

# Treatment of consumers by Internet-enabled businesses: Ethnographic pilot study

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Sponsored by Me2B Alliance

## Executive Summary

### **Objective**

To understand how people want to be treated by the Internet-enabled businesses they interact with.

### **Approach**

Ethnographic interviews conducted with 5 participants.

### **Insights**

#### ▪ **Explicit attitudes regarding the consumer-company relationship**

In general, participants saw themselves as having a relationship with the brand or product itself, rather than with the company that made the product. Even when prompted to discuss how they relate to specific companies, most participants had little to say about companies providing connected products and services. Two of the participants cited a few examples of corporate behavior that was important to them. But overall, corporate behavior was not a factor that overrode other factors when participants were deciding whether or not to use a connected product.

#### ▪ **Factors driving use of connected products**

The most important factors were convenience, usefulness, and the ability to connect with friends and family. Even when participants had negative views of a company or a product, these factors could override those negative views. The themes of “safety” and “security” did arise naturally for some participants. However, “safety” and “security” concerns did not override convenience, usefulness, and the ability to connect with friends and family. The small-scale, ethnographic approach of this study is useful for identifying these factors as potentially important, but it cannot determine generalizable patterns in how consumers may weigh various attributes when deciding whether to use a connected product. If this question is to be pursued in future research, a conjoint analysis is recommended.

#### ▪ **Perceptions of “digital harms” as an index of implicit attitudes regarding the consumer-company relationship**

Me2Be Alliance has hypothesized a set of “digital harms” consumers may encounter when using connected products. In this study, an “emic” catalogue of digital harms was also collected—one that was generated bottom-up by participants without biasing them toward specific categories. The participant-generated digital harms could be categorized as pertaining to either the production or consumption of either goods (and services) or information, both during the traditional “business transaction” and during additional “data transactions.”

Perceptions of digital harms may be considered an index of participants’ implicit attitudes regarding the consumer-producer relationship as unstable and unknowable.

When consumers participate in a traditional (not online) business transaction, they do not worry about being harmed because they believe they understand the rules of the transaction,

and that this understanding is shared by the producer as well. In contrast, the rules for engaging in online business transactions may be inherently unknowable because they are unstable over time, variable across organizations, and not standardized either through convention or regulation.

The mutual understanding in traditional business transactions is what affords each player agency in the interaction. When consumers understand the rules and expectations of the transaction, they are empowered to advocate for their own well-being. In the case of Internet-enabled business transactions, the lack of mutual understanding of the rules of engagement causes consumers to feel powerless. Interview participants indicated that knowledge and agency were important to them in their online consumer-producer relationships.

## **Recommendations**

### **Certification Criteria**

Include:

- Relationship rules that are clearly defined and mutually understood
- Knowledge about the nature of the relationship that is easy to access and understand
- Agency in the context of the relationship to advocate for one's own interests, however defined

### **Application of certification criteria**

- Apply certification criteria holistically, so that some "bad" behaviors may be counterbalanced by "good" behaviors.
- Scale penalization for "bad" behaviors so that consumers have additional recourse, beyond merely opting out of the relationship, to negotiate the relationship.

### **(Re)defining the terms**

- Work to define and standardize the online consumer-company relationship so it is as stable, consistent, and transparent as typical offline consumer-company relationships.
- Clearly define the role of a "consumer" and a "producer," especially in the context of information collection and sharing. Individuals should be aware when their apparent consumption is actually producing exchange value for a company.
- Define additional transactions beyond the expected, traditional "business transaction." This is an ongoing process of tracking and cataloguing as new transaction types are invented.

### **Outreach to consumers and producers**

- Conduct and outreach in order to propagate new ideas about the nature of consumer-company relationships, to bring consumer and producer views of this relationship into alignment, and to spark processes of organizational and cultural change.

### **Further research and design**

- In order to understand the relative importance of factors influencing use or non-use of connected products, including privacy factors, conduct a conjoint analysis.
- In order to engage consumers and producers in creating the parameters of a Me2B relationship model, facilitate participatory design processes.

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# 1 Introduction

## 1.1 Background

The purpose of this study was to understand people's primary concerns when it comes to how they interact with internet-enabled products or services as well as the companies that provide them. Me2B Alliance seeks to use this information to develop criteria for a certification that would indicate that a product or company meets a certain standard for behavior.

This study takes an ethnographic approach to the problem, investigating not only the nature of the consumer-company relationship, but also how people understand the interaction and what meaning it has for them. Understanding how people conceptualize their own role as online consumers and how they conceptualize the role of online producers will allow for the development of a bottom-up model of what an ideal consumer-company relationship would look like.

## 1.2 Study Objective

Conduct qualitative research to understand how people want to be treated by the Internet-enabled businesses they interact with.

## 2 Research Design

This was a small-scale, qualitative pilot study. Open-ended interviews were conducted with five adult participants in order to understand how they want to be treated by the Internet-enabled businesses they interact with.

### 2.1 Research Questions

Two primary research questions guided the development of the research methods:

1. What are users' primary concerns when considering how they want to be treated by an internet-enabled business?
2. What are users' primary concerns when considering whether to use/buy a connected product or service?

### 2.2 Participants

Study participants consisted of two men and three women of various racial/ethnic backgrounds and from various parts of the United States. All were in their 30s, with the youngest being 31 and the oldest, 39. Three of the participants worked from home, and two did not. Table 1 provides basic demographic information about the five participants.

Table 1: Study Participants' Demographic Information

| Pseudonym | Sex | Age | Race/Ethnicity       | Residence        | Employment                                  |
|-----------|-----|-----|----------------------|------------------|---|
| Dan       | M   | 35  | White                | Phoenix, AZ      | Sales, works from home                      |
| Gerald    | M   | 37  | Black                | Tampa, FL        | Chef  |
| Jasmine   | F   | 31  | Black                | Philadelphia, PA | Eighth grade counselor                      |
| Adriana   | F   | 37  | Hispanic (Dominican) | Boston, MA       | Translation for government, works from home |
| Kimberly  | F   | 39  | White                | Brownsburg, IN   | Virtual assistant, works from home          |

Participants differed in the way they related to the connected devices, products, and services they used. The following profiles give a sense of each participant's technology use in terms of quantity of products used, the way the products were used, how the participants felt about their technology use, as well as their general comfort level with technology. Participants also differed in their concern for online privacy or other "digital harms." Most were generally unconcerned except when it came to financial information, taking extra steps to secure their credit card or other information online. Only Adriana expressed significant distrust toward several connected service providers.

**Dan**



**Snapshot: Power user**

Dan was an extremely savvy user of connected products and services. He stood out for the sheer quantity of such products and services that he used regularly. He also stood out for being very invested in the act of consuming these products and services, going to great lengths to research, compare, and even test before purchasing. He was knowledgeable about relationships between brands and companies, and well-versed in tech industry concepts and terminology. Dan relished being part of a complex, interconnected ecosystem of connected products and services, and was hoping to expand this ecosystem.

*Devices regularly used:* Android smart phone, Windows laptop, Chromecast Ultra, video doorbell, smart scale, Nest thermostat

*Key connected products and services discussed:* Google suite, streaming music and content (YouTube, Disney+, Netflix), shopping sites, mobile banking, connected home ecosystem

**Gerald**



**Snapshot: "Old school"**

Gerald described his own technology use as "old school" on four occasions during the interview. He used the fewest number of connected devices, products, and services of the participants. He noted that, despite using some connected products and services, he continued to use multiple modalities to accomplish tasks. For example, he listened to both streaming music and music on CD; he wrote recipes on his computer as well as with pen and paper; and he played chess on the preinstalled phone app as well as through an online forum. While he was hoping to acquire his own smart TV soon, Gerald also said that his use of connected products has been limited by the bandwidth of his Internet connection, which is shared with other people in his home.

*Devices regularly used:* Smartphone, Windows desktop computer, borrowed laptop, partner's smart TV

*Key connected products and services discussed:* Email, streaming music (iTunes), streaming content (Netflix, Hulu), chess, Reddit, MS Word

**Jasmine**



**Snapshot: Social media butterfly**

The youngest participant, Jasmine, stood out for her social media use. She reported spending a significant amount of time viewing and posting to social media, especially Instagram. She also spent a significant amount of time participating in group chats. Jasmine said that she "loved" her phone, always had it with her, and used it for personal, social, and work functions.

*Devices regularly used:* Samsung smartphone, Windows laptop, Chromecast, Roku, Fitbit

*Key connected products and services discussed:* Messaging apps (WhatsApp, Signal, Group Me), social media (Instagram, Facebook, Twitter), streaming content (Netflix, Hulu, Disney+), online shopping, online banking

### **Adriana**



#### **Snapshot: Chatty**

Adriana stood out for her use of messaging apps, which she used to keep in touch with friends and families across the country as well as out of the country. As she explained, “WhatsApp is huge with Hispanics because you can do calls and texting with people in other countries.” Adriana also stood out for being the participant most concerned with digital harms and with the behavior of tech corporations. She mused that her heightened concern could be related to work she has done for the FBI.

*Devices regularly used:* iPhone, two Windows laptops, smart TV; kids have 2 tablets and one smartphone

*Key connected products and services discussed:* Messaging apps (WhatsApp, Marco Polo, iMessage, Linked In, FB Messenger), Waze, mobile banking, Facebook Marketplace, Amazon, Starbucks, Uber

### **Kimberly**



#### **Snapshot: Work user**

Kimberly worked from home providing customer service for several companies that rely heavily on connected services, such as Yelp or Facebook business, so she regularly used many common apps for work purposes. She reported used 6 different phone apps and 4 messaging apps for work purposes. Kimberly had few concerns about privacy or other digital harms and was less concerned than other participants with having control over app behavior or her own information.

*Devices regularly used:* iPhone, two Windows laptops, Android tablet, wearable activity tracker, Google Home, connected home video camera, Firestick, PlayStation 4

*Key connected products and services discussed:* Messaging apps (iMessage, WhatsApp, Slack, Facebook Messenger), Facebook, Amazon Prime, Consumer Medical, streaming content (Hulu, Netflix), phone call apps

## **2.3 Recruitment**

Participant recruitment was conducted using an online platform, UserInterviews.com. The platform allows for the creation of a screening survey to find eligible participants. Participants were sought who had a home broadband connection, who regularly used at least two Internet-



enabled devices, who did not work in the technology sector, and who did not live in a large urban center. See Appendix A for the complete screening survey.

Participants who qualified after completing the screening survey were then hand-selected by the researcher for participation. The researcher invited participants so as to maximize diversity of the interviewees along the dimensions of age, sex, ethnic/racial background, and geographical location. Due to the nature of the participants who qualified for the study, and perhaps the nature of the online recruitment platform, age diversity was limited.

Of the initial 5 participants invited to be interviewed, all but one completed the interview. To make up for the participant who did not complete the interview, a sixth participant was invited, and did complete the interview. A total of 5 participants, then, were interviewed.

## 2.4 Interviewing Process

Interviews were conducted via videoconferencing using the Zoom application. Melanie McComsey conducted the interviews, and one Me2B volunteer observed each interview and asked some questions of participants. Three different Me2B volunteers took turns observing 4 of the interviews. The fifth interview was not observed by a Me2B volunteer. Interviews were audio-recorded using Zoom. Each interview lasted approximately one hour.

### 2.4.1 Informed Consent

Interviewees gave verbal consent to participate in this study. At the start of the interview, via videoconferencing, the interviewer showed the participant a written consent form (see Appendix B). The interviewer read the entire consent form to the interviewee, then asked if he or she had any questions and if he or she agreed to participate in the study. If the interviewee consented, the audio-recording was initiated, and the interviewee was asked to state his or her name and to state, "I agree to participate in this study." These audio recordings of participants' verbal consent were saved as separate audio files and are retained by study personnel.

## 2.5 Ethnographic Interviewing

The purpose of ethnographic interviewing is to understand from the participants' perspectives which themes are important to them within a particular domain. To this end, ethnographic interviewing does not follow a rigid question-answer format so as to allow participant-generated themes to emerge and be integrated into the interview. The Ethnographic Interview Guide (see Appendix C) was used to direct the conversation, though questions were not necessarily asked verbatim or in the order they appear in the guide. The interviewer(s) also improvised questions as necessary in order to follow up with themes introduced by the participants.

## 2.6 Data Analysis

Audio recordings of the interviews were transcribed verbatim and then coded using a qualitative and mixed method research software (NVivo). Coding followed a bottom-up process in which codes were created based on emergent themes in the data. Overall, 74 distinct codes

were created, and 599 references were coded. Some of the major themes included references to digital harms, reasons for using or not using a connected product or service, descriptions of online practices related to privacy, and opinions expressed about specific companies or brands. For a full inventory of coding categories that emerged from the data, see Appendix D.

### 3 Insights

The insights summarized below represent the five participants' primary concerns when thinking about how they interact with internet-enabled products or services. The themes are organized into three major categories:

1. Explicit attitudes regarding the consumer-company relationship
2. Factors driving use of connected products
3. Perceptions of “digital harms” as an index of implicit attitudes regarding the consumer-company relationship.

For each category, the key insights are stated, then followed by a brief discussion of the evidence from which they emerged, and how they might relate to other insights or themes.

#### 3.1 Explicit attitudes regarding the consumer-company relationship

The following insights demonstrate how the participants talked about the relationship between themselves and the connected products and services they used. In general, participants saw themselves as having a relationship with the brand or product itself, rather than with the company that made the product. Even when prompted to discuss how they relate to specific companies, most participants had little to say about companies providing connected products and services. Two of the participants, Dan and Adriana, cited a few examples of corporate behavior that was important to them. But overall, corporate behavior was not a factor that overrode other factors when participants were deciding whether or not to use a connected product. Participants seemed to have a high tolerance for “bad” corporate behavior as long as the product was useful to them.

| Insight  | Discussion  |
|--|---|
| <b>3.1.1 Participants saw themselves as having a relationship with a product rather than with the company that made the product.</b> | Questions in the Interview Guide prompting participants to discuss a connected product they “really like” and one they “dislike” were deliberately crafted to be ambiguous as to whether the company, brand, functionality, or experience was in question (especially in cases where the company and product shared a name). Participants’ responses revealed what factors are most important to them when deciding to use or continue to use a connected product. No participant initially responded to these questions by discussing aspects of their relationship with a company, or the way the company treats them or handles their information. Instead, all participants initially responded to these questions by discussing some aspect of the functionality of the product or feelings associated with using the product. |

When prompted to talk about their relationship to a device or a connected product, participants were verbose and able to speak at length on these questions. In contrast, when prompted to talk about a company, participants often sidestepped the question, or claimed not to know much about the topic.

In one telling case, Kimberly began to discuss some thoughts on the privacy practices of Facebook at the researcher's prompting, but then began to conflate the company's privacy practices with content shown on the site.

*Interviewer: You are giving [Facebook] your information and in exchange, you're getting this service. Do you feel like that's a fair deal?*

*Kimberly: Not really, but I guess people aren't going to do things for free anymore. I guess it depends on how much of my information they're taking, which it seems to be quite a lot these days. I don't know, I kind of liked it back in the day when they didn't steal all your information and give it to whoever they want. I'm sure that they do that.*

*Interviewer: You said you don't think it's a fair deal, but you also haven't stopped using the service, right? Is there anything that would trigger you to stop using it?*

*Kimberly: I think if things got really negative, like if I was receiving a lot of negative things. I don't know how far they would have to go. It would have to be pretty bad and pretty offensive for me to stop using it.*

Based on Kimberly's previous claim that she does not like to see political or religious posts on Facebook, her reference to "receiving a lot of negative things" seemed to refer to posts she would see in her Facebook feed. In other words, even in the context of a discussion of the company's handling of her information, she reverted to talking about the functionality of the product when asked what would make her stop using it.

Overwhelmingly, then, participants saw themselves as relating to or interacting with a product, not with a company, when using connected products and services.

**3.1.2 Even when prompted, most participants did not have strong opinions about companies they do business with.**

Due to participants' general reluctance to talk about companies themselves, some participants were directly prompted to give opinions on companies they had already mentioned. Even in these cases, many participants had little to say about the companies. Kimberly's response below, when asked about Amazon, is a good illustration of how participants often deflected these questions by claiming not to "listen to" or "understand" issues related to corporate behavior.

*Interviewer: How do you feel about Amazon as a company? Do you like Amazon?*

*Kimberly: I do. Financially I've heard some things like how much they make and how much they avoid taxes. They get tax breaks. **I don't really listen to all that very much. I don't really understand it all.** That kind of stuff maybe annoys me a little bit, but at the same time they have really good customer service. If there's an issue with something they fix it very quickly. I can appreciate those types of things and overlook other things that maybe aren't so great.*

In this excerpt, Kimberly also justified her continued use of Amazon products despite rumors of tax avoidance saying that their good customer service was more important to her. In another example, Jasmine was discussing having deleted the Facebook and Twitter apps from her phone for purely functional reasons—she preferred to access them via her browser. The interviewer then prompted her to discuss specific companies, but for her, corporate behavior did not seem to affect her choice to use or not use a connected product.

*Interviewer: Are there any apps that you wouldn't want to have on your phone, just because you don't like that brand or that company?*

*Jasmine: I'm not sure. I don't think so.*

Participants also tended to have little knowledge about which companies own certain products and services. Several participants were unaware, for example, that Facebook owns WhatsApp. Overall, then, most participants did not have strong opinions about the companies they do business with online, and resisted identifying their relationship with companies as a factor in deciding to use a connected product. This was the case even when participants were prompted by the interviewers to express attitudes toward companies providing connected products.

**3.1.3 Some participants introduced the idea that corporate behavior matters to them when choosing to use a connected product.**

Although rare, there were some cases in which participants organically introduced the idea of corporate behavior influencing their use of connected products and services. For example, Dan indicated that he sees Google as “trying to work in the best interest of the consumers,” and that this is important to him in choosing to use so many Google products and services. At the same time, however, he mitigated the importance of this factor, saying “I don’t get too deep into it.”

*Interviewer: And what do you love so much about Google?*

*Dan: I love the breadth of services... I think the business is, and I don't know everything about Google. I do say I like Google, but I don't know everything about the business, and I don't really invest monetarily into Google, so I don't get too deep into it, but they seem to stand like a company that is trying to work in the best interest of the consumers, I would hope, and I don't think any business is perfect, but I'll think of one that I'm thinking favorably at the moment.*

Adriana was the only participant who expressed strong negative opinions toward several companies and claimed that their behavior influenced her when choosing to use those companies’ products. In particular, she said that she preferred to use Lyft instead of Uber for ride sharing because she heard that “Lyft treats their employees a little

better” and because she heard that an Uber board member was a Trump supporter.

*Adriana: I haven't deleted Uber, but I heard about their political affiliations, and I'll be honest, whenever possible, I use Lyft over Uber, and also heard that Lyft treats their employees a little better, although that's questionable recently... I also heard at some point...someone on the board I think of Uber was affiliated or a strong supporter of the Trump campaign, and while I'm not heavily into politics, I just don't want to be--to me, it's one of those things where it's like, okay, then I'll just go with Lyft. I don't want to contribute to someone who is certainly feeding negative things in our country, if that makes sense. I don't want to get into the politics of it, but any little bit I can do to help to take away my money and my service from companies that obviously don't have the best interest of all of us as a country, I'm going to do it, and that was my decision with Uber, if that makes sense.*

Adriana was also the only participant to specifically mention negative news coverage of corporate behavior. She claimed that coverage of congressional hearings on Facebook prompted her to deactivate her account—although she later reactivated it.

*Adriana: I deactivated my Facebook when it was sort of at the height of all that stuff and you were seeing the hearings and you could see Mark Zuckerberg in the morning in the news. At some point, I did deactivate it.*

Dan and Adriana did seem to care about corporate behavior then, though it was not a primary or overriding factor in their decision to use a connected product or service.

**3.1.4 Even when participants did have negative opinions toward a company, this was usually not sufficient to prompt them to stop using the company's products.**

Despite Adriana's negative view of Uber's employee policies, she had not deleted the app. And despite her negative view of Facebook's corporate behavior, she continued to use the service. When asked why she continued to use Facebook, she cited the need to keep in touch with friends and family, and the helpfulness of Facebook marketplace.

*Adriana: Because it's become a part of society. Of culture. It's the sort of thing, for example, I have certain friends who only send certain updates on Facebook. I wouldn't hear from them otherwise. So, for me, it's not so much so that everyone around me knows what I'm doing, because I don't often update my own profile or feed or whatever, it's more because I do stay in touch with certain people. I recently reconciled with my dad after 10 years of not talking to him, and he's an avid Facebook fan... I have found that the Facebook marketplace has been pretty helpful. Kind of a necessary evil. It's like you know that it's not great.*

Jasmine also expressed concern about Facebook, saying that she believed the Messenger app was "collecting personal information." She said she stopped using the product temporarily, but then resumed use.

*Jasmine: There was some buzz, maybe a year ago, about Facebook Messenger and it was saying that it was collecting personal information. So, I had to leave it for a while, but I had it back again. And at this point, I feel like I can't control it unless I'd use nothing. So whatever information is out there is out there, and I just make sure that I'm not doing anything criminal or crazy... But everything is just--at this point I feel like I can't avoid it. It's just there.*

Jasmine justified her continued use of Facebook Messenger by citing her lack of control over her own information, and put the onus on herself—"not do anything criminal or crazy"—to stay safe (see §3.3.3).

In a conversation about targeted advertising, Adriana demonstrated another pattern in which participants were more willing to vilify certain companies than others.



Overwhelmingly, Facebook was the company most often vilified by participants. In the excerpt below, Adriana was reluctant to blame Amazon for targeted advertising she saw on Facebook, even though she had just explained to the interviewer that the advertising seemed to reflect her Amazon search history.

*Adriana: I probably blamed the whole thing on Facebook, and now that you're telling me that, it kind of makes me feel like I should've probably been equally as upset at Amazon, and I'm not. And maybe I don't want to be as upset at Amazon, because that gives me a reason to stop shopping there, and that is not possible. That is also a necessary evil. I cannot stop shopping on Amazon, because I'm not going to go to the stores. So, I'm going to assume that this was all on Facebook.*

This example shows that consumers consider corporate behavior holistically, in context, so that certain undesirable behaviors are more tolerable from companies whose services are considered indispensable.

### 3.2 Factors driving use of connected products

The following insights provide an overview of the factors most important to interview participants when deciding whether to use and keep using a connected product. The most important factors were convenience, usefulness, and the ability to connect with friends and family. Even when participants had negative views of a company or a product, these factors could override those negative views. The themes of “safety” and “security” did arise naturally for some participants. These factors were most important when they were considering use of a product that would store financial information. However, “safety” and “security” concerns did not override convenience, usefulness, and the ability to connect with friends and family.

The small-scale, ethnographic approach of this study is useful for identifying these factors as potentially important, but it cannot determine generalizable patterns in how consumers may weigh various attributes when deciding whether to use a connected product. If this question is to be pursued in future research, a conjoint analysis is recommended.

| Insight   | Discussion   |
|---|--|
| <p><b>3.2.1 Convenience, usefulness, and social connection overrode most other factors for participants when deciding whether to use a connected product.</b></p> | <p>The examples in §3.1.4 also illustrate factors that were more important to participants than corporate behavior when deciding whether to use and keep using a connected product. Factors cited by participants could loosely be grouped into the categories of convenience, usefulness, and social interaction.</p>   |
| <p><b>3.2.2 “Safety” and “security” were important to participants, but these factors did not usually override others.</b></p>                                    | <p>Participants did organically cite “safety” and “security” as factors they considered when deciding to use a connected product. These terms encompassed a range of concepts including keeping financial information secure, having control over microphone or webcam enabling, protecting themselves from viruses and limiting site tracking when using a web browser, encrypting messages, and protecting their home networks.</p> <p>All participants mentioned worrying about having their financial information online. Gerald was the most conservative in this respect, saying that he rarely made online purchases, preferring to go into brick and mortar stores.</p> <p><i>Gerald: I'm hesitant about buying things online because I don't want my credit card information online. I feel like you could have the best firewall and the best security measures, but these hackers out here are advanced. And we have no idea of what they're doing, what the new techniques are. So, I never feel totally <b>safe</b> putting my financial information on the web. So that's why I prefer to just go [to the store].</i></p> <p>The other participants were more willing to make regular online purchases, but most were wary of saving their financial information online. Kimberly claimed to enter her debit card information online each time she wanted to make a purchase. Adriana noted that she had deleted an app because she didn't like how her credit card information was saved to it.</p> |

*Adriana: I'm thinking, is it even **safe** to have this if I have, especially, any of my data linked to it? For example, on Dunkin Donuts, I think I had at some point, their automatic thing, you know, that was connected to my card, and I'm thinking, 'I should just probably delete it because I'm not even using it that often, and my card is linked to that and what if something happens.'*

As discussed in detail in §3.2.3, below, participants described smart speakers as “creepy” and believed that they may be recording conversations of people at home. A few other instances of concern over covert recording were also expressed. Kimberly wondered whether it was her Google Home or her iPhone that may be recording her telephone conversations. Gerald expressed a reluctance to use his webcam, noting that he was “hesitant” to even participate in the interview via videoconferencing.

*Gerald: I mean, I'll be honest, I was a little hesitant with this [interview]. Because I'm not the type of person that uses my webcam a lot. And I'm kind of weird about allowing people to have access to my computer. I'm getting over it. But yeah.*

Adriana justified her use of the Chrome browser by saying it was “safer” than other browsers. Even so, she minimized her own investment in seeking a “safer” browser by attributing the recommendation to her “tech guy” and by implying she is not an expert in this domain with the phrase “or something like that.”

*Adriana: I keep getting told by different companies, and I think my tech guy that I take my computer to mentioned to use Chrome more often. **I think it's safer or something like that.** So, I try to use Chrome more often than not.*

Jasmine was the only participant to mention using a messaging app that uses end-to-end encryption. She said she had only recently downloaded it. When prompted by the interviewer about her motives, she explained that a friend had suggested it because it is “more secure.”

*Jasmine: One of my friends uses it and suggested using it. He said that it has messaging encryption and it's **more secure** than other apps or messaging.*

Despite recently downloading Signal, Jasmine used other messaging apps without end-to-end encryption. Her justification for using Signal deferred to another person's opinion, suggesting she did not feel strongly about using only encrypted messaging services.

Dan was the only participant to discuss securing his home network and all the devices connected to it. He expressed the belief that having a well-integrated system, preferably with all devices from the same company, would be more "secure" and reduce "vulnerabilities."

*Dan: I'm putting everything smart, I want it to all work together, and if I have to buy a hub, that's okay. But what I don't want to have is disparate systems. I don't want to have different things that don't talk to each other, and I'd like to have all these things do it in a **secure** way. When I open up all these different devices, and if they don't talk together, that's only more vulnerabilities in the system there.*

The terms "safety" and "security" were generated by participants in several instances. These terms encompassed several different concepts for participants, which, though important, were not more important than other factors when participants were deciding whether to use a connected product.

**3.2.3 The limited examples of participants who had opted not to use or had stopped using a connected product due to safety (privacy) concerns all involved in-home smart speakers.**

In Adriana's case, she had opted not to have a smart speaker in her home due to privacy concerns. She had heard of smart speakers "recording people's conversations in the house," and said she finds that "really weird."

*Adriana: I'm pretty freaked out by [smart speakers], so I'm going to hold off on that for as long as I possibly can, yeah.*

*Interviewer: And why do you say that? Why are you freaked out?*

*Adriana: I come across a lot of... online, and I think, I believe actually in the news, mainly articles online about how Alexa has recorded people's conversations in the house, not purposefully, and I just find that to be really weird. From the moment it came out, it was just something that I was a little concerned with.*

Jasmine, in contrast, said she had owned a Google Home smart speaker, but no longer did. When the interviewer asked her why she stopped using it, she said she thought it was “listening” in her house and that this “creeped her out.”

*Jasmine: Oh, it felt just weird having something listening in my house. Like see, my phone does it sometimes where I'm not necessarily saying the command and it'll pop up. That creeped me out a bit.*

Kimberly was the only interviewee who regularly used a smart speaker at home, though she said she used it “only for music.” Although she had some privacy concerns about the speaker and anecdotal evidence that it may have used her conversations to create targeted advertising on other platforms, she had not stopped using the product.

*Kimberly: I think [Google Home is] neat, but I also think it's listening a little bit because it's connected to everything. For instance, I do not have psoriasis, but I said it to a friend on a phone call and suddenly I had ads on Facebook about psoriasis. I had never said the word before. I don't have it, I was talking about somebody that I used to work with and all of a sudden, I'm getting ads, getting emails and it's very weird... I feel a little creeped out. Like maybe people could listen, but on the other hand, I'm not that interesting. If someone's listening, then they're really going to fall asleep soon.*

In-home smart speakers, then, were one of the few devices that participants had opted not to use or had stopped using specifically due to privacy concerns.

### 3.3 Perceptions of “digital harms” as an index of implicit attitudes regarding the consumer-company relationship

Me2Be Alliance has hypothesized a set of “digital harms” consumers may encounter when using connected products. This catalogue of digital harms represents an “etic” approach, or one that accounts for maximal logical possibilities. In this study, an “emic” catalogue of digital harms was also collected—one that was generated bottom-up by participants without biasing them toward specific categories. Thus, the term “digital harm” was never actually used with participants, nor were any other specific technical terms in this domain. Instead, participants were asked about what kinds of things they worry about when using the Internet, or whether they feel “safe” doing particular online activities. The resulting emic set of digital harms represents a set of categories that emerged naturally from the data as participants discussed connected products they used.

In general, the participant-generated digital harms could be categorized as pertaining to either the production or consumption of either goods (and services) or information, both during the traditional “business transaction” and during additional “data transactions.”

When consumers participate in a traditional (not online) business transaction, they do not worry about being harmed because they believe they understand the rules of the transaction, and that this understanding is shared by the producer as well. In contrast, consumers’ perception that they may be harmed in the course of an online transaction is an indirect indication that they do not understand the rules of the transaction. Indeed, the rules for engaging in online business transactions may be inherently unknowable because they are unstable over time, variable across organizations, and not standardized either through convention or regulation. Thus, perceptions of digital harms may be considered an index of participants’ implicit attitudes regarding the consumer-producer relationship as unstable and unknowable.

The mutual understanding in traditional business transactions is what affords each player agency in the interaction. When consumers understand the rules and expectations of the transaction, they are empowered to advocate for their own well-being. In the case of Internet-enabled business transactions, the lack of mutual understanding of the rules of engagement causes consumers to feel powerless. Interview participants indicated that knowledge and agency were important to them in their online consumer-producer relationships.

| Insight   | Discussion   |
|---|--|
| <p><b>3.3.1 Participant-enumerated digital harms could be categorized as harms related to either <i>production</i> or <i>consumption</i>, both during the traditional “business transaction” and during additional “data transactions.”</b></p> | <p>In the traditional consumer-producer relationship, the consumer exchanges money for a good provided by the producer. This simple exchange may be referred to as a “business transaction.” In the context of Internet-enabled consumption, participants worried about things like the security of their financial information in the course of the transaction or the use of their financial information by the company. For example, Kimberly discussed how she had been charged monthly for something she thought was a one-time purchase.</p> <p><i>Kimberly: I think the worst thing that I've had is like I've paid for an app or I paid for something and it's like a monthly and I forget to turn it off. So, after I'm like, 'Oh my gosh, I've been paying for this and I haven't been using it.' I go in and turn that off so I'm not being charged \$2.99 or \$3.99 a month, which adds up after a while.</i></p> <p>In the context of Internet-enabled production, participants worried about issues like quality control, such as in the case of potentially misleading product reviews or “fake” or low-quality products. Dan described an instance where he believed he had received a product that was not the expensive brand-name item he thought he would get.</p> <p><i>Dan: My beautiful haircut was done by this device. This is a hair trimmer, and it's a major brand. It's a very expensive one. It's probably way more than I should have spent, but I feel like it's fake. I feel like it's not real, and it gets really, really warm on the outside, and it's something that I own that I've been using now for a year, but I remember when I bought it on Amazon, I felt like something was wrong, and I do wonder about that.</i></p> <p>Internet-enabled consumption introduces an additional dimension to the consumer-producer relationship because information and other digital media may also be consumed and produced during the course of a transaction or beyond. This may be referred to as the</p> |

“data transaction.” In the data transaction, the roles of consumer and producer may be swapped, shifting, or difficult to discern. For example, a person may consume online content while producing data for a company, providing the company with actual exchange value. Or a person may consume advertising without wanting to or intending to.

Thus, in this data transaction dimension, interview participants said they were concerned about companies *taking* their data, including things like surveillance, information collection, and information sharing or selling. Examples from Gerald and Jasmine illustrate the negative views participants generally had about these practices.

*Gerald: I'll go look for anything, a bicycle, a weight set. And then I'll be on a whole 'nother site and then here comes an ad for weights or whatever I was looking for just in general search. And I mean, I kind of understand why you would do that. Because I mean, you want to advertise to people what they're interested in. But at the same time, I've never not had that feeling of, 'How'd they know that I was just looking at this?'*

*Jasmine: I will say even if I don't necessarily buy something or just because I looked it up that I'll see an ad for it on Facebook and I'm like, 'Okay.' Or scrolling through Instagram and I looked something up on my phone, then I'll see on Instagram an ad for it. And that's where I feel like I don't like that that ad is on me. But I don't know how to stop it.*

Participants were also concerned about companies *giving* them unwanted data, such as alerts, advertisements, “spam,” and other marketing materials. Dan discussed one interesting scenario in which he had received marketing mail from his bank despite believing he had opted out of all marketing materials. Dan was especially savvy about controlling his information, and went as far as to call the bank to address the issue.



*Dan: I received a piece of postal mail from my bank, and to me, that was a major weird thing, because I have opted out of paper delivery of anything, and I've already opted out as much as possible from marketing and sales solicitations from that bank. When I received a thing in the mail that was pretty much saying, 'Hey, there's this new service that we have, we want to show it to everyone.' I was very offended. I was like, 'Oh, my goodness.' So I picked up the phone and I called my bank, and I said, 'Hey there, I want to understand how this thing came to my home, because I have all my privacy settings set to do not mail, do not solicit, and do not contact unless this is a major support issue or service issue that needs to be discussed.' And their response was, 'Sure, we can go on the website and do that with you right now.' And I said, 'Well, I already have those settings there, why did this get—' So, it's interesting. It almost felt like they ignored-- and it was from the bank, it wasn't from one of their partners, just to be clear.*

**Kimberly described another effect of unwanted information—it could result in additional unwanted business transactions.**

*Kimberly: I'm kind of annoyed by it, just because it makes me, 'Oh maybe I do want this, maybe I do want to buy that.' I have bought a couple of things online that I probably didn't need to. I saw it on Facebook and it looked like a really cool thing so I did it.*

**Participant-enumerated digital harms, then, could be categorized as harms related to either *production* or *consumption*, both during the traditional “business transaction” and during additional “data transactions.”**

**3.3.2 Consumers' perception that they may be harmed in the course of an online transaction is an indirect indication that they see the consumer-producer relationship as unstable and unknowable.**

When consumers participate in a traditional (not online) business transaction, they do not worry about being harmed because they believe they understand the rules of the transaction, and that this understanding is shared by the producer as well. Furthermore, this mutual understanding is what affords each player agency in the interaction. When consumers understand the rules and expectations of the transaction, they are empowered to advocate for their own well-being.

In contrast, consumers' perception that they may be harmed in the course of an online transaction is an indirect indication that they do not understand the rules of the transaction. Indeed, the rules for engaging in online business transactions may be inherently unknowable because they are unstable over time, variable across organizations, and not standardized either through convention or regulation.

An excerpt from Adriana's interview exemplifies the kind of confusion participants demonstrated as to the nature of the transaction they were participating in. She lamented being "bombarded" with ads on Facebook, and then voiced her own thoughts musing about whether the advertising was part of a "business."

*Adriana: You go on Facebook and you can't even watch a video now halfway through before getting bombarded with an ad. The moment that started happening, I think is when I started getting kind of upset with Facebook, because it's like, 'What is this, a business?'*

Participants' lack of confidence in their knowledge about the consumer-producer relationship in online contexts was further illustrated by the kind of hedging language discussed in §3.1.2. Participants regularly said that they "didn't understand" or "didn't know" when directly asked about corporate behavior.

In this way, perceptions of digital harms may be considered an index of participants' implicit attitudes regarding the consumer-producer relationship.

**3.3.3 In their interactions with connected products and with Internet-enabled companies, participants valued knowledge of the nature of their relationship to the producer, and agency in the context of that relationship.**

The mutual understanding in traditional business transactions is what affords each player agency in the interaction. When consumers understand the rules and expectations of the transaction, they are empowered to advocate for their own well-being. In the case of Internet-enabled business transactions, the lack of mutual understanding of the rules of engagement causes consumers to feel powerless.

Interview participants indicated that knowledge and agency were important to them in their online consumer-producer relationships. One way they indicated this was by describing the agentive practices they engaged in. All participants invested either time or money to engage in practices that would increase their own control over online transactions. These practices included things like changing privacy settings in applications, buying dedicated software to increase privacy or security, deleting or deactivating accounts or products, or completely opting out of using something seen as unsafe. Jasmine illustrated a range of these practices in her description below.

*Jasmine: Some [apps] are asking--they always ask immediately like, 'Do you want to sync your contacts or have your location available?' I usually try to turn those off if it's not necessary. Because I realize also like with the maps, with Google maps, it tracks everywhere you've been in the day, if you don't turn that off. And I found that and I was like, 'That's a bit much.' So, I started turning location off. Anything that syncs with contacts, I turn off. That's mostly the microphone and the camera access. Some apps just asked with that. I don't understand why you need that. If you don't have the functionalities. I try to turn those off as well and just turn them on only if I need to use it.*

Despite engaging in such agentive practices, participants also indicated that they wished for more

options for control and more access to information. Both Gerald and Dan noted instances where they had been frustrated by not being able to unsubscribe from marketing materials or delete an account.

*Gerald: Most of the time I will say that it's easy. There's a link and I just hit that unsubscribe, type my email in, and I'm unsubscribed. I've had had issues where I've unsubscribed and I'm continuing to get the newsletter. So, I have to either unsubscribe several times or I have to try to get in contact with customer service. That's only happened a few times. But there was one time where I had to actually get in contact with customer service and tell them, 'Look, I'm trying to unsubscribe. Stop sending me things.' **And yeah, I don't think it should ever have to go that that.** But it has gone that far a couple of times.*

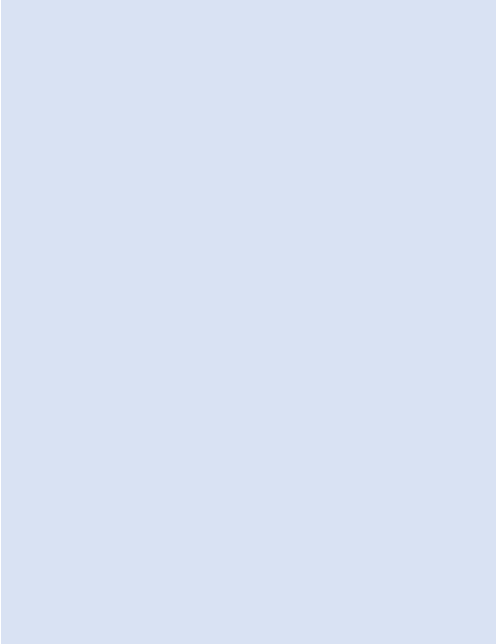
*Dan: I've tried deleting accounts from certain companies, and they've come back and said, 'I'm sorry, sir, for security, we cannot delete your account.' And I say, 'Wait, wait, what are you talking about?' **So, things like that drive me a little nuts.***

Adriana wished for a centralized system for managing online consumer-company relationships.

*Adriana: It's frustrating because there are times when I'm like, I wish it was one site where you could just go and make sure that if you hit this--like that [thing to] unsubscribe from people calling you...If there's a way for you to just not receive certain things or have a high level of security.*

Participants also described instances where a lack of knowledge in the context of an online consumer-company relationship caused them to terminate that relationship.

*Gerald: I used to have a Fingerhut account, I'm not sure if you know what that is. But it's basically a company that has products and*



*they let you pay off your products monthly. So, they had a breach, this was a long time ago, they had a breach. And like I said before, **they weren't very good with letting you know exactly what was breached or what my options are or what I could do. So that actually led to me canceling their account.** Because it felt like they were trying to skirt responsibility and not step up and say, 'Look, this happened on our watch with our company and we're going to make this right.'*

Thus, in their interactions with connected products and with Internet-enabled companies, participants valued knowledge of the nature of their relationship to the producer, and agency in the context of that relationship.

## 4 Recommendations

These recommendations follow from the insights detailed in the previous section.

### 4.1 Certification criteria

This study pointed to several characteristics of a bottom-up model for an ideal consumer-company relationship. More than demanding specific behaviors of companies, participants in this study desired a clear understanding of the parameters of the relationship and the agency to advocate for their own well-being in the context of the relationship. Minimally, then, certification criteria should include:

- Relationship rules that are clearly defined and mutually understood
- Knowledge about the nature of the relationship that is easy to access and understand
- Agency in the context of the relationship to advocate for one's own interests, however defined

### 4.2 Application of certification criteria

Although safety and privacy were important to participants in this study, they were not as important as other factors in influencing the use of connected products. In particular, few privacy concerns were important enough to participants to cause them to opt out of or cease using a product. The one exception to this was (perceived) audio and/or video surveillance, to which participants were averse enough to have opted out of using in-home smart speakers.

- Apply certification criteria holistically, so that some "bad" behaviors may be counterbalanced by "good" behaviors.
- Scale penalization for "bad" behaviors so that consumers have additional recourse, beyond merely opting out of the relationship, to negotiate the relationship.

### 4.3 (Re)defining the terms

Because online consumer-producer relationships are a relatively new phenomenon and differ from traditional offline consumer-producer relationships as well as from individual-individual relationships, it is necessary to define and work to standardize the relationship model.

- Work to define and standardize the online consumer-company relationship so it is as stable, consistent, and transparent as typical offline consumer-company relationships.
- Clearly define the role of a "consumer" and a "producer," especially in the context of information collection and sharing. Individuals should be aware when their apparent consumption is actually producing exchange value for a company.
- Define additional transactions beyond the expected, traditional "business transaction." This is an ongoing process of tracking and cataloguing as new transaction types are invented.

#### 4.4 Outreach to consumers and producers

Conduct and outreach in order to propagate new ideas about the nature of consumer-company relationships, to bring consumer and producer views of this relationship into alignment, and to spark processes of organizational and cultural change.

#### 4.5 Further research and design

- In order to understand the relative importance of factors influencing use or non-use of connected products, including privacy factors, conduct a conjoint analysis.
- In order to engage consumers and producers in creating the parameters of a Me2B relationship model, facilitate participatory design processes.

## Appendix A: Screener Survey

1. Do you have internet service to your home?
  - a. Yes (accept)
  - b. No (reject)
  - c. Not Sure (accept)
2. What kinds of computing devices do you frequently use?
  - a. Smart TV or Smart DVD/Blu-ray player (may select)
  - b. Computer (may select)
  - c. Smartphone (may select)
  - d. Tablet (may select)
  - e. Connected Device (connected thermostat, connected scale, security cameras, etc.) (may select)
  - f. Connected Wearable (smart watch, Fitbit etc.) (may select)
  - g. Smart Speaker or Personal Assistant (Amazon Echo, Google Home, etc.) (may select)
  - h. Other (may select)
  - i. None of the above (reject)
3. In which of the following sectors do you work?
  - a. Banking or finance (accept)
  - b. Business management (accept)
  - c. Healthcare (accept)
  - d. Law (accept)
  - e. Technology (reject)
  - f. Media (accept)
  - g. Education (accept)
  - h. Other/none (accept)
4. Do you live in any of the following locations? Bay Area, Los Angeles, Austin, Chicago, Seattle, New York City.
  - a. Yes (reject)
  - b. No (accept)



## Appendix B: Informed Consent

Me2B Alliance  
CONSENT TO ACT AS A RESEARCH SUBJECT  
**Treatment of consumers by Internet-enabled businesses**

Me2B Alliance is conducting a study to understand the concerns of people who use connected products or services. Dr. Melanie McComsey will lead the study. You have been asked to take part because you are a consumer or user of connected products and services. There will be approximately 5 participants in this study over a one-month period.

If you agree to be in this study, the following will happen to you:

You will be asked a series of open-ended questions about your technology use and your feelings related to your technology use. The interview will last about 60 minutes. It will take place over videoconference and it will be recorded. The interview will be conducted by Dr. Melanie McComsey, and one additional Me2B volunteer will observe.

There will not be any direct benefit to you by participating in this study. There will be no cost, and you will be compensated for your participation. The investigator may learn more about how people want to be treated by Internet-enabled businesses.

Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time. You will not be compensated if you withdraw.

Audio recording:

Audio recording you as part of this project will help our research team better analyze your responses. We will not retain any video recording or imagery of your likeness. We will take the following steps to ensure your privacy:

1. Except to confirm your consent, we will not record any names, personal data, or obviously identifying characteristics. If recorded, such information will be permanently deleted using audio editing software.
2. All identifying details will be concealed in the presentation of data.
3. The researcher will remind you when you are being recorded.
4. The audio recording and original transcript will not be made available to anyone outside our research team.

Risks: There is the possibility of loss of confidentiality. However, research records will be kept confidential to the extent allowed by law. Because this is an investigational study, there may be some unknown risks that are currently unforeseeable.

Dr. McComsey has explained this study to you and answered your questions. If you have other research related questions or problems, you may reach Dr. McComsey at [m.mccomsey@gmail.com](mailto:m.mccomsey@gmail.com).

By giving verbal consent, you agree to participate, and you have received a copy of this consent document if requested.

## Appendix C: Ethnographic Interview Guide

### I. Introduction to the study

“We are forming a new non-profit organization to develop a certification mark, like the ‘Organic Food,’ label, but for technology products connected to the internet, so you can know if an app or website is treating you right. We would like to ask you a few questions to learn how you like to be treated by connected products and services you use.”

### II. Consent form

### III. Background information

- a. Name:
- b. Sex:
- c. Age:
- d. Ethnicity:
- e. Place of residence:
- f. Employment description:
- g. Do you have broadband at home?
- h. What internet-connected devices do you regularly use? (computer, smartphone, television, video game, wearable, connected household gadgets, etc.) [Elicit type for each one]

### IV. Interview guide

1. You mentioned that you use a \_\_\_\_ [connected device] \_\_\_\_\_. Tell me about your relationship with this device. [Repeat question for each device.]
  - a. When do you use it?
  - b. What do you use it for? [elicit specific app/service/business names]
  - c. Have you used it today? What did you use it for today?
  - d. How do you feel about the device?
2. You mentioned you use \_\_\_\_ [list connected products/services] \_\_\_\_\_.
  - a. Is there one of these that you really like? What do you like about it?
  - b. Is there one of these that you really dislike? What do you dislike?
3. Which connected products/services did you start using most recently?
  - a. Tell me about when you first started using the product/service.
  - b. How/why did you decide to start using it?
  - c. Did you compare other products?
  - d. How do you feel about this product/service now?
4. Which connected products/services do you think you spend the most time using?
  - a. How much time do you spend?
  - b. How do you feel when you are using it?
  - c. How do you feel about the time you spend?
5. Which connected products/services do you think you spend the most money on?
  - a. How much money do you spend?
  - b. How do you feel when you are using it?
  - c. How do you feel about the money you spend? Is it a fair deal?

- d. Do you think you get a fair deal with free products/services? What are you “paying”? What are you getting in return?
- 6. Have you ever deleted an app from your phone, or unsubscribed from/stopped using a connected service/product? Tell me about that.
  - a. Why did you do it?
  - b. What was the final trigger?
  - c. How do you feel about that decision now? Would you do it again?
  - d. Has safety ever been a concern for you in stopping use of a connected product/service? Tell me about that.
- 7. When you are browsing the web, do you ever worry that clicking certain links, or going to certain pages could be unsafe? What do you worry about? What do you think could happen?
  - a. Has anything like that ever happened to you?
  - b. What methods do you use to protect yourself from those potential problems?
  - c. What else do you think could be done to keep people safe on the Internet?
  - d. Who should do that?
- V. Closing
  - a. Do you have any questions for me?
  - b. Do you have any other observations you'd like to share?
  - c. Thank you

## Appendix D: Coding Categories and References

| <b>Nodes</b>                                      | <b>Aggregate number of coding references</b> | <b>Aggregate number of interviews coded</b> |
|---|--|---|
| <i>Ambivalence</i>                                | 5  | 2   |
| <i>Brand, age</i>                                 | 2  | 1   |
| <i>Brand, competitive behavior</i>                | 4  | 3   |
| <i>Brand, connected vs brick and mortar</i>       | 2  | 2   |
| <i>Brand, feeling</i>                             | 2  | 1   |
| <i>Brand, labor practices</i>                     | 2  | 1   |
| <i>Brand, politics</i>                            | 1  | 1   |
| <i>Brand, reputation</i>                          | 9  | 4   |
| <i>Brand, size</i>                                | 5  | 2   |
| <i>Brand, transparency</i>                        | 1  | 1   |
| <i>Connected devices or services inventory</i>    | 32   | 5   |
| <i>Consumer mentalities, change over time</i>     | 7  | 3   |
| <i>Device relationship, assistant</i>             | 4  | 3   |
| <i>Device relationship, personal</i>              | 8  | 4   |
| <i>Device relationship, social</i>                | 8  | 4   |
| <i>Device relationship, work</i>                  | 7  | 4   |
| <i>Digital harm, ads</i>                          | 13   | 4   |
| <i>Digital harm, annoying</i>                     | 6  | 5   |
| <i>Digital harm, attention</i>                    | 13   | 4   |
| <i>Digital harm, health</i>                       | 2  | 1   |
| <i>Digital harm, intrusive</i>                    | 9  | 3   |
| <i>Digital harm, kids</i>                         | 2  | 1   |
| <i>Digital harm, online reviews</i>               | 4  | 2   |
| <i>Digital harm, privacy</i>                      | 20   | 5   |
| <i>Digital harm, purchasing risk</i>              | 9  | 4   |
| <i>Digital harm, recording</i>                    | 6  | 3   |
| <i>Digital harm, sharing across brands</i>        | 12   | 5   |
| <i>Digital harm, spam</i>                         | 10   | 5   |
| <i>Digital harm, theft or breaches</i>            | 15   | 5   |
| <i>Digital harm, tracking or handoffs</i>         | 20   | 5   |
| <i>Digital harm, usability</i>                    | 2  | 1   |
| <i>Fair deal, for price</i>                       | 3  | 3   |
| <i>Fair deal, free service</i>                    | 2  | 2   |
| <i>Information sources</i>                        | 17   | 5   |
| <i>Justification for use, brand</i>               | 11   | 4   |
| <i>Justification for use, convenience</i>         | 9  | 3   |
| <i>Justification for use, customer experience</i> | 18   | 5   |

|  |    |   |
|--|----|---|
| <i>Justification for use, fun</i>                      | 7  | 4 |
| <i>Justification for use, habit</i>                    | 1  | 1 |
| <i>Justification for use, human touch</i>              | 4  | 3 |
| <i>Justification for use, impact on hardware</i>       | 9  | 4 |
| <i>Justification for use, interconnectivity</i>        | 3  | 2 |
| <i>Justification for use, no value in own data</i>     | 1  | 1 |
| <i>Justification for use, peer pressure</i>            | 7  | 4 |
| <i>Justification for use, personalization</i>          | 12 | 5 |
| <i>Justification for use, political</i>                | 4  | 2 |
| <i>Justification for use, price</i>                    | 7  | 3 |
| <i>Justification for use, reciprocity</i>              | 3  | 1 |
| <i>Justification for use, security or privacy</i>      | 22 | 5 |
| <i>Justification for use, social</i>                   | 8  | 4 |
| <i>Justification for use, time investment</i>          | 3  | 3 |
| <i>Justification for use, trend</i>                    | 1  | 1 |
| <i>Justification for use, usability</i>                | 23 | 5 |
| <i>Justification for use, usefulness</i>               | 28 | 5 |
| <i>Privacy practice, change settings</i>               | 17 | 5 |
| <i>Privacy practice, communication with company</i>    | 5  | 4 |
| <i>Privacy practice, dedicated software</i>            | 11 | 5 |
| <i>Privacy practice, deleting or deactivating</i>      | 17 | 5 |
| <i>Privacy practice, hardware choice</i>               | 3  | 1 |
| <i>Privacy practice, integration</i>                   | 2  | 2 |
| <i>Privacy practice, location services</i>             | 2  | 2 |
| <i>Privacy practice, multi-factor authentication</i>   | 2  | 2 |
| <i>Privacy practice, opt out or opt in</i>             | 29 | 5 |
| <i>Privacy practice, passwords</i>                     | 4  | 3 |
| <i>Privacy practice, posting or voting or feedback</i> | 9  | 4 |
| <i>Privacy practice, purchasing or financial</i>       | 14 | 5 |
| <i>Solutions, corporations</i>                         | 7  | 3 |
| <i>Solutions, government</i>                           | 6  | 2 |
| <i>Solutions, non-profit</i>                           | 3  | 1 |
| <i>Solutions, tech</i>                                 | 1  | 1 |
| <i>Specific brand or device, Amazon</i>                | 6  | 4 |
| <i>Specific brand or device, Facebook</i>              | 8  | 3 |
| <i>Specific brand or device, Google</i>                | 2  | 1 |
| <i>Specific brand or device, smart speaker</i>         | 6  | 3 |
| <b>Total=599</b>                                       |    |   |