

Quality Standards, Service Orientation, and Power in Airbnb and Couchsurfing

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Although Couchsurfing and Airbnb are both online communities that help users host strangers in their homes, they differ in an important sense: Couchsurfing prohibits monetary payment while Airbnb is built around it. We conducted interviews with users experienced on both Couchsurfing and Airbnb (“dual-users”) to better understand systemic differences between the platforms. Based on these interviews we propose that, compared to Couchsurfing, Airbnb: (1) appears to require higher quality services, (2) places more emphasis on places over people, and (3) shifts social power from hosts to guests. Using public profiles from both platforms, we present analyses exploring each theme. Finally, we present evidence showing that Airbnb’s growth has coincided with a decline in Couchsurfing. Taken together, our findings paint a complex picture of the changing character of network hospitality.

CCS Concepts: • **Human-centered computing** → **Empirical studies in collaborative and social computing**; *Empirical studies in HCI*; Social networks; Computer supported cooperative work;

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1 INTRODUCTION

“I have hosted both Airbnb and Couchsurfers at the same time. They didn’t interact because my Airbnb guest was working in Managua, so he used to come home at like eleven at night, and the Couchsurfing guest, I was with her in the city doing tourist

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things. *The two never even met*, they never even realized that there were other people in the house.”—Participant 14

Couchsurfing and Airbnb are platforms that connect strangers in need of a place to stay with people who have empty apartments, guest rooms, or couches. Described as facilitating “network hospitality” [29], both systems can be seen as alternatives to hotels and hostels. Instead of managing buildings and leases like hotels, network hospitality platforms facilitate peer-to-peer exchange among their users. However, Couchsurfing and Airbnb differ crucially in one regard: hospitality on Couchsurfing is incentivized through social relationships like generalized exchange, trust, and altruism; monetary payment is prohibited. Network hospitality on Airbnb, however, utilizes monetary exchange: hosts are engaging in short-term rental of their space for money. A theory of two systems differentiated by money has been proposed by Heyman and Ariely [16] who claim that the presence of money invokes different mental frames, norms, and incentives. Although both Airbnb and Couchsurfing provide beds for travelers, Heyman and Ariely argue that the character and dynamics of the services will be fundamentally different.

In this paper, we address the following research question: how do social- and money-based network hospitality differ in their users’ relationships with each other? We start with a grounded theory approach [6] to analyze data from 17 interviews of *dual-users* of both sites. We find that Airbnb and Couchsurfing are different in terms of their perceived hosting standards (what is a good-enough home), their service orientation (whether the focus is on people or place), and guest-host power dynamics (guest-centric versus host-centric). To check these findings, we also conducted quantitative hypothesis tests using comprehensive datasets of public listings on both Couchsurfing and Airbnb in the United States. Our quantitative results provide additional support for, and reveal deeper aspects of, the themes that emerged from the interviews. In a final analysis of the two platforms’ user-bases over time, we find a striking picture of a shift in the nature of network hospitality from Couchsurfing to Airbnb.

Although our focus is on network hospitality, we believe that our work has broader implications for many areas of the “sharing economy” where money-based services exist alongside similar services that operate through social forms of exchange [5]. As just one example, BlaBlaCar, a marketplace that facilitates carpooling using money stands alongside Waze Carpool, where money is algorithmically limited to cost-sharing or explicitly renounced in their “drive for free” tier. Our work has implications for the users, system designers and policy makers of many sharing economy services.

2 RELATED WORK

Our work is informed by research in social computing on network hospitality and by studies in economics on the effects of money as an incentive.

2.1 Network Hospitality

The sharing economy is a “system based on sharing underused assets or services, for free or for a fee, directly from individuals” [5] in domains as wide-ranging as goods, food, or space [30]. “Network hospitality” is a term coined by Molz [29] to describe the process of using online platforms for the material exchange of accommodation. Although Couchsurfing and Airbnb are the two most widely-used platforms for network hospitality [35], there are many others. Examples of network hospitality that eschew monetary exchange like Couchsurfing include Hospitality Club, BeWelcome, and Warm Showers. VRBO, HomeAway, and Wimdu are examples of network hospitality systems similar to Airbnb.

Research on Couchsurfing suggests that it “is positioned by its members as a morally superior alternative to commercial hospitality enterprises and commodified relations” [15]. Lauterbach et al. found that the many reciprocal interactions among participants, and its vouching system, make Couchsurfing a system driven fundamentally by trust [24].

In sociological terms, Couchsurfing’s operation might best be described as *generalized indirect exchange*, where services are given in loose chains. Theories of exchange posit that the community-level reciprocity in this case will generate a high degree of social solidarity [25]. Indeed, empirical studies such as Molm et al.’s found that generalized indirect exchange displayed the most solidarity, compared to other forms. Negotiated direct exchange—where strict contractual transactions occur between exactly two parties—displayed the least solidarity [28].

Conversely, this loose reciprocity mechanism in Couchsurfing has also been claimed to be responsible for why intense social interaction can be an obligation [29], leading to tension, awkwardness, and indebtedness [4]. Lampinen et. al’s study of the sharing site *Kassi* concluded that rather than designing away indebtedness, research should look at how to support the pre-existing ways users navigate the feeling [23].

With the presence of money, such as in Airbnb, the question of indebtedness gives way to what is afforded by negotiated direct exchange. Research on Airbnb has emphasized the role of monetary compensation in motivating participants and providing financial assurance [19, 22]. Ikkala and Lampinen [19] claimed that “the presence of money can provide a helpful frame for network hospitality, supporting hosts in their efforts to accomplish desired sociability, select guests consistent with their preferences, and control the volume and type of demand.”

Work on the sharing economy in general has demonstrated a mismatch between “providers’ explanations of their systems’ motivations [and] what really seems to motivate users” [1]. In an attempt to compare motivations in Couchsurfing and Airbnb Jung et al. found that what is primarily “shared” on the platforms is different. Analysis of user reviews showed that Couchsurfing tended to emphasize sharing of human relationships, not the physical house as in Airbnb’s case [21].

Moreover, researchers have pointed to the potential benefits of studying dual users of both sites to deepen the understanding of these differences. For example, network hospitality researchers studying Airbnb reported recruiting research subjects with experience in Couchsurfing and suggested that these users have a particularly valuable perspective [22]. Other research has called for studies comparing monetary and non-monetary network hospitality systems [19]. We believe that this is the first study to answer these calls.

2.2 Money-based and Non-money-based Systems

Fiske’s classic relational theory divides social relationships into four categories: *communal sharing*, *authority ranking*, *equality matching*, and *market pricing* [14]. Pitting the *market pricing* relation against the others, Heyman and Ariely proposed a “two-market” theory [16] to explain the difference between money-based and non-money-based systems. According to this theory, when no monetary reward is involved (e.g., neighbors voluntarily offer moving help), people perceive their exchanges as existing in a “social-market.” In contrast, the presence of monetary rewards (e.g., paying cash for moving help) invokes a “money-market,” with accompanying frames and norms. For example, in the money-market the amount of compensation directly influences individuals’ level of effort. However, in social-markets effort is shaped by altruism or generalized reciprocity; individuals work as hard as they can regardless of payment.

Bellotti et al. found empirical evidence for two-market theory in their investigation of “time-banking:” a sharing-economy system where people trade their time with each other [2]. In their view, “peer-to-peer exchange systems” could be described as either “commercial” such as Airbnb, or “non-profit” connoting that peers are not profiting off each other, such as in timebanking. They

found that due to the essential metaphor of timebanking—the bank—participants shaped their behaviors in the manner of money-markets.

Similarly, Benkler distinguishes an emergent type of “social sharing” from “market-based” services both in terms of incentives for participation and transaction costs [3]. With social sharing, transaction costs include processes such as coordination and defining social norms. In market-based systems, costs include regulation and price-making. In Benkler’s account, systems that support social sharing, like Couchsurfing, have been successful precisely because they drove down the costs of hosting strangers by forgoing markets and the transaction costs associated with them. If we extend his analysis to understand the success of Airbnb, we might conclude that market-based systems have found their own ways to reduce the transaction costs of hosting strangers by evading regulations and allowing users to set prices themselves.

Of course, no system of service provisioning is purely market-based. For example, past research has shown in detail that Airbnb users derive a mix of financial and social benefits from participation [19]. Heyman and Ariely theorize about the dynamics of a market type with mixed social and monetary incentives and conclude that hybrid socio-money-markets are still dominated by their money component and its forces. Borrowing terminology from Benkler [3], but acknowledging the messy and fuzzy nature of the distinction, we refer to Couchsurfing as a “social-based” system and Airbnb as a “money-based” one.

3 DATA AND METHODS

We approached understanding the differences between social-based and money-based services in two stages. First, we qualitatively analyzed interviews of users experienced in both Couchsurfing and Airbnb to draw out major themes. Secondly, we used quantitative data from public profiles on both Couchsurfing and Airbnb to further explore those themes.

3.1 Stage 1: Grounded Theory Analysis of Interviews

We began our research by conducting interviews with “dual users” of both Couchsurfing and Airbnb. We define dual users as individuals who have participated on both Couchsurfing and Airbnb as a host or, alternatively, on both platforms as a guest. We recruited dual users by posting messages on the Airbnb subreddit,¹ the Couchsurfing subreddit,² Couchsurfing’s Minneapolis discussion board,³ and Minneapolis Craigslist.⁴ In selecting interview subjects, we employed a statistically non-representative stratified sampling technique across five dimensions [34]. Each dimension was defined in dichotomous terms: (1) experience as a dual guest or dual host, (2) gender coded as male or female, (3) nationality coded as whether the participant holds a US passport, (4) income coded as whether the participant earned greater than US\$40,000 per year, and (5) age coded as whether the individual was older than 23 years old. These five strata resulted in 32 possible combinations.

We recruited 17 dual users occupying 14 of the 32 possible strata (see supplementary material for details). Details on each of the 17 interviewees are in Table 1. We found that there was not a sharp line between guests and hosts. For example, some participants used both Couchsurfing and Airbnb as a guest, but had only hosted on Couchsurfing. We only used roles if they applied fully—so in the previous example we would code the user only as a dual guest.

Interviews were semi-structured in that we used a list of questions but allowed room to ask about interesting topics that came up along the way. Our full interview questions are available in our supplementary material. In-person and video-conferenced interviews took place between

¹<https://www.reddit.com/r/Airbnb>

²<https://www.reddit.com/r/couchsurfing>

³<https://minneapolis.craigslist.org/>

⁴<https://www.couchsurfing.com/nearby/Minneapolis>

#	Dual-role	Gender	Nationalities	Income	Age
1	Guest	F	Thailand/US	+	-
2	Host	M	Australia	+	+
3	Guest	F	US	-	-
4	Guest	F	US	-	-
5	Guest	M	US	-	+
6	Host	F	US	-	+
7	Guest	M	US	+	+
8	Host	F	US	-	-
9	Guest	F	US	+	+
10	Host	M	Turkey/UK	+	+
11	Host	M	Portugal	-	+
12	Host	M	Nicaragua	-	-
13	Guest	F	Netherlands	-	-
14	Host	M	US	-	+
15	Host	M	US	+	+
16	Guest	F	Russia	-	-
17	Guest	M	Netherlands	+	+

Table 1. Details about each of our interview participants in terms of our sampling strata of dual-role, gender, nationalities, income, and age. As a privacy matter we did not ask users to reveal their incomes and ages, only if they were above/below US\$40,000 per year, and 23 years old respectively. Here “+” means “above” and “-” means “below”.

November 2015 and February 2016, lasted approximately one hour, and were compensated with US\$15 or local equivalent.

Following Charmaz’s approach to grounded theory [6], each interview was fully transcribed by a member of the research team and transcripts were iteratively coded using RQDA [17]. A tenet in Charmaz’s approach that distinguishes it from Corbin and Strauss’ original grounded theory approach is more space for researchers to incorporate prior ideas and existing theory into coding. Therefore, our analysis involved both inductive codes that emerged from the transcripts, “sensitizing” codes drawn either from previous research, and later-stage codes informed by emerging themes. As per Charmaz, our iterative analytic cycle consisted of the following steps: (1) coding transcripts, (2) meeting to discuss codes in a team, (3) amalgamating codes, (4) highlighting themes, (5) writing and revising memos, and (6) recoding transcripts. We continuously analyzed and coded our data until saturation—i.e. when new interviews gave no new insights. At the end of our analysis, our single codebook contained 252 codes, organized into 10 axial-codes, which, through 19 memo revisions, were summarized into the 3 themes presented.

3.2 Stage 2: Quantitative Analysis of Public Data

In the second stage of our research, we developed quantitative tests to further explore each of the themes from Stage 1. To do so, we built comprehensive datasets of the public listings of offers for hosting on both Couchsurfing and Airbnb in the United States. For Couchsurfing, we used a custom web scraper to identify users within the US and collect each user’s unique identifier, sign-up date, city and state, reviews, verification information, and “status” as to whether they were hosting. We ensured that our scrape of Couchsurfing was complete by verifying that the number of users scraped (# users-scraped) was equivalent to the number of search results Couchsurfing reports per

	Airbnb	Couchsurfing
Total listings	337,213	n/a
Total profiles	n/a	1,462,675
Total hosts	220,434	249,443
Trusted hosts	156,934	54,258

Table 2. The sizes of our Couchsurfing and Airbnb datasets. For host counts, we find the unique set of users offering listings in Airbnb, and the unique set of profiles that have status “Accepting Guests” in Couchsurfing. Trusted hosts are those with more than one review in Airbnb, and any form of verification or any references in Couchsurfing.

US state, summed over every state ($\sum_{states} \# \text{ search-results}$). The sum of all US states was indeed less than 1% larger than our user count ($\frac{\# \text{ users-scraped}}{\sum_{states} \# \text{ search-results}} \geq .99$). Our Couchsurfing scrape took place in January 2016. For Airbnb, we used the `insideairbnb.com` full-US dataset from November 2015 [9] and utilized the host’s identifier, sign-up date, city and state, price, availability, and reviews. Additionally, we wrote another web scraper to retrieve reviews of hosts by guests in Airbnb as the complement of the hosts-to-guests reviews provided by the `insideairbnb.com` dataset. Table 2 summarizes these datasets.

We then aligned the Airbnb and Couchsurfing datasets in order to capture aggregate levels of Couchsurfing and Airbnb hosting in different cities. This presented three challenges related to (A) geographical standards, (B) guest/host statuses, and (C) verification statuses:

- (A) The two platforms might refer to the same city in different ways. Nonetheless, we found that if we lower-cased city and state names, 90.4% of the hosts in either Couchsurfing or Airbnb lived in cities for which we had at least one host in the other platform. The remaining 9.6% of hosts lived in 8,392 cities that had hosts on one site but not the other. To confirm that this was not just an artifact of different ways of referring to the same cities, we manually inspected the top 20 most populated cities in this disjoint set. We found that they were all small cities which indeed had only hosts in one site. Furthermore, 35% of the cities in the disjoint set had just one host listed. Given this evidence, we considered the datasets fully merged.
- (B) There is not a clear distinction on Couchsurfing between guests and hosts. Couchsurfing users post public profiles and indicate their openness to hosting as part of this profile. We only considered a user a host if their status was “Accepting guests” and not if it was “Maybe accepting guests”.
- (C) In both systems, there appear to be “fake” users that have been created automatically.⁵ To address this concern, we limited both datasets to subsets of *trusted hosts* with a minimal level of verification. We defined trusted hosts to mean Couchsurfing hosts with at least one reference or any other form of verification, and Airbnb hosts with at least one reference.

Although these data were all publicly posted, we recognize that they could be removed by users at some point in the future. To prevent accidental archiving, we have opted against public posting of these data. To ensure the reproducibility of our quantitative results and facilitate extension of this work, we will make this code and data available, on request, to researchers who agree to extend this same protection to the users who published the data.

⁵<http://notconfusing.com/suggestions-of-fake-profiles-in-couchsurfing/>

4 INTERVIEWS

Our analysis of the 17 coded interviews from our stratified sample resulted in three themes that reflect what dual users of Airbnb and Couchsurfing claim distinguished social- and money-based network hospitality. These themes are that Airbnb, as compared to Couchsurfing: (1) raises perceived requirements for participation, (2) mixes its focus between both people and places to stay in, rather than solely on people to stay with, and (3) gives power to guests instead of hosts.

4.1 Theme 1: Raising Perceived Standards

4.1.1 What is “good enough for Airbnb?” A main line of inquiry we pursued with our hosting participants was why they would host on one site but not the other. A common theme in their answers centered around expectations of quality in the accommodation. That is, participants who at some point only hosted on Couchsurfing frequently said that they did not host on Airbnb because they did not feel that their homes were of sufficient quality. Nine participants indicated that they have an expectation of room quality on Airbnb, but not on Couchsurfing. Participant 6 explained this dilemma:

I always wanted to host on Airbnb but I didn’t actually have a bedroom that I felt would be sufficient for guests who are paying for it. It’s one thing when you’re like, “you can come Couchsurfing with me—I’ve got a couch.” It’s a completely other thing when you feel like you’re providing a paid service and you are accountable to this person for creating privacy and an experience where, if they want to, they can totally not interact.
—P6

Participant 6’s words underscore the notion of a perceived minimal quality for both physical space and for service necessary for hosting on Airbnb. These “Airbnb standards,” we heard, incorporate many expectations that potential hosts are expected to offer. Participant 7 spoke of the first time that they felt an Airbnb host fall short of these standards:

[Hosts] usually take it really seriously where they’ll have your towels all laid out for you, peppermints on the pillow, instructions on what to do, they’ll make breakfast. Whereas this last time, the host said “stuff’s in the closet, feel free to have a little cereal—but not too much.” —P7

From this guest’s perspective, a nicely made bed with chocolates is within the normal range of what guests can expect on Airbnb.

There are other less obvious norms that were described as well. For instance, host reliability is implicitly part of the Airbnb reputation according to Participant 10:

There have been times when I prefer Airbnb, because I just wanted a place to stay and I wouldn’t have much time to hang out with any host or [...] take the risk of them canceling. —P10

To understand the full impact of the importance of protection against cancellation risk, take this story from Participant 5’s Couchsurfing travels:

I’ve had the experience, people say “yeah you can come, here’s my address and they don’t include their phone number. So I show up, no one’s there. I’m knocking. I’m on my smartphone trying to send a message saying “text me” or “call me.” So there’s this lack of communication. —P5

According to reports, it’s not unusual to have some doubt about whether an arrangement will materialize on Couchsurfing.

That said, while Airbnb is positioned in the minds of participants as physically and professionally up-market, the converse is not necessarily true. Couchsurfing was seen simply as more

variable. Of course there is the stereotype of Couchsurfers being “hippie travellers who use only flip phones,” as Participant 5 said, but four other participants told us that the quality of Couchsurfing accommodations can range greatly, and at times they are not even so distinct from that of Airbnb’s:

Perception in public is that Couchsurfing is full of hippies, broke students, and you’re actually sleeping on someone’s couch all the time. Quite often you stay in a proper bedroom just like an Airbnb. —P2

Participant 2 speaks against the misconception that all of Couchsurfing is youngsters slumming it. Illustrating this point about variable quality, Participant 9 gives an example of one particularly indulgent stay:

It was a really beautiful area in Chicago, on the 23rd story. It was looking over Lake Michigan. He said normally he rented in Airbnb when he’s gone; and when he’s there he hosts on Couchsurfing. —P9

Showcased here is Couchsurfing accommodation which is also literally available on Airbnb. One can either rent the apartment with the owner absent, or stay with the host for free. This seemingly strange situation pinpoints the message from dual-guests that the quality of homes and hosting arrangements on Couchsurfing are variable, even if the standards are lower.

4.1.2 Origin of quality standards. Participant 11 offered the following rationale for how Airbnb can maintain consistently high standards:

I project my expectation. If I were to be paying for it, I’d expect a nice stay. This is why I never Airbnb-hosted before, because recently I couldn’t enable that [kind of hosting]. —P11

Here Participant 11 displays the psychology of a host putting themselves in the position of an Airbnb guest, imagining if their offering is good enough for Airbnb.

Yet another reason why “good enough for Airbnb” might be a concept is that the company is intentionally trying to position themselves as upscale. Participant 7’s reasoning proposes that:

They [Airbnb, the company] take actions to usually get rid of hosts from their system, and then, what they also do, is they take proactive measures sending the photography crews out there to actually take pictures. They are really trying to brand the experience, that brand is at risk if [an Airbnb listing] has 1 or 2 star reviews. —P7

According to Participant 7, Airbnb is attempting to associate their brand with the user-generated content on their site, and, therefore, have an interest in ensuring positive views of their hosts. This creates pressure on hosts to provide high quality accommodations. Similarly, Participant 5 said:

It’s more about the photographs where you’ll be staying. This nice kind of wallpaper, or having a nice view of the lake. Airbnb is focused more on the room, creating good and unique places. Every hotel looks the same. Getting into the luxury game. [sic]—P5

The press has echoed this idea that Airbnb attempts to spread a specific aesthetic of their own [7]. The benefit to this Airbnb aesthetic, according to both journalists and Participant 5, is that it makes traveling frictionless and ensures comfort worldwide—just as hotels do.

Overall our interview data suggested that due to imagined and marketed images of the Airbnb brand, potential hosts do not post their home if they do not think it conforms to the Airbnb standards. Conversely, a wide range of accommodations appear on Couchsurfing. As a theme, we posit that *Airbnb raises perceived standards on offerings and Couchsurfing offerings vary more in quality.*

4.2 Theme 2: Focusing on People and Places

4.2.1 The human experience. As our paper's introductory quote demonstrated, Couchsurfers and Airbnb guests have stayed in the same houses, oblivious to each other. One way to understand how this is possible is in the reports of differing emphasis put on people and physical space. We heard that Couchsurfing is fundamentally a community about people (12 mentions), while Airbnb focuses on places to stay as well as people to stay with (10 mentions). Participant 14, explained this in terms of how guests on the two platforms have different aims:

People who go on Airbnb, they are looking for a specific goal, a specific service, expecting the place is going to be clean [...] the water isn't leaking from the sink. I know people who do Couchsurfing even though they could definitely afford to use Airbnb every time they travel, because they want that human experience. —P14

Some guests feel that a deeper sense of connection is possible on Couchsurfing. Others place Airbnb as somewhere between Couchsurfing and a hotel in terms of its person-focus. Participant 11 articulated:

Airbnb offers a different experience, and I don't mean compared to Couchsurfing in this sense, I mean in relation to a more traditional tourism experience. Money means service, money means transaction, but, there's several gray and nuanced areas in how people do business [on Airbnb] because its a mixture of business and hospitality. —P11

While it is true that a guest can stay in an Airbnb without ever meeting the host, or only ever having perfunctory conversation, our participants stressed that Airbnb doesn't preclude personal connection. Participant 6, an Airbnb host, said:

Sometimes they have plans already and they just don't end up talking to me very much. And sometimes they're like, "yeah, let's have a beer" and then it turns more into a Couchsurfing mode. —P6

The degree to which an Airbnb stay can turn into "Couchsurfing mode" can be striking. Participant 3 explained how their Airbnb guest-host relationship grew strong through a family loss:

I was supposed to stay there for a month but I ended up staying there for four to five months just to help out [my host] after her mother had died. Doing her laundry, stuff like that. —P3

We saw compassion and friendship building from Airbnb as well as Couchsurfing stays—something that was mentioned by three other participants as well as other researchers [22]. In participants' minds, if Couchsurfing is almost entirely people-oriented, and hotels are almost entirely place-oriented, then Airbnb lies somewhere in the middle.

4.2.2 The role of user interface in service orientation. In discussing how focus on people and places manifests, five participants mentioned user interfaces. The technologies and user experiences were seen by participants as priming them to think more or less about the people and places being displayed. Of location, Participant 15, a dual guest, noted:

On Couchsurfing you can only see the city and not the whole address. This is on purpose so it's less about the location and more about the host. Airbnb offers more location-driven filters. Is it near transport? A monument? The filters speak to what they offer. —P15

These interviewees suggested that the design of the platforms emphasized their orientation. For example, with its coarse location data, Couchsurfing was described as rejecting place. Airbnb was described as embracing it. Participant 7 told just how detailed his selection process could become in Airbnb with fine-grained geographic information:

I look at that map and see where it's located. Then I look at price. I kind of measure value against location. Is this decent value or 3 blocks away can I get something that's a little bit better of a deal for me? And then I look at who's actually hosting the place.
—P7

With Airbnb's interface, decisions are being made on fine-grain geographic criteria before the host is even considered as a factor.

Conversely, Participant 5 noted that new additions to Couchsurfing's user interface attempted to further emphasize the human side of hospitality by connecting people with complimentary skills:

They also added these newer things in the last couple years about sharing skills. It's more about you and who you're staying with. The platform lends itself to saying, "oh yeah, I read in your profile you teach guitar, can you teach me something?" —P5

Participants explained that on Couchsurfing, personal compatibility and the ability to connect with a host was paramount. On the other hand, we heard about the influence of Airbnb as a technology supporting selection by place as much as by person. We phrase our second theme, *Couchsurfing tends to emphasize people while Airbnb tends to emphasize places as well as people*.

4.3 Theme 3: Host-centered versus Guest-centered

4.3.1 Imbalanced power relationships. A final theme in our interview data was the difference in the power relationship between guests and hosts. Eight participants suggested that guests attempt to impress potential hosts on Couchsurfing. On the other hand, twelve participants said that it is the reverse in Airbnb and that hosts attempt to impress guests. Participant 10 explained this concisely:

On Couchsurfing the hosts usually have more constraining house rules compared to Airbnb, because on Airbnb the host is trying to attract the guest, whereas on Couchsurfing, it works the other way round. It's the guest that has to make an effort for the host to accept them. —P10

As anthropologists studying gift exchange have noted, gift giving can have the social effect of placing the gift-giver in a position of power in relation to the receiver [26]. Because Couchsurfing hosts are not being paid, extending hospitality is treated as a gift. In Airbnb, however, the direct monetary exchange explicitly benefits the host and alleviates the feeling of indebtedness in guests, reversing the power relationship.

4.3.2 Social obligations and options. A consequence of imbalanced power is "social obligation" in Couchsurfing versus what one interviewee described as "social options" in Airbnb. Participant 13 said:

[For Airbnb] I think you're buying a service and the service is the room, and you don't need to be... of course you're friendly towards them, but it's not like you have to spend your time with them. And OK you also don't *have* to do that with Couchsurfing. [...] but I wouldn't feel good if I wasn't being social with my host. —P13

On Couchsurfing, guests reported feeling an obligation to their hosts that could be "paid back" socially. The characteristic social obligation of Couchsurfing [29] is avoided through the contract that exists on Airbnb. Participant 15 sought to define the alternative currency theory in terms of a kind of emotional labour:

In Couchsurfing there is a hidden currency, it's a social-emotional currency (and the receipt is your review). If I get a gift, [e.g.,] someone plays me a song on their instrument, that has intrinsic value. —P15

The social-emotional currency, according to Participant 15, takes the form of small personal actions, like musical entertainment, that are meant to repay the host. Another very typical way guests fulfill their obligations in Couchsurfing is by simply keeping their host company. An aware guest will be able to sense if this is the case according to Participant 9:

As a guest you definitely need to feel the [host's] personality. If they are lonely? They need someone to talk to. I hangout with them. —P9

Nine other participants mentioned this exchange of friendship and company in Couchsurfing.

For some guests though, it can be difficult to determine if the “intrinsic” value of their reciprocity is commensurate with what the host is expecting. Through direct negotiated exchange, as Participant 4 tells it, Airbnb circumvents this problem:

On Airbnb the social obligations aren't there, you can check-in and check-out, you don't have to make sure you're taking too much from somebody, you don't have to make sure the experience is equally as rewarding for the host as it is for you. —P4

Crucially, even though money-based hospitality eases social obligation, it does not banish the human aspects of social interaction altogether. As Participant 5 sees it, the relationship is still potentially open for friendship:

In Airbnb, I've got my key, I want to be in the private bedroom for a while. I don't think there's much of a social obligation, but there's *social options*. —P5

Seen here is the perception that Airbnb has eliminated social obligation while retaining the possibility of guest-host interaction. A consequence of Airbnb's guest-centered nature is that the possibility for connection is primarily for guests to initiate.

4.3.3 Power, trust and safety. As well as affecting social obligations, we heard that the different power relationships in Couchsurfing and Airbnb also affect trust in guest-host interactions. Seemingly counterintuitive, four dual hosts said that with Couchsurfing, they trust their guests more:

I actually trust my Couchsurfing guests more than I trust my Airbnb guests. The reason being there's no financial transaction, I feel like people are more beholden to you to be good people. —P6

One way to understand Participant 6's observation is in terms of increased social solidarity stemming from generalized reciprocity.

Airbnb's guest-focus reverses this trust flow and may lessen one troubling aspect of the host-centric power relationship—the potential for sexual predation, especially of women. Participant 1 explained that she had contacted a host on Couchsurfing and was so put off by their response—“I only take girls”—that she signed up for Airbnb:

They were all like, “No, you have three boys with you—I only take girls.” I was like, “red flag,” so then I signed up for Airbnb. —P1

Three other participants mentioned that Airbnb's mediation through money is an improvement of safety in guests' minds.

The idea that hosts occupy the position of power within Couchsurfing has been described before. State et al. [31] examined differences in reciprocal references left by guests for hosts and by a hosts for guests. They found that Couchsurfing guests reported greater trust in their hosts, and described their hosts as better friends, than hosts reported of their guests. Our interviews provide additional evidence in support of that power dynamic on Couchsurfing and suggest that the reverse may be true of Airbnb. Phrased as a theme, we suggest that, *Airbnb gives more power to guests and Couchsurfing gives more power to hosts*.

5 QUANTITATIVE HYPOTHESIS TESTING

We quantitatively test hypotheses associated with each theme using the data described in Section 3.2. These analyses provide evidence in support of each of our three themes.

5.1 Theme 1: Raising Perceived Standards

	<i>Hosts per 100k population</i>	
	Couchsurfing (1)	Airbnb (2)
Median House Price (\$100k)	-3.775*	43.443*
Constant	28.174*	33.110
Observations, City-years	7,475	7,475
Log Likelihood	-41,603.740	-62,041.980

Note: * $p < 0.01$

Table 3. Results of two mixed-effects linear regressions between the fixed effect of median house price and the rate of hosts per capita, city and year are treated as random effects. Airbnb exhibits a positive correlation, whereas the Couchsurfing correlation is negative and an order of magnitude smaller.

The first theme from the interviews was that Airbnb is perceived to raise standards on offerings while Couchsurfing does not. Owing to how geographically pervasive this theme was, both across our participants and in Chayka [7], we make the following hypotheses:

H1a: Wealthier cities will have more homes that reach the “Airbnb standards” and thus more Airbnb hosts per capita.

H1b: The rate of hosts per capita in Couchsurfing will be unrelated to a city’s wealth.

5.1.1 Statistical model. We collected city-level data on median house prices and population for each city in our dataset from the US Census [27]. Median house price as a proxy for physical quality standards allows for nationwide comparisons but will not capture important and potentially complex variation in the way that use of the sites have diffused within cities as well as ignoring subtleties of quality that are not captured by such a broad measure. Joining the Airbnb and Couchsurfing user dataset with the Census data resulted in 97.5% coverage of hosts being in a city and state for which we had census data.

We ran two mixed-effects linear regressions between the rate of hosting and the median house value in each city and in each year. That is, for each site, we regressed the number of host listings per 100,000 population on median house price (in \$100,000s) as a fixed effect, using the city and year variables as random effects.

5.1.2 Results. Table 3 shows that the rate of Airbnb hosts per population exhibits a positive relationship with median house price ($\beta = 43.443; p \leq 0.01$); whereas Couchsurfing hosts exhibits a negative relationship ($\beta = -3.775; p \leq 0.01$). In other words, we predict that for each \$100,000 increase in median house price in a city, there will be about 43.4 more Airbnb hosts per 100,000 citizens, and 3.8 fewer Couchsurfing hosts.

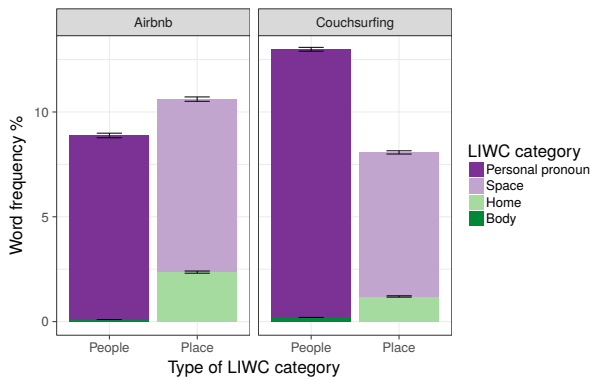


Fig. 1. The percentage of words in reviews in LIWC categories referring to concepts of *people* and *place*, in both Airbnb and Couchsurfing. Airbnb shows almost equal emphasis in personal pronouns and space; whereas Couchsurfing is more person-oriented. Error bars show the 95% confidence interval.

5.1.3 Interpretation. The results largely provide support for Theme 1. H1a is supported by the positive relationship between house price and the number of Airbnb hosts. H1b was not supported in that we estimate a negative relationship between house price and Couchsurfing hosts. That said, the negative correlation is an order of magnitude smaller than our estimate for Airbnb suggesting that hosting in Couchsurfing is indeed much less correlated to house-price.

Of course, our study cannot identify a causal effect. Although our results might be explained by more apartments of the high quality necessary for Airbnb in wealthier neighborhoods, we cannot rule out alternative explanations. For example, higher cost of living may necessitate increased Airbnb hosting. Although limited, our analysis complements our qualitative finding and provides at least some evidence in support of interviewees’ perceptions of “Airbnb standards.”

5.2 Theme 2: Focusing on People and Places

Our interviewees suggested that while Airbnb users focus on both people and places, Couchsurfing users focus on people almost exclusively. To test this theme, we reasoned that the content of reviews exchanged in the sites would reflect this difference. We hypothesize:

H2a: Airbnb reviews will discuss people and places in near equal proportions.

H2b: Couchsurfing reviews will discuss people more than places.

5.2.1 Statistical model. We used the LIWC dictionary software [32] to identify the degree to which reviews were people- and place-oriented. Of all the LIWC dimensions available, we used the *personal pronoun* and *body* categories to represent people-orientation, and the *home* and *space* categories to represent place-orientation. Table 4 shows example words from each category. The LIWC score for a review is defined as the percentage of the words that occur in a category. For example, the sentence “She is intelligent.” has a *personal pronoun* score of 33.33, since 1 of 3 words in this sentence is a personal pronoun. We ran the LIWC software on 10,000 randomly-selected reviews from our public dataset—5,000 reviews each from Airbnb and Couchsurfing. To test for differences between sites, for every LIWC category, we applied an independent t-test between the distribution of LIWC scores on Airbnb and Couchsurfing reviews.

5.2.2 Results. Figure 1 and Table 4 show the average LIWC scores in different categories by site. Combining the *personal pronoun* and *body* categories (i.e. people-orientation), 8.87% of words in

category	example	Airbnb	Couchsurfing	p
<i>personal pronoun</i>	themselves, he, i, our	8.78	12.80	< 0.01
<i>space</i>	east, outside, large, where	8.25	6.87	< 0.01
<i>home</i>	address, bed, laundry, shower	2.36	1.20	< 0.01
<i>body</i>	arm, ear, hand, lung	0.09	0.19	< 0.01

Table 4. The examples and percentage of words in reviews in LIWC categories referring to concepts of *people* and *place*, in both Airbnb and Couchsurfing. The significance of the mean differences for each category is confirmed with an independent t-test, all of which are significant.

Airbnb reviews are people-oriented versus 12.99% of words in Couchsurfing reviews. Combining *space* and *home* categories (i.e. place-orientation), 10.61% of words in Airbnb reviews are place-oriented versus 8.07% in Couchsurfing. Furthermore, t-tests indicate that the difference in the percentage of words in each LIWC category in the two sites is statistically significant ($p \leq 0.01$).

5.2.3 Interpretation. Our results provide support for Theme 2. In terms of H2a, Airbnb is more balanced in people-orientation and place-orientation at 8.87% vs. 10.61%—a spread of approximately 2 percentage points. Couchsurfing on the other hand more than doubles that difference, and has more people-oriented words than place-oriented words—12.99% vs. 8.07% (H2b). These results support what we heard in the interviews: Airbnb users mix their focus more equally on people and place. On Couchsurfing a greater emphasis is placed on people.

5.3 Theme 3: Host-centered versus Guest-centered

Our interviews suggested a difference in the power relationship between guests and hosts: Airbnb gives more power to guests and Couchsurfing gives more power to hosts. To investigate this difference, we first consider the psychological underpinnings of what participants hinted was causing the discrepancy. Power Dependence Theory [8] predicts that a power-unequal situation will induce behavior that brings relationships closer to a more balanced state. A low-power actor may attempt to lessen their dependence on a more powerful partner by engaging in “status-giving” activities. In the context of network hospitality, a low-power actor might give status to the high-power actor by awarding them higher ratings and better reviews. In State et al.’s earlier study [31], they found empirical support for this prediction in Couchsurfing by showing that ratings were higher from guest-to-host than vice-versa.

We expanded State et al.’s approach to both platforms by conducting sentiment analysis on the reviews on both platforms and looking at differences in the sentiment between guests reviewing hosts and hosts reviewing guests. We propose the following hypotheses based on Theme 3:

H3a: Couchsurfing guests will give more positive reviews to hosts than vice-versa.

H3b: Airbnb hosts will give more positive reviews to guests than vice-versa.

5.3.1 Statistical model. To operationalize the notion of review positivity, we used Mechanical Turk to label our reviews on a 5-point Likert scale. We used this technique rather than LIWC because although LIWC has a *positive emotion* score for text it is insensitive to sentiment intensity (e.g. “good” and “excellent” are both equally positive words) [18]. We randomly selected 250 reviews from

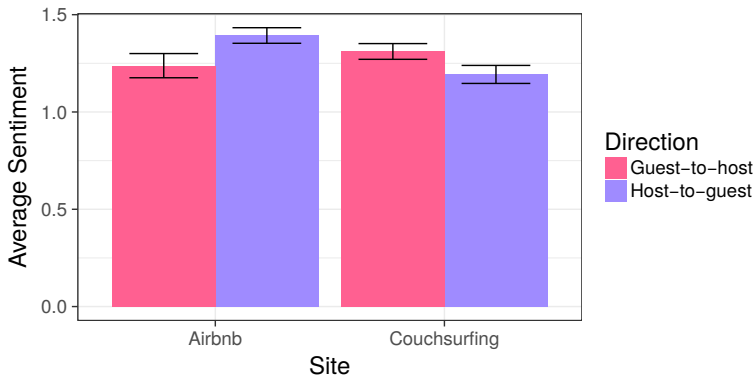


Fig. 2. Average sentiment score of reviews in Airbnb and Couchsurfing, separated by direction (guest-to-host, or host-to-guest). Sentiment score is given by 4 Mechanical Turkers per review on a 5-point Likert scale from very negative to very positive $[-2, 2]$. Error bars show the 95% confidence interval.

each of the 4 categories in the cross-product $\{\text{Airbnb, Couchsurfing}\} \times \{\text{guest-to-host, host-to-guest}\}$, for a total of 1,000 reviews. We asked Turkers to read and rate the reviews on the 5-point interval from -2 to 2; -2 being very negative, 0 being neutral, and 2 being very positive. We had 4 Turkers rate each review and took their average rating to represent the positivity of the review. We paid Turkers the minimum wage of Minnesota, prorated.

We conducted a Mann-Whitney U test to determine if the average sentiment of host-to-guest and guest-to-host reviews differed. We conducted this U test twice, for both Airbnb and Couchsurfing.

	Airbnb	Couchsurfing
Guest-to-host (g.t.h.)	1.24	1.31
Host-to-guest (h.t.g.)	1.39	1.19
(g.t.h.) - (h.t.g.)	-0.15***	0.12***

Note: *** $p < 0.01$

Table 5. Average sentiment and Mann-Whitney U test results for Turk sentiment scores of reviews on 5-point Likert scale, which implies a significantly different direction of positivity between the two sites.

5.3.2 Results. Figure 2 shows the average sentiment scores for each site in both directions. Table 5 shows that Airbnb hosts rate guests with an average sentiment of 1.39 and guests rate hosts at 1.23. On Couchsurfing those sentiment scores are 1.19 and 1.31.

That is, Airbnb guests will likely give a less positive review to the host than vice-versa (0.15 points lower on our 5-point Likert scale, $p < 0.01$); but in Couchsurfing, the guest will likely give a more positive review to the host than vice-versa (0.12 higher on our 5-point Likert scale, $p < 0.01$).

5.3.3 Interpretation. Our results show that Couchsurfing guests write more positively about hosts than vice versa (in support of H3a) but that Airbnb reviews from hosts-to-guests are more positive than guests writing about hosts (in support of H3b). We interpret these quantitative results as providing evidence in support of the power dependence relationships raised in the interviews: Couchsurfing is host-centric, whereas Airbnb is guest-centric.

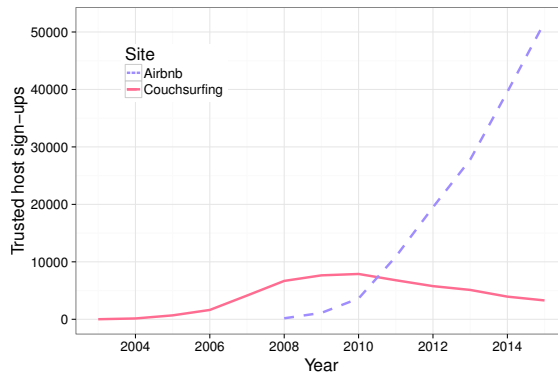


Fig. 3. Comparison of yearly sign-ups of *trusted hosts* on Couchsurfing and Airbnb. Hosts are “trusted” when they have any form of references or verification in Couchsurfing and at least one review in Airbnb.

6 DISCUSSION

Our work suggests that there are several fundamental differences between Couchsurfing and Airbnb. These findings contribute to the literature on network hospitality by providing insight into why these platforms may be on very different trajectories. Seven years ago, Couchsurfing and similar social-based systems defined network hospitality. Today, as Airbnb grows, our findings point to what is changing in network hospitality, and perhaps the sharing economy at large.

Figure 3 shows a comparable subset of established hosts on both platforms and paints a striking picture of the way that network hospitality has changed. While our dataset suggests that the sign-up date for trusted hosts on Couchsurfing peaked in 2010 and has declined subsequently, the number of Airbnb hosts seems to have increased rapidly since the system’s founding in 2008. In terms of trusted hosts sign-ups, we see that Airbnb surpassed Couchsurfing in 2010.

In a multi-level linear regression of the number of sign-ups in Couchsurfing on the number of sign-ups in Airbnb using our longitudinal city-level dataset used in Section 5.1, with fixed effects for city and year, we find that the number of Airbnb sign-ups is negatively correlated with Couchsurfing sign-ups ($\beta = -0.022$; $p \leq 0.01$). Table 6 shows that over a year, for every additional 1,000 Airbnb sign-ups in a city, there have been 22 fewer Couchsurfing sign-ups. If data from the two largest players is evidence of broader trends, network hospitality is shifting to a system based on money.

6.1 Reasons for the shift

Although our analysis is designed to understand what has changed in the shift from social-based to money-based network hospitality, this question is intricately tied up with questions around why the shift occurred. Do they compete? Has Couchsurfing’s growth slowed because of Airbnb’s growth? Although we cannot answer these questions, these questions are central enough to our study that it is worth sketching out possible answers for which we found some support in our interviews.

As Participant 6 told us, there is a feeling that Airbnb somehow fixes Couchsurfing:

Airbnb solves some of the fundamental problems that I have encountered as a Couchsurfing host. I am way less inclined to use Couchsurfing now that Airbnb exists. I really enjoy the interaction [on Airbnb] when it happens because it feels very much like the old Couchsurfing experiences, but still usually with less of the pressure.—P6

	<i>Dependent variable:</i>
	Couchsurfing Sign-ups
Airbnb Sign-ups	-0.022***
Observations (City-years)	25,873
R ²	0.126
Adjusted R ²	0.083
F Statistic	2,459.359*** (df = 1; 17031)
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01

Table 6. Regression of host sign-ups on Couchsurfing on host sign-ups in Airbnb. a are included for both city and year. Airbnb hosts sign-ups are negatively correlated with Couchsurfing sign-ups.

Research has shown that the benefits of hosting on Airbnb include many of the same social benefits as Couchsurfing while reducing some of the risk and providing new incentives [22, 29]. In this sense, money-based systems are more attractive than entirely social-based systems to many potential users—especially would-be hosts who stand to benefit financially.

A second explanation for Couchsurfing’s stagnation in the face of Airbnb’s growth could be that the two sites are simply at different points in their independent life-cycles [20] and that there is no direct relationship. Couchsurfing, like other popular network hospitality sites, is older, more established, and may have reached a large portion of its potential users. Airbnb may simply not be as far along. This explanation suggests that, with time, Airbnb’s growth will also slow as it matures. Of course, Airbnb has already shown that its ceiling in terms of its userbase is much higher than Couchsurfing’s.

6.2 Implications of the shift

Given the fundamental differences demonstrated in our findings, we might ask what is lost and gained from the shift to money-based network hospitality that we outlined. We identify three possible implications: a decrease in affordability, an increase in commercial focus, and an increase in perceptions of safety.

6.2.1 Affordability. From our first proposition we saw that Airbnb generated perceptions of minimum quality for participation. This could mean that the opportunity to earn from one’s home is linked to one’s ability to afford a nice enough home. Indeed, other studies have shown that Couchsurfing and Airbnb address different socio-economic classes [10]. Likewise, given the ties between socio-economics and race that exist in the US, prior research showing that black Airbnb guests and hosts are disproportionately disadvantaged is also pertinent [12, 13]. In a future where income from Airbnb is more commonplace, being excluded from those potential earnings plays into a broader critique of the sharing economy that it is “expensive to be poor.” [33]

6.2.2 Commercial focus. Our second theme claimed that Couchsurfing focused more on people, and that Airbnb places more emphasis on places. Here our participants noted that one main cause of less human interaction in Airbnb are hosts with many listings, or “multilisters” as they called them. Participant 17 expanded on this effect:

You end up with dozens, or scores maybe, of Airbnb venues being rented out or being managed by the very same person. Which is just another way of running a hotel, [it’s]

totally the opposite of what, not Airbnb specifically, but the sharing economy in general has the potential to offer. —P17

Searching for these multilisters in our dataset we found that 18.7% of Airbnb hosts list more than once, and 4.4% have listings in more than one city. Even the *The Economist* has noted a consumer backlash saying that the “perceived readiness to reduce all aspects of people’s lives, from spare rooms to spare time, to assets to be auctioned off is seen as deeply dehumanising.” [11]

6.2.3 Safety. Although the first two findings paint a grim picture of the shift toward money-based network hospitality, our third finding about host-guest relationships suggests a brighter outlook. Respondents, especially women, reported that with less costly social obligations, Airbnb felt like a safer alternative.

If I’m alone of course I’m scared to stay at a stranger’s couch. But the weird thing is, with Airbnb, I don’t really mind staying alone in someone’s apartment. —P1

Airbnb alleviates some safety concerns of guests who, as paying “customers,” get to decide if and how sociality takes place. In this way, a shift to money-based systems could broaden the appeal of network hospitality.

6.3 Implications for the Sharing Economy

Generalization is often a tricky question—particularly for grounded-theory-based work. That said, we believe that there are reasons why our findings might be able to provide some insight into other areas of the “sharing economy.”

For example, BlaBlaCar is a form of money-based “carpooling.” It functions as a marketplace where drivers post their routes with prices, and passengers may buy seats. On the other hand, Waze Carpool allows drivers and passengers to enter trips, and then matches them. Waze Carpool allows drivers to either drive for free or be algorithmically compensated based on miles driven by GPS and the government reimbursement rate. With this similar monetary/non-monetary division, we iterate through our three themes, explaining how they might apply to carpooling.

First, participation could also be limited by whether users can meet perceived standards (Theme 1). Drivers with less expensive or older cars may be more willing to offer rides on Waze Carpool than with BlaBlaCar where a driver would have to decide that they would meet paying riders’ standards. Indeed this notion is already somewhat codified into the rules of these platforms as Waze Carpool includes a prominent “I’m willing to drive for free” button, potentially lowering expectations. Meanwhile, BlaBlaCar has been offering special-price leases on new Opels (a German automobile manufacturer), enticing drivers to portray a brand image.

The second theme suggests that social-based network hospitality is more people-focused. In carpooling, this would translate to the importance of the driver versus their car. With the choice between two Waze Carpool ride options, we might predict the choice of the more appealing personality. However, we would predict the more luxurious car to be selected among two BlaBlaCar drivers. User interface differences underscore this divide. While both platforms allow five-star ratings and reviews, additional badges on Waze include “CoolPooler” (for being extremely friendly), while on BlaBlaCar they include the “Backseat Gaurantee”—that no more than 2 people will share the back seat of the car.

Finally, the guest-or-host-centric user dynamics predict that the ride-offerer is in the position of power in Waze Carpool while the ride-taker has more power in BlaBlaCar. In fact, the very mechanisms of the two sites reflect this. In Waze passengers make their trips known and only drivers can propose a match. Conversely with BlaBlaCar drivers make their trips known and passengers must propose the match.

7 LIMITATIONS

Our work has several important limitations. Although we believe they have special insight, the dual users we chose to interview may be unrepresentative of the user-bases of either system. For example, if we believe that Couchsurfing attracts users who are more comfortable in novel social situations, then our interviewees might feel more comfortable in novel social situations than the typical Airbnb user. Likewise we did not control for whether dual users were active on both sites simultaneously. If not, our respondents' memories of one site might suffer from retrospective bias.

Another limitation is that while our interviews were international in scope, we only collected quantitative data from the United States. Expanding the national boundaries of our data collection would draw a more complete picture. Our quantitative analyses were further limited in a number of ways that stem from the process of bringing together several distinct datasets. For example, although we limited our dataset to a set of comparable "trusted hosts" on both platforms, we relied on two forms of "references" which reflect subtly distinct relationships. Differences in the way that geographic location were reported across datasets meant that we had to define our geographic scale at the city level and ignore more fine-grained variation. Another concern is that although our quantitative analysis is longitudinal, our data is drawn from cross-sectional snapshots. As a result, certain types of data—like accounts deleted from either platform—are missing.

Finally, although the findings from our qualitative work are presented in the form of broad themes, our quantitative tests are more narrowly focused and relied on necessarily arbitrary forms of operationalization. In Theme 1, we interpret a regression between median house price and hosting rates as showing different hosting standards. Although our interviews corroborate this connection, and although we controlled for city and year, more controls would substantiate the claim. In Theme 2, we used the frequency of different words in reviews to test the people- and place-focus of each site. This might have been tested in other ways such as how profile pictures represent a host or their home. In Theme 3, we study differences in the relative positivity of reviews left by guests for hosts and vice versa. Although previous work by State et al. [31] suggests this approach can capture power relationships, it is obviously only a very partial picture.

8 CONCLUSION

This paper presented and tested three themes that emerged from grounded-theory analysis of interviews with 17 dual-users of Couchsurfing and Airbnb. Claims we consistently heard from participants were that the users, framing, and power relationships of the two platforms systematically differ. Aligning comprehensive datasets of listings from US-based users of Couchsurfing and Airbnb, we uncovered diverging dynamics of network hospitality's two largest platforms. First, we heard that Airbnb, but not Couchsurfing, impresses standards for host's homes. We found support for this theme by showing that the rate of Airbnb hosts increases with the median house price of a city, whereas with Couchsurfing it decreases. Second, we heard that Airbnb splits emphasis on the people and places on the site, but that Couchsurfing emphasizes people. We explored this theme by showing that Airbnb reviews use pronouns nearly as often as space-words (e.g. 'where', 'large'), while in Couchsurfing reviews pronouns are more frequent. Third, we heard that Airbnb empowers guests whereas Couchsurfing empowers hosts. We demonstrated this by showing that Airbnb hosts left guests more positive reviews than vice-versa, while in Couchsurfing guests left hosts more positive reviews. Finally, we presented evidence that Airbnb has grown rapidly relative to Couchsurfing and discussed the implications of this trend and our themes in the sharing economy.

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