

Blurred Lines



An Exploration of Consumers'
Advertising Recognition
in the Contexts of Search Engines
and Native Advertising

An Exploration of Consumers' Advertising Recognition in the Contexts of Search Engines and Native Advertising

FTC Staff Report
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FEDERAL TRADE COMMISSION

Maureen K. Ohlhausen, Acting Chairman
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Overview¹

The Federal Trade Commission’s Enforcement Policy Statement on Deceptively Formatted Advertisements explains that an advertisement is deceptive under Section 5 of the FTC Act if it materially misleads consumers as to its commercial nature or source. In other words, consumers should be able to recognize an ad as an ad.² If a separate disclosure is necessary to make that happen, the disclosure should be made in a way that ensures consumers can read, process, and understand it.

Ad recognition may be particularly challenging for consumers in the areas of search advertising and “native advertising,” *i.e.*, digital advertising that resembles news, feature articles, product reviews, entertainment, or other non-advertising online content. The FTC staff has expressed concern that consumers sometimes have difficulty distinguishing regular search results from advertised search results and has provided specific guidance to search engines on this issue.³ The FTC staff also has provided specific guidance to native advertisers,⁴ and has provided general guidance on making effective disclosures in digital media.⁵

Only a small number of studies have investigated how consumers perceive these non-traditional forms of advertising. Some of these studies are online surveys that explicitly ask about respondents’ understanding of an ad’s source or commercial nature.⁶ Other studies measure changes in participants’ behavior, such as their clicking or purchasing behavior or visual attention, but not their understanding of the ads.⁷

This report summarizes exploratory research the FTC staff conducted in 2014-2015 to gain additional insights into consumer recognition of native and search ads. In particular, the staff was interested in whether making modest changes to the design and wording of disclosures – based on guidance previously issued by the FTC staff and usability and web design principles – could improve consumers’ recognition of these ads. The study compared participants’ reactions to actual ads (both native and search) as they appeared on a series of captured web pages to the reactions of other participants to nearly identical versions of these same web pages with ad disclosures modified to improve their prominence, legibility, or clarity. We made a number of modifications, including changes to disclosure language, position, text size and color, and to other visual cues such as the borders around or background shadings of ads or ad groupings. We tested an equal mix of ads viewed on either a desktop computer or a smartphone.

During the study, we did not ask participants whether they believed any content item on the web pages was advertising or to specify its source except with regard to the final series of web pages presented. Instead, we primarily evaluated whether participants recognized ads as ads based on indirect measures. After we completed the study, coders subjectively scored whether participants recognized content items as advertising based upon participants’ spontaneous comments while interacting with the web pages and their responses to general questions concerning particular content items.⁸ In this study, we also evaluated participants’ eye movements as they viewed the ads.

Overall, the study results suggest that using disclosures that are consistent with FTC staff’s guidance can improve the likelihood that consumers will recognize an ad as an ad. Across the different ads we tested – after controlling for the influence of other factors such as the type of ad, an individual participant’s tendency to recognize or not recognize ads, and the order in which a participant saw the ads – the disclosure modifications substantially increased the likelihood that a participant recognized an ad as an ad. The improvements observed were substantially similar across search and native ads, as well as between ads viewed on a desktop and on a smartphone. Even with the improved disclosures, a significant percentage of participants still did not recognize some ads as ads.

In examining the effect of the modified disclosures on participants’ visual attention, there also was an overall reduction in time participants looked at ads. However, our analysis also indicates that any reduction in

the amount of time participants looked at an ad was independent of their understanding of the ad's commercial nature. This underscores the importance of testing consumers' actual understanding of an ad, as opposed to exclusively relying on behavioral measures, such as changes in visual attention, to evaluate a disclosure's effectiveness.

The ads we tested in the study represent only some of the many different variations of search and native ads used today, and since we conducted the study, the designs of search engine and media sites have only continued to evolve.⁹ Because we made a number of changes to each ad's disclosure, we also do not know the extent any particular change affected consumers' ad recognition. Nor does the study, given its limitations, establish that consumers were deceived by any one ad we tested. Nevertheless, the results of this study strongly suggest that using some commonsense disclosure techniques can reduce the potential for consumers to be misled as to the commercial nature of paid search and native ads.

Study Methodology

During this exploratory study, we observed, interviewed, and tracked the eye movements of 48 participants.¹⁰ as they interacted with eight different sets of web pages or "scenarios" in a usability lab. (See Appendix A for the screening protocol and demographic information about participants). Four of these eight scenarios were search engine web pages ("search scenarios") and four were web pages from media sites that included native advertising ("native ad scenarios"). In two search and two native ad scenarios, participants viewed the web pages on a desktop computer, and in the other two search and other two native ad scenarios, on an Android smartphone. Participants saw one of two versions of the web pages: (1) a copy of the actual web pages ("original").¹¹ or (2) a nearly identical version except that we modified the ad disclosures marking particular ads or ad groupings on the web pages ("modified"). Some web pages had more than one ad or ad grouping of interest. The study tested participants' recognition of these particular ads or ad groupings as ads ("ad conditions"). Given that we made a number of changes to the disclosures of each ad condition tested, the study could not measure the effect of any one disclosure modification on participants' ad recognition.

The web pages shown and the particular ad conditions tested in each scenario were as follows:

Google Desktop: A search results page returned in response to a search for the term "tablet" on google.com, as viewed on a desktop computer, and a second page or "click-into page" that displayed after a participant clicked a link labeled "Shop for tablet on Google." The ad conditions examined in this scenario were: (1) the "Shop for tablet on Google" box ("Shop Box ads") on the search results page; (2) ads on the right-hand side of the same page ("Right-side ads"); (3) ads above the organic search results on that page ("Top ads"); and (4) the ads shown on the click-into page ("Shop Page ads").

Google Mobile: A search results page returned in response to a search for the term "carpet cleaner" on google.com, as viewed on an Android phone, and a second page that displayed after a participant clicked a link labeled "Shop on Google." The ad conditions examined in this scenario were: (1) the Shop Box and Top ads on the search results page, and (2) the Shop Page ads on the click-into page.

Bing Desktop: A search results page returned in response to a search for the term "air purifier" on bing.com, as viewed on a desktop computer. This scenario did not include a click-into page, although participants could click on various items on the main page. The ad conditions examined in this scenario were the Top and Right-side ads on the search results page.

Bing Mobile: A search results page returned in response to a search for the term "vitamin d supplements" on bing.com, as viewed on an Android phone. This scenario did not include a click-into page, although

participants could click on various items on the main page. The single ad condition examined in this scenario was the Top ads on the search results page.

Gear Patrol Desktop: The home page of the lifestyle magazine Gear Patrol, as viewed on a desktop computer, and a second page that displayed after a participant clicked on a review of a sports car included among the content items on the home page. The ad conditions examined in this scenario were the car review promoting the Subaru WRX as it appeared on the main page and on the click-into page.

Time Mobile: The health section of Time magazine’s site containing a continuous stream of content items, as viewed on an Android phone, and a second page that displayed after a participant clicked on an article about the incidence of home burglaries. This article was listed in a Taboola-branded “content recommendation widget,” which was nestled within the site’s content stream on the main page. The ad conditions examined in this scenario were the feature article promoting an ADT home security system as it appeared on the main page and on the click-into page.

Yahoo Desktop: The home page of Yahoo! containing a stream of content, as viewed on a desktop computer, and a second page that displayed after a participant clicked on an article about pain relief in the content stream on the home page. The ad conditions examined in this scenario were the feature article promoting the pain-relief supplement Instaflex as it appeared on the main page and on the click-into page.

Chicago Tribune Mobile: An article about a woman’s battle against hair loss appearing on the Chicago Tribune’s newspaper site, as viewed on an Android phone. The article displayed after a participant clicked a link to the article forwarded in an email from a friend. The email shown to participants was an actual email generated by clicking one of the social media buttons on the Chicago Tribune site, which enabled sharing of the article via email. This native ad scenario included only the click-into page. The ad condition examined in this scenario was the feature article promoting the hair-replacement services of Embassy Studio, a Chicago-area salon.

* * *

A moderator presented these scenarios to participants in a counterbalanced order, *i.e.*, a different order for each participant, which reduced the potential for contaminating the results with learning effects. (*See* Appendix B for the Experimental Design Table.) During each scenario, participants “thought aloud,” *i.e.*, verbalized what they were thinking as they looked at and interpreted the web pages shown to them, and responded to open-ended questions. (*See* Appendix C for a description of the study procedure and copies of the main study questionnaire and post-study interview questions.) When participants initially saw a web page, they looked at the page uninterrupted for several seconds, scrolling around as desired, while eye tracking equipment measured their eye movements and fixations on the screen.

It is important to note that we designed the study to prevent participants from deducing its purpose and, as a result, altering their normal behavior while interacting with the web pages. The moderator did not explicitly ask participants about whether anything on the web pages was advertising and also specifically asked their opinions of regular content or “decoy” items. The moderator asked if participants saw any ads on the web pages only for the last scenario presented, after completing the main study. Participants’ responses to questions asked after the moderator presented all eight scenarios confirmed that the study was successful in concealing its purpose from them.

We video recorded each participant session. These video recordings included audio of the sessions and real-time renderings of participants’ computer mouse movements, eye gazes, and fixations on the screen. Based on an examination of these video recordings and transcripts of the sessions, two different coders – an expert consultant and either one of two FTC paralegal staff – coded each participant on whether or not he or she

recognized particular ads as ads or if it was unclear to the coder. (See Appendix D for a description of the coding process.) Eye tracking measures also assessed the amount of time participants fixated on different areas on the screen, including on the areas encompassing particular ads and ad groupings. (See Appendix E for a description of how these eye tracking data were processed.) In this study, we considered the expert consultant's coded judgments,¹² eye tracking measures, and various visualizations – in the form of heat maps,¹³ and gaze plots,¹⁴ – depicting where and the order in which participants gazed and fixated on the web pages in qualitatively evaluating the performance of the various disclosure techniques tested.

Disclosure Techniques Explored in the Study

We made a number of changes to improve the saliency and clarity of disclosures used to distinguish paid search ads and native ads from other content on the web pages that participants saw during the study. The original and modified versions of the web pages shown to participants were identical except for these disclosure modifications. Consistent with FTC staff guidance on making effective disclosures in the context of search engines and native advertising, the changes we made focused on factors such as the location, language, text color, and size of the ad labels and the prominence of other visual cues used to distinguish ads from other content. Although the changes to the disclosures varied given design and format differences among the web pages, certain principles guided these changes. We kept the disclosure modifications to a minimum so as to achieve increased salience and clarity without significantly altering the overall design and appearance of the web pages. Moreover, we made changes with the goal of more closely aligning the ad disclosures with user-interface and web design principles articulated by one of our consultants, including:

1. Distinctive labeling, highly visible borders, and distinctive background colors can be used to visually distinguish different types of content.
2. Larger and bold fonts make headings, labels, and notices more noticeable.
3. Text color should contrast strongly with the background. Light text on a dark background is more difficult for users to read and process because the effective size and boldness of the text is reduced when the dark background visually bleeds into the light text characters.
4. Organize and order the content on a page, *i.e.*, use visual hierarchy, to ensure that users see ad labels and associate them with the correct item. Position and space ad labels so it is clear to which content items they relate. If a web page is written in a language that is read left to right, such as English, labels should be placed above and/or immediately to the left of their associated content.
5. When color differences are intended to signal something, ensure that the colors contrast well with each other and include redundant cues other than color in case some users cannot see the color differences.
6. Use terminology and symbols consistently on a site to ensure that users understand their meaning.
7. For labels, use terms that are familiar and clear to users. Avoid technical or industry-internal jargon.

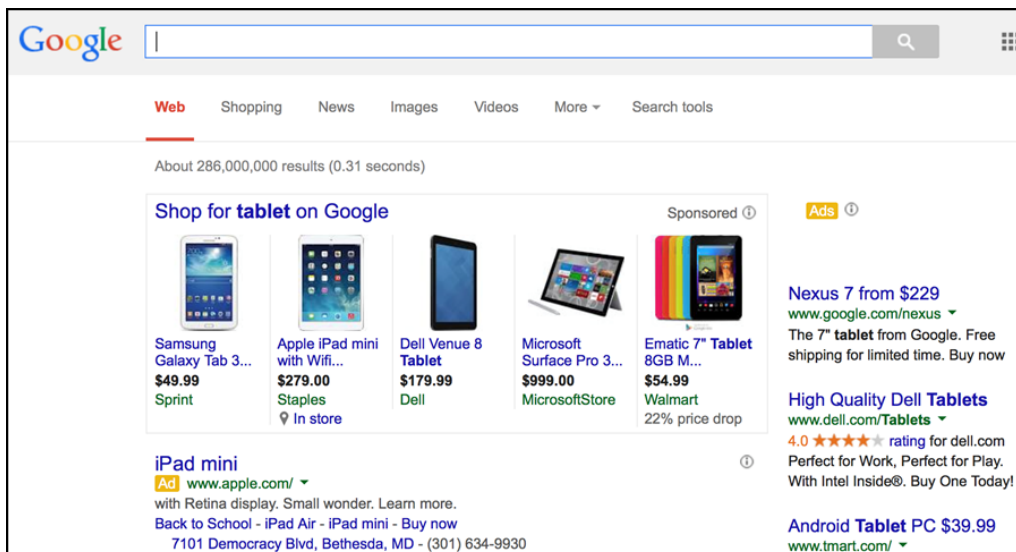
Below are descriptions of the specific changes we made to the ad disclosures in each scenario and screen shots of the original and modified versions of the web pages that illustrate these changes.

Google Desktop

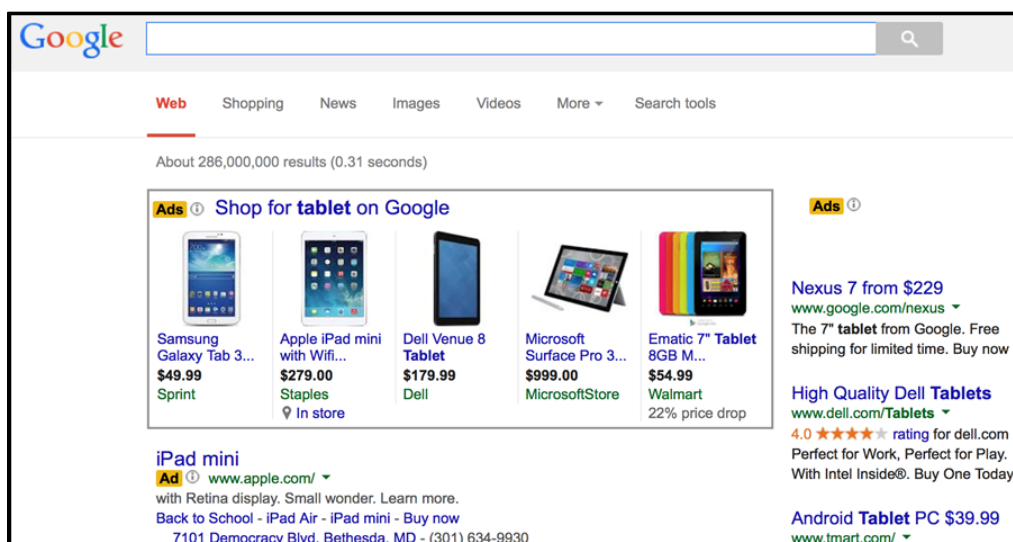
On the initial or “search results page” shown to participants in the Google Desktop scenario, we:

1. replaced the “Sponsored” label for the Shop Box ads with an “Ads” icon used to mark other ads on the page;
2. for the Shop Box ads, relocated this new label and the information icon from the top right of the box to the top left;
3. darkened the border around the Shop Box ads to better separate them from the regular search results; and
4. changed the text and background color of the “Ad(s)” icons from white-on-yellow to black-on-orange.

Original



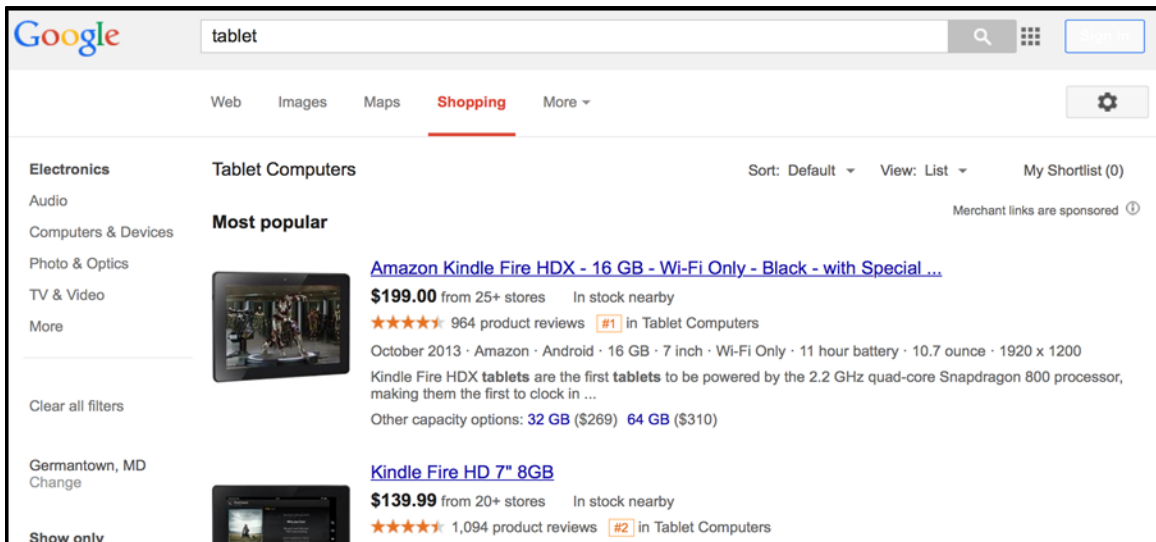
Modified Version



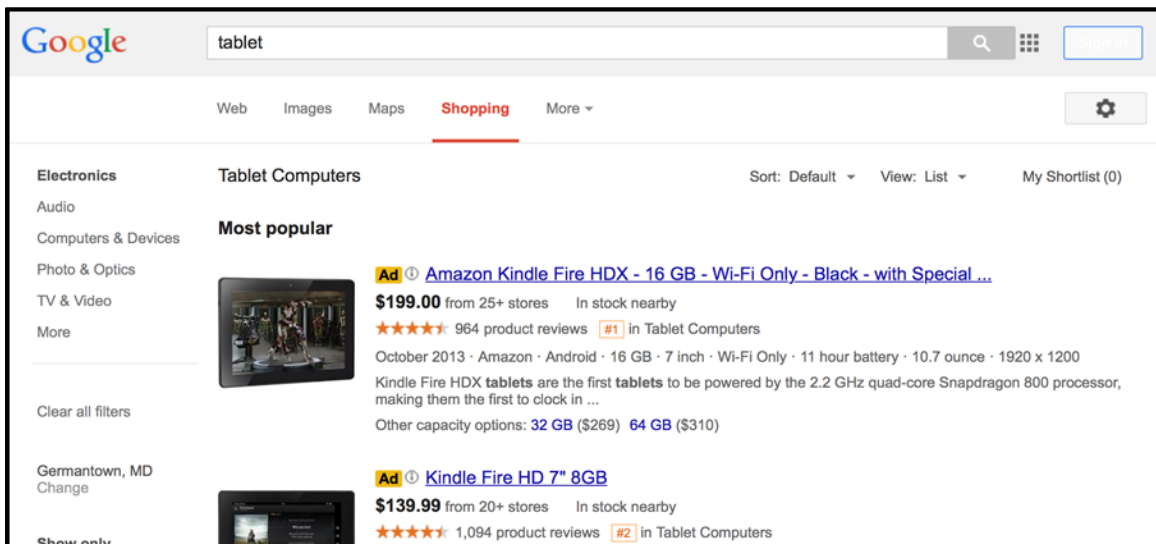
On the second or “click-into” page shown to participants in this scenario, we:

1. deleted the “Merchant links are sponsored” label located above the search results and in the top right of the page; and
2. in place of this label, added a combined “Ad” and information icon – in the same format used on the initial page – to each result listed on that page.

Original



Modified Version

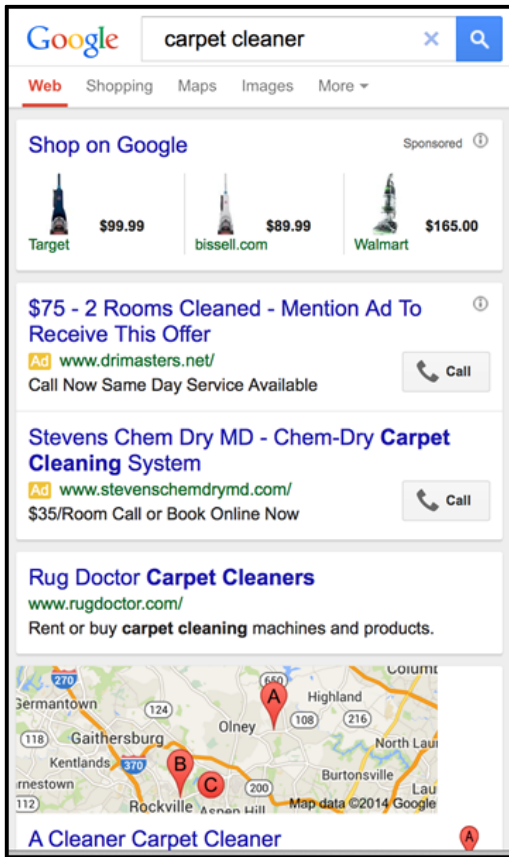


Google Mobile

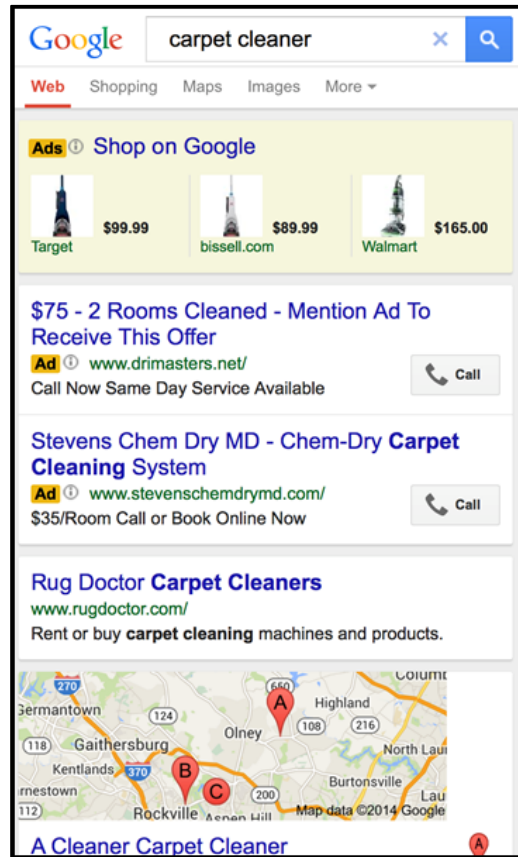
The changes made to the web pages in the Google Mobile scenario tracked the changes above in the Google Desktop scenario. Specifically, on the search results page shown to participants, we:

1. replaced the “Sponsored” label for the Shop Box ads with an “Ads” icon used to mark other ads on the page;
2. for the Shop Box ads, relocated this new label and the information icon from the top right to the top left of the box;
3. added tan background shading to better separate the Shop ads from the regular search results; and
4. changed the text and background color of the “Ad(s)” icons from white-on-yellow to black-on-orange.

Original



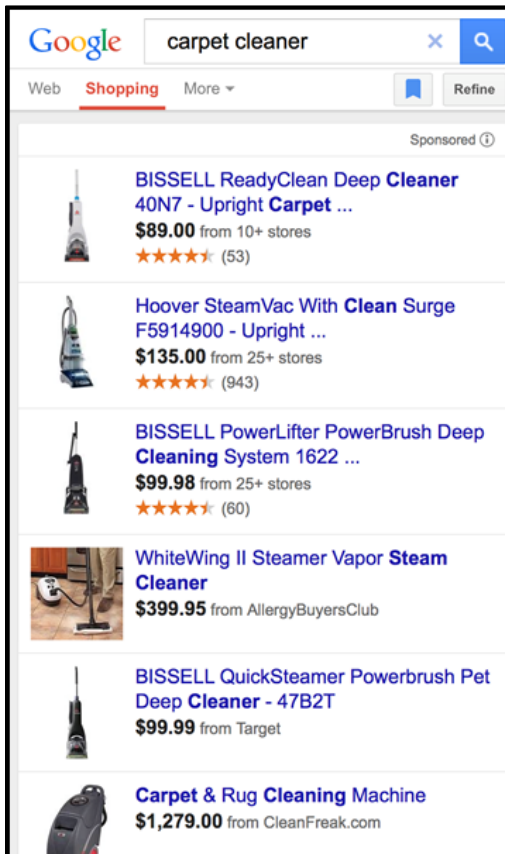
Modified Version



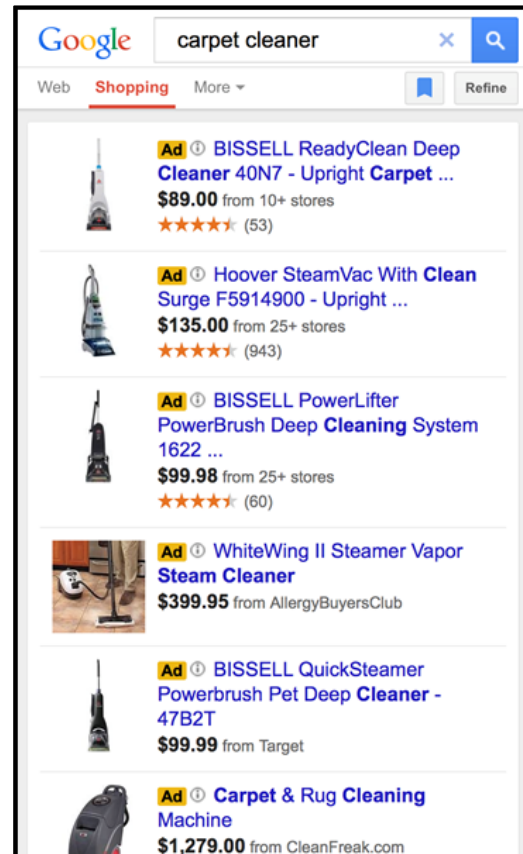
On the click-into page in this scenario, we:

1. deleted the “Sponsored” label located above the search results and in the top right of the page; and
2. in place of this label, added a combined “Ad” and information icon – in the same format used on the initial page – to each result listed on that page.

Original



Modified Version

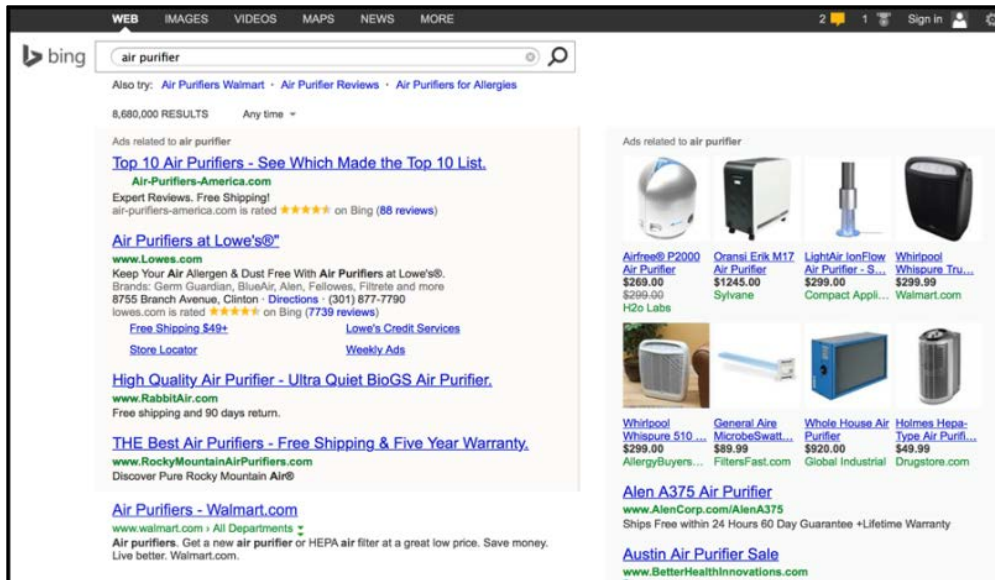


Bing Desktop

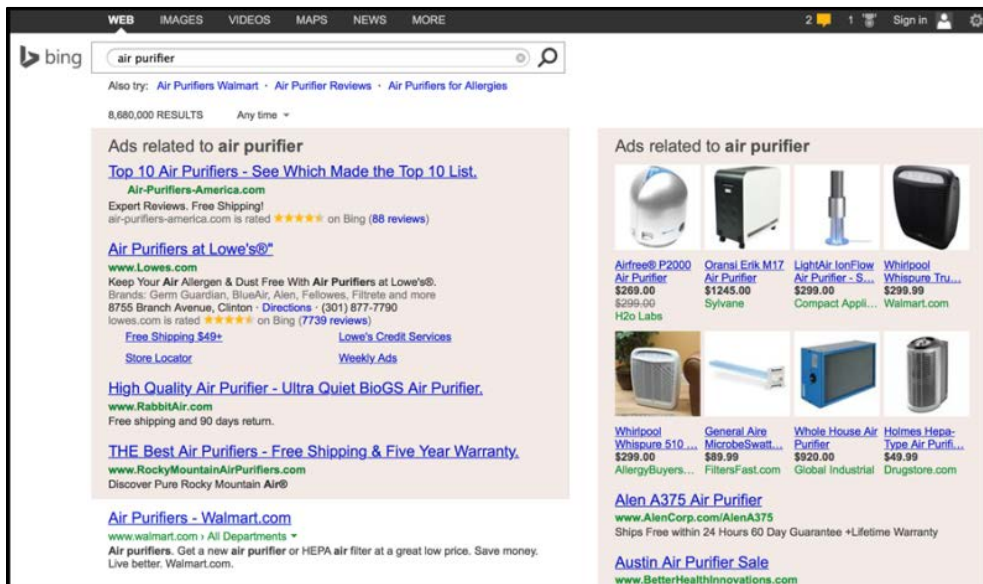
On the search results page shown to participants in the Bing Desktop scenario, we:

1. changed the background color of the Top and Right-side ads from light gray to tan so that it contrasted better with the background color of other content on the page; and
2. enlarged the font size of the ad label “Ads related to air purifier.”

Original



Modified Version



Bing Mobile

On the search results page shown in the Bing Mobile scenario, we:

1. darkened the green background color of the Top ads and other ads located on the page to increase contrast with the regular results on the page;
2. enlarged the font size of the ad labels; and
3. increased slightly the space between the label “Ads Related to . . .” and the first item listed below it to better signal that the label related to both the Top ads.

Original

The screenshot shows the original Bing Mobile search results for 'vitamin d supplements'. The search bar at the top contains the text 'vitamin d supplements' and a magnifying glass icon. Below the search bar are navigation tabs for 'WEB', 'IMAGES', 'VIDEOS', and 'NEWS'. The main content area features a green background for the top section. The text 'Ads related to vitamin d supplements' is followed by three search results. The first result is 'Free Vitamist Spray' with a link to 'http://www.vitamistspray.net' and a description: 'Buy 2 or more Vitamist products, get 1 free. Free shipping USA'. The second result is 'Calcium & Vitamin D' with a link to 'm.Caltrate.com' and a description: 'Calcium & Vitamin D Are Essential Throughout Life - Learn More.'. The third result is 'VITAMIN D: Uses, Side Effects, Interactions and Warnings ...' with a link to 'www.webmd.com/vitamins-supplements/ingredientmon...' and a description: 'Find patient medical information for VITAMIN D on WebMD including its uses, effectiveness, side effects and safety, interactions, user ratings and ...'. The fourth result is 'Best Vitamin D Supplements - Consumer Reports' with a link to 'www.consumerreports.org/cro/magazine/2013/05/most-vi...' and a description: 'Find the best vitamin D supplement with Consumer Reports' review of 32 brands.'. The fifth result is 'Vitamin D - What Should I Know About It?' with a link to 'allmedicine.about.com/od/herbsupplementguide/a/vitam...' and a description: 'What is vitamin D? What are the benefits of using vitamin D? What are the possible side effects?'.

Modified Version


The screenshot shows the modified Bing Mobile search results for 'vitamin d supplements'. The search bar at the top contains the text 'vitamin d supplements' and a magnifying glass icon. Below the search bar are navigation tabs for 'WEB', 'IMAGES', 'VIDEOS', and 'NEWS'. The main content area features a green background for the top section. The text 'Ads related to vitamin d supplements' is followed by three search results. The first result is 'Free Vitamist Spray' with a link to 'http://www.vitamistspray.net' and a description: 'Buy 2 or more Vitamist products, get 1 free. Free shipping USA'. The second result is 'Calcium & Vitamin D' with a link to 'm.Caltrate.com' and a description: 'Calcium & Vitamin D Are Essential Throughout Life - Learn More.'. The third result is 'VITAMIN D: Uses, Side Effects, Interactions and Warnings ...' with a link to 'www.webmd.com/vitamins-supplements/ingredientmon...' and a description: 'Find patient medical information for VITAMIN D on WebMD including its uses, effectiveness, side effects and safety, interactions, user ratings and ...'. The fourth result is 'Best Vitamin D Supplements - Consumer Reports' with a link to 'www.consumerreports.org/cro/magazine/2013/05/most-vi...' and a description: 'Find the best vitamin D supplement with Consumer Reports' review of 32 brands.'. The fifth result is 'Vitamin D - What Should I Know About It?' with a link to 'allmedicine.about.com/od/herbsupplementguide/a/vitam...' and a description: 'What is vitamin D? What are the benefits of using vitamin D? What are the possible side effects?'.

Gear Patrol Desktop

On the initial or “main page” shown to participants in the Gear Patrol Desktop scenario, we:

1. applied a tan background color to ads appearing within the stream of content items on the page;
2. reworded the ad label for these ads from “This post is presented by . . .” to “Advertisement by . . .”; and
3. relocated this new ad label, along with the brand logo, above the ad to which it relates.

Original



RISE OF THE MACHINES
POSITIVELY CHARGED: 7 BEST ELECTRIC MOTORCYCLES OF 2014
While electric cars have stumbled in the recent past, motorcycles have readily embraced digital propulsion — even Harley-Davidson has one in the works. With less mass to motivate, shorter runtime requirements and a complete lack of power-robbing creature features, motorcycles are a natural fit for battery-operated powerplants. Here are the seven best electric motorcycles of 2014.

Tweet 7 Tweet 23

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A WORLD RALLY BLUR
WITH THE 2015 SUBARU WRX, A RALLY CAR MATURES
Since it arrived onto North American shores in 2002 the Subaru WRX has been making the case for unadulterated fun, one four-wheel drift at a time. Vehicles and our expectations of them however, have changed a lot over the last 13 model years. No longer content to merely juke and jive with the best of them, we now demand our cars have styling, more toys than an only child and soft-touch everything. To keep these newly refined ralliers content in their cockpits, Subaru sent the WRX to finishing school. And, if you ask us, it graduated — with honors.

Like 92 Like 58

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THIS POST IS PRESENTED BY SUBARU.



Modified Version




RISE OF THE MACHINES
POSITIVELY CHARGED: 7 BEST ELECTRIC MOTORCYCLES OF 2014
While electric cars have stumbled in the recent past, motorcycles have readily embraced digital propulsion — even Harley-Davidson has one in the works. With less mass to motivate, shorter runtime requirements and a complete lack of power-robbing creature features, motorcycles are a natural fit for battery-operated powerplants. Here are the seven best electric motorcycles of 2014.

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ADVERTISEMENT BY SUBARU



A WORLD RALLY BLUR
WITH THE 2015 SUBARU WRX, A RALLY CAR MATURES
Since it arrived onto North American shores in 2002 the Subaru WRX has been making the case for unadulterated fun, one four-wheel drift at a time. Vehicles and our expectations of them however, have changed a lot over the last 13 model years. No longer content to merely juke and jive with the best of them, we now demand our cars have styling, more toys than an only child and soft-touch everything. To keep these newly refined ralliers content in their cockpits, Subaru sent the WRX to finishing school. And, if you ask us, it graduated — with honors.

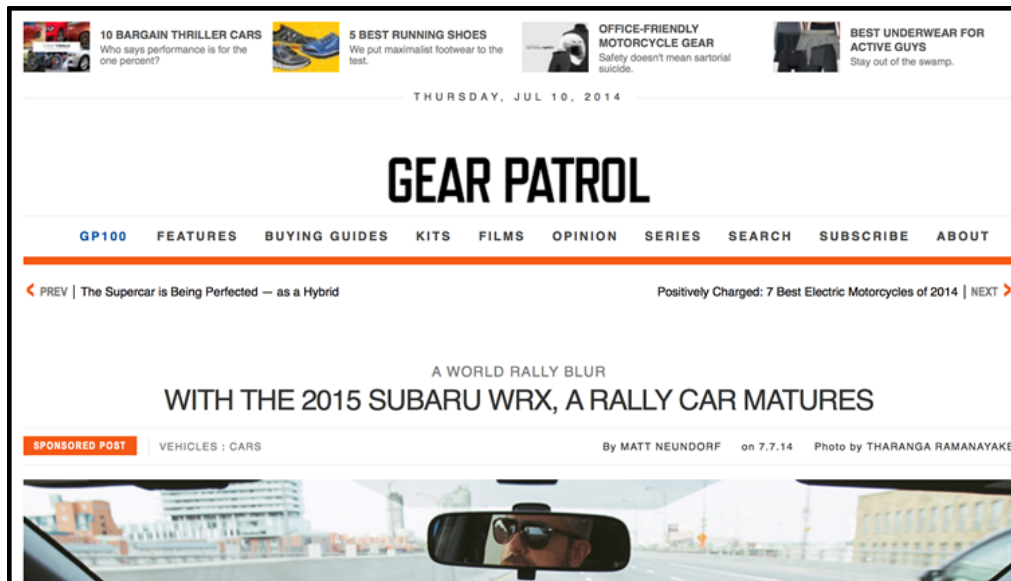
Like 92 Like 58

READ MORE

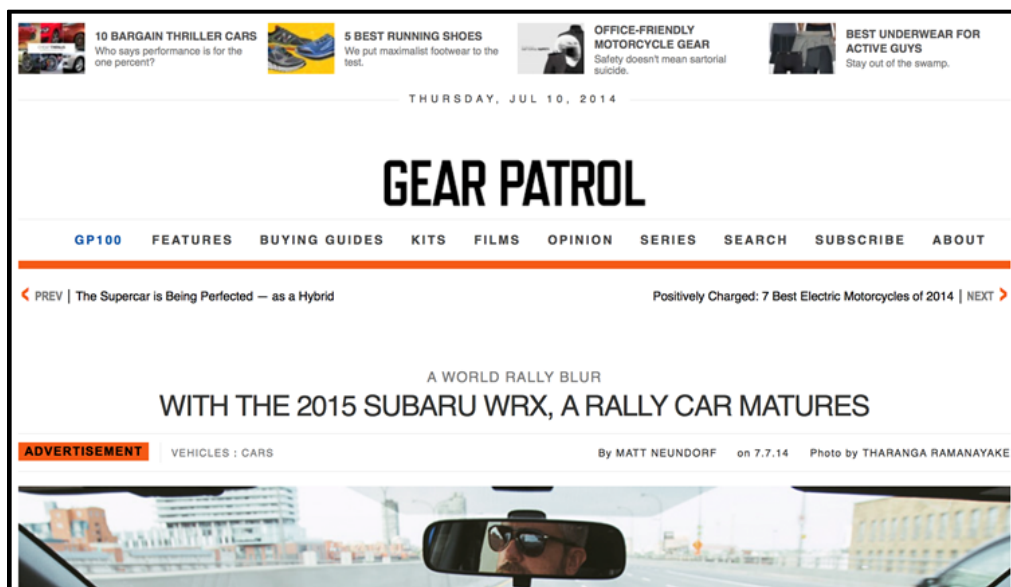
On the page displayed upon clicking the Subaru WRX ad or the “click-into page” in this scenario, we:

1. reworded the ad label from “Sponsored Post” to “Advertisement;”
2. enlarged the label’s font size; and
3. changed its text color from white to black.

Original



Modified Version

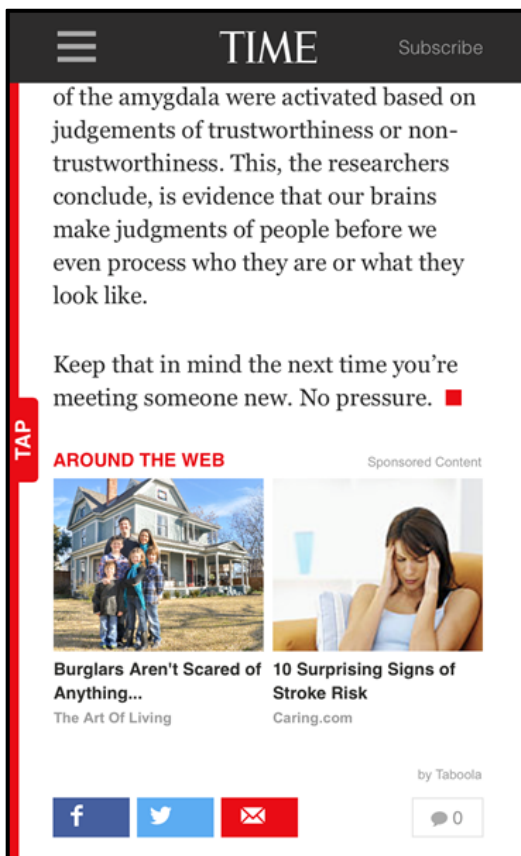


Time Mobile

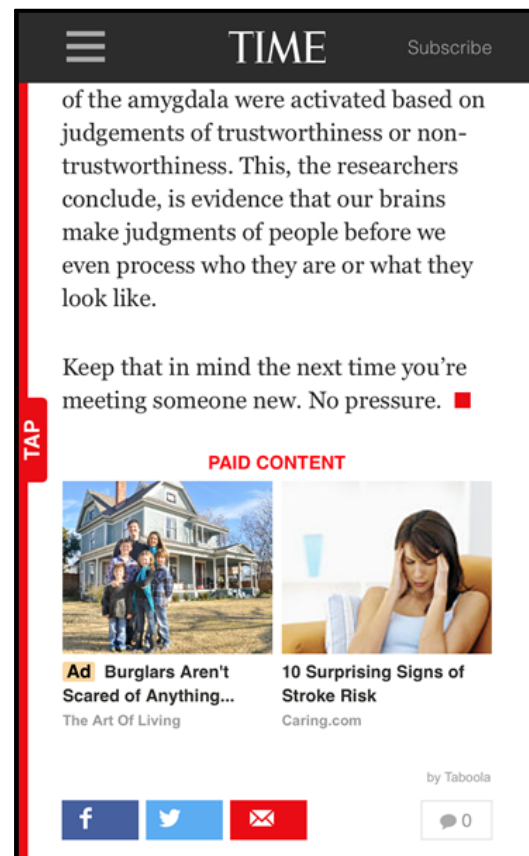
On the main page shown to participants in the Time Mobile scenario, we:

1. deleted the “Around the Web” labels above each of the content recommendation widgets inserted into the content stream;
2. reworded each “Sponsored Content” label to “Paid Content”;
3. centered this new “Paid Content” label above each content recommendation widget on the page; and
4. applied an “Ad” label to any item listed in the content recommendation widgets that was an ad.

Original



Modified Version



On the click-into page for the ADT ad in this scenario, we added the label “Advertisement” above the headline.

Original

THE ART OF LIVING BETTER

Last Updated on 2014-06-09

Like 0 Tweet 0 9

Did I Lock My Front Door? 5 Tricks To Stop Worrying About Your Home



We all know that draining feeling at the pit of your stomach. You forgot something, but you are not sure what it is. You're an hour from home, stuck in traffic, or sitting at your desk at work, unable to concentrate when

Modified Version

THE ART OF LIVING BETTER

Last Updated on 2014-06-09

Like 0 Tweet 0 9

ADVERTISEMENT

Did I Lock My Front Door? 5 Tricks To Stop Worrying About Your Home



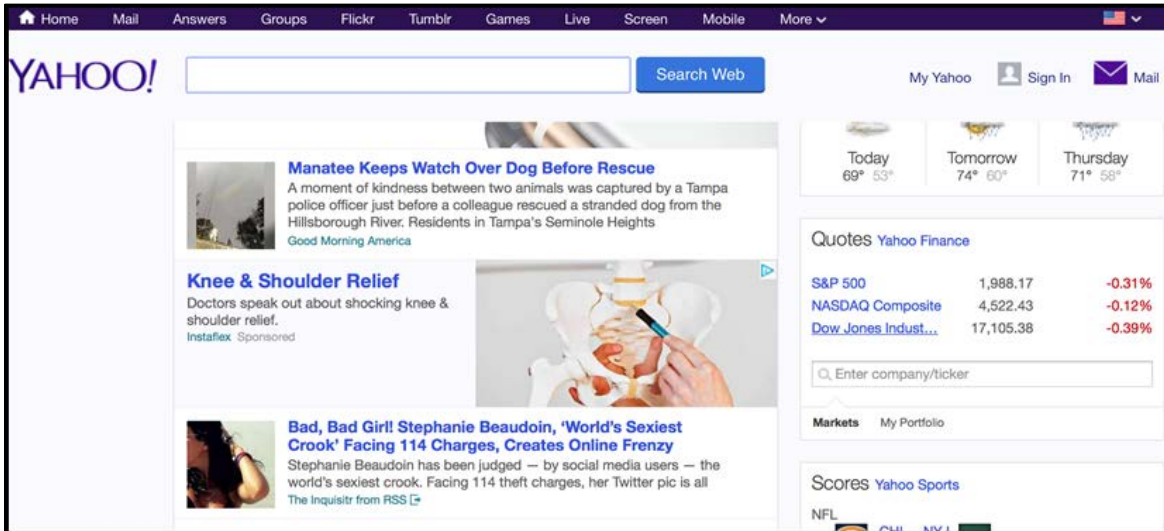
We all know that draining feeling at the pit of your stomach. You forgot something, but you are not sure what it is. You're an hour from home, stuck in traffic, or

Yahoo! Desktop

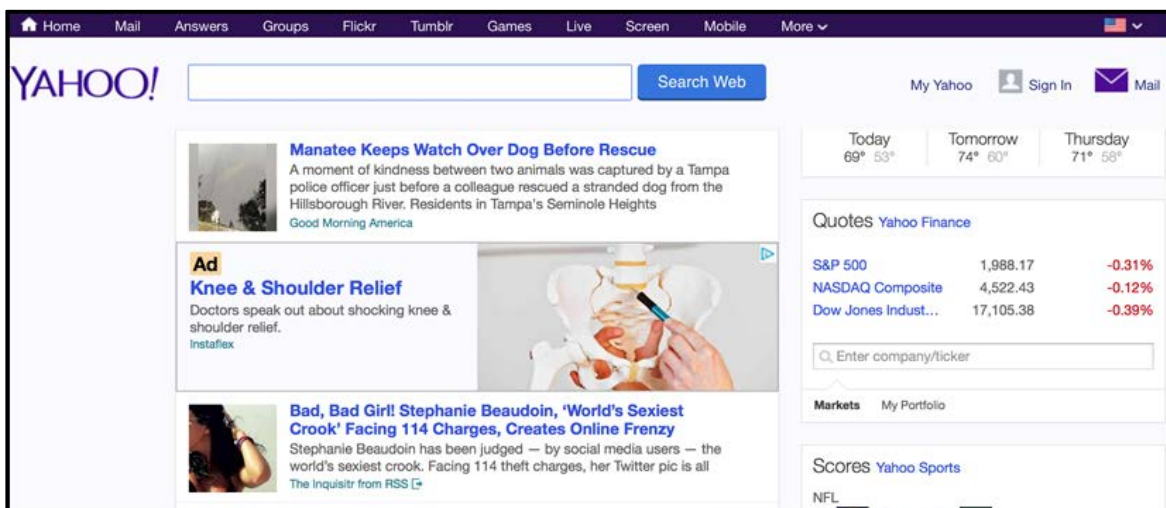
On the main page shown to participants in the Yahoo! Desktop scenario, we:

1. added a black border around each ad inserted into the content stream on the page;
2. reworded the ad label for each of these ads from “Sponsored” to “Ad”; and
3. relocated these new ad labels above the ads to which they relate, instead of below the ads.

Original



Modified Version



On the click-into page for the Instaflex ad in this scenario, we:

1. relocated the ad label “Advertisement by Instaflex” appearing in the banner area at the top-right of the web page to immediately above the ad’s headline; and
2. changed the coloring of this label from white text on a dark-gray background to black text on a white background.

Original



The original advertisement layout features a dark gray header bar. On the left is the "health" logo with a blue and yellow flame icon. On the right, it says "ADVERTISEMENT BY Instaflex" in white text. Below the header, the headline "Powerful Joint Discovery Revealed by Dr. David Katz on CBS 'The Doctors'" is centered. To the left of the text is a photo of three people in a lab setting with a digital display showing "6:00". Below the photo is the caption "ASU-NCRC HUMAN PERFORMANCE LAB, 2013". To the right of the photo is a paragraph of text: "New research into joint health compounds has finally paid off. On November 15th, Dr. David Katz presented results from a new Clinical study on CBS's 'The Doctors'. The Clinical study at the North Carolina Research campus shows that one joint compound in particular can deliver significant, effective joint relief." Below this is another paragraph: "In the double-blind University clinical study, Instaflex, a specialty joint supplement resoundingly beat the control group. Researchers at the North Carolina Research Campus concluded that Instaflex can deliver significant joint relief."

Modified Version



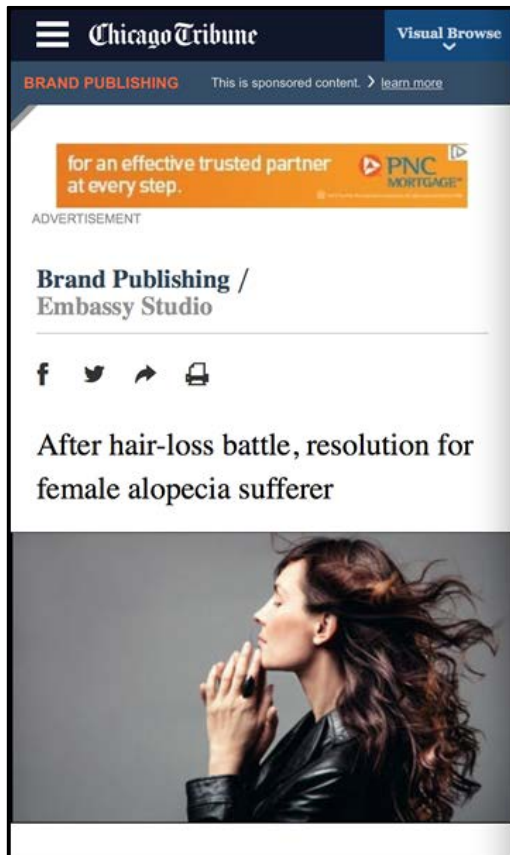
The modified advertisement layout features a dark gray header bar. On the left is the "health" logo with a blue and yellow flame icon. On the right, it says "ADVERTISEMENT BY Instaflex" in black text. Below the header, the headline "Powerful Joint Discovery Revealed by Dr. David Katz on CBS 'The Doctors'" is centered. To the left of the text is a photo of three people in a lab setting with a digital display showing "6:00". Below the photo is the caption "ASU-NCRC HUMAN PERFORMANCE LAB, 2013". To the right of the photo is a paragraph of text: "New research into joint health compounds has finally paid off. On November 15th, Dr. David Katz presented results from a new Clinical study on CBS's 'The Doctors'. The Clinical study at the North Carolina Research campus shows that one joint compound in particular can deliver significant, effective joint relief." Below this is another paragraph: "In the double-blind University clinical study, Instaflex, a specialty joint supplement resoundingly beat the control group. Researchers at the North Carolina Research Campus concluded that Instaflex can deliver significant joint relief."

Chicago Tribune Mobile

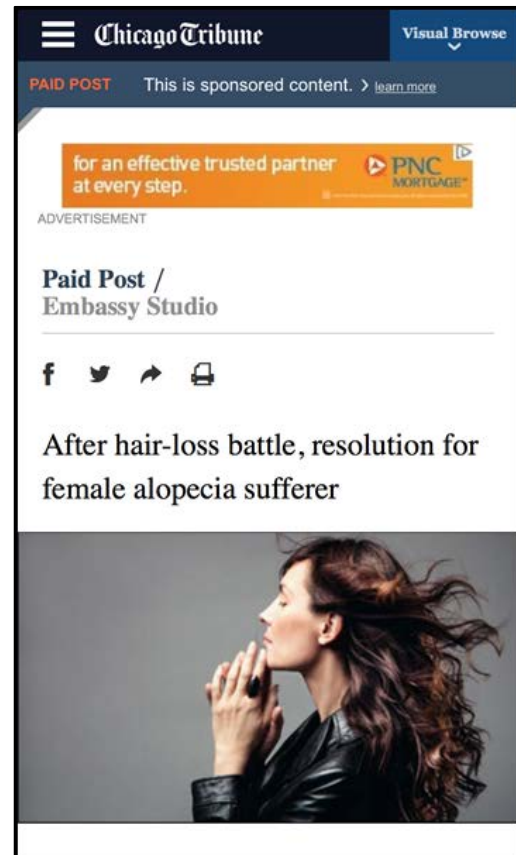
On the click-into page displayed after participants clicked a link for the Embassy Studio ad in an email in the Chicago Tribune Mobile scenario, we:

1. reworded the label “Brand Publishing” to “Paid Post”;
2. enlarged the font size of the “This is sponsored content” label; and
3. reworded the author credit at the end of the article from “Brand Publishing Writer” to “Writer for Embassy Studio.”

Original (Top of Page)



Modified Version (Top of Page)



Original (Bottom of Page)

The screenshot shows the bottom portion of a Chicago Tribune article. At the top, the Chicago Tribune logo and 'Visual Browse' button are visible. Below the header, a blue bar contains the text 'BRAND PUBLISHING' and 'This is sponsored content. > learn more'. The main text area contains a paragraph: 'the remaining areas.' followed by a quote: '“If someone was really discouraged by all the other methods, I would be happy to show her what it was like,” she says. “I can understand why women feel so bad, because I do, too.”' Below the quote is another paragraph: 'The number of NeoGraft procedures needed varies from person to person, but Smith is confident that she won't need a third procedure. Patients typically see improvement within six months, with full results within one year.' At the bottom of the text area is the byline: '—Lisa Schryver, Brand Publishing Writer'. Below the text is a promotional banner for a 'FREE eGuide to Endpoint Threat Detection, Response & Prevention' featuring the book cover for 'Endpoint Threat Detection, Response, and Prevention THE DUMMIES' by Mike Chapple. The banner includes a 'DOWNLOAD NOW' button.

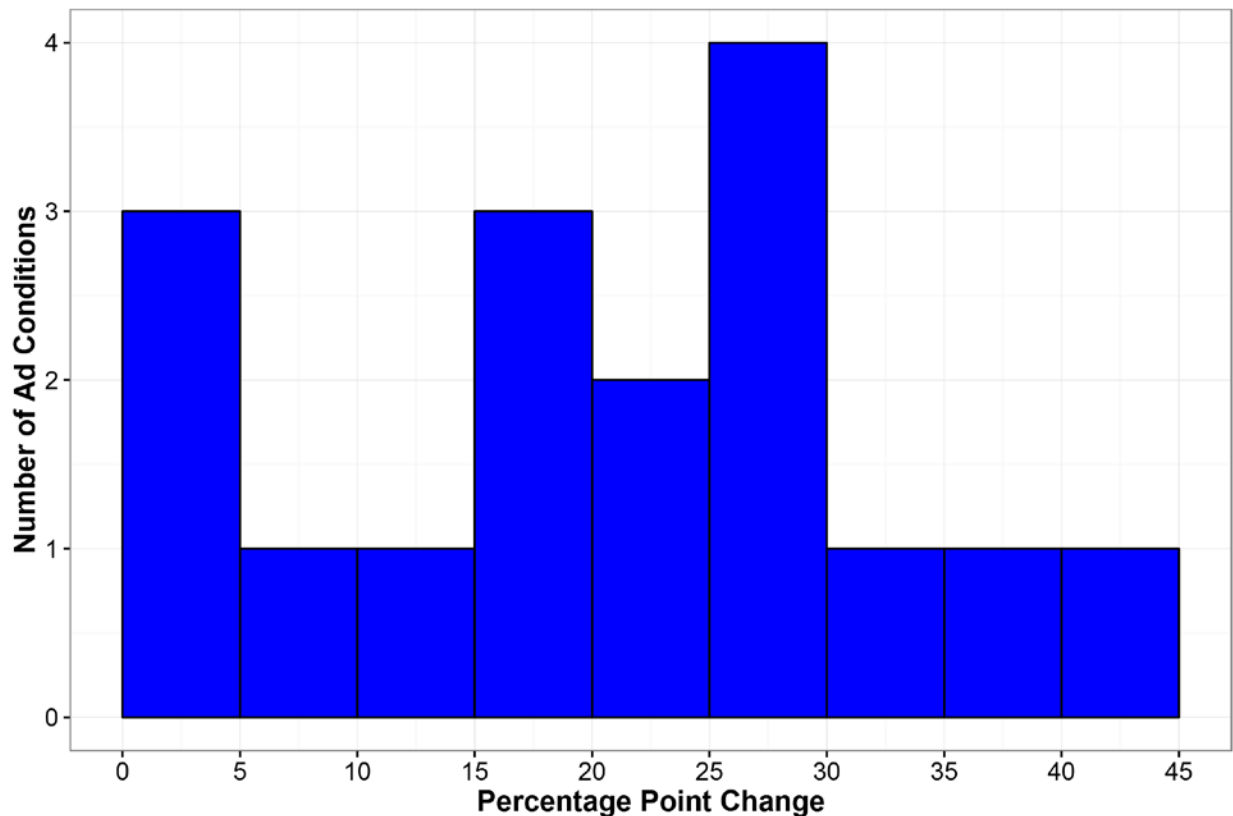
Modified (Bottom of Page)

The screenshot shows the bottom portion of a modified Chicago Tribune article. At the top, the Chicago Tribune logo and 'Visual Browse' button are visible. Below the header, a blue bar contains the text 'PAID POST' and 'This is sponsored content. > learn more'. The main text area contains a paragraph: 'the remaining areas.' followed by a quote: '“If someone was really discouraged by all the other methods, I would be happy to show her what it was like,” she says. “I can understand why women feel so bad, because I do, too.”' Below the quote is another paragraph: 'The number of NeoGraft procedures needed varies from person to person, but Smith is confident that she won't need a third procedure. Patients typically see improvement within six months, with full results within one year.' At the bottom of the text area is the byline: '— Lisa Schryver, Writer for Embassy Studio'. Below the text is a promotional banner for a 'FREE eGuide to Endpoint Threat Detection, Response & Prevention' featuring the book cover for 'Endpoint Threat Detection, Response, and Prevention THE DUMMIES' by Mike Chapple. The banner includes a 'DOWNLOAD NOW' button.

Qualitative Observations

Although we cannot determine the effect of any one particular disclosure modification on participants' recognition of advertising, we can make some qualitative observations about the potential effectiveness and noticeability of the disclosure techniques explored in the study. Overall, without testing for statistical significance or controlling for confounding factors, we found that, across the different ads we tested, the observed effects of the disclosure modifications were all in the positive direction. Based on an examination of coded judgments of ad recognition, for 13 of the 17 ad conditions tested, the modifications increased the likelihood that a participant recognized an ad as an ad in the range of 10 to 45 percentage points. (See Figure 1).

Figure 1: Distribution of Observed Increases in Ad Recognition



Each bar represents the number of ad conditions for which there was an increase of a given percentage-point magnitude in participants who recognized the ad as an ad. For example, in three ad conditions there was an increase of 15 to 20 percentage points and in four ad conditions an increase of 25 to 30 percentage points.

Because the study had only 48 participants, with only 24 viewing any given ad condition,¹⁵ we did not have enough statistical power to determine at the level of individual ad conditions whether the disclosure modifications had real effects on participants' recognition of advertising unless the observed differences were extremely large. Nevertheless, the following qualitative observations may be helpful to companies in weighing which disclosure techniques to use or to researchers in considering potential areas for future study.

Distinctive Background Shading and a Sufficiently Noticeable Ad Label

In both the Bing Desktop and Bing Mobile search conditions, the changes we made to the original Top ad disclosures consisted of enlarging the font size of the “Ads related to ...” labels and making the background shading darker. With the revised disclosures, most participants seemed to recognize the Top ads as ads, in both the desktop and the mobile versions. When the labels were less prominent and the shading lighter, recognition appeared lower.

Text Color That Sufficiently Contrasts with Background Color

In the Google Desktop Top ads condition, the primary modification was changing the ad label’s text color from white to black. With this modification, many more participants appeared to recognize these ads as ads. This may be due to the original label’s relative lack of contrast with the background on a desktop screen. In the Yahoo! Desktop condition, a native story was originally marked with a gray on white “Sponsored” label. A modified disclosure that increased the contrast of this ad label, together with other improvements, also seemed to produce a similar improvement in ad recognition, with most participants recognizing the native story as an ad.

Consistent Labeling for Ads on the Same Page

We replaced the “Sponsored” label for the Shop Box ads in both the Google Desktop and the Google Mobile conditions with the “Ad(s)” icon used to mark other ads on each of those pages. This may have contributed to increased ad recognition in both the Google Desktop and Mobile conditions, although it is unclear whether this improvement was attributable to the increased prominence of the labeling alone. Eye tracking data also revealed a change in where participants looked on the web pages with the modified disclosures; many participants spent less time on the Shop Box ads and more time on the Top ads and regular search results below those ads. A possible explanation for this change is that on the web pages with the modified disclosures, participants were quicker to realize that the Shop Box ads were ads.

Segregating Ads from Other Content

Among the various ads assessed in the search conditions, the Right-side ads had relatively high assessed ad recognition before the disclosures were modified. After we attempted to improve the disclosures, there was no change in Right-side ad recognition for the Google Desktop condition and very little for the Bing Desktop condition. A plausible explanation for this is that the Right-side ads, which are clearly segregated from the other search results, already tended to be more identifiable as ads so that disclosure modifications could not substantially improve ad recognition.

Ad Labels Located in the Top Right-Hand Corner of a Web Page or an Ad Grouping

In the study, we observed that disclosures located in the top right-hand corner of a web page or ad grouping were less likely to be noticed. On the original Google Desktop Shop Page, the disclosure “Merchant links are sponsored” appeared in the top right-hand corner of the page. Based on the eye tracking data, few participants who saw this page even registered fixations in the area of the disclosure. For the click-into page of the Yahoo! Desktop condition, we relocated the “Advertisement by Instaflex” label from the top-right of the web page to immediately above the ad’s headline. The eye tracking data showed that while most looked at the

relocated label, many did not look at the same label when it appeared in the top-right hand corner. In the Time Mobile main page condition, when the “Sponsored Content” label appeared in the upper right-hand corner of the content recommendation widget, many seemed not to recognize the ADT ad as an ad. When the label was moved over and centered above the ads, only a few did not recognize the ad as an ad. Although there were several other potential contributing factors for this improvement in ad recognition, *i.e.*, an increase in the size and contrast of the label and changing “Sponsored Content” to “Paid Content,” the eye tracking data suggests that participants were less likely to look at the label in the upper right-hand corner of the widget. On the original Time Mobile main page, while only a handful of participants fixated on the “Sponsored Content” label in the upper right-hand corner of the widget, most participants attended to the “Around the Web” label located in the upper left-hand corner.

Disclosures That Are Placed Close to an Ad’s Headline

Even though the modified disclosure “Advertisement by Subaru” on the main page appeared to improve ad recognition in the Gear Patrol condition, a sizeable proportion of participants still did not recognize the Subaru ad as an ad. The modified Gear Patrol disclosure may not have performed as well because participants failed to see the label “Advertisement by Subaru,” which appeared above an image of the featured car rather than above the story headline. Heat maps indicate that normal viewing patterns were to attend to the story headlines and story blurbs in the middle of the page, not the images on the left. The eye tracking data also shows that seven of the eight participants who were coded as not recognizing the Subaru native ad as an ad did not appear to look at the “Advertisement by Subaru” label. This suggests that participants tended to read the headlines when browsing through the content stream on the web page and that disclosures placed outside of this viewing pattern were less likely to be noticed.

When ad disclosures were located below the story headlines and blurbs, ad recognition also seemed lower among participants. Two of the conditions tested – Gear Patrol and Yahoo! – involved native ads in a content stream. The labels of these native ads appeared below the story headlines and story blurbs. In the Gear Patrol main page condition, when the disclosure “Advertisement by Subaru” was placed in the top left corner of the ad (and the ad’s background was changed to tan), more participants seemed to recognize the Subaru ad as an ad. As discussed above, ad recognition likely would have been greater had the disclosure been placed closer to the ad’s story headline rather than on the left above the picture of a Subaru. In the Yahoo! Desktop condition’s main page, even though initial ad recognition was relatively high, when the word “Sponsored” was relocated to above the story headline from below the story blurb, together with some other changes, ad recognition increased, with only a few participants not recognizing the native story with the modified disclosure as an ad. That so many people initially recognized the nature of the Yahoo! native ad may in part be a function of the subject and content of the ad.

Clarity of Disclosure Meaning

In the Chicago Tribune condition we changed the disclosure label “Brand Publishing” to “Paid Post.” This was the only condition for which the modified disclosure was not a variation of “Ad” or “Advertisement.” With the modified disclosure, ad recognition appeared to improve somewhat but was still relatively low. Based upon the eye tracking data, of those participants who did not recognize the Chicago Tribune article as an ad, most appeared to have looked at the modified ad label even if they failed to process it. A plausible explanation for this low ad recognition could be that the meaning of the “Paid Post” label was not sufficiently clear in meaning to overcome a strong overall impression that the Chicago Tribune, whose brand seemed to have strong recognition among participants, rather than an advertiser was the source of the content.

Strong Net Impression in Some Native Ad Contexts

The Gear Patrol and Chicago Tribune conditions appeared to have fewer indicia separate and apart from the disclosure that they were advertisements. For both these native ads, assessed ad recognition was low to begin with, and seemed to improve very little with the improved disclosures. By contrast, once participants began reading the unmodified click-into page in the Time Mobile condition, which was no longer on the Time site, a substantial majority recognized the ADT ad as an ad even though it did not have any disclosure. In addition, initial ad recognition in the Yahoo! condition's main page was relatively high and even greater with the improved disclosure. One plausible explanation for this is that stronger and clearer disclosures may be necessary when native ads more strongly resemble native content or appear in publications with a strong journalistic brand.

Same Disclosure Techniques on a Desktop and Mobile Device

We made identical changes to the Google Desktop and Mobile conditions with respect to the Top ads. We changed the text and background color of the "Ads" icons from white-on-yellow to black-on-orange. While this appeared to increase ad recognition for the Google Desktop condition, improving the contrast of the "ad" label for the original Google Mobile condition seemed to have little effect on ad recognition. Indeed, ad recognition for Top Ads in the original Google Mobile scenario was relatively high as compared to the Desktop scenario. It may be that the contrast was already easier to recognize on a mobile device so increased contrast in this scenario did not help with ad recognition.

The Aggregate Effects of Improved Disclosures on Assessed Ad Recognition

Although we could not systematically examine the effects of the disclosure modification on ad recognition for each separate ad condition, we have the necessary statistical power to estimate the combined effects of the disclosure modifications across all the different ads tested. We used a regression analysis to detect changes in the coded judgments of whether participants recognized an ad as an ad or if it was unclear to the coder. (See Sections I, II and III of Appendix F for a description of the regression analysis used to estimate the effects of the disclosure modifications on ad recognition.) This regression analysis controls for various complicating factors that could possibly influence the likelihood of a participant recognizing an ad as an ad, including the fact that some ads are more recognizable as ads than other ads, the tendency of an individual participant to correctly recognize an ad or to presume that all content is advertising, or the order in which a participant saw the ads.

Applying this analysis, the aggregated effects of the disclosure modifications across the different ads we tested are substantial and statistically significant. Indeed, the disclosure modifications increased the likelihood that a participant would recognize an ad as an ad by 21 percentage points (from an average ad recognition of approximately 47% to an average ad recognition of approximately 68%). These effects are substantially similar across the subgroups of search ads and native ads, as well as between ads viewed on a desktop computer and a smartphone. (See Figure 2.)

Figure 2: Estimated Effects of Disclosure Modifications on Ad Recognition

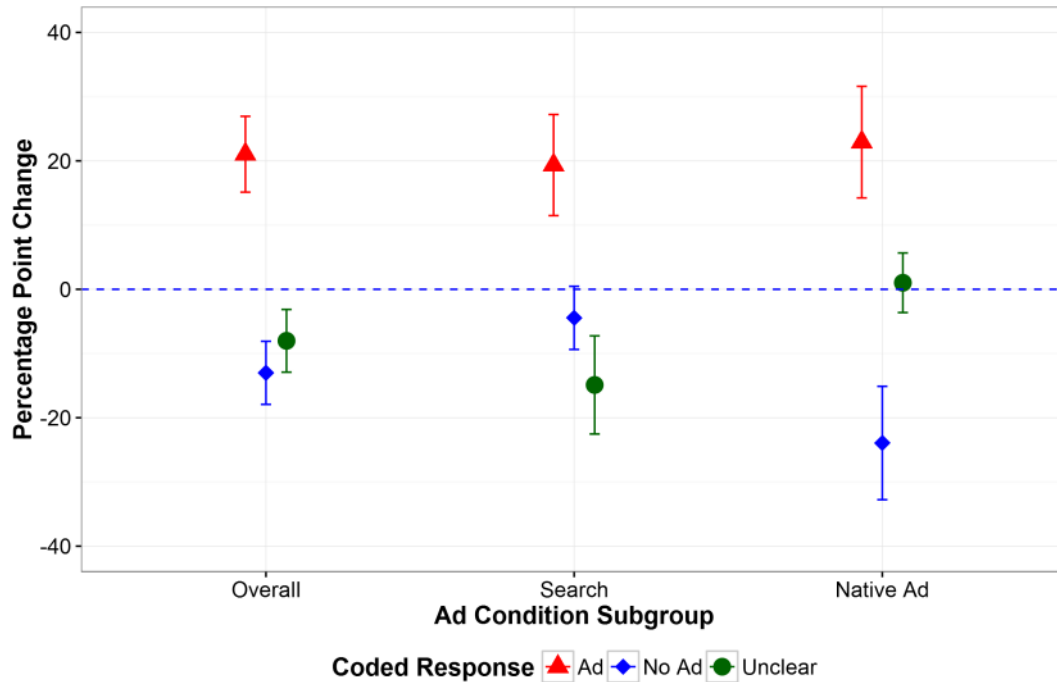


Figure 2 depicts the 95% confidence intervals for the estimated effects of the disclosure modifications on ad recognition based on the statistical model, both for all ad conditions and for the search and native ad conditions separately. The red triangle, blue diamond, and green circle respectively depict the effect on the probability that: (1) an ad was recognized as an ad; (2) an ad was not recognized as an ad; and (3) it was unclear to the coder.

We also note that, while improved recognition of the native ads with the modified disclosures derives entirely from a corresponding decrease in participants not recognizing them as ads, approximately 75% of the improved recognition of search ads comes from a corresponding decrease in ads scored as unclear to the coder. (See Figure 3)

Figure 3: Fraction of Ads Coded as Recognized as an Ad, Not Recognized as an Ad, and Unclear

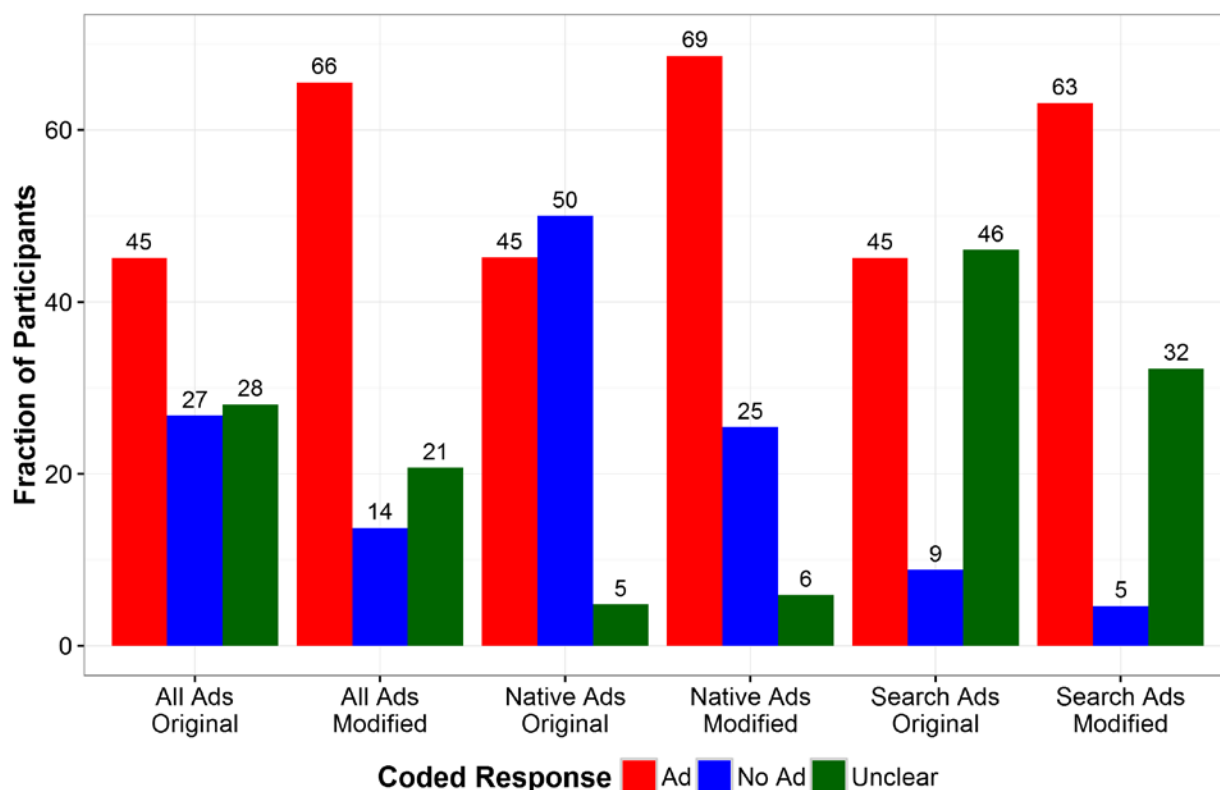


Figure 3 depicts the percentages of ads that were coded as: (1) recognized as an ad; (2) not recognized as an ad; and (3) unclear to the coder, both for all ad conditions and for search and native ad conditions separately.

Ads coded as unclear could include some instances when a participant had correctly recognized an ad as an ad but the coder did not have enough information to make a judgment. Thus, with regard to search ads, it is less certain that the increased rate of ad recognition with the improved disclosures was due primarily to more participants recognizing ads that they otherwise would not have recognized as such, as opposed to the coder having less difficulty assessing participants' recognition.

The Relationship Between Improved Ad Recognition and Time Spent Looking at the Ads

We analyzed eye tracking data collected during the study to test whether participants spent less time attending to ads with improved disclosures. (See Section IV of Appendix F for a description of the regression analysis used to analyze the eye tracking data.) In this analysis, we used eye tracking data for a subset of the ad conditions: only those ads that appeared among non-advertising content on a web page.¹⁶ We applied a regression model to estimate the effect of the disclosure modifications across the ad conditions, measuring the effect as a percent change between the unmodified and modified ads. We found that the disclosure modifications significantly reduced the amount of time that participants spent looking at the ads by 21%. While the observed effects were larger for native ads than for search ads (26% reduction versus 21%), observed effects were statistically different from zero only across the search ads, for which we had more statistical power to detect differences.¹⁷

We further analyzed the eye tracking data by controlling for ad recognition in the regression analysis to evaluate whether the observed decrease in the amount of time participants fixated on the ads was due to a larger proportion of them recognizing the ads as ads. We found that, although participants looked substantially less at ads with the modified disclosures, this behavioral effect did not correlate with their recognition of the ads as ads. When controlling for the possible influence of ad recognition on the amount of time participants spent looking at the ads, we discovered that this behavioral effect did not become smaller but instead was slightly larger. Thus, improved ad recognition cannot be driving the reduction in time participants fixated on the ads with the modified disclosures. This supports the importance of testing consumers' actual understanding of whether an ad is an ad and not assuming that behavioral measures such as visual attention are necessarily valid proxies for consumer understanding. (See Figure 4).

Figure 4: Estimated Effects on Average Amount of Time Spent Looking at Ads With and Without Controlling for Improved Ad Recognition

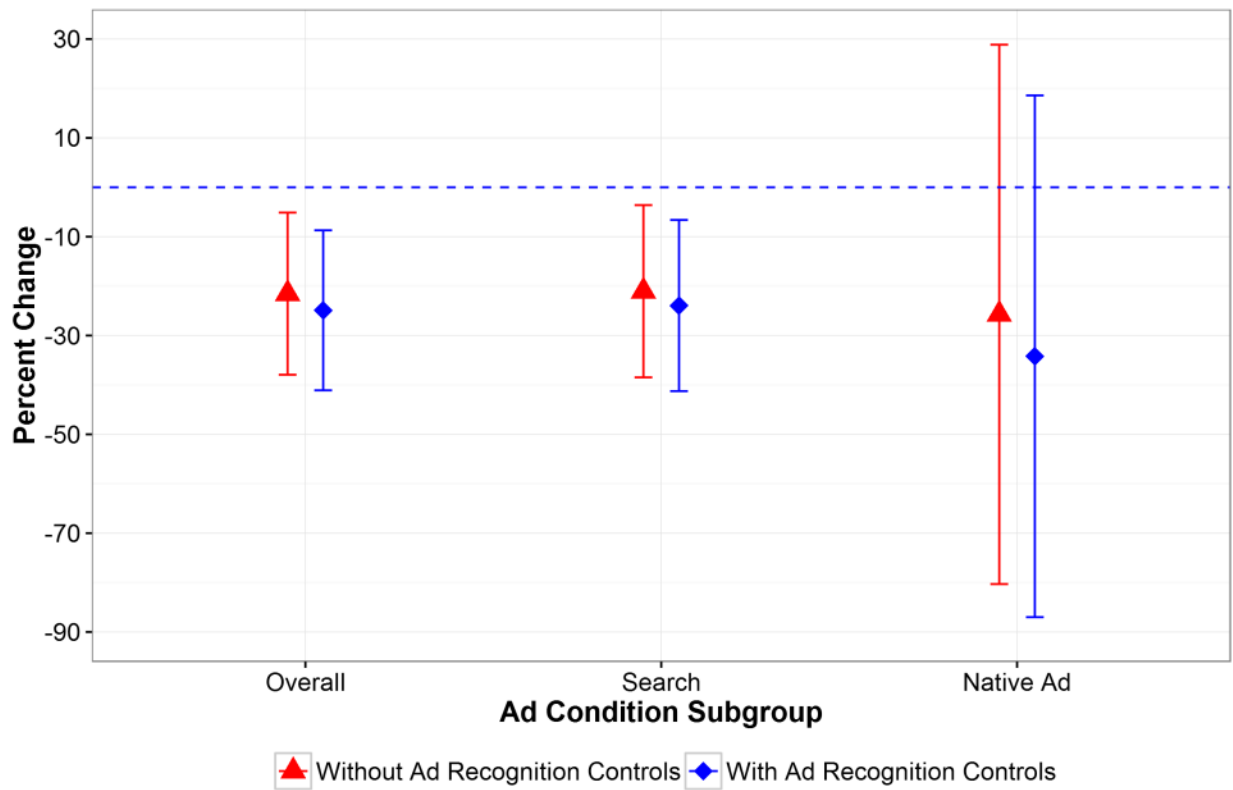


Figure 4 depicts the 95% confidence intervals for the estimated effects of the disclosure modifications on time spent looking at ads with and without controlling for ad recognition, for all ad conditions and separately for the search and native ad conditions. The red triangles depict the results not controlling for ad recognition, while the blue diamond depicts the results controlling for ad recognition.

Methodology Limitations and Areas for Future Research

The study was designed to be exploratory in nature and thus has a number of limitations. It does not isolate the effects of any one modification or combination of modifications on participants' recognition of the ads as ads. It may be that some of the changes made to the ad disclosures had an outsized influence while others had little or no influence on whether participants recognized an ad as an ad. Future research would be necessary to isolate the effects of various factors such as disclosure location, language, text color and size, and the prominence of background shading or borders on consumers' recognition of an ad.

The study also necessarily depends on subjective judgments of whether or not a participant recognized an ad given we did not explicitly ask that question to participants except with regard to the final ad tested. Observed differences in ad recognition could be due to more participants recognizing an ad with the improved disclosures as an ad or to more participants voicing this belief or giving other clear indicia easily interpreted as ad recognition. Another complicating factor in the search engine context is that some participants revealed during the study that they consider any search result that promotes a company or its products to be an “ad,” regardless of whether the result was paid for or returned organically in response to a query. Thus, accurately judging whether participants correctly distinguish paid search ads from regular search results can be more difficult without the benefit of direct questions.

In this study we also did not test participants’ understanding of non-advertising content or traditional ads on the web pages. In future research this information could be useful in accounting for the possibility that some consumers may have a tendency to interpret all content as commercial in nature.

It also is important to note that with the exception of just one condition, participants viewed the click-into pages with modified disclosures after we had exposed them to an improved disclosure on the preceding web page. This aspect of the study design makes it more challenging, if not impossible, for us to assess accurately the effect of the modified disclosures on participants’ understanding of these click-into pages. To overcome this limitation, we would need to test the click-into pages in isolation without a preceding web page or test the click-into pages without an improved disclosure on the preceding page.

Conclusion

Ads should be identifiable as advertising. Using some of the common sense disclosure techniques recommended in FTC staff guidance, as discussed above, can greatly increase the likelihood that consumers will recognize an ad as an ad. Minor modifications, including changes to disclosure language, position, text size and color, and to other visual cues such as the borders around or background shadings of ads or ad groupings, can in combination substantially increase the likelihood that a consumer recognizes an ad as an ad and reduce the potential for consumers to be misled as to the commercial nature of paid search and native ads.

Endnotes

¹ The primary authors of this FTC staff report are Laura M. Sullivan and Michael F. Ostheimer, senior staff attorneys in the FTC's Division of Advertising Practices. In designing and conducting the study, the FTC staff consulted Jeff Johnson, the President and Principal Consultant of the usability firm UI Wizards and Assistant Professor in the Department of Computer Science at the University of San Francisco; Manoj Hastak, Professor of Marketing in the Kogod School of Business at American University; and Bernard J. Jansen, Professor in the Department of Computer Science at the Pennsylvania State University. UserWorks, a user experience firm in the Washington, D.C. area, administered the study, including collecting and processing eye tracking data. Devesh R. Raval, an economist in the FTC's Bureau of Economics, provided valuable assistance by conducting regression analyses of the study results. Caitlyn Brady, an FTC paralegal, provided substantial assistance with the study's implementation and data validation. Teresa J. Peeler and Christopher Hundycz of the FTC's Division of Consumer and Business Education also assisted with creating the stimuli tested.

² *FTC Enforcement Policy Statement on Deceptively Formatted Advertisements*, 81 Fed. Reg. 22596 (Apr. 18, 2016).

³ Press Release, Federal Trade Commission, FTC Consumer Protection Staff Updates Agency's Guidance to Search Engine Industry on the Need to Distinguish Between Advertisements and Search Results (June 25, 2013), available at www.ftc.gov/news-events/press-releases/2013/06/ftc-consumer-protection-staff-updates-agencys-guidance-search; see also Exemplar letter from Mary K. Engle, Associate Director, Division of Advertising Practices, Federal Trade Commission to General Purpose Search Engines (June 24, 2013), available at www.ftc.gov/sites/default/files/attachments/press-releases/ftc-consumer-protection-staff-updates-agencys-guidance-search-engine-industry-on-need-distinguish/130625searchenginegeneralletter.pdf.

⁴ Native Advertising: A Guide for Businesses (business guide document offering guidance on when disclosures can prevent consumer deception and how to make effective disclosures in the context of native advertising), available at <https://www.ftc.gov/tips-advice/business-center/guidance/native-advertising-guide-businesses>.

⁵ .com Disclosures: How to Make Effective Disclosures in Digital Advertising (2013), available at <https://www.ftc.gov/tips-advice/business-center/guidance/com-disclosures-how-make-effective-disclosures-digital>.

⁶ See, e.g., Bartosz W. Wojdyski, *The Deceptiveness of Sponsored News Articles: How Readers Recognize and Perceive Native Advertising* (2017) (online survey tests the effects disclosure position, language, and other characteristics on respondents' recognition of a news article as advertising), available at <http://journals.sagepub.com/doi/abs/10.1177/0002764216660140>; David A. Hyman, David Franklyn, Calla Lee & Mohammed Rahmati, *Going Native: Can Consumers Recognize Native Advertising? Does it Matter?* (2016) (online survey tests respondents' recognition of different images as ads, including original native ads, a modified native ad, traditional ads, regular editorial content, and video commercials), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2816655; Chris Jay Hoofnagle & Eduard Meleshensky, *Native Advertising and Endorsement Schema, Source-Based Misleadingness and Omission of Material Facts*, *Technology Sciences* (2015) (online survey tests respondents' understanding of a sponsored blog post, including the source of the post); see also Bartosz W. Wojdyski & Nathaniel J. Evans, *Going Native: Effects of Disclosure Position and Language on the Recognition and Evaluation of Online Native Advertising*, 45 *J. Advertising* 157 (2016) (study consisting of an online survey and a smaller eye tracking experiment tests effects of disclosure language and position on participants' recognition of a native ad as an ad and on their likelihood of looking at the disclosure).

⁷ See, e.g., Navdeep S. Sahni & Harikesh S. Nair, Native Advertising, Sponsorship Disclosure and Consumer Deception: Evidence from Mobile Search-Ad Experiments (2017) (study measures changes in clicking and purchasing behavior between participants who use one of three versions of a restaurant search site with different ad disclosures of varying saliency), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2737035&download=yes.

⁸ In scoring participants' recognition of the last ad presented to them, coders also considered participants' answers when asked if they saw any ads on the web pages.

⁹ This ever-evolving landscape is evident in a recent review of publisher sites by the company MediaRadar, which reported that the percentage of publisher sites that were not clearly labeling native ads dropped to 37% from 70% as found in a survey conducted the previous year. Third of Publishers Still Falling Foul of FTC Native Ad Guidelines, Mar. 6, 2017, *available at* <https://resources.mediaradar.com/newsroom/third-of-publishers-still-falling-foul-of-ftc-native-ad-guidelines>. Search engine sites also have undergone significant changes. See, e.g., Ginny Marvin, UPDATED: A visual history of Google ad labeling in search results, Mar. 3, 2017, *available at* <http://searchengineland.com/search-ad-labeling-history-google-bing-254332>.

¹⁰ Participants were not aware of either the FTC's role in the study or the study's purpose, and were paid \$125 for their time.

¹¹ Between June 2, 2014 and September 4, 2014, we captured and preserved the HTML code of the actual web pages tested in the lab. To create modified versions of the preserved web pages, we revised relevant parts of the HTML and CSS code in copies of these preserved web pages. The pages rendered during a session in the same way as if a participant were normally browsing the Internet.

¹² Coder agreement between the expert consultant and the FTC paralegal staff was 79.2%. We did not, however, resolve differences by the usual method of discussion between the coders. Instead, we used the expert consultant's coding for the analyses discussed in this report. Based on independent testing, we found very little substantive differences in the results whether we used the expert consultant or FTC paralegal staff's coded judgments. (See Section III of Appendix F for a description of the regression analysis that we applied to compare results between using the expert consultant and the FTC paralegal staff's coding.)

¹³ Heat maps are color-coded visualizations of the frequency with which all of the participants seeing a condition fixated on different areas of a page.

¹⁴ Gaze plots depict where and in what order a particular participant fixated on a page and the duration of each fixation.

¹⁵ Only 12 participants, an even smaller number, saw four of the ad conditions tested in the study. With regard to two search scenarios – Google Desktop and Google Mobile – participants viewed the click-into page in the first scenario presented to them during a session.

¹⁶ We expected only to observe differences in the amount of time participants looked at the ads with the modified disclosures when the ads appeared among non-advertising content on a web page, such as, for example, in a content stream or within unpaid search results. Therefore, we excluded eye tracking data for those ads appearing on a click-into page from the analysis.

¹⁷ Of the 22 ad conditions included in the eye tracking analysis, only six were native ads.

Appendix A: Screening Procedure

We used a series of screening questions to ensure that participants had experience with search engines and the Internet (*See Attachments 1 and 2 for screening protocols*).¹ To participate in the study, participants had to: (1) be age 18 or older; (2) be fluent in English; (3) use both a desktop computer and smartphone at least once per week; (4) use search engines to look for information about products and services; and (5) browse websites to look for information about products and services. We excluded participants if they or anyone in their household worked for a marketing research firm, magazine or newspaper, or search engine or worked for a company or store that makes or sells: (1) home security products; (2) hair care products; (3) drugs or dietary supplements; (4) advertising; (5) computers; or (6) smartphones. We also excluded participants if they had participated in a research study or focus group in the past six months or advertised on their own blog or website. Finally, to ensure that the eye tracking equipment would work correctly, participants were excluded if they: (1) had certain eye-conditions; (2) wore bifocals, trifocals, or progressive lenses; or (3) wore contact lenses and reading glasses simultaneously when using a computer or smartphone.²

The screening process established age, gender, ethnicity, and frequency of Internet use to ensure reasonable diversity in the participant sample. Of the 48 participants included in the study, 26 were female and 22 were male. Five participants were between 18 and 24 years old; nine were between 25 and 34 years old; eight were between 35 and 44 years old; 10 were between 45 and 54 years old; 12 were between 55 and 64 years old; and four were at least 65 years old. Thirty participants reported their race as White; 13 as Black; two as Hispanic; two as Asian; and one as Native American/Pacific Islander. Participants were better educated than the United States population, with more than 62% having a college degree or higher.

¹ We recruited for the study on a rolling basis. The screener questionnaire included a series of questions to ensure that we had a mix of participants based on frequency of Internet and search engine use. Early in the recruitment process, we had to adjust our criteria for occasional usage because it was unreasonably difficult to find candidates who used the Internet less than once a day.

² Three participants were excluded from the study because of a failure to correctly calibrate the eye tracking equipment during their sessions. We also excluded another five participants after we subsequently discovered that they had viewed an incorrect web page due to a technical problem. In each case, new participants were recruited to replace the excluded participants.

Attachment 1 to Appendix A: (First) Screener Questionnaire

Appt. Date & Time: _____ @ _____

Directions Sent: _____ Recruiter: _____ Reminder Call: _____

Participant Name: _____ Male Female (*Recruit a mix*)

Daytime Phone # _____ Evening Phone # _____

Participant Screener for Federal Trade Commission Search & Sponsored Content Usability Test

Recruitment Objectives

Data Collection: November 17 through December 3, 2014
Participants: 48 web and smartphone users
Location: In-person at UserWorks' facilities in Silver Spring
Length: 90 minute sessions
Incentives: \$125

Recruitment Approach

UserWorks will recruit participants for in-person sessions from its Washington, DC area database of volunteers. The recruitment follows this procedure:

- People who are registered in the database will be sent a broadcast **email announcement**, which includes a general description of the project and a few preliminary screening questions (see **Preliminary Screening Questions** below).
- Interested candidates who think they may qualify will respond by email with answers to the preliminary screening questions.
- Based on these responses, our recruiter(s) will select a subset of candidate participants to call.
- These selected candidates will be administered a more detailed screening questionnaire (see **Screener Questions** below) by telephone. Qualified candidates will be invited to participate in the study and scheduled for a specific time slot.

Email announcement to our participant database will say:

Email Subject: Participants Needed for a Study about Search and Web Content

UserWorks, Inc., a user experience design and usability research firm, is recruiting participants for a study to evaluate the usability of search and web content.

The study will take about 90 minutes to complete and will be conducted in-person at UserWorks' facility in Silver Spring, MD between November 17th through December 3rd, 2014. You will be paid for your participation.

Who:

Web and smartphone users

What:

An in-person session lasting about 90 minutes

When:

Monday, November 17, 2014 through Wednesday, December 3rd, 2014

Where:

Silver Spring, MD

If you are interested, please click this link <https://www.surveymonkey.com/s/PSGZJXL> to answer a few preliminary questions. We will then contact selected candidates by phone to go through an additional set of questions to determine if you qualify.

After reviewing the responses from the participants, UserWorks' recruiter(s) will then call the selected candidates and say/ask the following:

- Hello, my name is _____, and I'm calling from UserWorks. You recently replied to our announcement about an upcoming usability study.
- We are doing a project to learn users' opinions about the usability of web search and online content. We are trying to find out if the information is easy to use and understand. If you are interested in participating, I would like to ask you a few questions to see if you qualify.
- If you qualify, you will be offered [\$125] for your participation in the study.
- The study will involve an interview session lasting about 90 minutes and will take place between Monday, November 17th through Wednesday, December 3rd, 2014 at our office in Silver Spring.
- May I ask you a few questions? This will take about 5 minutes. All of the information you provide here will be treated as confidential. It will not be shared with anyone other than the UserWorks people working on this project and our client. The information passed on to the client will be only in aggregate form and will not include anything that identifies you as an individual.

1. When is the last time you participated in a research study or focus group?

- Within the last 6 months *[Terminate]*
- More than 6 months ago or never

2. Have you or has anyone in your household ever worked for any of the following types of companies?

- Market research company
- Search engine company, e.g. Yahoo, MSN, AOL, or Google
- Magazine or newspaper, e.g. Time, Newsweek, New York Times, or Huffington Post
- Security products or services, e.g. home security systems, camera surveillance, window protection, or car alarms
- Hair care products company, such as color treatments, hair restoration, or laser hair removal
- Drug or dietary supplement company
- Advertising agency or advertising department of a company
- Car company, e.g. General Motors, Ford, Subaru, or Mercedes Benz
- Computer or mobile device manufacturer

[Terminate if yes to any of the above answers]

3a. Do you have a personal website, personal blog, or website/blog for your personal business?

- Yes
- No

If yes, continue to Q3b. Otherwise skip to Q4.

3b. Do you engage in advertising on your website/blog?

- Yes *[Terminate]*

No

One thing of interest in this study is participants' eye movements as they view online content. Thus we need to ask several questions about your vision.

4. Do you have any of the following eye conditions?

- Nystagmus (involuntary eye movements, sometimes called “dancing eyes”) [Terminate]
- Strabismus (sometimes called cross-eyed or wall eyed) [Terminate]

5. Do you wear any of the following corrective lenses when you use a computer or smartphone?

- Glasses
 - Bifocals [Terminate]
 - Trifocals [Terminate]
 - Progressive Lenses (where the magnification changes gradually from top to bottom of the lenses)[Terminate]
 - Reading glasses [probably OK, but check as the study progresses]
- Contact Lenses
 - Do you use reading glasses in addition to your contacts when working with a computer or smartphone?
 - Yes [Terminate]
 - No

6. Which of the following do you use to access the Internet, at least occasionally? (check all that apply)

Recruit only participants who use both desktop/laptop AND smartphone

- Desktop or Laptop computer
- Tablet computer [Terminate if only method to access Internet]
- Smartphone - Brand of smartphone: _____
- Other – Please describe: _____

7. Which of the following best describes how often you access the Web for purposes other than email, social media like Facebook, or online games? (Record one response)

- More than three times per day
- Three times per day
- Two times per day
- One time per day
- A few times per week
- About once per week
- Less than once per week [Terminate]

8. Which of the following activities, if any, do you do when you are online?

- Use search engines to look for information about products and services
- Browse websites to look for information about products and services
- Read news or other articles in online magazines, newspapers, newsfeeds, or social media
- Write a blog, read blogs, or comment on blogs
- Watch videos at a video site, (e.g., YouTube, Vimeo, Netflix)
- Play online games
- Read or post in social networking sites (e.g., Facebook, Meetup, Tumblr, Twitter)
- Read or send e-mail

Other

All participants must check the first 3 boxes, even if it was a few months ago, otherwise [Terminate].

9. Which search engine do you use most on the devices that you use to access the Internet on your [Desktop/Laptop, Tablet, Smartphone]? (*Record only one mention in each column*)

Desktop	Tablet	Smartphone	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AOL
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Google
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yahoo!
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other Which one? _____

10. How often do you use search engines like Google, Yahoo!, or Bing to look for information about products and services? This might include things like using a search engine to look up a restaurant or local shop, identify a store or website where you can buy a product, or to find information about a product itself. Please think about all your searches for products or services, even if you are not planning to make a purchase of that product or service based on that search. How often do you use search engines?

Frequent Users:

- More than once per day
- About once per day
- A few times per week

Occasional Users:

- About once per week
- Once every few weeks
- Monthly
- Once every few months
- Never [*Terminate*]

User Category Summary:

- Frequent Internet Users
 - Uses Web at least more than once per day
 - Performs several online activities
 - Uses search engine at least a few times per week
- Occasional Internet Users
 - Uses Web at least once per week, but no more than once per day
 - Performs a few online activities
 - Uses search engine at least once per week

11. Gender – record without asking:

- Male
- Female

12. What is your age?

Recruit a mix for each user category

- 18-24
- 25-34
- 35-44
- 45-54

- 55-64
- 65 or older

13. What is the highest level of education you have completed?
Recruit half college graduate or more for each user category

- Some high school
- High school graduate
- Some college
- College graduate
- Post-graduate

14. What is your race or ethnicity? Please select all that apply. If “Other,” please describe.
Recruit a mix for each user category

- Caucasian/White
- African-American/Black [*Recruit 1-2 in each user category*]
- Hispanic or Latino [*Recruit 1-2 in each user category*]
- Native American or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other
- Declined to state

15. The study session will be video recorded. Only the team working on this project will use the recording and your name will not be associated with it or other data in any way. You will be asked to sign an informed consent form. Would you be willing to be video recorded?

- Yes
- No [Terminate]

16. How would you like the directions to UserWorks sent to you?

- Email Address _____
- Fax Number _____
- Over Phone

You are the only person scheduled to participate at [*time & date of session*]. If you are not able to keep this appointment, please call me at 301.431.0500 [or 888.558.7872] as soon as possible.

During the session we will be using an eye tracking device to measure your eye position and movements while viewing the computer screen/smartphone. A camera will view a close-up of your eyes and determine from the reflected light the direction that you are looking. A computer will record an indication of where you are looking from moment to moment on an image of the screen that you are seeing. There is nothing distracting or intrusive about the process. Nothing touches your eye or skin. There is nothing harmful about the process. Women should not wear mascara or false eyelashes because these may interfere with the eye tracker measures.

If you wear glasses to use a computer and/or smartphone please bring those with you to the session.

Attachment 2 to Appendix A: (Second) Screener Questionnaire

Appt. Date & Time: _____ @ _____

Directions Sent: _____ Recruiter: _____ Reminder Call: _____

Participant Name: _____ Male Female (*Recruit a mix*)

Daytime Phone # _____ Evening Phone # _____

Participant Screener for Federal Trade Commission Search & Sponsored Content Usability Test

Recruitment Objectives

Data Collection: November 17 through December 12, 2014
Participants: **48 web and smartphone users**
Location: **In-person** at UserWorks' facilities in Silver Spring
Length: 90 minute sessions
Incentives: **\$125**

Recruitment Approach

UserWorks will recruit participants for in-person sessions from its Washington, DC area database of volunteers. The recruitment follows this procedure:

- People who are registered in the database will be sent a broadcast **email announcement**, which includes a general description of the project and a few preliminary screening questions (see **Preliminary Screening Questions** below).
- Interested candidates who think they may qualify will respond by email with answers to the preliminary screening questions.
- Based on these responses, our recruiter(s) will select a subset of candidate participants to call.
- These selected candidates will be administered a more detailed screening questionnaire (see **Screener Questions** below) by telephone. Qualified candidates will be invited to participate in the study and scheduled for a specific time slot.

Email announcement to our participant database will say:

Email Subject: Participants Needed for a Study about Search and Web Content

UserWorks, Inc., a user experience design and usability research firm, is recruiting participants for a study to evaluate the usability of search and web content.

The study will take about 90 minutes to complete and will be conducted in-person at UserWorks' facility in Silver Spring, MD between November 17th through December 3rd, 2014. You will be paid for your participation.

Who:

Web and smartphone users

What:

An in-person session lasting about 90 minutes

When:

Monday, November 17, 2014 through Wednesday, December 3rd, 2014

Where:

Silver Spring, MD

If you are interested, please click this link <https://www.surveymonkey.com/s/PSGZJXL>

to answer a few preliminary questions. We will then contact selected candidates by phone to go through an additional set of questions to determine if you qualify.

After reviewing the responses from the participants, UserWorks' recruiter(s) will then call the selected candidates and say/ask the following:

- Hello, my name is _____, and I'm calling from UserWorks. You recently replied to our announcement about an upcoming usability study.
- We are doing a project to learn users' opinions about the usability of web search and online content. We are trying to find out if the information is easy to use and understand. If you are interested in participating, I would like to ask you a few questions to see if you qualify.
- If you qualify, you will be offered [\$125] for your participation in the study.
- The study will involve an interview session lasting about 90 minutes and will take place between Monday, November 17th through Wednesday, December 12th, 2014 at our office in Silver Spring.
- May I ask you a few questions? This will take about 5 minutes. All of the information you provide here will be treated as confidential. It will not be shared with anyone other than the UserWorks people working on this project and our client. The information passed on to the client will be only in aggregate form and will not include anything that identifies you as an individual.

1. When is the last time you participated in a research study or focus group?

- Within the last 6 months [*Terminate*]
- More than 6 months ago or never

2. Have you or has anyone in your household ever worked for any of the following types of companies?

- Market research company
- Search engine company, e.g. Yahoo, MSN, AOL, or Google
- Magazine or newspaper, e.g. Time, Newsweek, New York Times, or Huffington Post
- Security products or services, e.g. home security systems, camera surveillance, window protection, or car alarms
- Hair care products company, such as color treatments, hair restoration, or laser hair removal
- Drug or dietary supplement company
- Advertising agency or advertising department of a company
- Car company, e.g. General Motors, Ford, Subaru, or Mercedes Benz
- Computer or mobile device manufacturer

[Terminate if yes to any of the above answers]

3a. Do you have a personal website, personal blog, or website/blog for your personal business?

- Yes
- No

If yes, continue to Q3b. Otherwise skip to Q4.

3b. Do you engage in advertising on your website/blog?

- Yes [*Terminate*]
- No

One thing of interest in this study is participants' eye movements as they view online content. Thus we need to ask several questions about your vision.

4. Do you have any of the following eye conditions?

- Nystagmus (involuntary eye movements, sometimes called “dancing eyes”) [Terminate]
- Strabismus (sometimes called cross-eyed or wall eyed) [Terminate]

5. Do you wear any of the following corrective lenses when you use a computer or smartphone?

- Glasses
 - Bifocals [Terminate]
 - Trifocals [Terminate]
 - Progressive Lenses (where the magnification changes gradually from top to bottom of the lenses)[Terminate]
 - Reading glasses [probably OK, but check as the study progresses]
- Contact Lenses
 - Do you use reading glasses in addition to your contacts when working with a computer or smartphone?
 - Yes [Terminate]
 - No

6. Which of the following do you use to access the Internet, at least occasionally? (check all that apply)

Recruit only participants who use both desktop/laptop AND smartphone

- Desktop or Laptop computer
- Tablet computer [Terminate if only method to access Internet]
- Smartphone - Brand of smartphone: _____
- Other – Please describe: _____

7. Which of the following best describes how often on average you access the Web for purposes other than email, social media like Facebook, or online games? (Record one response)

Frequent users:

- More than three times per day
- Three times per day
- Two times per day

Occasional users:

- One time per day
- A few times per week
- About once per week
- Less than once per week [Terminate]

8. Which of the following activities, if any, do you do with some regularity when you are online?

- Use search engines to look for information about products and services
- Browse websites to look for information about products and services
- Read news or other articles in online magazines, newspapers, newsfeeds, or social media
- Purchase items online
- Use online banking or other financial services
- Write a blog, read blogs, or comment on blogs
- Watch videos at a video site, (e.g., YouTube, Vimeo, Netflix)

- Play online games
- Read or post in social networking sites (*e.g., Facebook, Meetup, Tumblr, Twitter*)
- Read or send e-mail
- Other

All participants must check the first 2 boxes, even if it was a few months ago, otherwise [Terminate].

9. Which search engine do you use most on the devices that you use to access the Internet on your [Desktop/Laptop, Tablet, Smartphone]? (*Record only one mention in each column*)

Desktop	Tablet	Smartphone	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AOL
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Bing
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Google
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Yahoo!
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other Which one?_____

10. How often do you use search engines like Google, Yahoo!, or Bing to look for information about products and services? This might include things like using a search engine to look up a restaurant or local shop, identify a store or website where you can buy a product, or to find information about a product itself. Please think about all your searches for products or services, even if you are not planning to make a purchase of that product or service based on that search. How often on average do you use search engines?

Frequent Users:

- More than once per day
- About once per day
- A few times per week

Occasional Users:

- About once per week
- Once every few weeks
- Monthly
- Once every few months
- Never [*Terminate*]

User Category Summary:

- Frequent Internet Users are those who meet ALL of the following criteria:
 - Uses Web more than once per day on average
 - Performs more than two of the first five online activities listed above
 - Uses search engines at least a few times per week
- Occasional Internet Users are those who fail to meet one or more of the above Frequent User criteria but who otherwise qualify for the study

11. Gender – record without asking:

- Male
- Female

12. What is your age?

Recruit a mix for each user category (i.e., for Frequent and Occasional Users)

- 18-24
- 25-34

- 35-44
- 45-54
- 55-64
- 65 or older

13. What is the highest level of education you have completed?

Recruit half college graduate or more for each user category

- Some high school
- High school graduate
- Some college
- College graduate
- Post-graduate

14. What is your race or ethnicity? Please select all that apply. If “Other,” please describe.

Recruit a mix for each user category

- Caucasian/White
- African-American/Black [**Recruit at least 1-2 in each user category**]
- Hispanic or Latino [**Recruit at least 1-2 in each user category**]
- Native American or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other
- Declined to state

15. The study session will be video recorded. Only the team working on this project will use the recording and your name will not be associated with it or other data in any way. You will be asked to sign an informed consent form. Would you be willing to be video recorded?

Appendix B: Experimental Design Table

Participants were randomly assigned to one of two groups: (1) “Group A,” who first viewed four mobile scenarios followed by four desktop scenarios; and (2) “Group B,” who first viewed four desktop scenarios followed by four mobile scenarios. We grouped the scenarios in this way rather than intermixing mobile and desktop scenarios because the eye tracking equipment had to be positioned and calibrated differently for a computer or smartphone screen.

Abbreviation Key for Study Scenarios

Scenario Name	Ad Type	Scenario Code
Google Desktop Original	Search	S-GDO
Google Desktop Modified	Search	S-GDM
Google Mobile Original	Search	S-GMO
Google Mobile Modified	Search	S-GMM
Bing Desktop Original	Search	S-BDO
Bing Desktop Modified	Search	S-BDM
Bing Mobile Original	Search	S-BMO
Bing Mobile Modified	Search	S-BMM
Gear Patrol Desktop Original	Native	N-GPDO
Gear Patrol Desktop Modified	Native	N-GPDM
Time Mobile Original	Native	N-TMO
Time Mobile Modified	Native	N-TMM
Yahoo Desktop Original	Native	N-YDO
Yahoo Desktop Modified	Native	N-YDM
Chicago Tribune Mobile Original	Native	N-CTMO
Chicago Tribune Mobile Modified	Native	N-CTMM

Experimental Design Table

Group A

Group A	Desktop Scenarios	Mobile Scenarios
A-1	S-GDO, S-BDM, N-GPDM, N-YDO	S-GMM, S-BMO, N-TMO, N-CTMM
A-2	S-GDO, S-BDM, N-YDO, N-GPDM	S-GMM, S-BMO, N-CTMM, N-TMO
A-3	S-GDO, N-GPDM, S-BDM, N-YDO	S-GMM, N-TMO, S-BMO, N-CTMM
A-4	S-GDO, N-GPDM, N-YDO, S-BDM	S-GMM, N-TMO, N-CTMM, S-BMO
A-5	S-GDO, N-YDO, S-BDM, N-GPDM	S-GMM, N-CTMM, S-BMO, N-TMO
A-6	S-GDO, N-YDO, N-GPDM, S-BDM	S-GMM, N-CTMM, N-TMO, S-BMO
A-7	S-BDM, S-GDO, N-YDO, N-GPDM	S-BMO, S-GMM, N-CTMM, N-TMO
A-8	S-BDM, S-GDO, N-GPDM, N-YDO	S-BMO, S-GMM, N-TMO, N-CTMM
A-9	S-BDM, N-GPDM, N-YDO, S-GDO	S-BMO, N-TMO, N-CTMM, S-GMM
A-10	S-BDM, N-GPDM, S-GDO, N-YDO	S-BMO, N-TMO, S-GMM, N-CTMM
A-11	S-BDM, N-YDO, N-GPDM, S-GDO	S-BMO, N-CTMM, N-TMO, S-GMM
A-12	S-BDM, N-YDO, S-GDO, N-GPDM	S-BMO, N-CTMM, S-GMM, N-TMO
Group A	Mobile Scenarios	Desktop Scenarios
A-13	N-TMO, S-GMM, S-BMO, N-CTMM	N-GPDM, S-GDO, S-BDM, N-YDO
A-14	N-TMO, S-GMM, N-CTMM, S-BMO	N-GPDM, S-GDO, N-YDO, S-BDM
A-15	N-TMO, S-BMO, S-GMM, N-CTMM	N-GPDM, S-BDM, S-GDO, N-YDO
A-16	N-TMO, S-BMO, N-CTMM, S-GMM	N-GPDM, S-BDM, N-YDO, S-GDO

A-17	N-TMO, N-CTMM, S-GMM, S-BMO	N-GPDM, N-YDO, S-GDO, S-BDM
A-18	N-TMO, N-CTMM, S-BMO, S-GMM	N-GPDM, N-YDO, S-BDM, S-GDO
A-19	N-CTMM, S-GMM, N-TMO, S-BMO	N-YDO, S-GDO, N-GPDM, S-BDM
A-20	N-CTMM, S-GMM, S-BMO, N-TMO	N-YDO, S-GDO, S-BDM, N-GPDM
A-21	N-CTMM, S-BMO, N-TMO, S-GMM	N-YDO, S-BDM, N-GPDM, S-GDO
A-22	N-CTMM, S-BMO, S-GMM, N-TMO	N-YDO, S-BDM, S-GDO, N-GPDM
A-23	N-CTMM, N-TMO, S-BMO, S-GMM	N-YDO, N-GPDM, S-BDM, S-GDO
A-24	N-CTMM, N-TMO, S-GMM, S-BMO	N-YDO, N-GPDM, S-GDO, S-BDM

Group B

Group B	Desktop Scenarios	Mobile Scenarios
B-1	S-GDM, S-BDO, N-GPDO, N-YDM	S-GMO, S-BMM, N-TMM, N-CTMO
B-2	S-GDM, S-BDO, N-YDM, N-GPDO	S-GMO, S-BMM, N-CTMO, N-TMM
B-3	S-GDM, N-GPDO, S-BDO, N-YDM	S-GMO, N-TMM, S-BMM, N-CTMO
B-4	S-GDM, N-GPDO, N-YDM, S-BDO	S-GMO, N-TMM, N-CTMO, S-BMM
B-5	S-GDM, N-YDM, S-BDO, N-GPDO	S-GMO, N-CTMO, S-BMM, N-TMM
B-6	S-GDM, N-YDM, N-GPDO, S-BDO	S-GMO, N-CTMO, N-TMM, S-BMM
B-7	S-BDO, S-GDM, N-YDM, N-GPDO	S-BMM, S-GMO, N-CTMO, N-TMM
B-8	S-BDO, S-GDM, N-GPDO, N-YDM	S-BMM, S-GMO, N-TMM, N-CTMO
B-9	S-BDO, N-GPDO, N-YDM, S-GDM	S-BMM, N-TMM, N-CTMO, S-GMO
B-10	S-BDO, N-GPDO, S-GDM, N-YDM	S-BMM, N-TMM, S-GMO, N-CTMO
B-11	S-BDO, N-YDM, N-GPDO, S-GDM	S-BMM, N-CTMO, N-TMM, S-GMO
B-12	S-BDO, N-YDM, S-GDM, N-GPDO	S-BMM, N-CTMO, S-GMO, N-TMM
Group B	Mobile Scenarios	Desktop Scenarios
B-13	N-TMM, S-GMO, S-BMM, N-CTMO	N-GPDO, S-GDM, S-BDO, N-YDM
B-14	N-TMM, S-GMO, N-CTMO, S-BMM	N-GPDO, S-GDM, N-YDM, S-BDO
B-15	N-TMM, S-BMM, S-GMO, N-CTMO	N-GPDO, S-BDO, S-GDM, N-YDM
B-16	N-TMM, S-BMM, N-CTMO, S-GMO	N-GPDO, S-BDO, N-YDM, S-GDM
B-17	N-TMM, N-CTMO, S-GMO, S-BMM	N-GPDO, N-YDM, S-GDM, S-BDO
B-18	N-TMM, N-CTMO, S-BMM, S-GMO	N-GPDO, N-YDM, S-BDO, S-GDM
B-19	N-CTMO, S-GMO, N-TMM, S-BMM	N-YDM, S-GDM, N-GPDO, S-BDO
B-20	N-CTMO, S-GMO, S-BMM, N-TMM	N-YDM, S-GDM, S-BDO, N-GPDO
B-21	N-CTMO, S-BMM, N-TMM, S-GMO	N-YDM, S-BDO, N-GPDO, S-GDM
B-22	N-CTMO, S-BMM, S-GMO, N-TMM	N-YDM, S-BDO, S-GDM, N-GPDO
B-23	N-CTMO, N-TMM, S-BMM, S-GMO	N-YDM, N-GPDO, S-BDO, S-GDM
B-24	N-CTMO, N-TMM, S-GMO, S-BMM	N-YDM, N-GPDO, S-GDM, S-BDO

Appendix C: Main Study Procedure

The duration of each participant session was approximately 90 minutes. Prior to presenting the first set of web pages, a moderator reviewed logistics with the participants, directed them to complete a pre-test interview form, and instructed them to think aloud when interacting with web pages. The moderator next calibrated the eye tracking equipment for the first four scenarios to be presented. At the mid-way point of each session, the moderator re-positioned and re-calibrated the equipment for the next four scenarios.

The study presented each set of web pages to participants in the context of a real-life scenario, for example, using a search engine to find information about a vitamin that your doctor recommended. (*See Attachment 1 for a copy of the main study questionnaire, including the real-life scenarios.*) Participants read each scenario aloud and then pressed a button to display the main page for the scenario. Participants looked at this page uninterrupted for several seconds, scrolling around as desired.³ During this time, the eye tracking equipment recorded participants' eye movements on the screen. Once participants paused or were about to click into another page, the moderator directed their attention back to the main page and began to ask probing questions. The moderator then directed participants' attention to specific items on the main page and asked for comments. Some of these items were the specific ads examined by the study, while other items were regular content that masked the study's purpose. The moderator also asked participants to click both ads of interest and decoy items. Their spontaneous comments and eye movements upon clicking into the new pages were recorded.⁴ Once participants paused, the moderator asked probing questions about these pages. If a scenario was the final one the moderator presented, he also asked participants a series of open- and closed-ended questions concerning whether they recognized any ads on the main page.

After the moderator presented all eight ad scenarios, he interviewed participants about the purpose of the study, their normal response to ads in various contexts, and their interpretation of different ad-disclosure terms (*See Attachment 2 for Post-Test Debriefing questions*).

³ For the one native ad scenario without a main page, the study procedure was slightly different. In this scenario, participants only quickly glanced at an email with a link to an item before clicking into the next page.

⁴ As noted in the body of this report, two of the four search scenarios examined as part of this study did not include a click-into page. Also, with regard to the other two search scenarios, participants saw the click-into page for only the first one presented to them during a session.

Attachment 1 to Appendix C: Main Study Questionnaire

Group A

Scenario GDO (Google Desktop Original - Formerly Scenario 1)

You are at your computer at home. You are interested in purchasing a *tablet computer*. You go to Google and search for *tablet*. These are the results. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Google search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why?,” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST Google Scenario, direct P to Organic result “Tablets CNN CNET.com” (the 2nd listed organic search result).

If this is the SECOND Google Scenario, direct P to the Shopping Carousel labeled “Sponsored” at the top of the page.

NOTE: P should only be shown the Google Shopping page in ONE scenario. If P clicks into the Google shopping page of his/her own volition on the FIRST Google scenario, direct him/her to the ORGANIC search result in the SECOND Google scenario. -----

Organic Search Result:

M directs P to natural result labeled “Tablets CNN CNET.com.” M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you? why or why not?”]*

M asks P to click natural search result. Please browse as you normally would. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “what are you looking at and why?,” “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

Shopping Carousel (2nd Google Scenario):

M directs P to “Shop for tablet” link. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it *[M asks P probe questions, e.g., “tell me what you see here?,” “is it useful to you? why or why not?”]*

M asks P to click “Shop for tablet” link. Please browse as you normally would. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “what are you looking at and why?,” “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

******Shopping Carousel (Participant Selected):***

M redirects P to “Shop for tablet” link. *[P describes link and M asks probe questions, e.g., “why did you click here before?” “why didn’t you click in this area (e.g, point to natural search result) or in this area (point to a result labelled ad)?”]*

Please browse this page (i.e., Google Shopping Page) as you normally would but don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes page and M asks probe questions, e.g. “what are you looking at and why?,” “is this what you expected to see? why or why not?” “is this page useful to you? why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Google SERP if not there.]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario BDM (Bing Desktop Modified - Formerly Scenario 3 [modified])

You are at your computer at home. You are interested in purchasing an *air purifier*. You go to Bing and enter this search [*air purifier*]. These are the results that appear. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Bing search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why,?” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST BING Scenario, direct P to the **2nd Ad Result** located at the top of the page, above the organic search results – labeled “Air Purifiers at Lowe’s”

If this is the SECOND BING Scenario, direct P to the organic search result labeled “The Best Air Purifiers – Free Shipping & Five Year Warranty (**2nd Organic result**).

NOTE: If P clicks on an ad during the 2nd Bing scenario, explore that result, then direct P to the specified organic result. -----

Naturally-Clicked Result (any result, including second ad result)/First or Second Bing Search Scenario

If P naturally clicked away from the home page, M directs P to link he/she clicked. *[P describes link and M asks probe questions, e.g., “why did you click here before?” “why didn’t you click in this other area?”]*

M asks P to re-click on the result. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

First Bing Search Scenario (Second Ad Result)

If necessary, M directs P to second ad result labeled “Air Purifiers at Lowe’s.” M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you? why or why not?”]*

M asks P to click the result. Please browse as you normally would. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

Organic Search Result (Either scenario)

M directs P to the natural search result labeled “THE Best Air Purifiers – Free Shipping & Five Year Warranty,” the second result below the shaded ads. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you? why or why not?”]*

M asks P to click natural search result. Don't click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., "is this what you expected to see?; why or why not?" "is this useful to you? why or why not?"]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Bing SERP if not there]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario GePaDM (Gear Patrol Desktop Modified - Formerly Scenario 5 [modified])

You are at home at your computer. You are interested in buying a car. A friend sent you a link to Gear Patrol, an online magazine showcasing new flashy products, because that day's issue of Gear Patrol focused on cars. Take five minutes to review the information and do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Gear Patrol page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., "what are you looking at and why,?" "what would you tend not to pay attention to and why?"] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----Direct P to "Three New Wave Hybrids that emphasize design (and efficiency)" first. This is the first Gear Patrol article below the menu.

After exploring first story, direct P to the Subaru ad titled "A world rally blur:..."

NOTE: If P selects Subaru item first of his/her own volition, explore that and then direct them to the New Wave Hybrid item.

If P selects another organic item, explore that item then continue with New Wave and Subaru. -----

[M directs P to the item on new-wave hybrids, which leads to a story]

M tells P to imagine that this item attracts your attention because you are interested in a hybrid car. For now, don't click on it. *[M asks P probe questions, e.g., "tell me what you see here?," "is it useful to you; why or why not?"]*

M asks P to click on the link that leads to the next page, and, if necessary, directs P to select "View All" at the bottom of the next page. *(This presents a full gallery of automobiles)*

Please browse as you normally would. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to organic car story page if not there.]* Please describe the page to me.

[P describes the page and M asks probe questions, e.g., "tell me what you see here?"; "is this what you expected to see when you clicked on the link on the previous screen? why or why not?," "is this useful to you; why or why not?"]

[If necessary, M directs P to the Subaru item leading to the story about the Subaru WRX car]

M tells P to imagine that this item also draws your attention and you want to explore it further. For now, don't click on it. *[M asks P probe questions, e.g., "tell me what you see here?," "is it useful to you; why or why not?"]*

M asks P to click on the link that leads to Subaru WRX story.

Please browse as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to Subaru WRX story page if not there.]* Please describe the page to me.

[P describes the page and M asks probe questions, e.g., “tell me what you see here?”; “is this what you expected to see when you clicked on the link on the previous screen? why or why not?” “is this useful to you; why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Subaru WRX item page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>							<i>Not Informative</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Reliable</i>							<i>Not Reliable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Believable</i>							<i>Not Believable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Useful</i>							<i>Not Useful</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>

[Return to Gear Patrol main page]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario YDO (Yahoo! Desktop Original - Formerly Scenario 7)

You are at home at your computer. You check the news on Yahoo. This is the page you see. Take two minutes to act as you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Yahoo News page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why,?” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----Direct P to News item titled “US Officials: Terrorist Group...” This is the first post below the purple bar, in the middle of the Yahoo! Page.

After exploring this story, direct P to the “Instaflex” ad titled “**Knee & Shoulder Relief...**”

If P should select Instaflex ad of his/her own volition, explore that page, then direct to a different, organic item. If P clicks on something other than the two directed, explore, then continue with US story and Instaflex.-----

[M directs P to item on terrorist group nearing an attack, located below the purple bar, in the middle of the Yahoo! page, which leads to an AP story on Yahoo! News.]

M tells P to imagine that this item attracts your attention and you decide to explore it further. For now, don't click on it. *[M asks P probe questions, e.g., “tell me what you see here?,” “is it useful to you; why or why not?”]*

M asks P to click on the link that leads to the news story.

Please browse the page as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to Yahoo! Health story if not there.]* Please describe the page to me. *[P describes the page and M asks probe questions, e.g., “tell me what you see here?,” “is this what you expected to see when you clicked on the link on the previous screen? why or why not?,” “is this useful to you; why or why not?”]*

[If necessary, M directs P to the Instaflex ad on the page, which leads to a story discussing pain relief research]

M tells P to imagine that this item attracts your attention because you are interested in pain relief solutions for you or a family member. For now, don't click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you; why or why not?”]*

M asks P to click on the link that leads to the story on research about the ingredients in Instaflex.

Please browse the page as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to Instaflex story if not there.]*
Please describe the page to me.

[P describes the page and M asks probe questions, e.g., “tell me what you see here?”; “is this what you expected to see when you clicked on the link on the previous screen? why or why not?” “is this useful to you; why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Instaflex item page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>							<i>Not Informative</i>
1	2	3	4	5	6	7	
<i>Very Reliable</i>							<i>Not Reliable</i>
1	2	3	4	5	6	7	
<i>Very Believable</i>							<i>Not Believable</i>
1	2	3	4	5	6	7	
<i>Very Useful</i>							<i>Not Useful</i>
1	2	3	4	5	6	7	

[Return to Yahoo! main page]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario GMM (Google Mobile Modified - Formerly Scenario 2 [modified])

You are waiting at the doctor's office and decide to do some searching on your mobile phone. You are interested in purchasing a *carpet cleaner*. You go to Google and enter this search [*carpet cleaner*]. These are the results that appear. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Google search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., "what are you looking at and why,?" "what would you tend not to pay attention to and why?"] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST Google Scenario, direct P to Organic result "Tablets CNN CNET.com" (the 2nd listed organic search result).

If this is the SECOND Google Scenario, direct P to the Shopping Carousel labeled "Sponsored" at the top of the page.

NOTE: P should only be shown the Google Shopping page in ONE scenario. If P clicks into the Google shopping page of his/her own volition on the FIRST Google scenario, direct him/her to the ORGANIC search result in the SECOND Google scenario. -----

Natural Search Result:

M directs P to the natural search result labeled "A Carpet Cleaner," the first result that appears below the map. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., "tell me what you see here,?" "is it useful to you? why or why not?"]*

M asks P to click natural search result. Please browse as you normally would. Don't click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., "what are you looking at and why,?" "is this what you expected to see?; why or why not?" "is this useful to you? why or why not?"]

Shopping Carousel (2nd Google Scenario):

M directs P to "Shop for tablet" link. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it *[M asks P probe questions, e.g., "tell me what you see here,?" "is it useful to you? why or why not?"]*

M asks P to click "Shop for tablet" link. Please browse as you normally would. Don't click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., "what are you looking at and why,?" "is this what you expected to see?; why or why not?" "is this useful to you? why or why not?"]

******Shopping Carousel (Participant Selected)/First Google Search Scenario:***

M redirects P to “Shop for tablet” link. *[P describes link and M asks probe questions, e.g., “why did you click here before?” “why didn’t you click in this area (e.g, point to natural search result) or in this area (point to a result labelled ad)?”]*

Please browse this page (i.e., Google Shopping Page) as you normally would but don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes page and M asks probe questions, e.g. “what are you looking at and why?,” “is this what you expected to see? why or why not?” “is this page useful to you? why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Google SERP if not there.]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario BMO (Bing Mobile Original - Formerly Scenario 4)

You are waiting at the car service center and decide to do some searching on your mobile phone. Your doctor recommended that should take Vitamin D. You go to Bing and enter this search [*vitamin D*]. These are the results that appear. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Bing search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why,?” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST BING Scenario, direct P to the **2nd Ad Result** located at the top of the page, above the organic search results, labeled “Calcium and Vitamin D.”

If this is the SECOND BING Scenario, direct P to organic search result labeled “How do I choose the best vitamin D supplement? (with pictures)” (3rd. Organic result below the ads)-----

Participant Selected Result (any result, including second ad result)/First or Second Bing Search Scenario

If P naturally clicked away from the home page, M directs P to link he/she clicked. *[P describes link and M asks probe questions, e.g., “why did you click here before?,” “why didn’t you click in this other area?,”]*

M asks P to re-click on the result. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

First Bing Search Scenario (Second Ad Result)

If necessary, M directs P to second ad result labeled “Calcium and Vitamin D.” M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?,” “is it useful to you? why or why not?”]*

M asks P to click the result. Please browse as you normally would. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

Organic Search Result (Either Scenario)

M directs P to the natural search result labeled “How Do I Choose the Best Vitamin D Supplement? (with pictures),” the natural search result ranked third on the page, below the shaded ads. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?,” “is it useful to you? why or why not?”]*

M asks P to click natural search result. Don't click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., "is this what you expected to see?; why or why not?" "is this useful to you? why or why not?"]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Bing SERP if not there]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario TMO (Time Mobile Original - Formerly Scenario 6)

You are waiting in line at a coffee shop. You've been reading an item on Time's site, so you go to Time.com and continue reading it. When you have finished reading the item, continue to interact with Time.com as you normally would.

You finish reading that item, so you decide to browse further on the page. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Time article page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., "what are you looking at and why,?" "what would you tend not to pay attention to and why?"] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

----- Direct P to "Burglars aren't scared of anything" item (ADT Ad) first, then to story titled "Sierra Leone dispatches..." (second article on the page)

NOTE: If P clicks on ADT ad of his/her own volition, explore the item then direct to a different organic item on the main Time page. If P selects a completely different item, explore that item, then move on to ADT and Sierra Leone items.-----

[If necessary, M directs P to ADT ad on the Time page, which leads to the ADT story.]

M tells P to imagine that this item attracts your attention because you are concerned about the safety of your home. For now, don't click on it. *[M asks P probe questions, e.g., "tell me what you see here?" "is it useful to you; why or why not?"]*

M asks P to click on the link that leads to the next captured page (story offering tips on how to keep your home safe).

Please browse as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to ADT Story page if not there.]* Please describe the page to me.

[P describes the page and M asks probe questions, e.g., "tell me what you see here?"; "is this what you expected to see when you clicked on the link on the previous screen? why or why not?," "is this useful to you; why or why not?"]

[M directs P to organic item on Troops Enforcing the Ebola Quarantine in Sierra Leone, the second Time article]

M tells P to imagine that this item attracts your attention because you are concerned about Ebola and you decide to explore further. *[M asks P probe questions, e.g., "is this item useful to you? why or why not?," "is this what you expect to see on this page? why or why not?"]*

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to ADT item page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>							<i>Not Informative</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Reliable</i>							<i>Not Reliable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Believable</i>							<i>Not Believable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Useful</i>							<i>Not Useful</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>

[Return to Time main page]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario CTMM (Chicago Tribune Mobile Modified - Formerly scenario 8 [modified])

You are in a coffee shop. You are using your mobile phone to check your email and you open an email message from a friend. She forwarded you an item that she thought would interest you because your sister recently started struggling with hair loss. You click on the item and this is what you see. Read this item and continue to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you.

M asks P to click on the link in the email.

Please browse the page as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P comes to stop state] Okay, thank you. Please describe the page to me.

[P describes the page and M asks probe questions, e.g., “tell me what you see here?”; “is this what you expected to see when you clicked on the link on the previous screen? why or why not?,” “is this useful to you; why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Chicago Tribune page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>							<i>Not Informative</i>
	1	2	3	4	5	6	7
<i>Very Reliable</i>							<i>Not Reliable</i>
	1	2	3	4	5	6	7
<i>Very Believable</i>							<i>Not Believable</i>
	1	2	3	4	5	6	7
<i>Very Useful</i>							<i>Not Useful</i>
	1	2	3	4	5	6	7

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Group B

Scenario GDM (Google Desktop Modified - Formerly Scenario 1 [modified])

You are at your computer at home. You are interested in purchasing a *tablet computer*. You go to Google and search for *tablet*. These are the results. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Google search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why?,” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST Google Scenario, direct P to Organic result “Tablets CNN CNET.com” (the 2nd listed organic search result).

If this is the SECOND Google Scenario, direct P to the Shopping Carousel labeled “Sponsored” at the top of the page.

NOTE: P should only be shown the Google Shopping page in ONE scenario. If P clicks into the Google shopping page of his/her own volition on the FIRST Google scenario, direct him/her to the ORGANIC search result in the SECOND Google scenario. -----

Natural Search Result:

M directs P to natural result labeled “Tablets CNN CNET.com.” M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you? why or why not?”]*

M asks P to click natural search result. Please browse as you normally would. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “what are you looking at and why?,” “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

Shopping Carousel (2nd Google scenario):

M directs P to “Shop for tablet” link. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it *[M asks P probe questions, e.g., “tell me what you see here?,” “is it useful to you? why or why not?”]*

M asks P to click “Shop for tablet” link. Please browse as you normally would. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “what are you looking at and why?,” “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

******Shopping Carousel (Participant Selected):***

M redirects P to “Shop for tablet” link. *[P describes link and M asks probe questions, e.g., “why did you click here before?” “why didn’t you click in this area (e.g, point to natural search result) or in this area (point to a result labelled ad)?”]*

Please browse this page (i.e., Google Shopping Page) as you normally would but don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes page and M asks probe questions, e.g. “what are you looking at and why?,” is this what you expected to see? why or why not?” “is this page useful to you? why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Google SERP if not there.]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario GMO (Google Mobile Original - Formerly Scenario 2)

You are waiting at the doctor's office and decide to do some searching on your mobile phone. You are interested in purchasing a *carpet cleaner*. You go to Google and enter this search [*carpet cleaner*]. These are the results that appear. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Google search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., "what are you looking at and why,?" "what would you tend not to pay attention to and why?"] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST Google Scenario, direct P to Organic result "Tablets CNN CNET.com" (the 2nd. listed organic search result).

If this is the SECOND Google Scenario, direct P to the Shopping Carousel labeled "Sponsored" at the top of the page.

NOTE: P should only be shown the Google Shopping page in ONE scenario. If P clicks into the Google shopping page of his/her own volition on the FIRST Google scenario, direct him/her to the ORGANIC search result in the SECOND Google scenario. -----

Natural Search Result/First or Second Google Search Scenario:

M directs P to the natural search result labeled "A Carpet Cleaner," the first result that appears below the map. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it.

[M asks P probe questions, e.g., "tell me what you see here?," "is it useful to you? why or why not?"]

M asks P to click natural search result. Please browse as you normally would. Don't click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., "what are you looking at and why?," "is this what you expected to see?; why or why not?" "is this useful to you? why or why not?"]

Shopping Carousel (2nd. Google Scenario):

M directs P to "Shop for tablet" link. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it *[M asks P probe questions, e.g., "tell me what you see here?," "is it useful to you? why or why not?"]*

M asks P to click "Shop for tablet" link. Please browse as you normally would. Don't click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., "what are you looking at and why?," "is this what you expected to see?; why or why not?" "is this useful to you? why or why not?"]

Shopping Carousel (Participant Selected):

M redirects P to "Shop for tablet" link. *[P describes link and M asks probe questions, e.g., "why did you click here before?" "why didn't you click in this area (e.g, point to natural search result) or in this area (point to a result labelled ad)?"]*

Please browse this page (i.e., Google Shopping Page) as you normally would but don't click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes page and M asks probe questions, e.g. "what are you looking at and why?," is this what you expected to see? why or why not?" "is this page useful to you? why or why not?"

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Google SERP if not there.]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario BDO (Bing Desktop Original - Formerly Scenario 3)

You are at your computer at home. You are interested in purchasing an *air purifier*. You go to Bing and enter this search [*air purifier*]. These are the results that appear. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Bing search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why,?” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST BING Scenario, direct P to the 2nd **Ad Result** located at the top of the page, above the organic search results – labeled “Air Purifiers at Lowe’s”

If this is the SECOND BING Scenario, direct P to the organic search result labeled “The Best Air Purifiers – Free Shipping & Five Year Warranty (2nd **Organic result**).

NOTE: If P clicks on an ad during the 2nd Bing scenario, explore that result, then direct P to the specified organic result. -----

Naturally-Clicked Result (any result, including second ad result)/First or Second Bing Search Scenario

If P naturally clicked away from the home page, M directs P to link he/she clicked. *[P describes link and M asks probe questions, e.g., “why did you click here before?” “why didn’t you click in this other area?”]*

M asks P to re-click on the result. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

First Bing Search Scenario (Second Ad Result)

If necessary, M directs P to second ad result labeled “Air Purifiers at Lowe’s.” M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you? why or why not?”]*

M asks P to click the result. Please browse as you normally would. Don’t click on anything for now.

Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

Organic Search Result (Either scenario)

M directs P to the natural search result labeled “THE Best Air Purifiers – Free Shipping & Five Year Warranty,” the second result below the shaded ads. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you? why or why not?”]*

M asks P to click natural search result. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Bing SERP if not there]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario BMM (Bing Mobile Modified - Formerly Scenario 4 [modified])

You are waiting at the car service center and decide to do some searching on your mobile phone. Your doctor recommended that should take Vitamin D. You go to Bing and enter this search [*vitamin D*]. These are the results that appear. Take two minutes to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Bing search-results page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why,?” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----If this is the FIRST BING Scenario, direct P to the 2nd Ad Result located at the top of the page, above the organic search results, labeled “Calcium and Vitamin D.”

If this is the SECOND BING Scenario, direct P to organic search result labeled “How do I choose the best vitamin D supplement? (with pictures)” (3rd Organic result below the ads)-----

Participant Selected Result (any result, including second ad result)/First or Second Bing Search Scenario

If P naturally clicked away from the home page, M directs P to link he/she clicked. *[P describes link and M asks probe questions, e.g., “why did you click here before,?” “why didn’t you click in this other area,?”]*

M asks P to re-click on the result. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

First Bing Search Scenario (Second Ad Result)

If necessary, M directs P to second ad result labeled “Calcium and Vitamin D.” M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here,?” “is it useful to you? why or why not?”]*

M asks P to click the result. Please browse as you normally would. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

Organic Search Result (Either Scenario)

M directs P to the natural search result labeled “How Do I Choose the Best Vitamin D Supplement? (with pictures),” the natural search result ranked third on the page, below the shaded ads. M tells P to imagine he/she is interested in the link and decides to explore further but for now do not click on it. *[M asks P probe questions, e.g., “tell me what you see here,?” “is it useful to you? why or why not?”]*

M asks P to click natural search result. Don’t click on anything for now. Remember to think aloud. Feel free to scroll down the page. *[Capture eye-movements, scrolling, clicking]*

[P describes the page and M asks probe questions, e.g., “is this what you expected to see?; why or why not?” “is this useful to you? why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Bing SERP if not there]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario GePaDO (Gear Patrol Desktop Original - Formerly Scenario 5)

You are at home at your computer. You are interested in buying a car. A friend sent you a link to Gear Patrol, an online magazine showcasing new flashy products, because that day's issue of Gear Patrol focused on cars. Take five minutes to review the information and do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Gear Patrol page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., "what are you looking at and why,?" "what would you tend not to pay attention to and why?"] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----Direct P to "Three New Wave Hybrids that emphasize design (and efficiency)" first. This is the first Gear Patrol article below the menu.

After exploring first story, direct P to the Subaru ad titled "A world rally blur:..."

NOTE: If P selects Subaru item first of his/her own volition, explore that and then direct them to the New Wave Hybrid item.

If P selects another organic item, explore that item then continue with New Wave and Subaru. -----

[M directs P to the item on new-wave hybrids, which leads to a story]

M tells P to imagine that this item attracts your attention because you are interested in a hybrid car. For now, don't click on it. *[M asks P probe questions, e.g., "tell me what you see here?," "is it useful to you; why or why not?"]*

M asks P to click on the link that leads to the next page, and, if necessary, directs P to select "View All" at the bottom of the next page. *(This presents a full gallery of automobiles)*

Please browse as you normally would. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to organic car story page if not there.]* Please describe the page to me.

[P describes the page and M asks probe questions, e.g., "tell me what you see here?"; "is this what you expected to see when you clicked on the link on the previous screen? why or why not?," "is this useful to you; why or why not?"]

[If necessary, M directs P to the Subaru item leading to the story about the Subaru WRX car]

M tells P to imagine that this item also draws your attention and you want to explore it further. For now, don't click on it. *[M asks P probe questions, e.g., "tell me what you see here?," "is it useful to you; why or why not?"]*

M asks P to click on the link that leads to Subaru WRX story.

Please browse as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to Subaru WRX story page if not there.]* Please describe the page to me.

[P describes the page and M asks probe questions, e.g., "tell me what you see here?"; "is this what you expected to see when you clicked on the link on the previous screen? why or why not?," "is this useful to you; why or why not?"]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Subaru WRX item page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>								<i>Not Informative</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	
<i>Very Reliable</i>								<i>Not Reliable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	
<i>Very Believable</i>								<i>Not Believable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	
<i>Very Useful</i>								<i>Not Useful</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	

[Return to Gear Patrol main page]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario TMM (Time Mobile Modified - Formerly Scenario 6 [modified])

You are waiting in line at a coffee shop. You've been reading an item on Time's site, so you go to Time.com and continue reading it. When you have finished reading the item, continue to interact with Time.com as you normally would.

You finish reading that item, so you decide to browse further on the page. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Time article page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., "what are you looking at and why,?" "what would you tend not to pay attention to and why?"] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

----- Direct P to "Burglars aren't scared of anything" item (ADT Ad) first, then to story titled "Sierra Leone dispatches..." (second article on the page)

NOTE: If P clicks on ADT ad of his/her own volition, explore the item then direct to a different organic item on the main Time page. If P selects a completely different item, explore that item, then move on to ADT and Sierra Leone items.-----

[If necessary, M directs P to ADT ad on the Time page, which leads to the ADT story.]

M tells P to imagine that this item attracts your attention because you are concerned about the safety of your home. For now, don't click on it. *[M asks P probe questions, e.g., "tell me what you see here?" "is it useful to you; why or why not?"]*

M asks P to click on the link that leads to the next captured page (story offering tips on how to keep your home safe).

Please browse as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to ADT Story page if not there.]* Please describe the page to me.

[P describes the page and M asks probe questions, e.g., "tell me what you see here?"; "is this what you expected to see when you clicked on the link on the previous screen? why or why not?," "is this useful to you; why or why not?"]

[M directs P to organic item on Troops Enforcing the Ebola Quarantine in Sierra Leone, the second Time article]

M tells P to imagine that this item attracts your attention because you are concerned about Ebola and you decide to explore further. *[M asks P probe questions, e.g., "is this item useful to you? why or why not?," "is this what you expect to see on this page? why or why not?"]*

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to ADT item page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>							<i>Not Informative</i>
	1	2	3	4	5	6	7
<i>Very Reliable</i>							<i>Not Reliable</i>
	1	2	3	4	5	6	7
<i>Very Believable</i>							<i>Not Believable</i>

1 2 3 4 5 6 7
Very Useful *Not Useful*
1 2 3 4 5 6 7

[Return to Time main page]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario YDM (Yahoo! Desktop Modified - Formerly Scenario 7 [modified])

You are at home at your computer. You check the news on Yahoo. This is the page you see. Take two minutes to act as you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you. *[Return to Yahoo News page if not there.]* Please describe the page to me.

[P describes page; M asks probe questions, e.g., “what are you looking at and why,?” “what would you tend not to pay attention to and why?”] *[Note: Probe questions should not directly mention paid vs. unpaid results.]*

-----Direct P to News item titled “US Officials: Terrorist Group...” This is the first post below the purple bar, in the middle of the Yahoo! Page.

After exploring this story, direct P to the “Instaflex” ad titled “**Knee & Shoulder Relief...**”

If P should select Instaflex ad of his/her own volition, explore that page, then direct to a different, organic item. If P clicks on something other than the two directed, explore, then continue with US story and Instaflex.-----

[M directs P to item on terrorist group nearing an attack, located below the purple bar, in the middle of the Yahoo! page, which leads to an AP story on Yahoo! News.]

M tells P to imagine that this item attracts your attention and you decide to explore it further. For now, don’t click on it. *[M asks P probe questions, e.g., “tell me what you see here?,” “is it useful to you; why or why not?”]*

M asks P to click on the link that leads to the news story.

Please browse the page as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to Yahoo! Health story if not there.]* Please describe the page to me. *[P describes the page and M asks probe questions, e.g., “tell me what you see here?,” “is this what you expected to see when you clicked on the link on the previous screen? why or why not?,” “is this useful to you; why or why not?”]*

[If necessary, M directs P to the Instaflex ad on the page, which leads to a story discussing pain relief research]

M tells P to imagine that this item attracts your attention because you are interested in pain relief solutions for you or a family member. For now, don’t click on it. *[M asks P probe questions, e.g., “tell me what you see here?” “is it useful to you; why or why not?”]*

M asks P to click on the link that leads to the story on research about the ingredients in Instaflex.

Please browse the page as you normally would. Remember to think aloud. *[Capture eye-movements, scrolling, clicking]*

[when P clicks away from screen or time expires] Okay, thank you. *[Return to Instaflex story if not there.]* Please describe the page to me.

[P describes the page and M asks probe questions, e.g., “tell me what you see here?,” “is this what you expected to see when you clicked on the link on the previous screen? why or why not?,” “is this useful to you; why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Instaflex item page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>								<i>Not Informative</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	
<i>Very Reliable</i>								<i>Not Reliable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	
<i>Very Believable</i>								<i>Not Believable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	
<i>Very Useful</i>								<i>Not Useful</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	

[Return to Yahoo! main page]

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

Scenario CTMO (Chicago Tribune Mobile Original - Formerly Scenario 8)

You are in a coffee shop. You are using your mobile phone to check your email and you open an email message from a friend. She forwarded you an item that she thought would interest you because your sister recently started struggling with hair loss. You click on the item and this is what you see. Read this item and continue to do what you normally would in this situation.

[when P clicks away from homepage or time expires] Okay, thank you.

M asks P to click on the link in the email.

Please browse the page as you normally would. *[Capture eye-movements, scrolling, clicking]*

[when P comes to stop state] Okay, thank you. Please describe the page to me.

[P describes the page and M asks probe questions, e.g., “tell me what you see here?”; “is this what you expected to see when you clicked on the link on the previous screen? why or why not?” “is this useful to you; why or why not?”]

[If final scenario presented to P, ask P additional probe questions below; otherwise close browser and open file for next scenario.]

[Return to Chicago Tribune page if not there]

Please rate this page on each of the following scales.

<i>Very Informative</i>							<i>Not Informative</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Reliable</i>							<i>Not Reliable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Believable</i>							<i>Not Believable</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
<i>Very Useful</i>							<i>Not Useful</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>

Do you see any ads on this page?

Why do you say that? *[Ask question for each ad identified]*

Do you see any other ads?

Why do you say that?

FTC Search & Sponsored Content Study

Pre-Test Interview

Participant Initials:_____ Participant Group & #:_____ Date:_____

1. How often do you access the Web? Several times a day___ Once a day___
A few times/week___ Once a week___ Less than once/week___ Never___
2. Devices used to access the Internet? Desktop computer___ Laptop computer___
Tablet computer___ Smart phone___ Other_____
3. Where do you work and, if for a company, what does that company do?

Participants should use Web at least once/week, via desktop or laptop computer and tablet or smartphone. They should not work in any of the industries listed in the recruitment screener.

If participant doesn't match study requirements (i.e., they somehow slipped through screening process), abort session.

Attachment 2 to Appendix C: Post-Test Debriefing Interview

FTC Search & Sponsored Content Study Post-Test Debriefing Interview

Participant Initials: _____ Participant Group & #: _____ Date: _____

1. How do you usually respond to ads in search results? Always ignore them____
Always look at them ____ Sometimes ignore, sometimes look at them ____
2. How do you usually respond to ads placed in or near articles or stories on the Internet? Always ignore them____ Always look at them ____ Sometimes ignore, sometimes look at them ____
3. How do you usually respond to ads mixed into recent posts? Always ignore them____ Always look at them ____ Sometimes ignore, sometimes look at them ____
4. Are you usually able to distinguish ads from non-ads?

5. Have you ever discovered that something you thought was regular information was an ad? How did you feel about that? _____
6. How would you want things marked so that you can see clearly that they are ads?

7. If something is marked with one of the following words what does that tell you?
Ad _____
Advertisement _____
Sponsored _____
Paid _____
Presented by _____

Additional Thoughts and Comments

Appendix D: Coding of Ad Recognition Data

Based on an examination of the video recordings and verbatim comments of participants for each participant, two different coders – an expert consultant on the study and either one of two FTC paralegal staff who otherwise were not involved in the study.⁵ – coded each of the 34 (17 original and 17 modified) ad conditions tested as to whether: (1) the participant recognized the ad as an ad (“recognized as ad”); (2) the participant did not recognize it as an ad (“not recognized as ad”); or (3) the coder could not tell if the participant recognized the ad as an ad or did not recognize it as an ad (“unclear”).⁶ The FTC paralegal staff coded either the Group A or Group B participant sessions so that they did not see both the original and modified version of the same web pages. The expert consultant, however, coded all the sessions. It is important to note that the study participants were not asked directly if an item was an ad; the coders considered participants’ behavior and comments as they viewed the ad conditions to make a judgment (*See* Attachment 1 for criteria used by coders). Ads coded as unclear could mean that a coder did not have enough information to make a judgment or that a participant was uncertain whether the ad was an ad.

Coder agreement between the expert consultant and the FTC paralegal staff was 79.2%. We did not resolve differences by the conventional method of discussion between the coders and instead deferred to the judgment of the expert consultant. Differences between the coders primarily were due to the greater likelihood of the FTC paralegal staff coding that it was unclear whether or not a participant recognized an ad. We analyzed the ad recognition data in two ways – by defaulting entirely to the coding of the expert consultant and by defaulting to the coding of the FTC paralegals – and found very little substantive differences in the results. The probability that an item was recognized as an ad was only slightly lower when we based our analyses on the FTC staff data. (*See* Section III of Appendix F for a description of the regression analysis using the FTC staff ad recognition coding.) The analyses discussed in this report utilized the expert consultant’s coding.

⁵ The FTC paralegals were given detailed instructions and practiced with video recordings of a few pilot sessions before they reviewed and coded the study session videos and verbatim comments.

⁶ One participant did not actually see one of the ad conditions due to human error, and thus we excluded that data point from our analyses.

Attachment 1 to Appendix D: Coder Instructions

Usability Study
Coder Instructions

Background

As part of this study, 48 participants were taken through 8 different digital scenarios or conditions. Four of these conditions were on desktop and four were on a mobile device. The conditions either related to search engines (categorized as “search”) or to a variety of publisher sites, such as Yahoo! (categorized as “native”). Specifically, the 8 conditions are as follows:

- Search-Google Desktop (S-GD)
- Search-Google Mobile (S-GM)
- Search-Bing Desktop (S-BD)
- Search-Bing-Mobile (S-BM)
- Native-Gear Patrol Desktop (N-GPD)
- Native-Time Mobile (N-TM)
- Native-Yahoo! Desktop (N-YD)
- Native-Chicago Tribune Mobile (N-CTM)

Each session was videotaped and transcribed, and special equipment also captured where participants looked on the various digital pages shown to them. For each session, there are 8 separate recordings in total, one for each condition presented. Each recording has a corresponding transcript, located in the same folder.

Each participant was presented the conditions in a different order. For each participant, the conditions are numbered in the order in which they were presented.

One coder will review recordings for participants 1 through 24, and a second coder will review recordings for participants 25 through 48. If you cannot hear what the participant says in a recording, you also can consult the corresponding transcript.

The recording of the final condition (# 8 of 8) includes a number of “post-study” questions to which participants respond. For these final conditions, you only need to listen until the point when participants respond to a question about what ads are on the page. The next question asks how participants usually respond to ads in or near search results; you need not listen to recording beyond this point, as it is not relevant to your coding.

Areas-of-Interest/Classification Table

An area-of-interest is a specified item or grouping of items on a particular page shown to a participant. Each condition is designed to test participants’ interaction with one or two particular pages, although participants may be shown or voluntarily click-into other pages during a condition. For each page that a condition is intended to test, there are one or more specified areas-of-interest.

For example, the Search-Google Desktop (S-GD) condition tests the main Google search page and a click-into page (Google Shopping page). [*Show visual*]. The main Google Page has three areas-of-interest: the shop box at the top of the page, ads under the box, and ads on the right-hand side of the page. The click-into page (Google Shopping page) has two areas-of-interest: the main list of results and ads located at the bottom of the page.

Another example is the Native-Yahoo! Desktop (N-YD) condition, which also tests two pages: the main Yahoo! page and a click-into page or article page. [Show visual]. The area-of-interest on the main Yahoo! page is an item consisting of the headline “Knee & Shoulder Relief: Doctors speak out about shocking knee & shoulder relief” accompanied by an image of a skeleton. The entire click-into page for this link is a second area-of-interest. The provided spreadsheet lists the area-of-interest for each of the conditions. [Walk-through areas of interest listed in the Classification Table].

Many conditions also can include a “decoy” item, which are listed below.

Condition	Decoy Item
Search-Google Desktop (S-GD)	Result named “Tablets CNN CNET.com” (the 2 nd listed regular search result)
Search-Google Mobile (S-GM)	Result named “A Cleaner Carpet Cleaner” (the 1 st listed regular search result)
Search-Bing Desktop (S-BD)	Result named “Top Air Purifier Reviews / Best Air Purifier – Consumer...” (3 rd regular search result listed)
Search-Bing-Mobile (S-BM)	Result named “How do I choose the best vitamin D supplement? (with pictures)” (4 th listed regular result below the ads)
Native-Gear Patrol Desktop (N-GPD)	Item titled “Three New Wave Hybrids that emphasize design (and efficiency)” (1 st article below the menu)
Native-Time Mobile (N-TM)	Item titled “Sierra Leone dispatches...” (2 nd article on the page)
Native-Yahoo! Desktop (N-YD)	Item titled “US Officials: Terrorist Group...” (1 st post below the purple bar, in the middle of the Yahoo! Page.)
Native-Chicago Tribune Mobile (N-CTM)	No Decoy

Coding Instructions

Different participants saw different versions of the same pages to be tested. Some pages may look more familiar and other pages less familiar to you. In coding the areas-of-interest, only consider what the participant actually says and does.

In a spreadsheet, create a separate tab for each participant, labeled with the participant number (i.e., 1, 2, 3, etc.). For each participant, classify the specified area-of-interest based on the following:

“Seen as ad”

“Not seen as ad”

“Unclear/no indication”

Once you make a classification, find the appropriate condition and area-of-interest in the provided classification table and insert an “X” into the appropriate column (i.e., “Seen as ad; “Not seen as ad; or “Unclear/no indication.” If you classify an area-of-interest as “Seen as ad” or “Not seen as ad,” note what caused you to make that classification in the column “Reason” for that area-of-interest.

[Review ways in which participants may verbalize or show they notice an area-of-interest as an ad or do not notice it as an ad.]

In some cases, you may not be able to tell whether a participant recognized an area-of-interest as an ad. If that happens, code that area-of-interest “Unclear/no indication.” For example, in the search conditions (Search-Google Desktop/Mobile (S-GD/GM) and Search-Bing Desktop/Mobile (S-BD/BM), participants may not say anything about an area-of-interest or only say things about its format (such as the images/pictures, price information, or color) or the product or store it promotes. Similarly, in native conditions (Native-Gear Patrol Desktop (N-GPD), Native-Yahoo! Desktop (N-YD), Native-Time Mobile (N-TM) and Native-Chicago Tribune Mobile (N-CTM), participants may talk about their interest in the product discussed in an area-of-interest but give no indication whether they notice the item-of-interest as an ad.

If it happens that a participant (due to moderator or technical error, or not scrolling down the page), was not shown an area-of-interest, code it as “Unclear/no indication” but also note that fact in the column “AOI Not Seen.”

In addition, different from a classification of “Unclear/no indication,” if a participant only noticed an area-of-interest as an ad during post-test questioning, code the area of interest as “Not seen as ad” and also mark an “X” in the column “Seen as ad only in post-test” for that area-of-interest. However, if the moderator told a participant that something is an ad, that does not count as the participant noticing an area-of-interest as an ad in the post-test questioning.

If a participant identifies an area-of-interest as an ad, it does not matter if they figured that out based on the item’s label or its content. In either situation, classify the area-of-interest as “Seen as ad.”

In classifying an area-of-interest, consider not only what the participant says or does during the condition that shows the particular area-of-interest *but also* any other relevant information learned from what the participant says or does during other conditions or the post-test questioning. For example, a participant may say something during a later condition or the post-test questioning that reveals he or she actually noticed an area-of-interest as an ad earlier, whereas it may have been unclear during the particular condition in which that area-of-interest was shown. If you relied on information revealed outside of the particular condition during which the area-of-interest was shown to make a classification, be sure to note that in the “Reasons” column.

A situation where a participant may reveal in a later condition that he or she actually noticed an area-of-interest as an ad previously differs from the situation described above in which a participant says or does something that suggests he or she only realized an-area-of-interest was an ad during the post-study questioning (and thus did *not* recognize that area-of-interest as an ad during the condition.). As instructed earlier, you should code that area-of-interest as “not seen as ad” and also mark an “X” in in the column “Seen as ad only in post-test.”

The fact that a participant’s eyes scanned an ad-label does not necessarily mean that the participant really noticed or processed the label. Human vision does not process everything our eyes scan. However, if the eyes lingered on a label and there is other corroborating evidence, *e.g.*, the participant mentions skipping the items under that label, that can be taken as strongly suggesting that the participant noticed the label.

In the search conditions (Search-Google Desktop/Mobile (S-GD/GM) and Search-Bing Desktop/Mobile (S-BD/BM), just saying that an area-of-interest (search-result-item) links to a company selling something does not necessarily mean that the participant recognizes that area-of-interest as an ad. Participants often say the same thing about search-result-items that are *not* paid search results.

However, in the native conditions (Native-Gear Patrol Desktop (N-GPD), Native-Yahoo! Desktop (N-YD), Native-Time Mobile (N-TM) and Native-Chicago Tribune Mobile (N-CTM), saying an area-of-interest probably links to a sales pitch is good enough to classify the participant as recognizing that item as an ad.

Also, in the native conditions, it can happen that participants say the area-of-interest on the first page is an ad or links to an ad but when participants click into the next page they change their mind and say the second area-of-interest is not really an ad. The reverse situation also can happen. Participants may not notice the area of interest as an ad on the first page but after clicking into the next page say that it is an ad.

Review pilot recordings; ask coder to classify and go over reasoning [at least one in which participant: notices area-of-interest as an ad, does not notice as an ad; and it is unclear whether the participant does or not][sic]

Appendix E: Processing of Eye Tracking Data

While participants interacted with the web pages, we also collected time-sequenced eye tracking data. We only processed these data for specific time segments when participants interacted with the web pages without interruption. These time segments included the first few seconds after: (1) the main web page was displayed; (2) the moderator directed a participant's attention to particular ads; and (3) the click-into page was displayed.

For each time segment, we defined "areas of interest" on the relevant pages, which contained the particular ads examined by the study. We then mapped these areas of interest ("AOIs") to the eye tracking data to generate statistics, *i.e.*, "AOI statistics." Among other things, the AOI statistics measured the total amount of time that a participant gazed within each such area or "total visit duration." The time-segmented eye tracking data also were used to generate gaze plots and heat maps.

The process of mapping the AOIs to the eye tracking data was a quasi-manual process for ad conditions that participants viewed on a smartphone screen, whereas this mapping process was fully automated for the desktop conditions.

Appendix F: Regression Analyses of Ad Recognition and Eye Tracking Data

I. The Regression Model Used to Assess Changes in Ad Recognition

We used a multinomial logit model to estimate the change in ad recognition across the ad conditions due to the disclosure modifications.⁷ The model enabled each ad condition and each participant to have a unique effect on the probability that a participant was in one of the three possible outcome groups, *i.e.*, recognized the ad as an ad; did not recognize the ad as an ad; or it was unclear to the observer. For participant i , ad condition j , and category k , we modeled the latent value for each category as:

$$U_{ijk} = \beta_k D + \alpha_{ik} + \gamma_{jk} + \sum_{m=1:8} \delta_k^m O_{ij}^m,$$

where D is an indicator for whether the participant saw the original or modified condition, α_{ik} are participant – category effects, γ_{jk} are ad condition – category effects, and O_{ij}^m is an indicator variable that participant i saw ad condition j in order m . Here, β_k is the mean effect of the modifications across all ad conditions. The effects of all of these variables were allowed to vary across categories, so the probabilities of ad, no ad, or unclear could vary by participant, ad condition, and ad condition order, as well as because of the modifications.

To account for the fact that the same participants, and same websites, are present in the data multiple times, we clustered standard errors at the participant and website levels, allowing for arbitrary correlation between responses for the same website and between responses for the same participant. We report the marginal effects of the modifications.

In additional analyses, we examined how the effects of the modifications varied. We interacted the modifications with whether the ad condition was a search or native ad, and whether the participant viewed the ad on a mobile device or desktop.

II. The Disclosure Modifications Significantly Improved Ad Recognition

Overall, the disclosure modifications increased the probability that a participant recognized an ad by 21 percentage points, with the 95% confidence interval ranging from 15 to 27 percentage points. Because the bottom of the confidence interval is greater than zero, these effects are statistically significant. *See* Figure 1 below. In addition, given that in the original ad conditions the average rate of ad recognition was approximately 47%, an increase of 21 percentage points translates into a 45% improvement in ad recognition, which is substantial.

⁷ *See* A. Colin Cameron & Pravin K. Trivedi, Microeconometrics: Methods and Applications, ch. 15 (2005).

Figure 1
Confidence Intervals for Estimated Effects of Disclosure Modifications on Ad Recognition

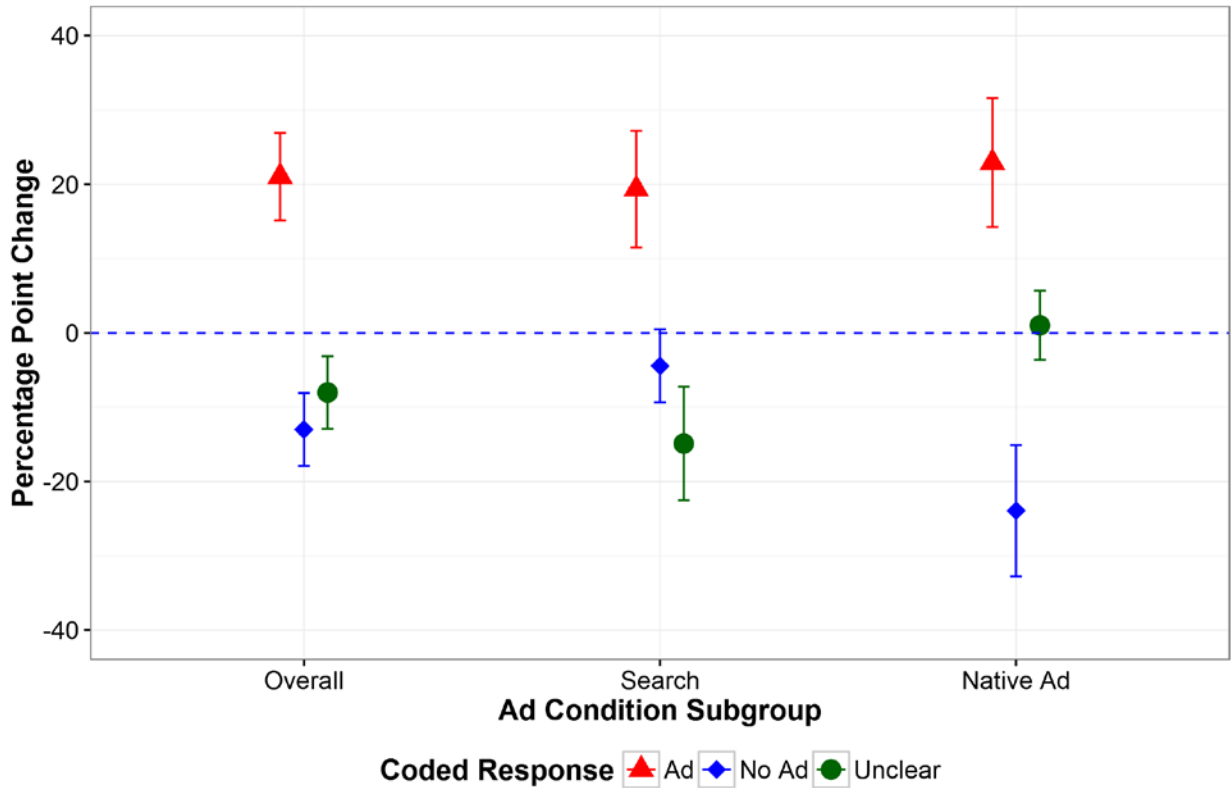


Figure 1 depicts the 95% confidence intervals for the estimated effects of the disclosure modifications on ad recognition based on the statistical model, both for all conditions and for the search and native ad conditions separately. The red triangle, blue diamond, and green circle respectively depict the effect on the probability that: (1) an ad was recognized as an ad; (2) an ad was not recognized as an ad; and (3) it was unclear to the observer.

We also found substantial improvements in ad recognition when we separately examined the search and native ad condition groups. *See* Figure 1 above. In the search ad conditions, we found that the probability that participants recognized the ads as ads increased by 19 percentage points (95% confidence interval of 11 to 27 points.) The effects of the disclosure modifications in the native ad conditions was a 23-percentage-point increase (95% confidence interval of 14 to 32 points). These results were significantly different from zero. With regard to the native ad conditions, improved ad recognition derives entirely from a corresponding decrease in ads that were coded as not recognized as an ad, whereas, with regard to the search ad conditions, approximately three-fourths of it derives from a corresponding decrease in ads that were coded as unclear.

The effects on ad recognition were substantially the same in the desktop and mobile ad conditions. Ad recognition increased by 21 percentage points in the desktop ad conditions (95% confidence interval of 13 to 28 percentage points) and by 22 percentage points in the mobile conditions (95% confidence interval of 13 to 31 percentage points.) *See* Figure 2 below. These results were significantly different from zero.

Figure 2
Confidence Intervals for Estimated Effects of Disclosure Modifications on Ad Recognition
for Desktop and Mobile Ad Subgroups

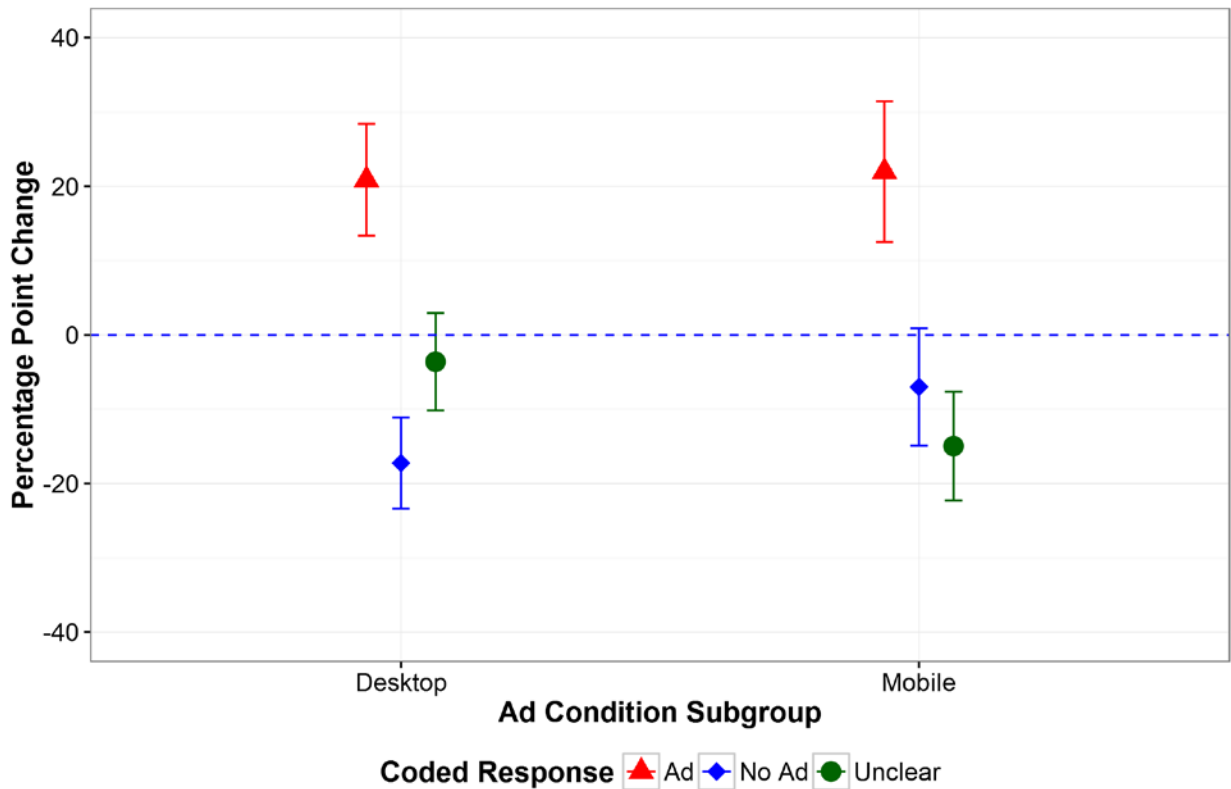


Figure 2 depicts the 95% confidence intervals for the estimated effect of the disclosure modifications on ad recognition based on the statistical model for the desktop and mobile ad conditions. The red triangle, blue diamond, and green circle respectively depict the effect on the probability that: (1) an ad was recognized as an ad; (2) an ad was not recognized as an ad; and (3) it was unclear to the observer.

III. Ad Recognition Analysis Using the FTC Paralegal Staff’s Coding Results

As explained in Appendix D, two different coders, an expert consultant and either one of two FTC paralegal staff, independently coded whether or not participants recognized each ad condition as an ad. We used the expert consultant’s coding to conduct the ad recognition analysis discussed in the body of the report. The two coders for each ad condition were in agreement 79% of the time across ad conditions and participants. Thus, to examine the robustness of the ad recognition results, we also ran the regression using the alternative coding of the FTC paralegal staff. We found that when we used the FTC paralegal staff’s coding, the effects of the modified disclosures on the probability of participants recognizing an ad as an ad only fell slightly, from 21 percentage points to 18.5 percentage points. *See* Figure 3 below.

Figure 3
Confidence Intervals for Estimated Ad Recognition Effects of Disclosure
Baseline and Alternative Coding Schemes

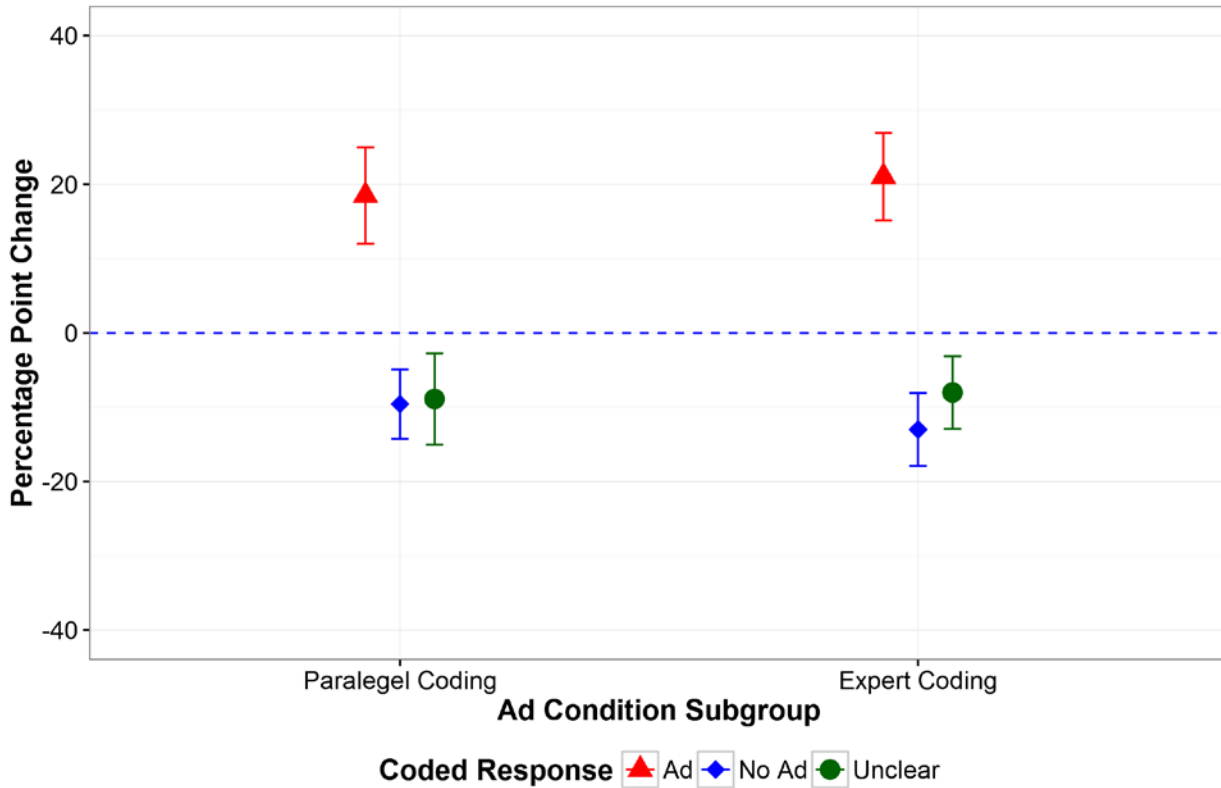


Figure 3 depicts the 95% confidence intervals for the estimated effects of the disclosure modifications on ad recognition based on the statistical model, using both the baseline coding data and the alternative data derived from the FTC paralegals' coding. The red triangle, blue diamond, and green circle respectively depict the effect on the probability that: (1) an ad was recognized as an ad; (2) an ad was not recognized as an ad; and (3) it was unclear to the observer.

IV. Eye Tracking Data Analyses

We used a Poisson regression model to estimate the effects of the disclosure modifications on the length of time participants looked at particular ads.⁸ Unlike a standard Poisson regression, however, we clustered standard errors at the participant and website levels. The model allowed us to estimate the average percent change in each variable due to the modifications. It measured changes in percentage terms, not in seconds.

The statistical model was:

$$\log E(Y_{ij}) = \beta D + \alpha_i + \gamma_j + \sum_{m=1:8} \delta^m O_{ij}^m + \sum_{n=1:3} \psi^n A_{ij}^n,$$

where $E(Y_{ij})$ is the expected value of the total visit duration Y for individual i and ad condition j . In addition, D is an indicator for whether the participant saw the original or modified condition, α_i are participant effects, γ_j are ad condition effects, O_{ij}^m is an indicator variable that participant i saw ad condition j in order m , and A_{ij}^n is

⁸ See A. Colin Cameron & Pravin K. Trivedi, Microeconometrics: Methods and Applications, ch. 20 (2005).

an indicator for whether individual i had ad recognition code n for ad condition j . We report results for specifications both excluding and including the ad recognition variables.

We examined 22 ad conditions, only those that appear on the main page,⁹ to estimate changes in visual attention. Sixteen of the 22 ad conditions were search ads and six were native ads, and thus it is important to note that we had less power to test for statistical significance when we examined the native ad conditions.

We found that the disclosure modifications significantly reduced the amount of time that participants spent looking at the ad conditions we tested. Overall, the disclosure modifications decreased the time participants fixated on these ads by 21%, with the 95% confidence interval ranging from -38% to -5%. *See* the red triangle confidence intervals in Figure 5 below. Examining the search and native ad condition groups separately, we also found that the effects were large in both groups. The amount of time participants fixated on the ads decreased by 21% in the search ad conditions (95% confidence interval ranging from -38% to -3%); it decreased by 26% in the native ad conditions (95% confidence interval ranging from -87% to 19%). The effects of the disclosure modifications is significantly different from zero when analyzed across all ad conditions and across the search ad conditions, but not when analyzed across the native ad conditions.

We detected differences in the effects between the desktop and mobile ad conditions. Although in both condition groups participants looked less at the modified ads, the amount of time decreased by 25% in the desktop ad conditions (95% confidence interval ranging from -45% to -4%) and by 16% in the mobile ad conditions (95% confidence interval ranging from -45% to 12%). *See* the red triangle confidence intervals in Figure 5 below. Only the results for the desktop ad conditions were significantly different from zero.

⁹ We did not expect to observe the same effect on visual attention with ads appearing on the click-into pages, given that, unlike the main pages which contain a mix of advertising and no-advertising content, the primary content on the click-into page is the actual ad or ad grouping that we were testing. Thus, we restricted our eye tracking analysis to ad conditions on the main pages.

Figure 4
Confidence Intervals for Estimated Effects of Disclosure Modifications on Average Amount of Time Spent Looking at Ads

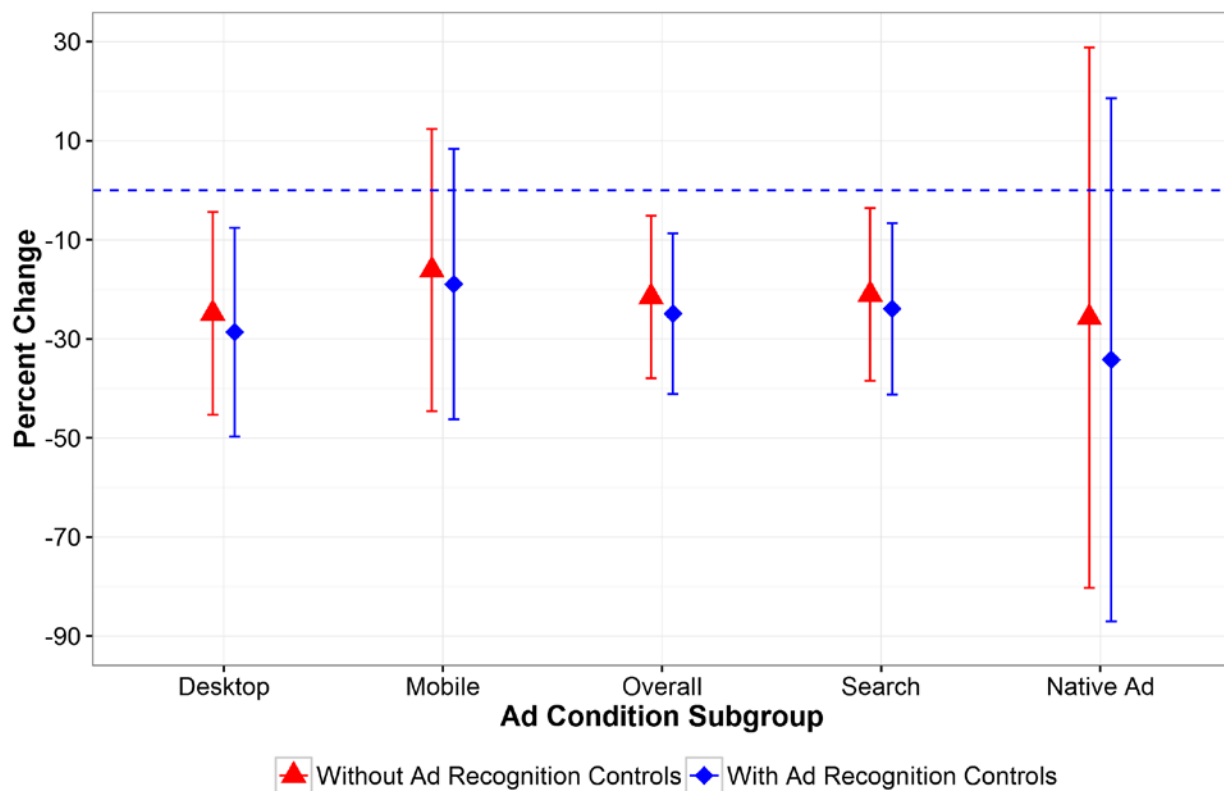


Figure 4 depicts the 95% confidence intervals for the estimated effects of the disclosure modifications on time spent looking at ads based on the statistical model, for all conditions and separately for the search, native ad, desktop, and mobile conditions. The red triangles depict the results not controlling for ad recognition, while the blue diamonds depict the results controlling for ad recognition.

We further analyzed the eye tracking data by controlling for ad recognition in the regression analysis to evaluate whether the observed decrease in the amount of time participants fixated on the ad conditions was due to a larger proportion of them recognizing the ads as ads. If the effects on visual attention were primarily due to increased ad recognition, when we controlled for ad recognition we should have found a significant reduction in the effects of the disclosure modifications. When we applied this regression model, we did not find a reduction in the effects of the disclosure modifications but instead that the effects were slightly larger (21% reduction in effects without controlling for ad recognition and 25% reduction with controlling for ad recognition.) See Figure 5 below. Thus, the decreased time that participants fixated on the ad conditions does not seem due to an increased rate of ad recognition.