

# When Does Retargeting Work? Information Specificity in Online Advertising: Web Appendix

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## **Abstract**

This web appendix discusses two additional lab experiments that confirm the robustness of our results.

## **A-1 Replication with Different Product**

*Objective.* The results in the main paper focus on travel products. We here aim to show that our results extend to other product categories where consumers are initially likely to have a broad idea of what they are looking for and later to develop narrowly construed preferences.

*Design and Procedure.* We choose a  $2 \times 2$  design similar to that reported in the main paper. We again vary whether a consumer has refined their preferences (only broad idea of what they want versus narrowly construed preferences) and the type of ad they are exposed to (generic versus dynamic ad). All participants are asked to imagine they are thinking of remodeling their bathroom to be more like a luxury spa. In the *broad-idea condition*, participants are told they do not yet know how exactly they will accomplish this and have not yet decided whether to focus on massage showers, tubs, extra-large basins or other luxury features. They are then asked to imagine that on a website of a bathroom remodeling company they broadly looked at different luxury bathroom features, including bathtubs. In the *narrow-preferences condition*, participants are told they are specifically looking for a freestanding clawfoot bathtub in off-white. They are then asked to imagine that on the website of a bathroom remodeling company they evaluated several freestanding clawfoot bathtubs in off-white.

All participants are told that as they now browse the Internet, they see an ad on another website for this bathroom remodeling company. Participants in the *generic-ad condition* are shown an ad that evokes a luxury bathroom setting - a hand relaxing on an off-white bathtub, a glass of champagne and candles. Participants in the *dynamic-ad condition* are shown an ad displaying four different freestanding clawfoot bathtubs in off-white. They are told the ad shows one of the bathtubs they looked at plus three other bathtubs. Participants are asked how likely they are to visit the firm's website and buy luxury bathroom features.

We measure whether either ad causes privacy concerns or reactance. We also ask participants

whether they had refurbished their bathroom in the past five years and whether they searched or purchased bathroom fixtures online the past five years to control for category experience.

We expect participants in the *broad-idea condition* to be more likely to visit the website and buy luxury bathroom features when they view a generic ad than when they view a dynamic retargeted ad. The dynamic ad should be more effective in the *narrowly construed preferences condition* than in the *broad-idea condition*, even when accounting for privacy concerns and reactance.

186 participants were recruited online through Mechanical Turk and randomly assigned to conditions (94 responses for the *broad-idea condition*, 92 responses for the *narrowly construed preferences condition*).<sup>1</sup>

*Results.* As hypothesized, in the *broad-idea condition*, participants react significantly more favorably to the generic ad than to the dynamic ad (5.133 vs. 4.184,  $p=0.002$ ). The effectiveness of the dynamic ad, however, increases significantly in the *narrow-preferences condition* (4.184 vs. 4.891,  $p=0.040$ ). Column (1) in Table A-1 confirms that overall consumers are less likely to buy after seeing a dynamic ad unless consumers already have narrowly construed preferences.

The results are robust to controlling for privacy concerns and reactance. There is no significant difference in privacy concerns between participants who view the generic ad vs. those that view the dynamic ad (3.547 vs. 3.857,  $p=0.127$ ). Privacy concerns do not change when participants have further refined their preferences (3.836 vs. 3.572,  $p=0.193$ ). Reactance to the ad is again low and does not differ across conditions (*generic* versus *dynamic*: 2.534 vs. 2.608,  $p=0.675$ ; *broad idea* versus *narrow preferences*: 2.567 vs. 2.576,  $p=0.958$ ). Inclusion of these variables in the regression does not change the main effect of interest (Table A-1, Column (2)).

Last, we check whether the effect we observe is a result of the participant's product experience. We include whether a participant refurbished their bathroom and an interaction term with the variable that indicates that an ad was specific. We repeat the analysis for whether participants searched

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<sup>1</sup>We dropped five outliers from the total number of 191 participants. When including the outliers, the main results are directionally consistent and significant, though at a lower level.

or purchased bathroom fixtures online. None of the interactions are significant, suggesting that the effect is not caused by prior category experience (Table A-1, Columns (3) and (4)).

The study confirms that the finding, that dynamic retargeted ads are only effective when consumers have refined their preferences, is not limited to vacations, but extends across other products where consumers are likely to initially have a broad idea of what they want and later develop narrowly construed preferences.

## **A-2 Ruling out Social Validation**

*Objective.* We next aim to provide further evidence that our results are not due to social validation and increased access to quality information. We focus on a setting where consumers have narrowly construed preferences for a travel product. We aim to show that in this setting the dynamic ad is more effective than a generic ad independently of whether consumers were exposed to social validation of products or received quality information.

*Design and procedure.* The study has a  $2 \times 2$  design. We vary whether a consumer has refined their preferences (only broad idea of what they want versus narrowly construed preferences) and whether there was social validation of the product. Participants in the *broad-idea condition* are asked to imagine they would like to go on a beach vacation. They do not yet know where they would like to go and are still exploring different destinations. They have not yet thought about specific hotels since they would like to first choose their destination. They are then asked to imagine that on a website of a travel company they broadly looked at hotels in many different regions. In the *narrowly construed-preferences condition*, participants are asked to imagine they would like to go on a beach vacation in Hawaii. They are specifically looking for a hotel with a very large pool. They are then asked to imagine that on the website of a travel company they evaluated hotels with large pools on Hawaii. All participants are then shown an ad displaying four hotels. They are told that it shows a picture of one of the hotels they looked at plus three other hotels.

Participants in the *no-validation condition* are additionally told that the hotels on the travel firm's website all looked very good, including the one displayed in the ad. Participants in the *social-validation condition* were told that on its own website, the travel firm also displayed the ratings by the travel review site Tripadvisor. All hotels they looked at were very highly rated, including the hotel displayed in the ad. In the *social-validation condition* we focus on star ratings provided by the review site but presented within the travel website to avoid confounds with other characteristics of the detailed reviews. All participants are then asked how likely they are to visit the firm's website and book a vacation. They were additionally asked how likely they are, at this stage of their travel planning to buy from a competitor.

We expect participants in the *broad-idea condition* to be less likely to visit the firm's website and book a vacation than in the *narrowly construed-preferences condition*. We expect that this is not affected by whether participants were told that they had viewed the review site ratings.

242 participants were recruited online through Mechanical Turk and randomly assigned to conditions (119 responses for the *broad-idea conditions*, 123 responses for the *narrowly construed-preferences conditions*).

*Results.* As hypothesized, participants in the *broad-idea conditions* react significantly less favorably to the dynamic ad than participants in the *narrowly construed-preferences conditions* (*no validation*: 4.754 vs. 5.229,  $p=0.038$ ; *social validation*: 4.569 vs. 5.226,  $p=0.008$ ). However, whether participants were exposed to ratings by a travel review site did not affect how likely they were to react favorably to the dynamic retargeted ad (*broad idea*: 4.754 vs. 4.569,  $p=0.456$ ; *narrowly construed preferences*: 5.230 vs. 5.226,  $p=0.987$ ). A regression further illustrates that whether consumers have refined their preferences, but not whether they were exposed to reviews by other travelers, significantly affects the effectiveness of a dynamic ad (Column (1) in Table A-2). This holds when we control for how likely consumers are to buy from a competitor (Column (2)).

The results confirm that whether a consumer has narrowly construed preferences, but not

whether the consumer was exposed to data indicating validation by other consumers or additional quality information, affects the effectiveness of dynamic ads.

Since in all conditions, participants were instructed that the advertised products were viewed positively, the results provide additional evidence that the increased effectiveness of a dynamic ad is not a result of reactance to an ad recommending products the consumer had previously rejected but rather due to consumers having formed narrowly construed preferences.

Table A-1: Lab Study Two - Luxury Bathroom

|                                   | (1)                  | (2)                  | (3)                   | (4)                   |
|-----------------------------------|----------------------|----------------------|-----------------------|-----------------------|
| Dynamic Ad                        | -0.950***<br>(0.304) | -0.894***<br>(0.294) | -0.581**<br>(0.244)   | -0.631**<br>(0.256)   |
| Stable Preferences                | -0.199<br>(0.308)    | -0.228<br>(0.301)    |                       |                       |
| Dynamic Ad × Stable Preferences   | 0.906**<br>(0.432)   | 0.908**<br>(0.418)   |                       |                       |
| Privacy                           |                      | -0.122<br>(0.0854)   | -0.108<br>(0.0856)    | -0.117<br>(0.0857)    |
| Reactance                         |                      | -0.253**<br>(0.0976) | -0.275***<br>(0.0986) | -0.272***<br>(0.0987) |
| Refurb. Bath                      |                      |                      | 0.0594<br>(0.333)     |                       |
| Refurb. Bath × Stable Preferences |                      |                      | 0.595<br>(0.485)      |                       |
| Bath Online                       |                      |                      |                       | -0.0976<br>(0.313)    |
| Bath Online × Stable Preferences  |                      |                      |                       | 0.628<br>(0.455)      |
| Constant                          | 5.133***<br>(0.219)  | 6.223***<br>(0.371)  | 6.096***<br>(0.343)   | 6.171***<br>(0.353)   |
| Observations                      | 186                  | 186                  | 186                   | 186                   |
| R-Squared                         | 0.0590               | 0.132                | 0.119                 | 0.116                 |

Dependent variable is purchase probability scale. Ordinary Least Square Estimates. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

Table A-2: Lab Study Three - Social Validation

|  | (1)                 | (2)                 |
|--|---------------------|---------------------|
| Social Validation                            | -0.185<br>(0.238)   | -0.151<br>(0.237)   |
| Well-Defined Preferences                     | 0.475**<br>(0.234)  | 0.487**<br>(0.234)  |
| Social Validation × Well-Defined Preferences | 0.181<br>(0.333)    | 0.162<br>(0.332)    |
| Buy Competitor                               |                     | 0.139*<br>(0.0800)  |
| Constant                                     | 4.754***<br>(0.166) | 4.157***<br>(0.381) |
| Observations                                 | 242                 | 242                 |
| R-Squared                                    | 0.0483              | 0.0603              |

Dependent variable is purchase probability scale. Ordinary Least Square Estimates. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

## Web Appendix – Part 2

This web appendix summarizes the instructions used in the lab studies of the main paper and the web appendix.

### 1 Instructions for Study: ‘Confirming Results in the Lab’

#### Consent

##### Research study on online travel sites

**Thank you for choosing to participate in this research study by Anja Lambrecht ([alambrecht@london.edu](mailto:alambrecht@london.edu)) and Catherine Tucker ([cetucker@MIT.EDU](mailto:cetucker@MIT.EDU)).**

We will ask you a few questions that relate to researching and purchasing travel products online. The total length of this study is approximately 5 minutes.

Your decision to participate in this study is voluntary. Please note that you are free to withdraw from the study at any time. Refusal to take part in this study, or withdrawing from it, will involve no penalty or loss of benefits that you would otherwise receive.

There are no risks involved in this study that you would not encounter in daily life.

Please note that our studies are purely for academic purposes. The results are available to the public in research journals, books and other academic publications. Your data will remain confidential and will be treated anonymously. In fact, we are only interested in aggregated responses and not individual responses.

If you have any questions pertaining to this research or your rights as a participant, you can contact the researchers (see contact details above). You will have an opportunity to receive a complete explanation of the research and its purposes following completion of the study.

If you are satisfied with the information outlined above and agree to participate in this research study, please select the yes option below.

Yes

No

#### Condition 1a – early stage, generic

Imagine you would like to go on a beach vacation. You do not yet know where you would like to go and are still exploring different destinations. You have not yet thought about specific hotels since you would like to first choose your destination.

Now imagine that on the website of a travel company you broadly looked at hotels in many different regions.

As you are now browsing the Internet, you see an ad on another website for this travel company. It shows a picture relating to beach vacations. The ad is displayed below.





Remember you have only decided on a beach vacation. You have not yet chosen a destination and are not yet thinking about specific hotels.

How likely are you to visit the firm's website and book a vacation?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember you want to go on a beach vacation. You have not yet chosen a destination and are not yet thinking about specific hotels.

At this stage of your travel planning, how likely are you to **have already visited** a travel review site, such as Tripadvisor? (On travel review sites you have access to reviews of specific hotel by other travellers.)

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please tell us how much you like this ad:



|                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Dislike Extremely        | Dislike Very Much        | Dislike Slightly         | Neither Like nor Dislike | Like Slightly            | Like Very Much           | Like Extremely           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|  | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| I am concerned that the travel website may not take measures to prevent unauthorized access to my personal information       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Overall, I feel unsafe about providing personal information to the travel website  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website is using too much personal information about me                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Obstrusive   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statement.

|                                 | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---------------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| This ad raises privacy concerns | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Condition 1b – early stage, specific**

Imagine you would like to go on a beach vacation. You do not yet know where you would like to go and are still exploring different destinations. You have not yet thought about specific hotels since you would like to first choose your destination.

Now imagine that on the website of a travel company you broadly looked at hotels in many different regions.

As you are now browsing the Internet, you see an ad on another website for this travel company. It shows a picture of one of the hotels you looked at plus three other hotels. The ad is displayed below.



Remember you have only decided on a beach vacation. You have not yet chosen a destination and are not yet thinking about specific hotels.

How likely are you to visit the firm's website and book a vacation?

|                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember you want to go on a beach vacation. You have not yet chosen a destination and are not yet thinking about specific hotels.

At this stage of your travel planning, how likely are you to **have already visited** a travel review site, such as Tripadvisor? (On travel review sites you have access to reviews of specific hotel by other travellers.)

|                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       |                          |                          |                          |                          |                          |                          |                          |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please tell us how much you like the ad:



|                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Dislike Extremely        | Dislike Very Much        | Dislike Slightly         | Neither Like nor Dislike | Like Slightly            | Like Very Much           | Like Extremely           |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree with the following statements.

|  | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Overall, I feel unsafe about providing personal information to the travel website  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may not take measures to prevent unauthorized access to my personal information       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website is using too much personal information about me                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Obstrusive   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statement.

|                                 | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---------------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| This ad raises privacy concerns | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Condition 2a – late stage, generic**

Imagine you would like to go on a beach vacation on Hawaii. You are specifically looking for a hotel with a very large pool.

Now imagine that on the website of a travel company you evaluated hotels with large pools on Hawaii.

As you are now browsing the Internet, you see an ad on another website for this travel company. It shows a picture generally relating to beach vacations. The ad is displayed below.



Remember that you are specifically looking for a hotel with a large pool on Hawaii.

How likely are you to visit the firm's website and book a vacation?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you are evaluating hotels with large pools on Hawaii.

At this stage of your travel planning, how likely are you to **have already visited** a travel review site, such as Tripadvisor? (On travel review sites you have access to reviews of specific hotel by other travellers.)

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Unlikely                 |                          | Unlikely                 |                          | Likely                   |                          | Likely                   |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please tell us how much you like this ad:



| Dislike Extremely        | Dislike Very Much        | Dislike Slightly         | Neither Like nor Dislike | Like Slightly            | Like Very Much           | Like Extremely           |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|  | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| I am concerned that the travel website may not take measures to prevent unauthorized | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|  |                          |                          |                          |                          |                          |                          |                          |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| access to my personal information  |                          |                          |                          |                          |                          |                          |                          |
| I am concerned that the travel website is using too much personal information about me                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Overall, I feel unsafe about providing personal information to the travel website  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Obtrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:





Please tell us whether you agree or disagree with the following statements.

|                                 | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---------------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| This ad raises privacy concerns | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Condition 2b – late stage, specific**

Imagine you would like to go on a beach vacation on Hawaii. You are specifically looking for a hotel with a very large pool.

Now imagine that on the website of a travel company you evaluated hotels with large pools on Hawaii.

As you are now browsing the Internet, you see an ad on another website for this travel company. It shows a picture of one of the hotels you looked at plus three other hotels. The ad is displayed below.



Remember that you are specifically looking for a hotel with a large pool on Hawaii.

How likely are you to visit the firm’s website and book a vacation?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you are evaluating hotels with large pools on Hawaii.

How do you view the travel company?

| Very negatively          | Negatively               | Somewhat Negatively      | Undecided                | Somewhat positively      | Positively               | Very positively          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please tell us how much you like the ad:



|                          |                          |                          |                                |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------------|--------------------------|--------------------------|--------------------------|
| Dislike<br>Extremely     | Dislike<br>Very<br>Much  | Dislike<br>Slightly      | Neither<br>Like nor<br>Dislike | Like<br>Slightly         | Like<br>Very<br>Much     | Like<br>Extremely        |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|  | Strongly<br>Disagree     | Disagree                 | Somewhat<br>Disagree     | Neither<br>Agree<br>nor<br>Disagree | Somewhat<br>Agree        | Agree                    | Strongly<br>Agree        |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| Overall, I feel unsafe about providing personal information to the travel website  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may not take measures to prevent unauthorized access to my personal information       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the travel website is using  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
| too much personal information about me |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Obstrusive   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|                                 | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---------------------------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| This ad raises privacy concerns | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**general – online travel**

How many times have you booked vacation packages, hotels or vacation rentals over the past 3 years?  
(Please enter a number only.)

.....

How many times have you booked vacation packages, hotels or vacation rentals online over the past 3 years?  
(Please enter a number only.)

.....

**thank you**

Thank you for participating in this study. The study is part of a larger research effort that explores how consumers search for travel information, react to ads by travel companies and make decisions on travel products.

Also, paste the word "beach" into the HIT comments block, though please give us any other comments as well.

If you have any questions, please do not hesitate to email us at [alambrechtl@london.edu](mailto:alambrechtl@london.edu) or [cetucker@mit.edu](mailto:cetucker@mit.edu).

## 2 Instructions for Appendix Study: ‘Ruling out Social Validation’

### Consent

#### Research study on online travel sites

Thank you for choosing to participate in this research study by Anja Lambrecht ([alambrecht@london.edu](mailto:alambrecht@london.edu)) and Catherine Tucker ([cetucker@MIT.EDU](mailto:cetucker@MIT.EDU)).

We will ask you a few questions that relate to purchasing travel products online. The total length of this study is approximately 5 minutes.

Your decision to participate in this study is voluntary. Please note that you are free to withdraw from the study at any time. Refusal to take part in this study, or withdrawing from it, will involve no penalty or loss of benefits that you would otherwise receive.

There are no risks involved in this study that you would not encounter in daily life.

Please note that our studies are purely for academic purposes. The results are available to the public in research journals, books and other academic publications. Your data will remain confidential and will be treated anonymously. In fact, we are only interested in aggregated responses and not individual responses.

If you have any questions pertaining to this research or your rights as a participant, you can contact the researchers (see contact details above). You will have an opportunity to receive a complete explanation of the research and its purposes following completion of the study.

If you are satisfied with the information outlined above and agree to participate in this research study, please select the yes option below.

Yes

No

### Condition 1a – early stage, no validation

Imagine you would like to go on a beach vacation. You do not yet know where you would like to go and are still exploring different destinations. You have not yet thought about specific hotels since you would like to first choose your destination.

Now imagine that on the website of a travel company you broadly looked at hotels in many different regions. The hotels all looked very good.

As you are now browsing the Internet, you see an ad on another website for this travel company. It shows a picture of one of the hotels you looked at, and that looked very good, plus three other hotels. The ad is displayed below.



Remember you have only decided on a beach vacation. You have not yet chosen a destination and are not yet thinking about specific hotels.

How likely are you to visit the firm's website and book a vacation?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Condition 1b – early stage, validation**

Imagine you would like to go on a beach vacation. You do not yet know where you would like to go and are still exploring different destinations. You have not yet thought about specific hotels since you would like to first choose your destination.

Now imagine that on the website of a travel company you broadly looked at hotels in many different regions. For all hotels, the website also displayed the ratings by the travel review site Tripadvisor. All hotels you looked at were rated very highly.

As you are now browsing the Internet, you see on another website an ad on another website for this travel company. It shows a picture of one of the hotels you looked at, and that was very highly rated, plus three other hotels. The ad is displayed below.



Remember you have only decided on a beach vacation. You have not yet chosen a destination and are not yet thinking about specific hotels.

How likely are you to visit the firm's website and book a vacation?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Condition 2a – late stage, no validation**

Imagine you would like to go on a beach vacation on Hawaii. You are specifically looking for a hotel with a very large pool.

Now imagine that on the website of a travel company you evaluated hotels with large pools on Hawaii. The hotels all looked very good.

As you are now browsing the Internet, you see an ad on another website for this travel company. It shows a picture of one of the hotels you looked at, and that looked very good, plus three other hotels. The ad is displayed below.



Remember that you are specifically looking for a hotel with a large pool on Hawaii.

How likely are you to visit the firm’s website and book a vacation?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Condition 2b – late stage, validation**

Imagine you would like to go on a beach vacation on Hawaii. You are specifically looking for a hotel with a very large pool.

Now imagine that on the website of a travel company you evaluated hotels with large pools on Hawaii. For all the hotels, the website also displayed the ratings by the travel review site Tripadvisor. All the hotels you looked at were rated very highly.

As you are now browsing the Internet, you see an ad on another website for this travel company. It shows a picture of one of the hotels you looked at, and that was very highly rated, plus three other hotels. The ad is displayed below.



Remember that you are specifically looking for a hotel with a large pool on Hawaii.

How likely are you to visit the firm's website and book a vacation?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

At this stage in your travel planning, how likely are you to buy from this company or from a competitor?

|                       | Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|-----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Buy from this company | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Buy from a competitor | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**thank you**

Thank you for participating in this study. The study is part of a larger research effort that explores how consumers search for travel information, react to ads by travel companies and make decisions on travel products.

Also, paste the word "travel review" into the HIT comments block, though please give us any other comments as well.

If you have any questions, please do not hesitate to email us at [alambrechtl@london.edu](mailto:alambrechtl@london.edu) or [cetucker@mit.edu](mailto:cetucker@mit.edu).



### 3 Instructions for Appendix Study: ‘Replication for Different Product’

#### Consent

##### Research study on online travel sites

Thank you for choosing to participate in this research study by Anja Lambrecht ([alambrecht@london.edu](mailto:alambrecht@london.edu)) and Catherine Tucker ([cetucker@MIT.EDU](mailto:cetucker@MIT.EDU)).

We will ask you a few questions that relate to researching and purchasing travel products online. The total length of this study is approximately 5 minutes.

Your decision to participate in this study is voluntary. Please note that you are free to withdraw from the study at any time. Refusal to take part in this study, or withdrawing from it, will involve no penalty or loss of benefits that you would otherwise receive.

There are no risks involved in this study that you would not encounter in daily life.

Please note that our studies are purely for academic purposes. The results are available to the public in research journals, books and other academic publications. Your data will remain confidential and will be treated anonymously. In fact, we are only interested in aggregated responses and not individual responses.

If you have any questions pertaining to this research or your rights as a participant, you can contact the researchers (see contact details above). You will have an opportunity to receive a complete explanation of the research and its purposes following completion of the study.

If you are satisfied with the information outlined above and agree to participate in this research study, please select the yes option below.

Yes

No

#### Condition 1a – early stage, generic

Imagine you are thinking of remodelling your bathroom to be more like a luxury spa retreat. You do not yet know how exactly you will accomplish this. You have not decided yet whether to focus on massage showers, tubs, extra-large basins or other luxury features.

Now imagine that on the website of a bathroom remodelling company you broadly looked at different luxury bathroom features, including bathtubs.

As you are now browsing the Internet, you see an ad on another website for this bathroom remodelling company. It shows a picture relating to bathrooms. The ad is displayed below.



Remember that you have decided to upgrade your bathroom with luxury features. But you have not yet decided what type of luxury features you like.

How likely are you to visit the firm's website and purchase luxury bathroom features?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|   | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Overall, I feel unsafe about providing personal information to the website  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website is using too much personal information about me                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may not take measures to prevent unauthorized access to my personal information       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Obstrusive   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**Condition 1b – early stage, specific**

Imagine you are thinking of remodelling your bathroom to be more like a luxury spa retreat. You do not yet know how exactly you will accomplish this. You have not decided yet whether to focus on massage showers, tubs, extra-large basins or other luxury features.

Now imagine that on the website of a bathroom remodelling company you broadly looked at different luxury bathroom features, including bathtubs.

As you are now browsing the Internet, you see an ad on another website for this bathroom remodelling company. It shows one of the bathtubs you looked at plus three others. The ad is displayed below.



Remember that you have decided to upgrade your bathroom with luxury features. But you have not yet decided what type of luxury features you like.

How likely are you to visit the firm's website and purchase luxury bathroom features?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|   | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| I am concerned that the website is using too much personal information about me                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Overall, I feel unsafe about providing personal information to the website  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may not take measures to prevent unauthorized access to my personal information       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|            |                          |                          |                          |                          |                          |                          |                          |
|------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Obstrusive | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|

**Condition 2ab – late stage, generic**

Imagine you are thinking of remodelling your bathroom to be more like a luxury spa retreat. You are specifically looking for a freestanding clawfoot bathtub in off-white

Now imagine that on the website of a bathroom remodelling company you evaluated several freestanding clawfoot bathtubs.

As you are now browsing the Internet, you see an ad on another website for this bathroom remodelling company. It shows a picture relating to bathrooms. The ad is displayed below.

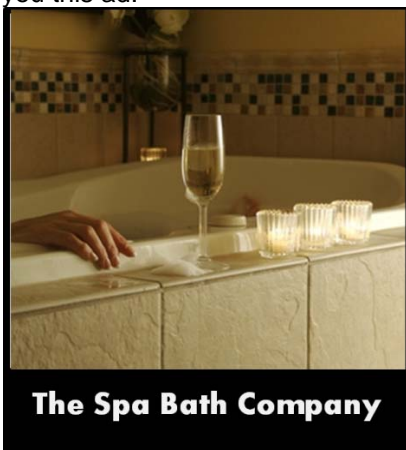


Remember that you have decided to upgrade your bathroom with luxury features. Specifically you are looking for a freestanding clawfoot bathtub in off-white.

How likely are you to visit the firm’s website and purchase luxury bathroom features?

|                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company’s website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|   | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| I am concerned that the website may not take measures to prevent unauthorized access to my personal information       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website is using too much personal information about me                                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Overall, I feel unsafe about providing personal information to the website  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Obstrusive   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

### **Condition 2b – late stage, specific**

Imagine you are thinking of remodelling your bathroom to be more like a luxury spa retreat. You are specifically looking for a freestanding clawfoot bathtub in off-white

Now imagine that on the website of a bathroom remodelling company you evaluated several freestanding clawfoot bathtubs.

As you are now browsing the Internet, you see an ad on another website for this bathroom remodelling company. It shows a picture of one of the bathtubs you looked at plus three others. The ad is displayed below.



Remember that you have decided to upgrade your bathroom with luxury features. Specifically you are looking for a freestanding clawfoot bathtub in off-white.

How likely are you to visit the firm's website and purchase luxury bathroom features?

| Very Unlikely            | Unlikely                 | Somewhat Unlikely        | Undecided                | Somewhat Likely          | Likely                   | Very Likely              |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Remember that you had previously browsed the company's website and later the company showed you this ad:



Please tell us whether you agree or disagree with the following statements.

|   | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|---|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| I am concerned that the website may use my personal information in a way that I do not like                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may share my personal information with other parties without getting my authorization | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website is using too  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

|   |                          |                          |                          |                          |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| much personal information about me  |                          |                          |                          |                          |                          |                          |                          |
| Overall, I feel unsafe about providing personal information to the website                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| I am concerned that the website may not take measures to prevent unauthorized access to my personal information | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Now please tell us whether you agree or disagree with the following statements on the ad above:

This ad is...

|              | Strongly Disagree        | Disagree                 | Somewhat Disagree        | Neither Agree nor Disagree | Somewhat Agree           | Agree                    | Strongly Agree           |
|--------------|--------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|--------------------------|
| Disturbing   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Obstrusive   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Interfering  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Invasive     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Forced on me | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Intrusive    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Distracting  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**experience**

Did you refurbish your bathroom in the past 5 years?

- Yes
- No

Did you search for bathroom fixtures online or did you purchase bathroom fixtures online in the past 5 years?

- Yes
- No

**thank you**

Thank you for participating in this study. The study is part of a larger research effort that explores how consumers search for travel information, react to ads by travel companies and make decisions on travel products.

Also, paste the word “clawfoot” into the HIT comments block, though please give us any other comments as well.

If you have any questions, please do not hesitate to email us at [alambrech@london.edu](mailto:alambrech@london.edu) or [cetucker@mit.edu](mailto:cetucker@mit.edu).