentionally agreeing to something the consumers would otherwise not choose if the terms were clearly presented. Due to the inconsistent wording, a consumer may mistakenly check both boxes, unintentionally agreeing to purchase the second item because they assumed that checking both options would result in the same outcome. Moreover, in situations where only one of these boxes is checked,⁷³ it may create further confusion as to what a consumer is agreeing to when they check particular selections. There are a variety of ways these inconsistencies in structure can contribute to tricky and deceptive disclosures, and guidance emphasizing a straightforward mode of disclosure can ensure clarity and comprehensibility.

D. Microtargeted Ads and Manipulative Disclosures

There are dark patterns that may be especially harmful to consumers when advertisements are microtargeted or use manipulative techniques to create an artificial sense of urgency. For instance, it is common practice on web pages and marketplace platforms to include a countdown timer on a product page that communicates some benefit to a consumer if the item is ordered within “x” hours, such as availability of the item, an expedited arrival date, or a

⁶⁸ See *Hidden Costs, Deceptive Design*, <https://www.deceptive.design/types/hidden-costs> (last accessed 7/13/2022) (discussing users feeling fatigued at the checkout page and being more willing to complete their purchase).

⁶⁹ *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at 18.

⁷⁰ *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at A-23.

⁷¹ See *Dark Pattern Categories*, <https://webtransparency.cs.princeton.edu/dark-patterns/> (last accessed 7/13/2022) (showing an example of a “misdirection” dark pattern where a pre-selected option pressures the user to accept).

⁷² *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at iii.

⁷³ See Mathur, et al. at 15-16 (use of pre-selected checkboxes to increase an inferior product’s market share).

current sale price. This “Countdown Timer” dark pattern “involves a phony deadline for a deal or offer, with a prominent ticking timer showing that the deadline is imminent.”⁷⁴ An advertisement may include language such as “Only 10 left in stock – order soon,”⁷⁵ even if there is little risk of the item selling out, or “Order within the next hour to get two-day shipping” when two day shipping is always available.⁷⁶ While perhaps not untruthful, its inclusion compels consumers to purchase items when they otherwise might not due to the perceived benefit to the consumer. These may be misleading statements, even if truthful, as the arrival date or sale price might not otherwise change, even if the countdown ran out of time. According to one study, “over 40% of all the timers they discovered on shopping websites either reset on expiration or were inconsequential to the advertised offer.”⁷⁷ These disclosures are likely intentionally placed to instill a sense of urgency or uncertainty into a consumer’s choice to purchase the item, creating the illusion that they will lose out on a deal if they do not purchase the item immediately.⁷⁸ These strategic disclosures may be especially manipulative if they are a part of microtargeted advertisements – if a consumer is in the market for a particular product and sees that “only” a certain amount of that product is available, they may feel more compelled to make a compulsive purchase.

E. Audio and Video Disclosures

For consumers who encounter ads in video or audio form, more specific guidance may be necessary to ensure that guidelines about proximity and clarity apply to these forms of advertisements. For instance, while the Guide notes that the existence of scroll bars does not do enough to notify consumers of a disclosure that can only be found by scrolling,⁷⁹ the same may apply for videos where a disclosure does not appear until the very end of a video, far from where the relevant advertising claim occurred. Here, the existence of time remaining in the video as shown by the scrolling progress bar may not be sufficient notice that a disclosure may appear later. In audio ads a user may be less likely to be looking at the progress bar. In addition to the current guidelines discussing volume, cadence, duration, and language,⁸⁰ temporal proximity may also be a helpful addition to ensure clarity and noticeability of such video and audio disclosures.

VI. Multi-party Selling Arrangements (RFI Topic 13)

In multi-party selling arrangements, especially in marketplace forums, it is common for consumers to struggle to distinguish between different sellers, as well as between sellers and the

⁷⁴ Mathur, et al. at 8.

⁷⁵ See, e.g., *Dark Pattern Categories*, <https://webtransparency.cs.princeton.edu/dark-patterns/> (last accessed 7/13/2022) (showing an example of a “scarcity” dark pattern where low stock of an item is indicated).

⁷⁶ See, e.g., *Dark Pattern Categories*, <https://webtransparency.cs.princeton.edu/dark-patterns/> (last accessed 7/13/2022) (showing an example of an “urgency” dark pattern that indicates a sale is ending soon).

⁷⁷ Mathur, et al. at 8.

⁷⁸ See *Dark Patterns*, <https://webtransparency.cs.princeton.edu/dark-patterns/> (last accessed 7/13/2022) (“Limited-time Message”).

⁷⁹ *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at 9.

⁸⁰ *.com Disclosures: How to Make Effective Disclosures in Digital Advertising*, FTC (March 2013) at 8.

platform itself.⁸¹ The current Guide does not contain any guidance as to what sorts of disclosures such platforms must include or the style in which such disclosures must be presented. These practices, however, make it difficult for consumers to discern what they are purchasing under what terms and conditions, even if they are listed somewhere on the webpage, and especially difficult when the terms are hidden deep within obscure pages.

For example, reviews of a particular model of sunglasses may include positive feedback that averages to 4 of 5 stars, and these may be the reviews linked under a seller's listing of that product. However, it may be the case that within those reviews, the specific ratings of that model of sunglasses sold by that particular seller are mostly negative and average to 1 of 5 stars. When marketplace platforms consolidate reviews by products generally, rather than products sold by sellers, consumers may be misled as to the quality or product that they are purchasing. This confusion may be especially prominent when many sellers are listing the same item for sale.

Another example of confusing mixing and matching relates to the variety of return policies a consumer could find on a multi-seller market platform.⁸² While the return policy espoused by a platform itself might specify free returns, a seller might specify that a buyer must pay a restocking fee. When platforms' guarantees differ from their sellers', consumers bear the burden of deciphering under what terms they are purchasing a product. The current Guide does not specify in what format this difference should be disclosed. We suggest the FTC consider altering its guidance to accommodate the large number of ways that multi-party selling arrangements can create customer confusion in incorporating many potentially conflicting disclosures in one consolidated platform. The guidelines should emphasize clarity in helping consumers locate disclosures that relate specifically to the product that is advertised on the web page they are viewing.

VII. Other Principles Relating to Online Advertising (RFI Topic 15)

We recommend that the Guide include more discussion concerning plain language and syntax in advertising and disclosures. The current version of the Guide only once mentions the use of plain language and syntax (p. iii). While the Guide should deal with the use of emerging and sophisticated technologies, we urge the Commission not to lose sight of seemingly basic ideas like requiring disclosures in plain language and syntax.

The failure to provide disclosures in understandable language is so prevalent and widespread that it has been detected as a distinct phenomenon in the domain of dark patterns research. For example, dark patterns researchers have suggested that “the dense, long legalistic language used in many privacy policies is also ‘dark’ in that it discourages people from reading

⁸¹ See *Problems with eBay Product Reviews*, Zenstores, <https://www.zenstores.com/tutorials/problems-ebay-product-reviews/> (last accessed 7/13/2022) (article discussing displeasure at jumbled reviews between products and sellers).

⁸² See Kyle James, *Amazon Return Policy: No More Confusion, Here's EXACTLY How it Works*, Rather Be Shopping, <https://www.rather-be-shopping.com/blog/amazon-return-policy/> (last accessed 7/13/2022) (blog post discussing confusion about Amazon's return policies and third party sellers)

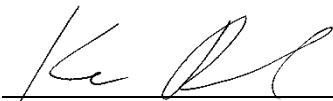
and hinders understanding.”⁸³ The same idea can be expanded to disclosures and dense terms and conditions for any product or service where material disclosures are written with sophisticated legal wording. Consumers should not need a law degree in order to engage in the online marketplace, especially when the transaction at issue involves sensitive matters like sharing personal data or relates to the provision of essential goods and services like medication.

VIII. Other Changes to the Document (RFI Topic 16)

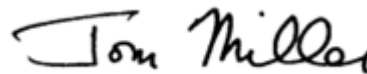
We have suggested a number of substantive changes to the Guide and urge the FTC to incorporate guidance related to the proliferation of dark patterns in online advertising. In addition, we recommend that the FTC take steps to improve the *form* of the document itself, in particular, creating a user-friendly online version or webpage of the document where everyday consumers and designers can browse the guidance. Such a webpage could also provide exemplar advertisements in-line with the text or use other interactive features. These steps would allow both individuals and companies subject to the Guidance as well as everyday consumers to more easily access and understand the FTC’s policies and guidance.

Thank you again for this opportunity to provide comment on the FTC’s initiative to undertake revisions to the Guide.

Respectfully Submitted,



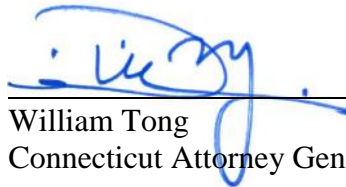
Kwame Raoul
Illinois Attorney General



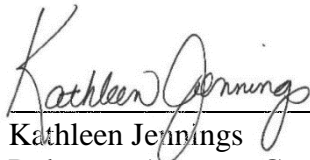
Tom Miller
Iowa Attorney General



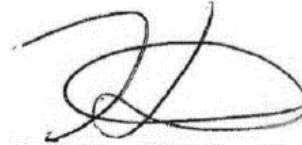
Treg Taylor
Alaska Attorney General



William Tong
Connecticut Attorney General

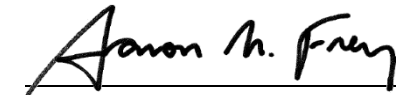


Kathleen Jennings
Delaware Attorney General

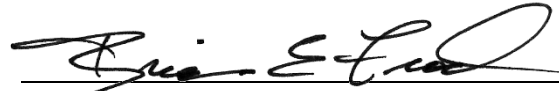


Karl Racine
District of Columbia Attorney General

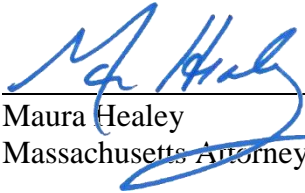
⁸³ Gunawan, et al, A Comparative Study of Dark Patterns Across Mobile and Web Modalities. Proc. ACM Hum.-Comput. Interact. 5, CSCW2, Article 377 (October 2021), 29 pages. <https://doi.org/10.1145/3479521>.



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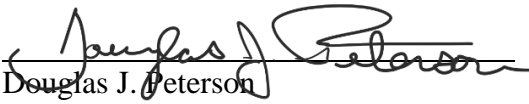
Brian E. Frosh
Maryland Attorney General



Maura Healey
Massachusetts Attorney General



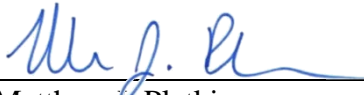
Keith Ellison
Minnesota Attorney General



Douglas J. Peterson
Nebraska Attorney General



Aaron D. Ford
Nevada Attorney General



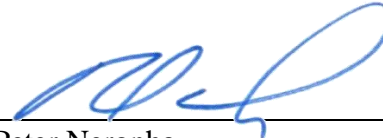
Matthew J. Platkin
New Jersey Acting Attorney General



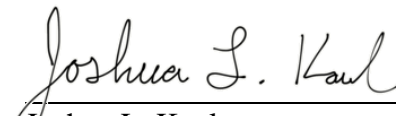
Ellen F. Rosenblum
Oregon Attorney General



Josh Shapiro
Pennsylvania Attorney General



Peter Neronha
Rhode Island Attorney General



Joshua L. Kaul
Wisconsin Attorney General



Stephen H. Levins
Executive Director
State of Hawaii, Office of Consumer Protection

ⁱ Full list of suggested research:

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- Arunesh Mathur, Gunes Acar, Michael J. Friedman, Elena Lucherini, Jonathan Mayer, Marshini Chetty, and Arvind Narayanan. 2019. Dark Patterns at Scale: Findings from a Crawl of 11K Shopping Websites. Proc. ACM Hum.-Comput. Interact. 3, CSCW, Article 81 (November 2019), 32 pages. <https://doi.org/10.1145/3359183>
- Arunesh Mathur, Jonathan Mayer, and Mihir Kshirsagar. 2021. What Makes a Dark Pattern... Dark?: Design Attributes, Normative Considerations, and Measurement Methods. In CHI Conference on Human Factors in Computing Systems (CHI '21), May 8–13, 2021, Yokohama, Japan. ACM, New York, NY, USA, 27 pages. <https://doi.org/10.1145/3411764.3445610>

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 - Saul Greenberg, Sebastian Boring, Jo Vermeulen, and Jakub Dostal. 2014. Dark Patterns in Proxemic Interactions: A Critical Perspective. In *Proceedings of the 2014 Conference on Designing Interactive Systems (Vancouver, BC, Canada) (DIS '14)*. ACM, New York, NY, USA, 523–532. <https://doi.org/10.1145/2598510.2598541>