



Frictionless Design: Unintended Discrimination in the Airbnb Platform¹

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Background

In recent years, the tech industry has been working actively towards developing seamless and simplified consumer experiences. The race towards optimization and convenience defines the industry's success and competitiveness in the market. Whether it is getting a taxi, renting accommodation, or ordering food, platforms like Uber, Airbnb, and DoorDash have made these consumer experiences more effortless and gratifying. This trouble-free and uncomplicated approach to developing digital products is currently referred to as "frictionless design."

Friction can be defined as difficulties that occur during an interaction with technology that confuses users or causes frustration.^{2,3} One example of friction in design is when one cannot figure out whether to pull, push, or slide the door to open it⁴. According to Norman (2013), the design of the door should indicate how it works without any need for trial and error. One way to solve this problem is by labeling the doors. The process of simplifying technology design to make the user's interaction unhindered is called frictionless design. Some of the advantages of the frictionless design that experts cite are minimizing the human effort to problem solving,

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² Cox, A. L., Gould, S. J. J., Cecchinato, M. E., Iacovides, I., & Renfree, I. (2016). Design Frictions for Mindful Interactions: The Case for Microboundaries. CHI'16 Extended Abstracts on Human Factors in Computing Systems - CHI EA '16, 1389–1397

³ Force, N. (2022). Reimagining the Role of Friction in Experience Design. *Journal of User Experience*, 17(4).

⁴ Norman, D. (2013). *The Design of Everyday Things* (Revised edition). Basic Books.

reducing user frustration, and saving time.^{5,6} Considering these advantages, the latest hype in the tech industry is that friction is problematic, and so designers are trained to eliminate friction in their products.

While going frictionless has a lot of advantages, this race toward making technology easy also has its own drawbacks. Frictionless design, in many situations, requires users to share their personal information and grant permissions, which raises concerns about data privacy and security. Apps like Facebook and Google collect user data that raises concerns about privacy, unauthorized use of personal information, and data breaches. The Washington Post reported that Amazon's Alexa devices keep a copy of everything it records after it hears its name.⁷ Although Amazon claims that consumers have complete control over this feature, the user has to go and delete the conversations from the Alexa app manually, knowing exactly where to look. The current design makes it difficult for the user to find and delete the recordings, demonstrating how frictionless design conceals information and enables users to neglect important privacy risks in using the app. In other words, sharing personal information with devices is easy, however, attempting to erase this data is a process full of deliberately added friction, creating an asymmetric relationship with the service provider.⁸

While this is just one example, other drawbacks associated with frictionless design are lack of transparency, thoughtless actions, impulsive decision-making, and the user's diminished agency. For example, one-click purchasing options make it effortless for users to make impulsive purchases without fully considering the consequences. With these increasing issues arising with technology, a pro-friction cohort emerged within the tech community that advocates for introducing meaningful frictions into designs. It has been contended that by making devices frictionless, designers are bringing in more underlying complexities and risks for the users. Researchers argue that friction in design can add moments of reflection, cognition, and awareness to a user's interaction with technology.⁹ While nobody is advocating that friction should be removed completely, there remains a mistaken impression that friction is merely a

⁵ Hernández-Ramírez, R., & Parrilli, D. M. (2023). A Defense of Friction—Or Why Ubiquitous Computing Should not Recede to the Background. In N. Martins & D. Brandão (Eds.), *Advances in Design and Digital Communication III* (pp. 125–136). Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-20364-0_12

⁶ Lemieux, C., & McDonald, D. (2020). *Frictionless: Why the Future of Everything Will Be Fast, Fluid, and Made Just for You*. Harper Business.

⁷ Fowler, G. A. (2019, May 8). Perspective | Alexa has been eavesdropping on you this whole time. Washington Post. <https://www.washingtonpost.com/technology/2019/05/06/alexa-has-been-eavesdropping-you-this-whole-time/>

⁸ Hernández-Ramírez, R., & Parrilli, D. M., Ibid.

⁹ Cox, A. L., Gould, S. J. J., Cecchinato, M. E., Iacovides, I., & Renfree, I., Ibid.

product of bad design. Instead, the argument may be made that designers should be trained to consider the value of friction and pivot towards designs where friction is added with intention and care to make interactions more informed and safer.^{10,11} There is a need for incorporating consent, safety, ethics, and other social values as design criteria^{12,13}. An example of good friction is the pop-up prompt that comes when a user tries to close a text editor which gives them an option to save the document before closing it directly. Here we can see that the user experiences a moment of self-reflection and cognition in finishing the interaction with the software.

It is important to note that technology associated disadvantages are not inherent to frictionless design, the impact on a user's behavior and experience depends on the specific context, and implementation of the design. This case study looks at a short-term rental platform, specifically Airbnb, and discusses how some of the design choices lead, even if unintentionally, to racist practices and discrimination among the users of the platform. The study discusses the complexities of design choices, how policies influence these platforms and social values play into these socio-technical relationships.

Case Study

The development of the internet and digital technologies has transformed the way society consumes. One of the advantages of online purchases is that they have been able to remove some bias, such as race and gender, from the buying process which is still a reality in the off-line markets. The relative anonymity of the transactions taking place on these platforms was one of the reasons that made it difficult for users to discriminate against others.¹⁴ However, for new shared economy platforms such as Uber and Airbnb, anonymity took a backseat, while profile pictures and names became front and center.

¹⁰ Cox, A. L., Gould, S. J. J., Cecchinato, M. E., Iacovides, I., & Renfree, I., Ibid.

¹¹ Force, N., Ibid.

¹² Le Dantec, C. A., Poole, E. S., & Wyche, S. P. (2009). Values as lived experience: Evolving value sensitive design in support of value discovery. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 1141–1150. <https://doi.org/10.1145/1518701.1518875>

¹³ Shilton, K. (2013). Values Levers: Building Ethics into Design. *Science, Technology, & Human Values*, 38(3), 374–397. <https://doi.org/10.1177/0162243912436985>

¹⁴ Fisman, R., & Luca, M. (2016, December 1). Fixing Discrimination in Online Marketplaces. *Harvard Business Review*. <https://hbr.org/2016/12/fixing-discrimination-in-online-marketplaces>

The sharing economy refers to a business model or a socioeconomic system based on collaborative consumption.¹⁵ In this kind of system, individuals, groups, or organizations share resources, goods, or services using digital platforms or offline networks. We are going to look specifically at Airbnb and how user profile information added to the platform has an impact on equity and discrimination.

Founded in 2007, Airbnb serves as a marketplace that connects hosts and travelers, offering a platform for individuals to rent out their properties to guests seeking accommodation, booking and managing short-term rentals. It has become an alternative to hotels and resorts, as it provides a wide variety of properties and lodging options in many locations worldwide. As of the year 2022, Airbnb has 6.6 million active listings in more than 220 countries worldwide.¹⁶ This is five times more than Marriott, for instance, which stood at 1.38 million rooms in 134 countries as of 2020.¹⁷

With the growth of Airbnb, claims of discrimination on the platform also started emerging. Numerous Black travelers started sharing their experiences of discrimination while using this home-sharing service. Many of them have also shared their stories on social media using the hashtag #AirbnbWhileBlack, highlighting the racial bias on the rental app where hosts are refusing to rent to Black guests. Their experiences included racist episodes that go from the host rejecting a guest's booking request, neighbors thinking that the guests were thieves, to hosts discriminating against the travelers by asking them to leave the property after they have arrived.^{18,19,20} Discrimination against Black travelers based on their race becomes an Airbnb problem when the design of the platform has also contributed to such outcomes.

Airbnb's policy was to grant the hosts access to guest profile pictures and names while allowing

¹⁵ GÖRÖG G., The Definitions of Sharing Economy: A Systematic Literature Review. *Management* (18544223). 2018;13(2):175-189. doi:10.26493/1854-4231.13.175-189

¹⁶ Airbnb. (2022b). About us. Airbnb Newsroom. <https://news.airbnb.com/about-us/>

¹⁷ Marriot International. (2020). Marriott International Announces Seventh Consecutive Year of Record Organic Worldwide Rooms Signings in 2019, with Approximately 515,000 Rooms in the Pipeline. Marriott International Newscenter (US).

¹⁸ Clemence, S. (2022, December 13). Black Travelers Say Home-Share Hosts Discriminate, and a New Airbnb Report Agrees. *The New York Times*. <https://www.nytimes.com/2022/12/13/travel/vacation-rentals-racism.html>

¹⁹ Glusac, E. (2016, June 21). As Airbnb Grows, So Do Claims of Discrimination. *The New York Times*. <https://www.nytimes.com/2016/06/26/travel/airbnb-discrimination-lawsuit.html>

²⁰ Vara, V. (2016, November 3). How Airbnb Makes It Hard to Sue for Discrimination. *The New Yorker*. <https://www.newyorker.com/business/currency/how-airbnb-makes-it-hard-to-sue-for-discrimination>

them to reject any booking request without explanation.²¹ Additionally, a guest seeking accommodation could also see the host's profile, past reviews, and listings offered. Airbnb encourages guests to contact the host by messaging them on the platform to confirm availability and any other details about the trip.²² This was the main feature contributing to the racial prejudice on the platform, as shown by the instances where guests reported that hosts made the properties unavailable after looking at their profile pictures and names. *The New Yorker* reported on a case where Selden, a Black man from Virginia, was trying to book an accommodation in Philadelphia. When he inquired about the availability, the host responded by saying that those dates were already booked.²³ He suspected something was odd, so he made fake profiles with stereotypically white names, “Jessie” and “Todd”, and this time the reply from the host for the same dates was different. Jessie and Todd were welcome. Other travelers had similar experiences and many of them also filed a lawsuit against Airbnb between 2015-2018 accusing them of facilitating racism.

A study conducted by scholars from Harvard Business School confirmed these stories and experiences through analysis of quantitative data²⁴. The study tested the availability of roughly 6,400 Airbnb listings across five major cities in the United States. Edelman et al. (2017) found that distinctively African American names were 16% less likely to be accepted compared to identical guests with distinctively white names. The study showed that booking inquiries from guests with white-sounding names were accepted 50% of the time compared to African-American sounding names being accepted 42% of the time. This percentage point difference is particularly striking when compared to the discrimination-free setting of competing platforms where personal details are not required to make a room reservation. The authors argue that Airbnb’s design choices enable this discrimination and that online markets can and should be made more anonymous to mitigate racial injustice. Edelman et al. also suggest that Airbnb could conceal guest names and personal information while increasing the “instant book” option (in which hosts can accept guests without screening them first).

²¹ Vara, V. (2016, November 3). How Airbnb Makes It Hard to Sue for Discrimination. *The New Yorker*. <https://www.newyorker.com/business/currency/how-airbnb-makes-it-hard-to-sue-for-discrimination>

²² Airbnb. (2023). Listing availability—Airbnb Help Center. Airbnb. <https://www.airbnb.com/help/article/137>

²³ Vara, Ibid.

²⁴ Edelman, B., Luca, M., & Svirsky, D. (2017). Racial Discrimination in the Sharing Economy: Evidence from a Field Experiment. *American Economic Journal: Applied Economics*, 9(2), 1–22. <https://doi.org/10.1257/app.20160213>

With regard to friction in design, the case of Airbnb shows that the option for guests to message the host with questions is a particular friction that has been added into the booking process as compared to the instant booking option. Airbnb's survey also showed that such friction, where guests are able to message the host regarding their queries, typically resulted in higher trip satisfaction for both parties²⁵. However, chances are that these results will vary among people who have been consistently discriminated against, given the evidence of the studies discussed previously. In the case of profile names, the visibility of them to hosts was allowing for potential biases to be formed based on racial or ethnic associations. From the perspective of friction, the visibility of guest names facilitates a seamless or frictionless flow of information that is prompting an unconscious bias among the hosts.

Unconscious bias or implicit bias refers to biases or prejudices that individuals hold without their awareness. These biases are often based on societal stereotypes and can be deeply ingrained beliefs or assumptions about certain groups of people. Unconscious bias can influence perceptions, judgments, or decision-making processes, even when individuals may not intentionally or consciously hold discriminatory attitudes.

This frictionless flow of information of guest names contributes to prompting the hosts on Airbnb to take action with or without mindfulness or reflection. Mindless interaction also contributes to unconscious bias²⁶ toward certain groups, which does not happen when guests' personal information is concealed during booking. The Civil Rights Act of 1964 prohibits discrimination based on race, color, religion, sex, or national origin in various settings, including public accommodations. While the specific application of the Civil Rights Act to incidents of racism on platforms like Airbnb can vary depending on the circumstances, the act establishes a legal framework that promotes equal treatment and prohibits discriminatory practices. Even when companies design platforms with good intentions, it is important to consider that they can still have some unintended consequences. Experts suggest that questioning if platforms are providing too much potentially sensitive user information, such as full names and profile pictures, is a matter of design decision-making.²⁷

After multiple cases of discrimination and lawsuits, Airbnb incorporated some steps to address the issues. One of the major alterations was that hosts on Airbnb will now be able to see a

²⁵ Selzer, Steve. The Fiction of No Friction. Airbnb. <https://airbnb.design/the-fiction-of-no-friction-2/>

²⁶ American Psychological Association. Implicit Bias. <https://www.apa.org/topics/implicit-bias>

²⁷ Fisman, R., & Luca, M., Ibid.

guest's profile picture only after they have accepted the reservation.²⁸ Additionally, Airbnb incorporated inclusivity training for hosts as well as rejection auditing, building them in as steps to make hosts eligible for instant booking on the platform.

In practice, Airbnb and other sharing economy businesses inhabit a soft spot in the law, as regulations based on traditional business models do not completely apply to them.²⁹ Hotels are easily understood as public accommodations, but short-rental homes involve more complex layers where homeowners rent out their private residences. In such a context, Edelman and Luca (2017) argue that Airbnb's changes are more likely to be motivated by public pressure or ethical considerations rather than legal mandates³⁰—but this likelihood should not reduce the importance of advancing regulations to incorporate them.

Case Study Questions

- 1) What is friction? Describe some of the pros and cons of friction in the design of digital platforms like Airbnb.
- 2) What are some of the design features that have led to discrimination in the case presented above?
- 3) What is unconscious bias? How may Airbnb's design have contributed to unconscious bias from hosts toward their guests?
- 4) What are the potential advantages and disadvantages of anonymity of user profiles on platforms like Airbnb?

Thematic Reflection and Discussion

Theme 1: Regulation of Shared Economy Platforms

The Civil Rights Act prohibits places of public accommodation to discriminate against individuals based on their race or socioeconomic status. However, the law mentions exceptions if someone is renting less than five rooms in his own home. Functionally, Airbnb serves as a hotel—overall, Airbnb hosts offer more rooms than major hotel chains—but since the platform aggregates private properties, it falls into a grey area under the law. Experts argue that the statute could also be read to treat all of Airbnb as a single provider of public accommodation, since the

²⁸ Airbnb. (2022a). A Six-Year Update on Airbnb's Work to Fight Discrimination and Build Inclusion. <https://www.airbnb.com/against-discrimination>

²⁹ Todisco, M. (2015). Share and Share Alike? Considering Racial Discrimination in the Nascent Room-Sharing Economy. *Stanford Law Review Online*, 67, 121–129.

³⁰ Luca, M., & Bazerman, M. H., *Ibid.*

company itself offers more than five rooms.³¹ Sharing economy platforms highlight a unique situation where the lines between what is public and private are blurred. Racial discrimination on different sharing economy platforms points to the gap in terms of applying the law and how the law should consider the possibility of implicit bias resulting in discrimination.

- 1) In your opinion, should Airbnb be considered a public or private accommodation? Why?
- 2) Imagine that you are an Airbnb designer. You have been asked to test new friction/frictionless possibilities to comply with the Civil Rights Act and mitigate discrimination through the platform. What two ideas would you implement considering the host experience? And the guest experience?

Theme 2: Values in Design

The issue of discrimination on Airbnb shows that corporations have a responsibility to consider their design choices and anticipate potential discriminatory outcomes. It reminds us that design goes beyond creating aesthetically pleasing and functional experiences; it has the power to shape social interactions and influence societal dynamics. Hernández-Ramírez & Parrilli (2023) suggest that designers cannot rely on legislation only and need to adopt an ethical stance as a critical aspect of the design process. Some ethical values discussed regarding digital platforms include fairness, respect, and privacy. By incorporating values into the design process, designers can contribute to creating more inclusive and equitable platforms and services.

- 1) Airbnb has changed its design to not allow guests and hosts to access any profile information such as full profile names and pictures until the booking is complete. Which values are embedded in such design choices? How can values in design enhance mindful interactions with technology?
- 2) Access the Design Justice Network website: <https://designjustice.org/>
 - a) Read the “About Us” page. What is Design Justice? Why was this network created?
 - b) Read their principles. Considering the Airbnb discrimination case and Principles #2 and #6 of the Design Justice Network, who do you think should be involved in the design of the solution for the problem in the platform? Why?

³¹ Leong, N. (2021, December 7). Can civil-rights law stop racial discrimination on AirBnb? Washington Post. <https://www.washingtonpost.com/news/monkey-cage/wp/2016/05/01/can-civil-rights-law-stop-racial-discrimination-on-airbnb/>

Theme 3: Investigate Your Own Bias

Visit the following website and take any of the implicit bias tests provided: <https://implicit.harvard.edu/implicit/selectatest.html>. Once you take the test, discuss the following questions.

- 1) What were some of the initial reactions and feelings during the test?
- 2) Did you find the test results surprising or unexpected?
- 3) How might implicit bias impact your everyday relationships, workplace, social interactions, etc.?