

Exploring peer-to-peer interactions on digital platforms: consumer behavior insights

Ipek Held

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DOCTORAL THESIS

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To the academic women who inspire me.

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Table of Contents

Acknowledgments	iv
Table of Contents	vi
List of Figures	x
List of Tables	xi
Abstract	xii
1. Introduction	1
1.1. Overview.....	2
1.2. Overall Structure.....	3
1.3. Theoretical Background.....	5
1.4. Methodology of The Dissertation.....	6
1.5. References.....	8
2. Platform-Mediated Peer-To-Peer Interactions in Digitally Connected World	9
Abstract.....	10
2.1. Introduction.....	11
2.2. Marketing in The Digitally Connected World.....	13
2.2.1. Digital Touchpoints.....	13
2.2.2. Platforms' Role and Market Power.....	14
2.3. Consumers in A Digitally Connected World.....	15
2.3.1. Behavioral Dynamics in Digitally Connected Consumers.....	16
2.4. P2P Interactions.....	17
2.4.1. P2P Direct Interactions.....	17
<i>Information Sharing</i>	17
<i>Funds Sharing</i>	22
<i>Goods Sharing</i>	23
2.4.2. P2P Indirect Interactions.....	24
<i>Consumer Consensus</i>	25

<i>Algorithmic Advice</i>	25
<i>Network Effects</i>	26
2.4.3. Dark-Side of P2P Interactions	26
<i>Dark Web</i>	26
<i>Scam - Fraud</i>	27
<i>Online Gambling</i>	29
<i>Misinformation, Trolling, and Harassment</i>	30
2.5. Conclusion & Future Research	30
2.6. References.....	33
3. Metaphysical Deterrents to Providers' Participation in the Sharing Economy: The Role of Peer-to-Peer Contagion.....	43
Abstract.....	44
3.1. Introduction.....	45
3.2. Conceptual Background	46
3.3. Empirical Support	48
3.3.1. Summary of Studies	48
<i>Study 1a – Testing the Basic Model</i>	49
<i>Study 1b – Replication with Different Product Category</i>	52
<i>Study 2 - Augmenting the Effect of Essence Threat Through Possession-self Link Strength</i>	54
<i>Study 3 – Mitigating the Expectation of Contagion through Thoughts of Sterilization</i>	57
3.4. General Discussion.....	59
3.5. Contributions and Practical Implications	59
3.6. Future Research.....	60
3.7. References.....	62
3.8. Appendix.....	66
1. Empirical Support Summary Table.....	66

2a. List and the descriptions of providers’ concerns regarding renting out	67
2b. Mean comparison statistics of providers’ concerns.....	68
2c. Descriptive statistics of providers’ concerns	69
3. Stimuli Study 1a.....	70
4. Measures for the focal variables.....	71
5. Sample responses for the open-ended question on essence definition	74
6. Stimuli Study 1b.....	75
7. Descriptive statistics of the variables of interest	76
8. Study 2 and Study 3 Exemplary Product Visuals.....	77
9. Possession-Self Link Manipulation Stimuli	78
10. Experimental Platform Terms and Conditions Page	79
11a. Study 2: Frequency of Objects Chosen by Participants.....	80
11b. Study 3: Participants responses on how they think their chosen object fits the given description	81
12. Study 3 Stimuli: Sterilizing Product Visuals.....	102
13. Study 3: Frequency of Objects Chosen by Participants	103
4. Consumers as Superheroes: When and Why Online Consumer Actions Manifest Underdog Effects.....	105
Abstract.....	106
4.1. Introduction.....	107
4.2. Theoretical Background	108
4.2.1. Financing an Underdog	108
4.2.2. Social Beliefs and Attitudes	108
4.2.3. WoM by Consumer Ratings.....	111
4.3. Study 1: Higher Motivation to Support but no Better Reviews for the Underdog	113
4.3.1. Procedure	114
4.3.2. Manipulation Checks	114
4.3.3. Results.....	115

4.4. Study 2: Performance as a Boundary Condition for The Underdog Effect on Donation Behavior	116
4.4.1. Procedure	117
4.4.2. Manipulation Checks	117
4.4.3. Results.....	118
4.5. Study 3: Sequential Decisions to Support the Underdog	118
4.5.1. Procedure	118
4.5.2. Manipulation Checks	119
4.5.3. Results.....	119
4.6. General Discussion.....	120
4.6.1. Theoretical Contributions.....	121
4.6.2. Practical Implications.....	122
4.6.3. Limitations & Future Research	123
4.7. References.....	126
4.8. Appendix.....	132
5. General Discussion and Conclusion.....	135
5.1. Theoretical Contributions & Managerial Implications.....	136
5.2. Limitations & Future Research	138
5.3. Concluding Remarks.....	139
5.4. References.....	141

List of Figures

Figure 3.1: The conceptual model.....	48
Figure 4.1: The conceptual model.....	113
Figure 4.2: Underdog effect on willingness to help	116

List of Tables

Table 1.1 Research Questions and Theory Background	5
Table 2.1: Synthesizing Framework	19
Table 2.2 Future Research Questions and Knowledge Gaps	32

Abstract

Consumers have been the center of any marketing strategy in what is understood as modern marketing. However, strategic utilization of customer-to-customer (C2C) interactions is relatively new. We are facing an ever-increasing influence of consumers on each other while we face the dissolution of producer-consumer distinction and witness the emergence of business models rooted in C2C interactions. In the face of these current trends, this dissertation takes a behavioral perspective to explore the current knowledge about C2C interactions in the consumer behavior field while we expand it through additional contributions rooted in empirics based on controlled experiments. Additionally, this dissertation discusses managerial implications connected to these contributions in order to capitalize on C2C interactions for businesses, platforms, and individual sellers.

The first paper in this dissertation synthesizes what we know about digitally-mediated C2C interactions (e.g., social media, instant messaging, e-commerce platforms). It creates a categorization of digitally-mediated C2C interactions, discusses challenges for traditional marketing approaches, and provides insights for marketers as well as future research ideas. The second paper explores an important process, anticipating essence threat, by which strangers' physical contact demotivates potential providers from supplying goods to peer-to-peer sharing platforms. We do so by separating metaphysical contagion from another process, that of physical contagion. The literature previously discussed physical contagion as the sole determinant of consumer contagion concerns. Finally, the last paper in this dissertation examines the underdog effect in a peer-to-peer context to identify if and how consumers support disadvantaged individuals' business success. The study reveals that underdog peer-providers can collect more money in crowdfunding but not more positive reviews for their products due to justice concerns. Overall, the three papers in this dissertation enhance our understanding and knowledge of consumer-to-consumer interactions which are substantially central to most digital contexts of today.

Resumen

Los consumidores han sido el centro de las estrategias de marketing en lo que se entiende como marketing moderno. Sin embargo, la utilización estratégica de las interacciones C2C es relativamente nueva. Se está produciendo un aumento en la influencia de los consumidores entre sí, al mismo tiempo que nos enfrentamos a la disolución de la distinción entre productores y consumidores, y somos testigos del surgimiento de modelos de negocio arraigados en interacciones C2C. Frente a estas tendencias actuales, esta disertación adopta una perspectiva conductual para explorar el conocimiento actual sobre las interacciones C2C en el campo del comportamiento del consumidor, mientras lo ampliamos a través de contribuciones adicionales basadas en experimentos controlados. Además, esta disertación analiza las implicaciones gerenciales relacionadas con estas contribuciones para capitalizar las interacciones C2C para empresas, plataformas y vendedores individuales.

El primer artículo de esta tesis sintetiza lo que sabemos sobre las interacciones C2C mediadas digitalmente (por ejemplo, redes sociales, mensajería instantánea, plataformas de comercio electrónico). Crea una categorización de interacciones C2C mediadas digitalmente, analiza los desafíos de los enfoques de marketing tradicionales y proporciona información para los especialistas en marketing, así como ideas de investigación futuras. El segundo artículo explora un proceso importante, anticipación a la amenaza a la esencia, mediante el cual el contacto físico de extraños desmotiva a los proveedores potenciales de suministrar bienes en plataformas de intercambio. Lo hacemos separando el contagio metafísico de otro proceso, el del contagio físico. El contagio físico se había definido previamente como el único determinante de las preocupaciones de contagio de los consumidores. Finalmente, el último artículo de esta tesis examina el efecto *underdog* en un contexto de igual a igual para identificar si los consumidores apoyan el éxito empresarial de las personas desfavorecidas y cómo lo hacen. El estudio revela que los proveedores desfavorecidos pueden recaudar más dinero mediante crowdfunding, pero no más críticas positivas para sus productos debido a preocupaciones de justicia. En general, los tres artículos de esta tesis mejoran nuestra comprensión y conocimiento de las interacciones entre consumidores, que son fundamentales para la mayoría de los contextos digitales de hoy.

Resum

Els consumidors han estat el centre de les estratègies de màrqueting en allò que s'entén com a màrqueting modern. Tot i això, la utilització estratègica de les interaccions C2C és relativament nova. S'està produint un augment en la influència dels consumidors entre si, alhora que ens enfrontem a la dissolució de la distinció entre productors i consumidors i som testimonis del sorgiment de models de negoci arrelats en interaccions C2C. Davant aquestes tendències actuals, aquesta dissertació adopta una perspectiva conductual per explorar el coneixement actual sobre les interaccions C2C en el camp del comportament del consumidor, mentre l'ampliem a través de contribucions addicionals basades en experiments controlats. A més, aquesta dissertació analitza les implicacions gerencials relacionades amb aquestes contribucions per capitalitzar les interaccions C2C per a empreses, plataformes i venedors individuals.

El primer article d'aquesta tesi sintetitza allò que sabem sobre les interaccions C2C intervingudes digitalment (per exemple, xarxes socials, missatgeria instantània, plataformes de comerç electrònic). Crea una categorització d'interaccions C2C intervingudes digitalment, analitza els desafiaments dels enfocaments de màrqueting tradicionals i proporciona informació per als especialistes en màrqueting, així com idees de recerca futures. El segon article explora un procés important, anticipació a l'amenaça a l'essència, mitjançant el qual el contacte físic d'estrany desmotiva els potencials proveïdors de subministrar béns en plataformes d'intercanvi. Ho fem separant el contagi metafísic d'un altre procés, el del contagi físic. El contagi físic havia estat definit prèviament com l'únic determinant de les preocupacions de contagi dels consumidors. Finalment, l'últim article d'aquesta tesi examina l'efecte *underdog* en un context d'igual a igual per identificar si els consumidors donen suport a l'èxit empresarial de les persones desafavorides i com ho fan. L'estudi revela que els proveïdors desafavorits poden recaptar més diners mitjançant crowdfunding, però no més crítiques positives per als seus productes a causa de preocupacions de justícia. En general, els tres articles d'aquesta tesi milloren la nostra comprensió i coneixement de les interaccions entre consumidors, que són fonamentals per a la majoria dels contextos digitals avui.

1. Introduction

1.1. Overview

Consumers are more connected than ever before. We owe this largely to digitalization, the integration of digital technologies into various aspects of our lives. The resulting increase in consumer connectivity opens up opportunities for individuals to gather information, earn a better living, or use products and services that are otherwise inaccessible. As a result, consumers are empowered to make more informed choices and engage in new forms of transactions (Troise, 2022; Belk, 2010). Their role in marketing has evolved from passive recipients of marketing messages to active participants who influence each other's behavior in complex ways (Moreau & Herd, 2010). Since the dominant approach in marketing is consumer-driven strategies, marketers cannot be blind to increased consumer connectivity.

Consequently, consumer-to-consumer interactions - social media, collaborative consumption, online reviews, or digital communities – have become a central marketing component. Some of these interactions involve monetary or non-reciprocal transactions where an individual becomes a provider who interacts with another individual to sell, rent, or share items, inform, train or entertain them. For instance, a Netflix family plan customer can become a peer provider on Sharesub where she rents out the other accounts of her family plan individually. In another example, a couple can be renting a peer-provider's car when visiting a foreign country while their own car is also rented out during their trip. Or, social media influencers can be simultaneously a customer and a provider (e.g., consuming and producing content) within the same platform. This increasingly prevalent practice of seller-buyer perspective switch is a new phenomenon. Because it blurs out the boundaries between producer and consumer (Puschmann & Alt, 2016) it pioneers a shift in our definition of “consumer,” which renders traditional marketing practices insufficient.

This dissertation originated from a general interest in understanding how consumer behavior evolves as novel peer-to-peer interaction forms emerge. Digital platforms and applications have been expanding in both range and specialization, increasing the variety and frequency of consumer connectivity (Llamas & Belk, 2022). However, there remains many unexplored areas regarding the types, application, and development of peer-to-peer interactions and consumer responses to them. This dissertation aims to expand our knowledge of these phenomena by exploring the psychological processes that affects consumer decision making and to offer consumer insights.

Three chapters in this dissertation complement each other by studying peer-to-peer interactions at different scales and contexts. First, we explore the landscape of peer-to-peer interactions, synthesizing existing knowledge, discussing the challenges for marketers, presenting the dark side for consumer wellbeing and future research directions for scholars. Then we reveal a novel factor counter acting the growth of peer-to-peer sharing activities. Finally, we explore how consumers' behave differently when contributing to WoM and crowdfunding for a peer in the presence of a certain information regarding the other peer's characteristics. Overall, these manuscripts contribute to a better understanding of factors and processes that underline consumers' decision-making when they interact with other consumers in or through digital mediation.

Particularly because new technologies continue to raise individuals' digital connectivity at an escalating speed, becoming aware of the possibilities surrounding consumers becomes key to forming profitable businesses and efficient marketing strategies. To do so, it addresses the implications of digital mediation in peer-to-peer interactions, deterrents for peer-providers to participate in the sharing economy, and how peer-providers may manifest a version of the underdog effect in online consumer behavior.

1.2. Overall Structure

The overarching focus of this dissertation is consumer-to-consumer interactions in digital mediation. Specific research questions asked in this dissertation involve who, what, when, why, where, and how in this context. This investigation could span from two colleagues meeting in a Zoom call to ordering groceries on a delivery app, from renting a neighbor's car to matching with her on Tinder. I chose to keep bird's eye angle for one chapter to model the ecosystem and study more specific contexts of peer-to-peer interactions in the following two chapters.

In the rest of the current chapter, I outline the theories and bodies of literature that have motivated the research questions and hypotheses that have been examined in this dissertation, and the methodologies employed by my research. This is followed by three standalone chapters. Each of these three chapters constitutes a research project devoted to answering the overarching research question of how P2P interactions may affect consumer behavior by exposing different consumer decision-making contexts.

The second chapter conceptualizes digitally mediated peer-to-peer interactions, documents what we know, and discusses what we need to know about them. I look at the new paradigms

that increased digitalization have brought to the world of business, marketing, and consumer behavior with a focus on consumers' decision-making processes and digital platforms' ability to influence those. I adopt a behavioral perspective and delve into how particular digital amenities (i.e., design elements, algorithms, internet of things, applications) empower platforms in restructuring consumer experiences by mediating, enabling, or moderating their interaction with other consumers. The chapter classifies peer-to-peer interactions in a practical framework that orients to (1) provide a depiction of the ecosystem that future researchers can use to guide their inquiries and (2) help marketers analyze their position in a science-based roadmap to better plan their functions involving customer-to-customer interactions. It also highlights caveats for individuals and marketers in relation to the potentially harmful aspects of peer-to-peer interactions, based on the existing research and practices on illicit actions.

The third chapter focuses on peer-providers' willingness to participate in the sharing economy by opening their possessions to renting. After discussing the importance of studying demotivating factors particularly on the supply side, the chapter moves to build the theoretical background to propose that (1) metaphysical contamination that comes with others' contact with a possession hinders owners' willingness to share due to an anticipated threat to its essence, (2) this process is distinct from physical contamination, (3) it is conditional to one's degree of identity-based connection with the possession, and (4) whether the item will come back to the owner or not. Then, experimental empirics follow: an initial exploratory study and four experiments conducted to test these hypothesized relationships. The chapter concludes by discussing the findings, limitations, contributions, practical implications, and future research suggestions.

The fourth chapter explores whether online consumer actions manifest the underdog phenomenon in supportive actions for peer-providers. The chapter starts by discussing what the underdog and WoM literatures suggest answering this question, which leads to conflicting findings. Then, the chapter builds hypotheses around the presence or absence of an underdog effect in consumer decision-making toward donation and public review behavior. Three experiments testing the hypothesized effect follow. The chapter closes with a discussion of the findings, theoretical contributions, practical implications, limitations, and future research suggestions.

Finally, the last chapter presents a general conclusion of this doctoral dissertation. It lists contributions to specific lines of research and some managerial implications spanning all 3

standalone chapters. It also highlights the limitations of the present studies, and suggests areas for future research to explore.

1.3. Theoretical Background

In the following paragraphs, I briefly outline my dissertation's overarching research lines. Each chapter of the dissertation contains specific extended literature reviews. Table 1.1 presents a concise overview of those.

In Chapter 2, we review the literature on digital peer-to-peer interactions within a provided conceptual framework. We base the motivation for this research on the increased use of digital technologies in marketing practice (i.e., digital touchpoints) and the proliferation of platform mediation in customers' interaction with each other. We review relevant research from digital marketing, platform economy, and purchase decision-making research lines to conceptually enrich these fields by reviewing extant knowledge on digitally mediated peer-to-peer interactions, synthesize findings, and also challenge existing perspectives.

Table 1.1 Research Questions and Relevant Literature

	Research Questions	Literature
Chapter 2	<p>What are digitally mediated peer-to-peer interactions?</p> <p>Why and how do consumers engage in them?</p> <p>How can businesses be impacted by and, at the same time, impact these interactions?</p> <p>What remains to be discovered about this phenomenon?</p>	<p>Digital consumer behavior</p> <p>Platform economy</p> <p>Word of mouth</p> <p>User generated content</p> <p>Digital marketing</p>
Chapter 3	<p>What factors influence providers' willingness to participate in goods-sharing transactions, particularly regarding the role of metaphysical contamination?</p> <p>What conditions can amplify or mitigate this influence?</p>	<p>Sharing economy</p> <p>Consumer contagion</p> <p>Possession-self link</p>
Chapter 4	<p>How does the underdog effect manifest in consumer actions, such as crowdfunding donations and consumer ratings towards peer-providers?</p> <p>What role do performance quality and consumers' motivation to reduce market inequalities play in this process?</p>	<p>Underdog effect</p> <p>Word of mouth</p> <p>Consumer reviews</p> <p>Justice beliefs and attitudes</p>

Chapter 3 starts with reviewing the sharing economy literature with a focus on consumer psychology to identify the knowledge gap we aim to address. Then, we integrate a form of metaphysical thinking, the law of contagion, that is in play when people interact with other entities (e.g., people, objects, places, smell). Contagion is shown to operate when consumers are in-store shopping, buying second hand or using a previously owned item (Argo et al., 2006; Castro et al., 2013; Morales & Fitzsimons, 2007; Newman et al., 2011; Stavrova et al., 2016). We test the application of this concept when physical contact with a shared item is experienced. We also include the concept of possession-self link in our hypothesis building, as the relationship with one's belongings might amplify contamination-based concerns.

In Chapter 4, we turn to the literature on the underdog effect, where the underdog characteristics of an entity (i.e., brand, campaign, product) are shown to influence consumer decision-making. Since the concept is shown to be closely related to social beliefs and attitudes (e.g., self-image, empathy, justice), we account for these factors in our hypotheses building. Because our variable of interest is engagement in two substantially different forms of consumer actions (i.e., crowdfunding and public reviews), we also bring relevant findings from the donation and WoM literature into our literature review.

1.4. Methodology of The Dissertation

The research approach of this dissertation relies on conceptual development and experimental probes. It is composed of a conceptual review oriented to reconcile and then extend past research about digital peer-to-peer interactions in a meaningful conceptual review, and two experiments oriented to explore how people make decisions when interacting with their peers by the means of digital platforms. While experiments are widely used in consumer behavior studies, conceptual articles are in shortage in the marketing literature, which weakens the discipline's theoretical core (Yadav, 2010).

To picture the extent and importance of peer-to-peer interactions, I start Chapter 2 with an expansive discussion and accumulation of our knowledge on digitally mediated peer-to-peer interactions. Here, I focus on identifying (1) what digitalization afforded the marketing world, (2) the differences between digital and non-digital peer-to-peer interactions, and (3) the role of digital platforms in this ecosystem. The output is a synthesis of existing research in a concise and meaningful manner, as well as suggestions for future research inquiries and management practices.

Chapter 3 focuses exclusively on providers' willingness to participate in good sharing transactions. It proposes and empirically tests a parallel mediation model with moderation where the effect of essence-related contamination concerns is central in explaining why individuals would be less willing to share their possessions. An exploratory study confirms the validity of an essence-related contamination concern as a substantial factor in determining individuals' willingness to share their possessions. Four experimental studies follow to test the hypothesized relationships between the constructs of physical contact, essence-related contagion concerns, physical contagion concerns, access type, possession-self link, and willingness to share. More specifically, first two studies provide support for the proposed mediation model underlying the effect of essence-related contamination concerns, above and beyond those of physical contamination concerns. The second study also tests the boundary condition of transaction type: whether one passes the item to another person temporarily or permanently. The last two studies test two intervening conditions (i.e., the strength of the possession-self link and making sterilizing options more salient). These experiments use novel manipulation methods and novel measurements. They also test the effect along a variety of product categories including but not limited to costumes, cars, digital cameras, sleeping bags, and sports equipment. Findings uncover factors that influence individuals' decision to open their belongings to the use of others, contributing to the study of peer-provider behavior and suggesting implications to motivate participation in the sharing economy.

Chapter 4 focuses on consumers' motivation to support an underdog peer-provider's success. This study hypothesizes conflicting effects connected to the underdog effect (i.e., the underdog effect manifests in some actions and not in others) and proposes an explanation for this. Three experiments test the underdog effect on willingness to support and decisions to support in action by giving reviews and money. In these three experiments the decision context is supporting a peer-singer that has either underdog or top dog characteristics. Participants listen to an audio track that is allegedly shared by a peer-singer on a sound sharing platform. The first experiment tests the underdog effect on willingness to support and whether this effect is reflected in the positivity of ratings. The following study tests the underdog effect on a consequential donation decision in addition to rating behavior. Both these studies incorporate testing the moderating role of the peer-providers' product performance since performance is hypothesized as a conditional factor for underdog effect. Finally, the last study tests the moderating role of the order in which supportive behaviors are requested and also the mediating role of individuals' motivation to reduce inequalities.

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2. Platform-Mediated Peer-To-Peer Interactions in Digitally Connected World

Abstract

Consumers live in a digitally connected world due to the integration of digital technologies into various aspects of their lives. This landscape is ever evolving, and our knowledge of digitally mediated peer-to-peer interactions is expanding. The purpose of this article is to document phenomena and behavioral dynamics in play when consumers interact with each other through digital channels. I discuss how this new phenomenon challenges prior structures and how our understanding of consumer behavior changes with the proliferation of digital platforms. The outcome of this investigation is a framework that allows us to (1) synthesize existing research in a concise and meaningful manner and (2) identify connections and differences with non-digital peer-to-peer interactions. Also, specific implications for future research avenues and management practice are outlined in this review.

Keywords: peer-to-peer, digitalization, digital platform

2.1. Introduction

The term "digitally connected consumer world" refers to the current state of interconnectedness and integration of digital technologies into various aspects of consumer life. As a result, individuals are constantly engaging with electronic devices and applications to manage their consumption needs. In this ecosystem, digital platforms become central entities that connect people, organizations, and systems on a large and efficient scale (Parker et al., 2016). For example, consumers may rely on digital platforms for a wide range of activities, including communication (Zoom, Skype, WhatsApp, WeChat), entertainment (Netflix, Disney+, HBO), information search (Wikipedia, Reddit), productive work (Slack, Dropbox, Google Workspace, Microsoft Office), money transfers (PayPal, Venmo, Apple Pay, Splitwise), shopping (Amazon, eBay, Alibaba, Getir), renting (Airbnb, GetAround), gaming (Google Play, PlayStation, Xbox, Nintendo), dating (Tinder, Bumble), connecting (LinkedIn, Instagram, Facebook) and more. While the platform economy scales up, PWC quantified the value of the top 100 digital platforms globally at over \$15 trillion in 2021 (PWC, 2022).

The landscape of the digitally connected consumer world is constantly evolving. New products and services emerge regularly to diversify and enhance consumer experiences. Products like noise-canceling headphones and VR glasses advanced the immersiveness of user experiences by better isolating people from their physical environment. Devices (e.g., smartphones, laptops, tablets, wearable tech, voice-controlled assistants, vehicles, home appliances, etc.) increased consumers' connectivity and interaction with digital content and services by removing frictions in data. The COVID-19 pandemic has also boosted digital connectivity for many individuals, as remote work, online education, virtual socializing, and digital entertainment became more prevalent. While some industries (e.g., tourism, transportation, live events) temporarily paused, some others integrated digital services to create new consumption experiences at a higher pace (Fleischer et al., 2022).

Consumers have also evolved in terms of how they interact with each other. Before the digital age, people interacted with fewer people and for a smaller amount of time on a daily basis (Cotten et al., 2013). An average internet user spent 6 hours and 37 minutes online daily in 2022 (Kemp, 2023). A substantial portion of this time involves interacting with other individuals, including but not limited to personal contacts, colleagues, other consumers, and providers (e.g., content creators and sellers). Therefore, digital consumer behavior involves interaction with other consumers at least as much as non-digital consumer behavior involves.

The novelties of online (vs. offline) consumer-to-consumer interactions open space for consumer researchers to create knowledge on this phenomenon and help practitioners shape better marketing practices.

I define digitally mediated P2P interactions as actions of exchange or influence that occur directly between individuals (peers) through digital platforms or technologies. It is important and timely to approach online (digital) and offline (non-digital) P2P interactions separately as per their significant differences in scale, immediacy, and accessibility. Offline consumer interactions typically occur in physical settings, such as retail stores or social gatherings, and are limited by geographical and temporal constraints. These interactions involve face-to-face communication, which can build strong personal connections but may lack the scalability and speed of digital interactions (Wenzel & Benkenstein, 2018). In contrast, online interactions can occur anytime and anywhere where users connect over the internet. This accessibility allows for a greater volume of interactions, as well as more diverse and inclusive participation. Moreover, digital interactions often leave a data trail, allowing for the collection and analysis of user behavior to inform marketing strategies. This data-driven approach enhances the personalization and efficiency of marketing efforts, making online P2P interactions a critical component of digital marketing strategy (Chaffey & Smith, 2020).

With this motivation for structuring this new body of work, this paper looks at studies investigating the behavioral dynamics in play when consumers are digitally connected, particularly when they interact through digital channels mediating these interactions. We define types of peer-to-peer interactions that occur in or via digital means and discuss how they are distinct from those occurring in the physical world. Furthermore, we highlight digital platforms' evolutionary role here. We then propose an organizing framework that helps understand (1) why and how the current digital interactions are happening and (2) how digital platforms and applications reshape consumer behavior. Building on the prior literature on digital consumer behavior, we identify how each type of P2P interaction challenges or fits the dominant marketing logic.

Our literature review was explicitly guided by four research questions: (1) What are digitally mediated peer-to-peer interactions? (2) Why and how do consumers engage in them? (3) How can businesses be impacted by and, at the same time, impact these interactions? (4) What remains to be discovered about this phenomenon? In the next section, I start by discussing how marketers impact consumers' decision-making process at digital touchpoints and platforms'

ability to shape marketing in the digitally connected world. Then, I delve into how consumer experiences have been altered by digital technologies. Then, I follow with an examination and classification of digitally connected consumer activities—particularly those involving direct or indirect interactions with other consumers. The paper concludes with a discussion of contributions, limitations, and suggestions for future research.

2.2. Marketing in The Digitally Connected World

Digital technologies are transforming marketing. Digitalization is changing marketing practices to become more efficient, agile, and customer-centric than ever (Henriette & Boughzala, 2015). With the integration of digital technologies into marketing execution, new forms of marketing processes (i.e. (e.g., chatbot customer service, customer relationship management systems, and customer analytics) have emerged to deliver higher convenience, novelty, and customization (Rogers, 2016). While technology-enabled business models such as Amazon, Netflix, and Airbnb gained a significant share of their corresponding industries (that is, retail, entertainment, and tourism), technology-enabled marketing activities (e.g., search engine optimization, pay-per-click advertising, social media marketing, email marketing) have gained considerable share against traditional marketing methods, which rely on print, radio, or television in marketing execution. (Li & Srinivasan, 2019; Au-Yong-Oliveira et al., 2020; Pfeiffer & Zinnbauer, 2010)

2.2.1. Digital Touchpoints

In parallel to the advancements discussed above, digital marketing emerged as a fast-growing subdiscipline of marketing that “highlights the touchpoints in the marketing process as well as in the marketing strategy process where digital technologies have a significant impact” (Kannan & Li, 2017). This subfield consists of several approaches and methods to advertise goods and services utilizing web media, including social networks, search engines, emails, and websites. Different from the other types of marketing that use print and broadcast media, digital marketing tags along with the uniqueness of the digital environments of consumer engagement (Chaffey & Ellis-Chadwick, 2019).

There are a growing number of digital touchpoints for marketers to intervene in consumers’ decision-making process, from need identification to post-purchase behavior. For example, in targeting execution, it is possible to create specific target niches within social networks or online platforms depending on the subjects' demographic characteristics, likes, and actions and

to craft custom messages based on data and analytics (Tuten & Solomon, 2023). At that point, marketers can monitor consumers' real-time or past behavior in the marketplace to create tailored offers for other individuals with similar behavioral patterns to influence their information search and consideration sets. Ultimately, once a purchase occurs, marketers can invite customers to generate WoM by sharing their experience with others to lead future purchasing decisions for themselves and others. (Yoo et al., 2013; East et al., 2017)

With word-of-mouth marketing, marketers aim to take advantage of interpersonal connections to increase reach and awareness and facilitate purchasing decisions (Cruz & Fill, 2008). Digitization of word of mouth intensified the possibilities word-of-mouth marketing can achieve (Dellarocas, 2003). Some campaigns can experience significant growth and impact as consumers pass the marketing message to their social network with one click. If the rate at which content spreads across various platforms and channels reaches a level of virality, the success of marketing activity is augmented (Abedniya & Mahmoudi, 2010). This desired state of content virality depends on individuals' interaction with each other as much as individuals' interaction with the content because it requires people to share the content with one another (Reichstein & Bruschi, 2019;).

2.2.2. Platforms' Role and Market Power

Platforms gather communities of a shared interest and help them bypass traditional intermediaries. There is a platform for nearly everything that enables a digital society of peers to connect (Llamas & Belk, 2022). They are becoming more diverse and specific in satisfying a need that was previously met only in the physical world or was not yet formed. Therefore, they not only generated process improvements to the existing market offers, but they also opened entirely new possibilities for consumers by the grace of technology (e.g., smart devices, IoT, algorithms, machine learning). Platforms' digital marketing strategies can be highly influential in shaping consumer decision-making as they can offer even more efficient, personalized, and engaging processes than traditional companies.

An e-commerce platform, be it a marketplace or a reseller, has higher visibility on consumer data (e.g., demand, keyword searching, browsing history) than manufacturers or retailers because consumers directly interact with the platform (Zha et al., 2022). For example, Vueling has user search data only for those who visited their web page or app to search for flights. In contrast, Skyscanner gathers data from a more diverse and also potentially larger group of users. This wide-ranging visibility should power a platform to craft better user experience (e.g.,

by better crafting display logic and promotional offers) as well as adding to their bargaining power against suppliers because they can highlight and positively differentiate certain products (e.g., “Best matches”). In addition, marketplace platforms (e.g., Zalando, Amazon, AliExpress) collect and publicly share user-generated content in the form of comments, images, and videos. Due to the fact that those platforms have a larger number of visitors, consumers might expect that they will have access to more data compared to what individual brands can show on their own digital channels (Mu & Zhang, 2021).

In this paper, I review how digitalization profoundly transformed business and marketing practices. In the next section, I focus on how digital technologies have reshaped consumer experiences.

2.3. Consumers in A Digitally Connected World

The growing interconnectedness of people, organizations, and machines that results from the Internet, mobile technology, and the Internet of Things has undermined conventional notions about how people access and consume information, goods, and services (Deloitte, 2021). This disrupts traditional marketing paradigms, making it necessary to have a fresh approach to consumers (Dahlman et al. 2016). We can classify the changes in consumers perspective as twofold: The ways consumers satisfy their consumption needs are becoming increasingly digital (e.g., cloud data storage, digital payments, streaming services); a more significant portion of our needs are satisfied by digitally-mediated ways (e.g., online shopping, social media). Today’s marketers should focus on digital consumer behavior as it aligns them with the expectations of consumers in the digitally connected world (Chaffey & Smith, 2022).

Digital consumer behavior may be defined as individuals' actions and decision-making processes when they engage with digital platforms and technologies for their consumption needs. This includes how consumers search for information, interact with brands, products, and other customers, make purchase decisions, and behave in the post-purchase stage in the digital environment (Lamberton & Stephen, 2016). Among the factors that put pressure on this emergence are the proliferation of the internet, digital devices, digital platforms, and advanced machine learning techniques. Consumers are now turning to a multitude of digital services to engage in shopping, communication, entertainment, learning, navigating, working, and monitoring their health while letting the digital facilities determine how they search for, use, and spread information, evaluate, buy, and consume products or services (Sun et al., 2019).

2.3.1. Behavioral Dynamics in Digitally Connected Consumers

Digitally connected consumers can be defined as individuals who use various digital devices (i.e., smartphones, virtual assistants, computers) and platforms (i.e., social media, e-commerce, and mobile apps) to connect with brands, services, and other consumers (Berman & Kesterson-Townes, 2012). They are informed, empowered, and influenced by their daily communication with digital devices and digitally distributed information. Their decision-making is influenced by their exposure to peer consumers purchases and peer consumer reviews (Cheung et al., 2014), design elements in digital presentation of goods (Chen et al., 2023), suggestions by algorithms (Barnes & Shavitt, 2023) and many other factors that are brought to our lives by multidimensional digitalization.

Digitally connected consumers in the need recognition phase might be stimulated by constant exposure to certain digital content like influencer collaborations, trending topics, viral content, personal feeds, and AI suggestions promoting a product or service. Hence, there are a multitude of digital connection incidents that can make consumers realize new needs in a dynamic and personalized manner, which will influence their behavior at the very start of the decision-making process (Ki et al., 2020; Farrell et al., 2020, Habil et al., 2023)

As compared to the non-digital era, digitally connected consumers are provided with more information resources to apply triangulation in evaluating a product. Consumers utilize enhanced information search and comparison options to help reduce uncertainty and make better-informed decisions (Ong, 2011). Triangulation involves comparing information from multiple different sources to establish its authenticity. Consumers may refer to multiple digitally delivered information sources, including user reviews, experts' recommendations, and social media influencers, to make decisions after ensuring credibility (Flanagin et al., 2020). For example, consumers can complement information provided by advertising and critical reviews with online peer reviews before deciding which movie to watch (Liu, 2006).

Similarly, consumers can combine online and offline shopping experiences for one purchase: use physical stores for product research and purchase online (aka showrooming) or use the Internet to research products and buy in physical stores (aka webrooming) (Flavian et al., 2020). Physical stores can integrate digital technologies (e.g., touch screens, digital payment systems) in the retail environment to enrich consumer experience, perception of service quality, satisfaction, and attitude, which in turn increases purchase intention (Pantano & Viassone, 2015).

In the post-purchase phase, digitally connected consumers have various ways (e.g., social media, email, or online chat) to communicate with brands as well as other customers (e.g., online reviews, social media) regarding their experience. Speed, convenience and relative cost of AI-based conversational agents are now redefining standards of post-purchase experience for both businesses and customers (Adam et al. 2021). At this stage, AI can also communicate loyalty programs, reward points, and personalized discounts based on previous purchases to increase customer retention (Rane, 2023). In case of an unsatisfactory experience, digitally connected consumers can receive instant refunds, and track their returns, which reduces uncertainty and enhances the post-purchase experience (Martínez-López et al., 2022).

Next, I discuss how a section of digitally connected consumer activities, specifically those that involve direct or indirect interaction with other consumers, is consequential for market success as well as consumer well-being.

2.4. P2P Interactions

P2P interactions in the digital world encompass a variety of actions, including but not limited to communication, exchange of information, money, products, services, entertainment content, and social activities that occur between individuals via digital technologies. These interactions occur through social media, instant messaging applications, e-commerce platforms, sharing platforms, gaming applications, and other forms of digital functions that allow users to interact with each other directly or indirectly. P2P interactions are one of the central pillars of the digital economy, that runs by billions of daily online connections among people, businesses, devices, data, and processes (Deloitte, 2021). Consumers' hyper connectedness in this setting includes a wide range of economic activities that are substantial for businesses' survival as well as their own well-being.

2.4.1. P2P Direct Interactions

P2P sharing refers to exchanges of information, money, goods, and services between individuals.

Information Sharing

Peer communication is another important sub-process in the context of digital consumer behavior where the exchange of information plays an important role in influencing consumer decision-making. Especially for experience-based products and services like a fitness class or a vacation package, it is difficult for customers to evaluate intangible attributes and determine

the suitability of an option (Weathers et al., 2007). Marketers take advantage of P2P interactions when consumers share information on their consumption experiences with others through various digital channels: online customer forums, review pages, instant messaging applications, social media, and travel websites. We discuss why P2P exchange of information should be promoted and supported by businesses.

An effective method of spreading knowledge and recommendations between peers is online consumer reviews (Hyong et al., 2007). This peer-generated content operates like social proof, endorsing the quality and credibility of goods and services. It is significant to note that word-of-mouth information is not deemed as biased compared to conventional advertisements. Consumers perceive reviews by other peer consumers as more reliable, objective, and up-to-date than those from professional editors or businesses (Zhang et al., 2010; Gretzel & Yoo, 2008). These qualities of peer-provided WoM can improve consumer confidence and enhance the decision-making process, hence increasing product sales and brand loyalty (Ding et al., 2024).

Table 2.1: Synthesizing Framework

	Applications	Current Discussion	Challenges	Insights
Direct Interactions	<p>Information sharing (reviews, referrals, social media, instant messaging, consumer forums, review pages)</p> <p>Funds sharing (borrowing, lending, crowdfunding)</p> <p>Goods sharing (collaborative consumption)</p>	<p>What we know: WoM delivered by peers ranging from one's close ties to social media influencers has a proven and significant influence on consumer decision-making. Peer-to-peer financial assistance provides a sustainable alternative to employers and the financial market. Collaborative consumption decreases the need for ownership while enabling access to a broad variety of goods and services.</p> <p>What we need to know: Efficient and effective ways for brands to intervene in WoM generation; how do behavioral biases in fund sharing through platforms resemble or differ from those prevalent in the financial market: how to target buyers who perceive ownership more as temporary possession.</p>	<p>Increased variety and availability in what is shareable. Attenuated physical constraints of time and place. Emerging against outdated business models.</p>	<p>Connecting consumers digitally enables disruptive innovations against established industries. Marketing strategy to account for how consumers are connected.</p>
Indirect Interactions	<p>Consumer consensus</p> <p>Aggregate behavior</p> <p>Network effects</p>	<p>What we know: Consumers need little or no additional effort to influence other consumers' decisions when they are using platforms. Their digital footprint in shopping or window shopping constitutes a data source for platform algorithms. Platforms process aggregate and segmented user data with AI tools to make better-targeted suggestions.</p> <p>What we need to know: At which stage of the consumer buying process do suggestions help decision-making more effectively, Optimal method and level of customization in suggestions; how does customer loyalty affect or be affected by overall customer behavior</p>	<p>Increased availability, scale, speed, and transparency of information on other consumers' choices.</p>	<p>Marketers adjust communication, product, targeting, and offers in accordance with aggregate-level customer data. Increased use of machine learning to increase the effectiveness of digital marketing.</p>
Dark Side of P2P Interactions	<p>Illegal trade</p> <p>Scam and fraud</p> <p>Online gambling</p> <p>Harassment</p> <p>Trolling</p> <p>Misinformation</p>	<p>What we know: Consumers -with or without evil intentions- find opportunities in digital mediation that enable illegal monetary gains through selling, stealing private information, gambling as well as harassing others, trolling brands, and spreading misinformation.</p> <p>What we need to know: How to increase consumers' adoption of increased security measures; how to establish better reputation mechanisms in evaluating peer-users; how to provide safety and trust under limited traceability</p>	<p>Lack of administrative surveillance, regulation, and legal sanction.</p>	<p>Strategies to handle provocative, insulting, or negative communication. Targeting underserved and niche communities. Scamming tactics that trigger fear, urgency, and scarcity to manipulate people.</p>

Social closeness of a peer can increase the effectiveness of their recommendations because people with strong ties (e.g., family, close friends) are more influential in our lives than people with weak ties (e.g., casual acquaintances, strangers) (Brown & Reingen, 1987). Promotion through referral programs exploits this rationale to encourage existing customers to introduce new users, for example, through coupons or free products. For instance, Dropbox and Uber are examples of businesses that have widely adopted this strategy of incentivizing users to request friends to join the program in exchange for some credits. It is not only an effective way to attract new clients but also turns users into engaged customers (Ryu & Feick). Through referrals from peers, businesses can reach out to potential customers with higher customer lifetime value to the business as they have been recommended by someone who is already a customer (Jin & Huang, 2014).

Besides actively referring to a product, location tagging is also an important type of information sharing between peers. Location tags highlight the best aspects of a location, from scenic views and delicious food to fun activities and unique features. Even if the intention is not to promote the place, they give the tagged location free exposure to a possibly new audience.

Social media influencers play a crucial role in P2P communication since they can increase brand engagement and influence the buying decisions of their followers through their creative content (Hughes et al., 2019). Typically, influencers may be celebrities or other people who have gained trust in certain fields and create content around that niche. They use articles, videos, or social media posts, sometimes promoting a certain product or service to their followers. Influencer interaction is seen as more genuine, fun, and intrinsically motivated as compared to other traditional marketing techniques even though people are aware that influencers are compensated by advertisers (Chung et al., 2023). In contrast to conventional advertising which most people tend to perceive with a lot of negativities, influencer marketing takes advantage of the relationship that exists between the influencer and their followers (Ki et al., 2020). This trust leads to increased attention and effectiveness, making influencers an effective instrument that brands can use to connect and communicate with consumers in the digital world.

Past research showed that the effectiveness of influencer marketing depends on many factors: influencer follower count and how many people the influencer follows (De Veirman et al., 2017), product type (Park et al., 2021), influencer's use of language (Cascio Rizzo et al., 2024), virtuality (Franke et al., 2023). Influencer communication is more effective in driving sales

when influencers feel like an old friend genuinely talking about their experience with a product rather than an opinion leader using informational language to promote a product (Farivar et al., 2020). While macro and mega influencers can be aspired for their popularity and reach a larger audience, their content is perceived to be more advertising-like and less unique since it seems to interest many others (Machleit et al., 2000). Nano and micro-influencers, on the other hand, are more relatable and approachable as people think of them as average people (Cascio Rizzo et al., 2024), making them perceived as more authentic (i.e., original and genuine) than mega-influencers (Park et al., 2021). Marketers can turn to this second group for their influencer collaborations (e.g., sponsored content, product reviews, giveaways) to feature their brand in the peer-to-peer communication space that small influencers create.

Company websites, social media groups, blogs, and discussion boards are common sites where consumers interact and express themselves on various products or services they have encountered. Public virtual communities create a shared social context, allowing the users to interact and discuss various issues and deals. These forums are sometimes developed and controlled by brands to gain information, engage in an efficient customer complaint resolution process, and hence create a good rapport with the audiences (Hennig-Thurau et al., 2004; Kaplan & Heanlein, 2010). For example, Apple and Microsoft have pages that focus on specific issues that interest users, including discussion of bug fixes, tips for getting the most out of their products, and updates on new features. These forums are helpful to customers who need to consult with other customers on similar issues. Further, the information communicated within these communities can be quite useful to the brands looking for insights to improve their products and services.

Another prominent P2P information-sharing channel is instant messaging applications (e.g., WhatsApp, WeChat, Telegram) primarily used for quick, versatile, and real-time communication between acquaintances. However, certain functions substantially distinguish them from each other and traditional SMS (Church & De Oliveira, 2013). While WhatsApp attracts small communities like neighborhoods, parents at a school, or project teams through in-chat polls and 32-person video calling functions with groups of up to 1024 users, Telegram allows up to 200,000 members to connect in large community chats or public groups (WhatsApp, 2022). Such focused groups connect people sharing similar demographics, needs, and interests, making it an ideal place to share knowledge, promote products, create a network, and collect feedback. WeChat differentiates itself from the others with a more advanced function called Mini Programs. This integrated function works similarly to individual e-

commerce, travel booking, and hailing apps. Customers can shop inside the app through Mini Programs, pay instantly with the WeChat Pay feature, share their shopping link with specific contacts in private messages, or share information on their purchase experience with their contacts in their social feed.

Funds Sharing

Crowdfunding platforms play a crucial role in democratizing finance by allowing individuals to raise funds from people from anywhere in the world over the Internet (Schwienbacher, 2010). These platforms enable peer creators, entrepreneurs, and nonprofits to present their projects or causes to a broad audience, seeking financial support in small increments without needing significant initial capital or established credit history (Mollick, 2014). Popular crowdfunding platforms like Kickstarter and Indiegogo have facilitated the funding of countless innovative products, artistic endeavors, and social causes (Belleflamme et al., 2014). A P2P crowdfunding platform, Patreon, is used by creators of digital products (i.e., podcasts, videos, blogs, NFT) to sell exclusive content directly to their subscribers, letting them earn a sustainable income without working in contract. By bypassing traditional funding sources, digital crowdfunding empowers individuals to bring their ideas to life, fostering innovation and community engagement.

Through the integration of crowdfunding functions into other platforms, crowdfunding has grown in coverage and influence. Some social media platforms (e.g., Facebook, Instagram, YouTube, Soundcloud) have included fundraising features, which enable people to collect money for themselves or specific organizations and causes on their pages. This integration takes advantage of the large population of users and the connectedness of these platforms to enable fundraisers to access potential donors easily (Hervé & Schwienbacher, 2019). Also, some e-commerce sites (e.g., Taobao by Alibaba) have implemented crowdfunding functionalities where customers are presented with detailed descriptions, images, and videos to decide on funding products from peer-creators in the development stage; effectively determining whether and how they will eventually be offered in the market.

Peers can also earn together online by debt-based crowdfunding where investor peers lend money to fund-seeking peers in return for a debt repayable over time, an equity share, or a reward (Lin et al., 2012). Crowdfunding in the form of peer-to-peer lending has received growing interest across the world since its emergence in the mid-2000s (Lin & Viswanathan, 2015). Platforms like Prosper, LendingClub, Zopa, and Peerform allow individuals to raise

funds for various purposes: debt consolidation, home improvement, business, personal, student, etc. By providing enhanced financial literacy, lower borrowing costs, and financial inclusion, P2P lending platforms significantly improve the accessibility and affordability of credits for individuals. On the other hand, distinct characteristics of P2P lending from traditional financing services call for research on how well-established financial market behaviors (e.g., herding, home bias, information asymmetry, network affect, appearance effect) fit in this context.

Goods Sharing

Sharing Physical Goods There are two forms of shared use of physical goods between individuals: sharing those provided by individuals or institutions. Before the proliferation of digital platforms, sharing between individuals was largely restricted to personal contacts (e.g., family, friends, colleagues, neighbors), and institutions enabling sharing (e.g., companies, municipalities, charities) followed less efficient processes. The emergence of digital platforms specialized in merchandising privately-owned goods (e.g., Peerby, Getaround) or providing goods to circulate between consumers (e.g., ShareNow) was evolutionary in opening up unprecedented possibilities. Such digital platforms increase supply and convenience in reaching a variety of goods (Kumar et al. 2018).

Thanks to the increased availability of peer-to-peer sharing options, sharing goods between individuals, makes goods available to many people who would otherwise have no access to them (Schreiner et al. 2018). But most importantly, this challenged the well-rooted dominant market logic of consumer behavior in the conventional market: Consumer buy-use-dispose goods supplied by companies. In peer-to-peer sharing practices (e.g., Airbnb, Getaround, Peerby), people grant others access to their belongings (e.g., house, car, sports equipment, costumes) and earn extra income through them (Cakanlar & Ordabayeva, 2023). This has the potential to turn every individual into a micro business that doesn't only consume but also supplies to the market. This also shifts the consumer mindset such that accessing an item becomes less tied to the absolute ownership of it (Benoit et al., 2017, Aspara & Wittkowski, 2019). Circulating belongings also increases usage of these individually owned goods that are maybe not any longer or not frequently used by the owner. Because the need for buying and privately owning goods decreases with the increasing availability of sharing options, sharing can challenge sales figures (Guo & Zeng, 2019) and make companies develop more access-based consumption options.

Sharing Digital and Phygital Goods Digital goods refer to intangible products such as software, e-books, audio, streaming services, online courses, and other content that can be distributed over the Internet. They are bought and delivered online, consumed with the flexibility of time, and repeated usage does not cause degradation (Atasoy & Morewedge, 2018). Therefore, they are immediately available once purchased and can be accessed anytime and at limitless times without deterioration. These distinct characteristics from physical goods make them easier to share them with others. Whereas sharing physical goods entails many concerns regarding the safety of the item, physical effort, inflexibility of independent usage, and social interaction (Spindeldreher et al., 2019).

The sharing of digital products is not restricted to those that are available for free. Platforms like Netflix, Spotify, YouTube, etc., have family or group plans where multiple people can use one account, making it cheaper for all. To further exploit this sort of budget-friendly plans, platforms like Sharesub and Togetherprice help individuals find others to unite and share the cost of a subscription with strangers, increasing the products' accessibility by decreasing monthly subscription costs.

Phygital goods combine physical and digital elements such that their consumption involves both tangible and intangible aspects. Their consumption requires a blend of digital and real-world experiences. For example, digital tickets, gift cards, coupons, NFTs linked to physical items that are conveyed over the internet but claimed and accepted in the physical world or physical devices like AR glasses, e-readers, and smart home devices that require digital connectivity to serve their function. With phygital goods, there is either a digital experience with physical elements or a physical experience with digital elements. In either case, marketers can capitalize on the digital element and encourage P2P interactions to enhance consumer engagement. For instance, brands can tap into personal social networks by leveraging people's motivation to share. Amazon's Kindle which allows lending e-books to another user for up to 14 days is a good example of integrating a traditional P2P sharing practice into their phygital product.

2.4.2. P2P Indirect Interactions

In biology, indirect interactions between living beings are typically defined as interactions where the effect of one organism on another is mediated by a third party (Wootton, 1994). For example, certain plants can modify soil conditions, making it easier for other organisms to grow (Weidenhamer & Callaway, 2010). I borrow this term to signify a type of interaction,

where individuals' collective actions and feedback can influence their peers' behaviors and choices. Below, I discuss how this mechanism applies to digitally mediated P2P interactions.

Consumer Consensus

Product attribute information, such as price, quality, and brand, have been considered the most prominent elements in influencing consumers' product choice (Jacoby et al., 1977; Zeithaml, 1988). Digital platforms add increased visibility to other elements regarding a product: detailed product descriptions, customer reviews, ratings, popularity labels, etc. Among these, ratings and reviews constitute user-generated input that can be subjective at the individual level but becomes increasingly objective at the aggregate level (Chevalier & Lin, 2006). Consequently, other consumers' consensus on the evaluation of a product (be it positive or negative) serves as a vertical product attribute, which decreases ambiguity on product quality and helps a consumer assess it on a reliable basis (Min & Cunha, 2019).

Star ratings are often displayed close to the most determinant product information like price and brand, even when the product is listed in a preview mode (e.g., in a banner or a sorted list). Customer reviews are often listed on a product page to help users further validate the product's quality and suitability (O'Connor, 2008). Given the influence of other consumers' opinions in consumer decision-making, Google collaborates with TripAdvisor and displays reviews and ratings from this platform on its own platform. Digital platforms also highlight best-seller products and customer favorites (Barnes & Shavitt, 2023), because these also serve to leverage collective user action. All of these help consumers to mitigate the uncertainty and risk associated with purchase.

Algorithmic Advice

Digital platforms play a very important role in modifying the decision-making process of consumers by means of personalized suggestions. They utilize algorithms in determining the selection of those options to display at the forefront and these algorithms are fed by user data. They follow the patterns in individual usage (e.g., browsing history, purchase history, search query, cart and wish list data, device type, location, time) as well as the aggregate demand (i.e., bestseller, most popular) to suggest products, offer promotions, show advertisements and so on (Schafer et al., 2011). Such applications employ predictive analytics and machine learning to understand consumer wants and needs based on other users.

For instance, the recommendation algorithm of e-commerce platforms brings forward the products that customers have bought or searched for before, as well as those that other customers viewed, bought, and liked the most (e.g., “Customers who viewed this item also viewed” and “Customers who bought this item also bought”), which increases the chance of a purchase (Barnes & Shavitt, 2023; Chaffey & Smith, 2020). Netflix and Spotify make recommendations and sort content in individual users’ feeds according to the viewing habits of other users with similar tastes. This way, by offering timely and relevant suggestions based on a variety of metrics that involve other consumers’ preferences and actions, they can steer consumer choices and increase satisfaction.

Network Effects

Network externalities involve instances whereby the consumption of a particular good or service possesses greater value because many other consumers are using it. This phenomenon is especially noticeable in social networks, where users are actively involved in the creation of content and determine the relevance and appeal of a resource. For example, when using social media like Instagram, recommendation websites like TripAdvisor, or sharing platforms like Getaround the value of the platform increases with a growing number of users to ensure more people for sharing and interconnecting with (Kumar et al., 2018).

There are several possible dynamics expected from network effects – one of the key benefits is that it is self-sustaining and there is constant feedback from the market – the more users are attached to a particular platform, the more others will be attracted, as well. This dynamic is seen in services like Uber where the availability of many providers is an added advantage to the site in helping the buyers find a taxi, or in Airbnb where more and better hosts are of value to the platform to attract clients (Cohen et al., 2016; Fleischer et al., 2022).

2.4.3. Dark-Side of P2P Interactions

There is a range of misconduct in digitally connected P2P interactions that are motivated by money, deception, or access to sensitive information (e.g., passwords, and personal data). A non-exhaustive list of these activities is discussed below.

Dark Web

The dark web, also called darknet, is a hidden part of the internet that is made up of non-indexed and disconnected websites and accessed through special software (e.g., Tor, I2P, and Freenet) (Thomaz et al., 2020). Through these means, users can securely access a website under full

anonymity and without leaving any traces behind. This hidden-services network is closely connected to illegal activities, such as selling drugs, weapons, pornography, or stealing data - accounting for 57% of the whole categorizable content (Moore & Rid, 2016).

There are fundamental advantages of using the dark web (vs. surface web) that offer unique insights and applications for marketing practice (Thomaz et al., 2020). As for the protection of anonymity, the dark web only operates with cryptocurrencies which makes it more appealing to tech-savvy and privacy-conscious consumers. Due to the absence of advertising and anonymity constraints, consumers need to base their assessment of a seller's reliability on peer reviews and ratings, making reputation management more important than it is in regulated markets (Georgoulas et al., 2021). From another angle, the dark web does not require application and registration to become a vendor, allowing individuals to be sellers and buyers simultaneously. For an individual, selling in a marketplace on the dark web (vs. surface web) can be more financially attractive for individual sellers as they bypass platform fees and regulations imposed by legal e-commerce platforms.

While research and regulation lag behind the thriving of such activities, the dark web carried a variety of illegal markets from offline to online (Brinck et al., 2013) and therefore fundamentally changed how easily people can access these markets. As a result, such activities might be more appealing to consumers, particularly to certain segments like underage, undereducated, or elderly. Such sensitive groups might underestimate associated risks, more easily trust others online, and be swindled. Even though prosecution authorities or tax authorities cannot trace people's purchase activity on the dark web, people exchange sensitive information like their payment details, full name, and full address (Moore & Rid, 2016). How trust and privacy concerns apply to consumer behavior in the dark web as compared to surface and deep web calls for future research.

Scam - Fraud

Fraud in cyberspace has been increasing in recent years, particularly during the COVID-19 pandemic, while offline variants of fraud appear to be declining (Kemp et al., 2021). Among the various types of such practices, those in the P2P space are ticket fraud, dating fraud, second-hand market fraud, and data piracy.

Dating fraud occurs when the criminal pretends to be in a romantic relationship with the victim which eventually causes significant emotional distress, a large sum of financial loss, or both (Buchanan & Witty, 2013). The criminals gradually persuade their victims to send money, buy

gifts, book tickets, etc. Perhaps the best-known case of these is the Tinder Swindler documented in a Netflix production. In extreme cases, emotional manipulation might turn into blackmailing with privately shared information (e.g., personal secrets, pictures, professional data) or kidnapping in a foreign country (Rege, 2009). As a P2P trust-building mechanism, some platforms certify users with multi-level authentication (i.e., confirming ID, email address, and phone numbers) or reputation signals like aggregate ratings (e.g., Uber, Airbnb) powered by AI.

In addition to the above, P2P digital fraud might occur when shopping for second-hand items from platforms like Facebook Marketplace, Vinted, or Wallapop. Some such platforms charge buyers a buyer-protection fee on every transaction promising an extra layer of protection to their purchases and keeping their information secure. Yet, when a suspicious action happens, their dispute resolution might be unfair and frustrating to the victim. For example, if a pseudo-seller posts empty boxes or broken items to buyers, it will not be possible for the buyer to prove the wrongdoing of the counterpart. Some platforms (e.g., Airbnb, and Getaround) employ algorithms to detect and prevent fraudulent activities by analyzing transaction patterns and user behavior for anomalies.

Phishing is an online scam where victims follow fake messages in emails and websites that are created by perpetrators and resemble the communication by trusted sources (i.e., banks, legitimate businesses, and government agencies) (Vishwanath et al., 2011). They exploit this deception to trick users into disclosing personal data like passwords, card details, or other financial info. Websites and platforms employ algorithms that scan for and flag potentially malicious content and users. They also encourage or require users to enable two-factor authentication (2FA) where users provide two pieces of evidence (e.g., fingerprint, hardware token, code in SMS in addition to password) to verify their identity before they can access their accounts. This method of adding an extra layer of security has low user adoption (Golla et al., 2021). I encourage consumer behavior researchers to explore factors like usability, perceived security, convenience, and user satisfaction related to 2FA implementation that can break consumer resistance to adoption.

Online ticket sales represent a large and constantly growing branch of online scams (Kirlappos et al., 2012). A P2P ticket fraud occurs when an individual purchases a ticket from another via a digital service (e.g., TicketSwap) but receives a fraudulent (e.g., used, counterfeit, outdated) ticket, QR code, or nothing. Even though collaborations with initial ticket issuers to validate

tickets protect users against counterfeit tickets, the service providers in this space (e.g., TicketSwap) have to address disputes between buyers and sellers one by one via a moderated chat in the search for an amicable resolution. They are short of solutions when a swapped-ticket buyer cannot enter a sold-out event (e.g., festival, concert) because the swapped ticket was used by someone else before them and therefore is no longer valid at the time they intend to use it. Making a dud investment as such happens in trading NFTs too. Fraudsters sell an asset they do not own or they artificially inflate the price of an NFT to entice more investors until they dump the NFT and vanish, leaving the investors with assets of (if any) little worth and no possibility to trace the culprits (Chalmers et al., 2022).

Online Gambling

Online gambling moves gambling away from a regulated physical space to an unregulated online space that is free from age and location restrictions. Increased accessibility of gambling in the digital space bears multiple psychological, financial, and social risks (i.e., addiction, loss of money, and popularization of gambling) (Cotte & LaTour, 2009). It transforms the consumption experience of gambling into a more efficient, more immersive, more addictive, more private one since consumers can access online gambling with a click instead of a trip to the casino, connect from anywhere anytime, use online wallets instead of cash or card, and hide it easier from close contacts. As a result, it is projected to steadily increase penetration and continue stealing the shares of offline businesses in the global gambling market which was projected to reach US\$95.05bn in revenue in 2023 (Statista, 2023).

Some consumers prefer online gaming over offline gambling because the former minimizes social connection between players as compared to the latter (Cotte & LaTour, 2009), while for some others the atmosphere of a physical casino is an essential part of the gambling experience. In response to the lack of social interactions in online gambling, social casino games are designed to allow gamers to communicate with one another (Gainsbury et al., 2014). Enhanced augmented reality in virtual environments might entice certain users particularly while bearing the risk of feeding a digital experience addiction due to increased immersiveness, feelings of social presence, and a sense of belonging (Casey, 2020). There is a need for scholarly research to uncover which and how certain types of behavioral manipulation, such as artificial social pressure or certain design elements (e.g., notifications, scroll algorithms, rewards) determine addiction (Berthon et al., 2019).

Misinformation, Trolling, and Harassment

Customers get involved in brand trolling online which significantly impacts brands' reputation as well as other customers. They primarily attack brands by engaging in malicious, offensive, abusive, or negative practices to provoke reactions from the brand (Demsar et al., 2011). There are a variety of ways like off-topic posting, deceptive information, aggression, and fake edits to troll a brand online (Phillips, 2015). Trolls can also attack a listed product or content provided by other customers specifically by ridiculing or humiliating their victims (Mkono, 2018). Such online communications can be widely and quickly distributed, reaching thousands, especially on public websites such as TripAdvisor and Yelp. These not only affect the brand but also influence observing consumers in forming an opinion of the brand. Trolls' use of abusive language or threats directed at the brand or other customers, creates a hostile environment that can discourage other customers from engaging with the brand.

Trolls also appear on social platforms by threatening or sending abusive messages to a specific individual or group of individuals. Anonymity in platform-mediated communication encourages trolls to say things they wouldn't in person (King, 2010). The psychological impact of experiencing online trolling is similar to that of facing offline harassment (Craker & March, 2016). Most online platforms have guidelines and terms of service that include specific information related to handling online trolling and other forms of abusive behavior. Facebook (2020) has such an online guidance page for group admins where muting, blocking, and banning are advised to address trolling. It is also possible and in practice to utilize deep learning to detect social media 'trolls' (MacDermott et al., 2022). It is advisable for any digital platform that shows consumer-generated content to use troll-detecting AI and machine learning, as well as openly communicate their terms for anti-troll execution to ensure consumer wellbeing.

2.5. Conclusion & Future Research

This research reviews and synthesizes extant research on a section of digital consumer behavior with the purpose of conceptualizing P2P interactions mediated by digital technologies. I explore the scope, state-of-the-art practices, and extant marketing research regarding this phenomenon. This exploration delves into the areas where increased digital connection between individuals resulted in shifts in business, marketing, and consumption practices. To adequately respond to these fundamental shifts, marketers need to understand if, how, and to what extent their marketing actions imply peer-to-peer interactions. Mastering their intervention in P2P interactions can leverage their digital marketing strategy.

The current conceptualization and classification of digitally mediated peer-to-peer interactions contribute to several research streams, primarily peer-to-peer marketing, digital marketing, digital platforms, and digital consumer behavior. The present approach can help illuminate some of the previously studied consumer research constructs (i.e., consumer empowerment, social influence, social capital, brand engagement) from a new perspective. It also lays a foundation for future research to frame their inquiries within an ecosystem. Within this ecosystem, future investigations can begin with macro-level questions such as what is the market value of these interactions, which industries are left behind in the integration of P2P interaction functions, what are the roadblocks against their integration, and what should be regulated regarding peers and mediating platforms activity. At the micro-level, I suggest devoting future efforts to exploring AI, addressing trust concerns, implementing safety measures, examining niche communities, and analyzing communication styles within digitally mediated peer-to-peer interactions.

Consumer behavior is a multi-faceted research domain; digital consumer behavior should have no less layers (Güngör & Çadırcı, 2022). Adding intertwined concepts to this fact, it is very difficult, if not impossible, to provide comprehensive coverage of even a single aspect of digital consumer behavior. In this sense, the current work is limited in meeting the principal motivation to incorporate our knowledge of the current phenomena.

Given the evolving landscape of digital consumer behavior and the unending nature of change in digital technologies, I highlight the need for continuous study. Our knowledge of P2P interaction in digital mediation can be extended in multiple directions. Some of those relate to the use of AI, trust concerns, safety implementations, niche communities, and communication styles. Having numerous questions singled out, I conclude with a list of future research suggestions that both marketing theory and practice might benefit from exploring.

Table 2.2 Future Research Questions and Knowledge Gaps

Direct Interactions

1. How can brands effectively intervene in and import data from local micro user groups who connect on (semi) encrypted apps like WhatsApp and WeChat?
2. How do consumers' communication of their evaluation of a brand, product, service, or service employee change when they are sharing information between peers vs with the company?
3. What behavioral factors operate differently in P2P lending than in the traditional financial market? How can platforms address demotivating factors to increase adoption?
4. How do WoM generated on platforms that require purchase to review differ from those without purchase requirements?
5. How does the integration of Large Language Models (LLMs) affect digitally mediated P2P interactions?

Indirect Interactions

1. How can platforms targeting a small niche exploit P2P interactions to reach critical mass and benefit from the network effect?
2. How does the influence of P2P interactions differ for geographically distant vs. close individuals?

Dark Side of the P2P Interactions

1. How do trust and privacy concerns apply to consumer behavior in the dark web as compared to the surface and deep web?
2. What factors can break consumer resistance to adoption of 2FA implementation? How to improve usability, perceived security, convenience, and user satisfaction related to that?
3. Which and how reputation signals (like aggregate ratings for users in Uber, and Airbnb) can be added to romantic match-making platforms to decrease risk associated with dating fraud?

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3. Metaphysical Deterrents to Providers' Participation in the Sharing Economy: The Role of Peer-to-Peer Contagion

Abstract

Despite the rising popularity of peer-to-peer sharing platforms, very little empirical research has documented how consumers respond to the opportunity of renting goods to one another. This work delineates how metaphysical (besides physical) contagion beliefs, particularly when self-identification with possessions is high, demotivates people from renting out their possessions in P2P platforms. We claim and empirically test that (1) others' physical contact hinders willingness to share a possession due to an anticipated threat to its essence and that (2) the possession's emotional link with the owner's identity amplifies this effect. Online and laboratory experiments provide evidence for these effects in isolation from physical contamination concerns. This research extends the research on peer-to-peer sharing by demonstrating detrimental effects of beliefs in essence threat and a possible mitigation tactic.

3.1. Introduction

Even though service-based peer-to-peer sharing platforms (e.g., Uber, Fiverr, TaskRabbit) are rapidly expanding their market presence across the globe, goods-sharing platforms (e.g., Peerby, Spinlister, Getaround) seem to be inherently more niche and only prevalent in fewer locations. A plausible reason for this gap is a shortage of individuals' product supply since matching supply and demand is fundamental for a peer-to-peer (P2P) marketplace to succeed (Kumar et al., 2018).

P2P marketplaces provide a space where individuals interact with each other by taking the position of a seller, a buyer, or both simultaneously. This P2P interaction model challenges the dominant logics of the conventional market economy by connecting individuals with those beyond their circle of personal connections (family, friends, neighbors, etc.) and by creating an opportunity for them to make money through their belongings or labor. Consequently, studying the factors that (de)motivate individuals to provide goods and services to each other is one of the most interesting avenues to advance our understanding of this phenomenon.

The current work adopts a behavioral perspective to investigate individual-level roadblocks on the supply side, which may be hindering the growth of peer-to-peer good-sharing activities. Prior research uncovered a variety of barriers to partaking in the sharing economy such as lack of trust, effort requirement, inflexibility, privacy concerns, and undesired social interaction (Spindeldreher et al., 2019). The purpose of our investigation is to study a relevant yet unrevealed factor that we propose is prominently in play when privately owned goods are shared: peer-to-peer contagion.

Existing research has studied the decision-making processes of sharing users extensively, but it has paid little attention to the provider's side, despite it being equally crucial and distinct (Hartl et al., 2020). To address the scarcity of research concerning the provider's side, this investigation focuses exclusively on providers' willingness to participate in good sharing transactions. We propose that (1) metaphysical contamination that comes with others' contact with a possession hinders owners' willingness to share due to an anticipated threat to its essence, (2) this process is distinct from physical contamination, (3) it is conditional to one's degree of identity-based connection with the possession, and (4) whether the item will come back to the owner or not.

In an initial exploratory study, we validated that the contamination of a possession's essence is a substantial factor informing individuals' willingness to share possessions. Then, four experimental studies provide evidence for the hypothesized effects of contagion concerns and determine boundary conditions. Overall, these findings advance our knowledge of what influences individuals' decision to open their belongings to the use of others, thus contributing to the study and practice of motivating participation in the sharing economy.

3.2. Conceptual Background

Acknowledging there are many different configurations of the sharing economy, this research addresses exclusively the sharing of consumer-owned resources. This leaves out collaborative consumption of company-owned resources (e.g., coworking, city bike sharing, Zipcar) but includes peer-to-peer interactions, in which an individual is the provider of a good for another individual. Furthermore, we study exclusively transactions with monetary compensation, leaving out borrowing, swapping, and donation-related activities. The segment of the sharing economy under scrutiny here grants individuals an opportunity to become micro-entrepreneurs who make money from their belongings (Akbar & Hoffman, 2022). Finally, we study an access-based form of sharing where the ownership is not transferred from the provider to the buyer, opposite to what would take place in a second-hand market (e.g., eBay, Facebook Marketplace, Vinted). Therefore, the scope of our research is peer-to-peer and monetary rental of goods, which is enabled by profit-oriented digital platforms (e.g., GetAround, Turo, Airbnb, Spinlister, Peerby).

The Law of Contagion and Consumer Contamination Theory

Renting out an item involves opening a possession to the presence of others - thus, to contagion. The law of contagion, in its initial conceptualization, suggests that a person or an object can transfer its physical properties to (i.e., contaminate) another item through touch (Nemeroff & Rozin, 1994). For example, a sportsman leaves stains of sweat on his clothes, or a lemon leaves its smell on hands. After this preliminary establishment of contagion law on the basis of transferred physical entities (i.e., germs, odor, and dirt), the concept of contagion was later expanded to involve the transfer of non-physical or metaphysical entities (i.e., essence, soul, mood) (Nemeroff & Rozin, 1994).

An emerging body of research has been investigating how this phenomenon applies to consumer decisions. In this context, laboratory and field experiments have shown that

consumers behave in compliance with the principles of both physical and metaphysical contagion. According to the former, shoppers avoid products that other shoppers (seem to have) touched and find these products disgusting (Castro et al., 2013; Morales & Fitzsimons, 2007; Argo et al., 2006; White et al., 2016). However, in the case of metaphysical contagion, consumers have been shown to devalue products when their creator is found to be immoral (Stavrova et al., 2016). Thus, consumers expect products that are used, designed, or touched by others to carry some physical (e.g., germs, stains) but also non-physical properties (e.g., personal energy, dexterity) from these previous contacts, which may also transfer to themselves (Huang et al., 2017).

Our conceptualization of peer-to-peer contagion is rooted in the fact that when sharing a possession with strangers, the owner has to subject the item to the probability of contagion. During the rental period, a variety of unknown sources (i.e., rental users, places they have been, other objects they used along the way) come in contact and possibly transmit both physical and metaphysical properties to the rental item (Nemeroff & Rozin 2018). Therefore, we argue that the lack of certainty regarding how such contacts will impact the object by the time it is returned to the owner discourages potential providers from sharing.

H1: Consumers will be less (vs. more) willing to share their possessions when they expect a higher (vs. lower) extent of physical contact.

Furthermore, saliency of other users' contact with a shared object has been shown to activate physical contamination concerns, and the beliefs about the transfer of germs or toxic residue have been shown to arouse disgust and decrease intentions to use access-based services (e.g., car rental by a car-sharing company) (Hazée et al., 2019). We argue that, even if the item is returned in the same physical condition (i.e., thoroughly cleaned, undamaged), owners might anticipate a change in the essence of the item after being rented out. We hypothesize that this anticipated essence threat mediates the deterring effect of physical contact on sharing intentions, and it is distinct from the effect of physical contamination. Because recent empirical work has demonstrated that beliefs about physical and nonphysical contagion transmission both overlap and are distinct (Huang et al., 2017).

H2: The extent of physical contact reduces willingness to share due to essence threat, even controlling for physical contamination concerns.

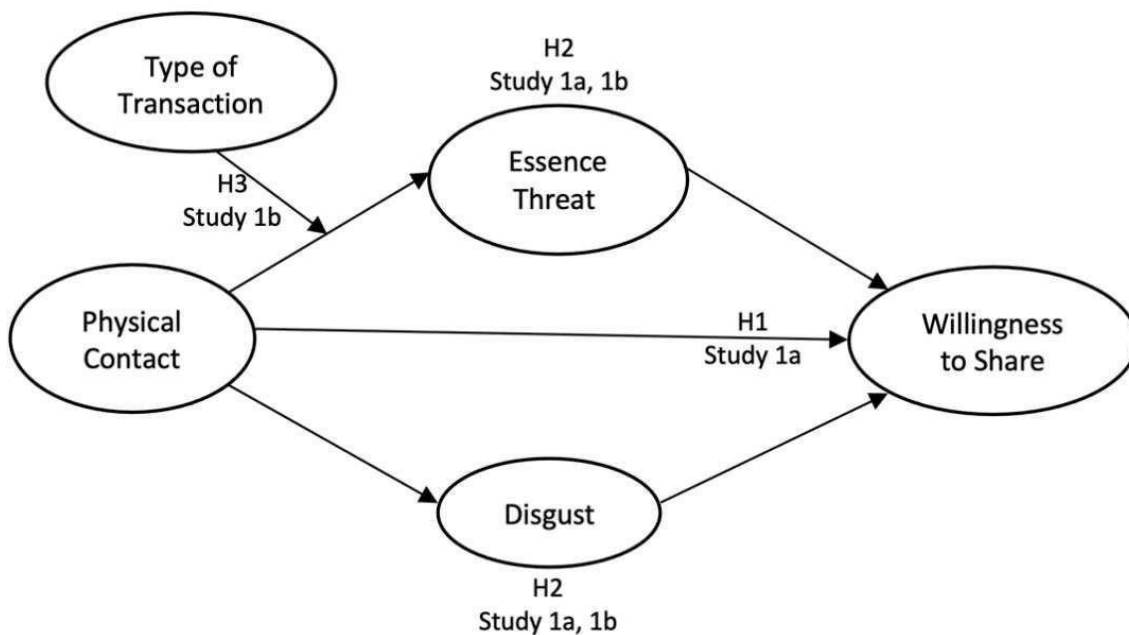
An important boundary condition for physical contact to constitute an essence threat is rooted in the fact that the owner is to receive their possession back. That is, if a provider rents an item,

even though they remain being the owner of the item, a temporary use of others is enough to change the essence of the item - without any visible physical change. However, if a provider sells an item instead of renting it, the possession's ownership is permanently transferred, and the product is not returned to the original owner. This context inherently renders essence threat ineffective since the object will not be returned to them again. Therefore, we argue that essence-related concerns should take place only when the type of transaction is temporary renting (e.g., P2P sharing) but not full ownership transfer (e.g., second-hand purchases).

H3: Extent of physical contact reduces willingness to share due to essence threat, only when the providers expect the possession to come back to them.

Figure 3.1 depicts our conceptual model, hypotheses, and studies testing them (See Web Appendix 1 for a summary table).

Figure 3.1: The conceptual model



3.3. Empirical Support

3.3.1. Summary of Studies

In an initial exploratory study, 104 Prolific workers answered a survey that tested the significance of a set of sharing-related concerns. We validated the significance of our proposed determinant of willingness to share (WTS), threat to a possession's essence, alongside six other prominent factors that the previous literature identified (i.e., mental effort, physical effort, scam by other users, communication with the other users, lack of hygiene, damage or unfair wear

and tear). The survey introduction stated that "there are online platforms that facilitate the sharing of various types of goods between individuals" and "in such platforms, for example, a user can rent a costume or a car from another user over a weekend in exchange for money." Then participants were asked to imagine themselves considering renting out one of their possessions through a sharing platform. An open-ended question asked them to list and explain three points that would make them hesitate to partake in such sharing platforms. Then participants read brief descriptions of the above-mentioned concerns and indicated the likelihood that they would be concerned by each of them (see Appendix 2a for the material). Hygiene- and essence-related concerns ($M=5.76$, $SD=1.33$; and $M=5.10$, $SD=1.61$ respectively) were rated to be important significantly above the mean on a 7-point Likert scale ($t(99)=13.65$, $p<.001$, and $t(99)=6.70$, $p<.001$ respectively) (Appendix 2b). Appendix 2c includes a summary of descriptive statistics.

Once essence-related concerns had been validated, three online studies and a laboratory experiment tested our hypotheses. Study 1a and 1b provide evidence for the proposed mediation model where anticipation of essence threat explains the effect of physical contact on willingness to share, above and beyond the activation of physical contamination concerns (operationalized as feeling of disgust). These studies use different operationalizations of physical contact: Study 1a uses intimacy of physical contact and Study 1b uses length of contact time. Besides these, Study 1b also tests the boundary condition of transaction type. Study 2 and 3 test two intervening conditions for the above-mentioned effects. Study 2 demonstrates that the strength of the possession-self link amplifies the effect of essence threat on willingness to share. Study 3 shows that making sterilizing options more salient mitigates anticipation of essence threat.

Study 1a – Testing the Basic Model

An important dimension of physical contact with an object is physical intimacy: the extent it is used in close contact with the body (Rozin & Fallon, 1987). Disgust and contamination concerns are greater when contact becomes more intimate (i.e., near vicinity, contact with skin, ingestion) (Dehling & Vernet, 2020; Angyal, 1941). Based on this rationale, we propose that the extent to which an object is used in intimate contact (e.g., close touch) with the body affects how much the owner is concerned about essence contamination in renting it. Thus, this study uses intimacy of contact as a proxy for our independent variable, physical contact, and it

manipulates contact intimacy by altering the level of close body contact the shared object requires in use.

For this study, we chose costume as the focal product for two reasons. First, costume sharing is a highly relevant context as clothing is one of the major spending categories and clothes are increasingly circulating between individuals (e.g., rental, donation, secondhand market) (Styvén & Mariani, 2020). Second, consumers shopping secondhand have shown stronger contagion concerns and respond more negatively to a product's prolonged prior contact with someone else's body, particularly in cases involving a high level of bodily closeness (Bezançon et al., 2019).

We also proposed, in H3, that only when the object comes back to the owner, contact intimacy can affect willingness to share by activating essence-related concerns. In testing these hypotheses together, we use a two-by-two between-subjects design where both how close to the body is the product during use (contact intimacy in use: low or high) and the type of transaction (rental or sale) is manipulated. Additionally, we control for the effect of monetary expectations by introducing a constant price across experimental conditions as one could expect more revenue from selling than renting. Finally, we also measure beliefs in the transfer of metaphysical properties as such dispositional differences could also affect our proposed model.

Procedure

We start the study by asking participants to imagine themselves as owners of a warrior costume that is composed of some clothing (i.e., dress, shorts, t-shirt) and some tools (i.e., sword and shield) and show participants a picture of one such costume element according to their gender (see Appendix 3 for the study material). We then asked them to consider (1) either renting or selling this costume of theirs and (2) either only tools or only clothes in response to a request from a user who offered 15 euros for this transaction. Following, a single question ("In the situation described, how likely are you to rent out (sell) the costume") measured the dependent variable on a 7-point Likert scale from "very unlikely" to "very likely". Participants were then provided a definition of essence as "the intrinsic and invisible nature of something that determines its true character", and indicated their anticipated essence threat (e.g., "After being used by others, the essence of my costume will be tainted.").

To measure physical contagion concerns, we adopted the 4-item feeling of disgust scale used by Morales and Fitzsimons (2007) in operationalizing this construct (e.g., "After being used by

others, the car will feel disgusting.”). To measure individual differences in metaphysical contagion beliefs we used the spiritual contagion sensitivity scale developed by Kim et al. (2023). These and other scales used in future studies are listed in Appendix 4. The survey closed with an open-ended question that asked students to write, in their own words, their definition of what essence is in this context. This question was oriented to test if their understanding of the concept was adequate and consistent (see Appendix 5 for a selection of responses).

Data

148 undergraduate students (45% Female, $M_{\text{age}}=19.5$) participated online in exchange for course credits. We created mean scores for the 4-item disgust scale and the 6-item measuring anticipated essence threat, after testing scale reliabilities (Cronbach's alpha values were .95, .89 correspondingly).

Manipulation Check

In line with the planned manipulation, participants in the clothes-only (high physical intimacy) condition scored higher on the manipulation check item (i.e., “To what extent would you worry about wearing the cloth (the sword and the shield) in this costume if someone else wore it?”) than those in the tools-only (low physical intimacy) condition ($M_{\text{cloth}}=3.64$, $SD=1.69$, $M_{\text{tools}}=2.12$, $SD=1.60$, $t(146)=5.598$, $p<.001$).

Results

In support of H1, data shows direct negative effect of physical intimacy on WTS ($M_{\text{cloths}}=4.61$, $SD_{\text{cloths}}=1.91$, $M_{\text{tools}}=5.63$, $SD_{\text{tools}}=1.58$, $F(1,144)=-3.496$, $p<.001$). Direct effect of physical intimacy on essence threat is not significant ($M_{\text{cloths}}=3.25$, $M_{\text{tools}}=3.00$, $p=.32$). Direct effect of physical intimacy on disgust is marginally significant ($M_{\text{cloths}}=3.51$, $M_{\text{tools}}=3.00$, $p=.08$).

A 2 (physical intimacy: low vs high) by 2 (transaction: rent or sell) ANOVA revealed a significant interaction effect on essence threat ($F(1,147)=6.315$, $p=.013$, $\eta^2=.042$). Pairwise comparisons revealed that only in the renting scenario, essence threat is higher for renting cloths than tools ($M_{\text{cloths}}=3.11$, $SD=.22$, $M_{\text{tools}}=2.28$, $SD=.24$, $F(1,74)=5.555$, $p=.02$, $\eta^2=.07$). However, in the selling scenario, effect of physical intimacy on essence threat is insignificant ($M_{\text{cloths}}=3.40$, $SD=.22$, $M_{\text{tools}}=3.73$, $SD=.24$, $F(1,72)=1.246$, $p=.27$). Thus, others' touch causes an anticipation of essence threat only when the item is rented.

We test a mediation model with two parallel mediators via PROCESS model 4 (Hayes, 2018). Bootstrapping analysis with 5,000 samples supports a mediation pattern in which essence threat mediates the negative effect of touch on WTS in the condition of renting ($\beta = .2483$, $SE = .17$, 95% CI: .0005 to .6496) but not in the condition of selling ($\beta = -.1001$, $SE = .10$, 95% CI: -.3304 to .0856). Moreover, disgust does not predict WTS in either sell or rent conditions; thus, it does not mediate the effect of touch on WTS. The effect of metaphysical contagion expectations remains significant even after including disgust as a parallel mediator. The control variable, beliefs in spiritual contagion did not correlate with WTS and there was no interaction effect between this control variable and the contact intimacy on WTS.

Therefore, Study 1a provides evidence that there is a significant negative relationship between increased physical contact and WTS (H1), which seems to be driven by essence-related concerns (H2) and conditional to the return of the product (H3). It also controls for monetary expectations, which could be an alternative explanation. The next study tests the mediation model with a different focal product.

Study 1b – Replication with Different Product Category

In this study, we replicate the test of our theory: others' physical contact is detrimental to consumers' willingness to share their possessions (H1). We also replicate our proposed process that the anticipation of essence threat mediates this effect and that the effect of essence-related concerns exists over and above physical contagion concerns (H2). For this study, we chose a family car as the focal product for two reasons. First, peer-to-peer car sharing is a common practice facilitated by various local and global platforms (e.g., Hiyacar, Getaround, Turo, Car Next Door). Second, using a different product category would increase generalizability of Study 1a's findings.

This time, we operationalize the extent of physical contact by lengthening the others' contact time. Previous research has shown that other shoppers' physical touch makes a product less attractive, especially when they are expected to have interacted with the product for a longer time (Bezançon et al., 2019; Castro et al., 2013). We proposed that the length of the rental period affects the degree an owner is concerned about contagion in a renting incident. Because as the time window for rental lengthens, one would expect more incidences of physical contact to happen between the renter and the rented item.

Procedure

The experiment had a one-factor (rental period length) two-level (short vs prolonged) between-subjects design with random allocation. This study was run with paid participants on Prolific, an online participant recruitment platform. Similar to Study 1a, we introduced participants to a car sharing scenario and asked them to imagine themselves considering posting the second car of their household on a popular sharing platform to rent it out occasionally (stimuli presented in Appendix 6). Then we presented the rental time manipulation by alternating the time a user requests to rent their car for: one afternoon or one week. Following, a single question measured the dependent variable on a 7-point Likert scale (In the given scenario, how likely are you to rent out the car?). Essence threat and disgust were measured as in Study 1a.

Additionally, we measured two other variables for control purposes. The first was the degree to which participants found this rental request financially motivating (e.g., "How much monetary benefit do you find in this rental transaction?") as longer rental time could mean more revenue. The second control measure was spiritual contagion scale as in Study 1a.

Data

We calculated mean scores for the constructs with indicated Cronbach alpha values: 4-item disgust scale (.95) and 6-item measuring anticipated essence threat (.93). Descriptive statistics of all variables for this and the other studies are listed in Appendix 7. 235 responses (59% Female, $M_{age}=43$) were collected from Prolific users who indicated to be car owners. 9 responses were excluded due to failing the attention check ("How long was the rental request for?": one week or one afternoon).

Manipulation Check

In line with the planned manipulation, participants in the long rental term condition scored higher on the manipulation check item (i.e., "How much would you be bothered by a stranger's physical contact with the car if they rented it for one week/one afternoon?") than those in the short rental term condition ($M_{short}=2.87$, $M_{long}=3.31$, one sided $t(224)=-1.980$, $p=.02$).

Results

The direct effect of rental period on essence threat was significant ($M_{short}=2.71$, $M_{long}=3.14$, one sided $t(224)=-2.065$, $p=.02$) but its direct effect on WTS was not ($M_{short}=5.17$, $M_{long}=5.02$, one sided $t(224)=.714$, $p=.24$). The absence of this direct effect (H1) could be due to participants' increased monetary expectations which was positively correlated with WTS

($r(224)=.465$, $p<.001$) and caused by lengthening the rental period ($M_{\text{short}}=4.76$, $M_{\text{long}}=5.12$, one sided $t(224)=-2.070$, $p=.02$). Therefore, we control for this variable in testing the proposed mediation model with two parallel mediators via PROCESS model 4 (Hayes, 2018). Results support that anticipating essence threat mediates the negative effect of increased contact on WTS (bootstrapping analysis with 5,000 samples: $\beta = -.14$, $SE = .08$, 95% CI: $-.3231$ to $-.0118$).

On the other hand, rental period did not have a significant effect on anticipated disgust ($M_{\text{afternoon}}=2.35$, $M_{\text{week}}=2.57$, one sided $t(224)=-1.120$, $p=.13$) and disgust does not show a significant mediation effect (bootstrapping analysis with 5,000 samples: $\beta = -.09$, $SE = .05$, 95% CI: $-.1458$ to $.0240$). Beliefs in spiritual contagion did not correlate with WTS and there was no interaction effect between this control variable and rental time variable on WTS.

Therefore, Study 1b provides evidence supporting H2 that increased contact intimacy diminishes WTS due to essence-related concerns, whereas disgust does not account for the process between contact intimacy and WTS. Results also support that this mechanism is distinct from physical contagion concerns (disgust). Our next study investigates whether the strength of the consumer's possession-self link may augment the effect of potential essence threat on a consumer's willingness to share.

Study 2 - Augmenting the Effect of Essence Threat Through Possession-self Link Strength

Providers' Possession-Self Link

Previous research demonstrated that in a variety of settings, consumers believe that objects may carry an essence and that such essence can be transferred between entities (Smith et al., 2016). For example, an everyday object like a pen previously touched by a highly creative person (Kramer & Block, 2014), a putter previously owned by a professional golfer (Lee et al., 2011), and a gambling slot machine after a seemingly lucky player won on it (Teed et al., 2012) are believed to bring desired outcomes because those objects carry essential properties from their earlier use. Newman et al. (2011) discuss how beliefs in transferred essence can turn an object into a potential carrier of the essence of a particular person (i.e., a celebrity) and influence its market value.

When Nemerof and Rozin (2018), who formed the basis for the study of contagion effects on behavior and decision-making, revisited the conceptualization of contagion, they underlined that contagion, and the extended sense of self are two concepts in close relationship. According to Belk's extended self-theory (1988), possessions can become an extension of oneself through self-connection and identification with the object. This internalization means that the object

reflects a part of the owner's identity, making it bear an additional intrinsic value to its owner beyond its market value or tangible properties.

Ferraro et al. (2011) argue that the loss of such possessions means the loss of some aspect of the self in addition to the loss of the tangible item. Along the same line, Hellwig et al. (2015) found that regarding a possession as "part of me" feeds fears of loss, damage, or contagion because the loss of such belongings can be regarded as a loss or a lessening of oneself. Here, we propose that when a belonging has such a special value to the owner, in that it carries a strong connection with the self, the loss of its essence will loom larger. Hence, we propose that self-identification with an item should amplify the negative effect of anticipated essence threat on willingness to share.

Study 2 is designed to test this proposition that the strength of the possession-self link augments the effect of anticipated essence loss on willingness to share possessions. We manipulated the strength of the possession-self link and let participants consider sharing an actual possession of theirs given it belongs to one of the different types of products we listed for them (see Appendix 8). In this study, 219 students (53% Female, $M_{age}=19$) participated in person in an on-campus behavioral lab in exchange for course credits.

Pretest – Possession-Self Link Manipulation

We designed ($n=139$) a reading and writing task as a prime to manipulate the experienced possession-self link.

Participants first read a brief paragraph about either how one's possessions can relate to one's identity or how they merely provide a functional benefit (stimuli are provided in Appendix 9). Then, we presented them with a list of 8 household items common among students (e.g., costume, game console, audio equipment, board game, suitcase, digital camera). Participants were asked to mark which of them they exclusively owned. After this, they were asked to select one, from among the items they exclusively owned, that would fit best the text they had just read. At this point, they were asked to write a detailed description of how this specific item either "relates to their identity" or "serves its function," depending on the priming condition. We then measured the extent of the possession-self link using the 6-item-scale "Incorporation to the Extended Self" developed by Sivadas and Machleit (1994) (i.e., "This object is part of who I am") (Appendix 4b). Those who elaborated on the self-identifying value of their item ($M=4.95$, $SD=1.86$) scored higher on the object's connection to their self-concept than their counterparts ($M=3.23$, $SD=1.78$) ($p<.001$, $t=5.585$, $df=137$, Cohen's $d=.95$).

Procedure

The experiment had a one-factor (possession-self link: high or low) between-subjects design with random allocation. After performing the manipulation procedure as described above, we introduced a sharing platform's terms and conditions to the participants (see Appendix 10 for the material) and measured their WTS for the particular item that they chose for the manipulation task (i.e., “How likely are you to put your ... to this sharing platform, in order to rent it out in exchange for money?”) on 9-point Likert scale. Following, essence threat was measured as in the previous studies. We also measured participants' desire for control (Burger & Cooper, 1979) to account for the fact that owners with a high desire for control may experience a reduced sense of control over their possessions, which refrains them from sharing them.

Results

A one-way ANOVA revealed that participants in the high possession-self link condition showed less WTS than their counterparts ($M=4,56$, $SD=2.75$; $M=5,41$, $SD=3.02$; $F(1,217)=4.745$, $p=.03$, $\eta^2=.02$).

We tested the hypothesized interaction between possession-self link conditions (high/low), anticipated essence threat (measured), and the interaction predicts WTS (Process Model 1: Hayes, 2018). The interaction effect was significant ($t=-2.253$, $p=.025$, $[-.714, -.048]$). Anticipating essence threat affects WTS significantly only when the item is linked to the owner's self ($t=-4.240$, $p<.001$ $[-1.609, -.588]$). This effect is mitigated when this link is not reinforced ($p=.12$). Introducing the control variable, desire for control, as a covariate did not change the significance of the hypothesized model.

We acknowledge that the possession-self link manipulation could prime participants to choose products that are more closely in touch with the body when used (mimicking the contact manipulation used in Study 1a through cloth-like or tool-like objects). Against this doubt on the endogeneity of independent variable, Appendix 11a shows the frequency of objects chosen in each condition and Appendix 11b lists how participants explained why they considered the chosen object to either “relate to their identity” or “serve its function”.

Thus, the strength of the possession-self link becomes a significant moderator of the relationship between anticipated essence threat and WTS. When sharing a possession and its

self-identifying value becomes very salient, the risk of essence threat hinders WTS, whereas in the case of possessions with low self-identifying value, the effect is mitigated.

Our last study tests the idea that anticipating essence threat can be mitigated by counteracting the idea of contagion with thoughts of sterilization.

Study 3 – Mitigating the Expectation of Contagion through Thoughts of Sterilization

Cleaning practices such as washing hands, using liquid sanitizers, or antiseptic wipes are common in preventing the transmission of germs. These practices have also been connected to a more metaphysical sense of contagion. For example, previous research has shown that laundry washing, or hand cleaning, can metaphorically clear traces of the past and put an entity into a more neutral state (Lee & Schwarz, 2010; Xu et al., 2012; Newman & Bloom, 2014). In the context of sharing, sterilizing shared items has the potential to comfort essence-related anticipated contagion, going beyond confronting germ-related physical contagion thoughts.

In Study 3, we test the causal link between contact-based anticipated contagion and essence threat by manipulating the strength of these expectations. We used a manipulation, which we expected would lower expectations of contagion by making people think about the possibility of sterilization. As in Study 2, participants were asked to consider sharing different types of products.

We collected 261 responses via Prolific out of which 238 were valid (66% Female, Mage=36). We excluded 23 responses due to failure to complete the study (2), not owning any of the listed items (2), or failure to select the right answer in the attention check question (19).

Pretest – Manipulation on Expectations of Contagion

We designed and tested a manipulation method that makes the benefits of sterilizing more salient. By exposing participants to sterilizing products, we aimed to make it more salient that consumers can counteract both physical and nonphysical contagion effects.

After reading a cover story about consulting with consumers to assist in designing advertising messages, participants rated the importance of various product specifications of either three sterilizing (soap, cleaning wipes, hand sanitizer) or three neutral products (juice, battery, post-it notes). The product specifications on the sterilizing product condition underlined the sterilization benefits and efficiency of those products. Appendix 12 includes the images shown in each condition. Then all participants indicated their agreement with 6 statements that captured their belief in metaphysical contagion. When asked to explain how the product

specification task and the questions about essence are related, three out of 102 participants correctly guessed the connection between the two and therefore were excluded from the analysis. Confirming our manipulation, the control group scored higher than the sterilizing-products-primed group on the following item: "Nonphysical entities (e.g., mood, essence) can be contagious" ($M_{\text{control}}=5.66$, $SD=1.32$ vs $M_{\text{cleaning}}=5.15$, $SD=1.52$, $F(1,97)=-1.784$, $p=.039$, Cohen's $d=-.36$).

Procedure

The experiment had one factor (sterilization salient vs control) between-subjects design with random allocation. After performing the manipulation procedure as described above, we introduced again the hypothetical sharing platform's terms and conditions and asked them to select an item they exclusively owned from a list of items as in Study 2. We finally measured anticipated essence threat for that item if they were to rent it out, as well as participants' individual differences in superstitious thinking (Epstein & Meier, 1989) and contagion sensitivity with the measure adapted from Haidt et al. (1994) by Newman et al. (2011).

Results

The data supported our expected pattern of results: A t-test revealed that the group exposed to the sterilizing products manipulation anticipated significantly less essence threat ($M_{\text{sterile}}=3.87$, $SD=1.49$; $M_{\text{control}}=4.25$, $SD=1.37$; $F(1,236)=275$, $p=.04$, $\eta^2=.02$). An ANCOVA with contagion sensitivity and superstitious thinking as covariates still revealed a significant effect of the manipulation.

We acknowledge that the manipulation (exposure to different types of products) might have affected what participants considered sharing such that participants in the sterilization condition were cued into the importance of cleanliness, and thus chose items that involve less physical contact in use (e.g., digital camera vs costume). Against this alternative mechanism that casts doubts on the causal validity of the study design, a Chi-square test shows that the participants' choice of objects did not vary by condition ($X^2(9, N=238)=12.506$, $p=.186$). Appendix 13 shows the frequency of objects chosen in each condition.

As we would expect due to our proposed process, making sterilizing options salient for people decreased their anticipated essence threat. Thus, this manipulation successfully decreased essence-related concerns and, potentially, the downstream negative effect on WTS.

3.4. General Discussion

The sharing economy has created markets in which individuals become providers as well as users. In this paper, we demonstrate that apart from physical contamination, essence-related concerns also come into play to determine consumers' openness to share a possession. In our studies, we find that a metaphysical construct, the anticipation of essence threat, can explain the lack of motivation to offer a possession within the sharing economy. We also determine that expectations of a user's (a stranger's) intimate contact with the product (Study 1a and 1b) drive willingness to share, particularly so for items to which owners are strongly connected (Study 2). Interestingly, it is possible to mitigate this concern by making sterilization practices more salient (Study 3).

Our research exclusively focused on the provider side as it is understudied despite being as important as the user side. Providing access to one's belongings as enabled by sharing platforms becomes a more novel phenomenon than that of acquiring access to goods and services as a consumer. This new phenomenon calls for a shift in consumers' mindset from being predominantly a buyer to become simultaneously a supplier (Hazée et al., 2019). In this paper, we establish how the concept of contagion applies to the supply side of the market.

Our studies are not free from limitations. Our data collection took place overlapping with the COVID-19 outbreak. This high level of awareness of the possibility of contagion may have caused a ceiling effect, hence our small effect sizes. To manipulate the extent to which touch activates contagion concerns, we pre-tested many methods including scrambled sentence tasks, introducing fictitious facts, and vignette-based manipulation methods, which Newman et al. (2011) had used. Only our manipulation using sterilizing products was able to successfully change participants' level of agreement with contagion-related principles. Finally, due to the novelty of the concept, we had to develop a scale to capture the extent of essence threat that a consumer may anticipate.

3.5. Contributions and Practical Implications

This paper contributes to several research streams. First, it deepens our understanding of an understudied dimension of the sharing economy: the providers' side. Second, by exploring the role of a magical belief, metaphysical contagion, it answers the call for more research investigating novel heuristics and biases, which influence consumers in access-based consumption models (Eckhardt et al., 2019). This research shows evidence for how a

metaphysical concept, belief in the possibility of essence change, can explain a lack of motivation to add a possession into sharing platforms. Building on Smith et al.'s (2016) findings on how the concepts of contagion and the extended self in objects affect consumers' valuation of goods, we investigate how these two concepts interplay in the minds of providers considering exposing their possessions to other users.

Third, the current approach to studying contagion serves to broaden its boundaries (Huang et al., 2017) by proposing and testing two new elements: (1) the underlying psychological process of anticipating essence change and (2) how it affects willingness-to-share as a dependent measure of interest. It also extends the growing body of research interested in understanding the role of metaphysical essence in consumer responses. The literature has empirically shown that physical contagion follows the principles of physical contact (i.e., the source of contagion must physically contact its target) and permanence (i.e., once contagion has been transmitted, it is resistant to purification; "once in contact, always in contact") (Nemerof & Rozin, 2018). In our experiments, we found support for these principles in the case of physical contagion concerns. However, essence-based contagion concerns were shown to be responsive to the extent to which the contact is intimate (i.e., a closer and prolonged touch with the source).

Finally, this research yields actionable insights for existing sharing platforms as well as incumbent companies incorporating access-based services into their business models (e.g., Stellantis via Free2Move, Nordstrom via Rent the Runway, furniture rental by IKEA). It adds support to the idea that promoting the sharing of possessions entails accounting for non-physical contagion beliefs and individuals' connections with their possessions. Based on the findings of this research, we hope to provide insights to assist in expanding peer-to-peer goods sharing and the more efficient utilization of goods.

3.6. Future Research

Our theorizing suggests that the negative aspects of metaphysical contagion could be a relatively small concern for renters in P2P sharing activities as they don't own the product, spend less time with it, and have rental mindset that evokes less caring and responsibility (Morewedge et al., 2021). Nevertheless, metaphysical contagion beliefs could have both positive and negative effects on one's motivation to rent from a certain provider depending on this person's appearance, characteristics, or other listed products in their portfolio as those could potentially carry properties over to them. For example, people prefer attractive hosts and

pay relatively higher to stay at their Airbnb offerings, even if they never get to be in contact or share the flat with them (Jaeger et al., 2019).

Overall, sharing platforms may be changing consumer behavior by making the concept of ownership more malleable. Consumers are motivated to choose access over ownership even for products that are central to their life (Pantano & Stylos, 2020). Users' access to goods without ownership and providers' temporary disposition of those goods challenges the logic of the long-established buy-use-dispose consumption cycle (Philip et al., 2015). Future research may delve into investigating acquisition and disposal related motivations that are prominent on both sides of the trade.

Finally, we find that only by making means of sterilizing more salient, we can moderate people's anticipation of essence threat when exposing their possessions to strangers' intimate contact. Previous research finds that consumer reluctance to donate possessions with sentimental value can be counteracted by memory preservation techniques like taking a photo (Winterich et al., 2017). More empirical research is needed to test alternative divestment rituals that could work against owners' reluctance to part with their possessions.

Our research demonstrates the importance of essence-related concerns triggered in the providers' minds. In the context of shared physical goods, people are more concerned by contagion when physical contact is close or extended. Future research can study the application of the same concept to the case of shared digital goods (i.e., subscription accounts, software, NFT artwork) with other users (e.g., sharing the Netflix login). An interesting dimension to explore is how contagion concerns are experienced in contexts in which other users' behavior directly influences the owners' future experience of the product (e.g., by altering the suggestion algorithm). Another such dimension is the role of interpersonal familiarity with the others in the sharing transaction (e.g., friends against strangers). Whether the other person is close to oneself, or similar to oneself, or not may determine how contagion on digitally shared goods is evaluated.

3.7. References

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3.8. Appendix

1. Empirical Support Summary Table

<i>Study</i>	<i>Focal Product</i>	<i>Sample Size</i>	<i>Participant Pool</i>	<i>Place</i>	<i>Testing</i>	<i>Experimental Manipulation</i>
Exploratory Study	7 concerns	104	Students	Online	Research motivation	
Study 1a	Costume	148	Students	Online	H1, H2 Boundary Condition	contact intimacy: (low or high) x type of transaction: (rental or sale)
Study 1b	Car	226	Prolific	Online	H2, H3	rental period length (a week or an afternoon)
Study 2	8 options	219	Students	Lab	Intervention	Reading & writing task
Study 3	8 options	238	Prolific	Online	Intervention	Sterilization priming

2a. List and the descriptions of providers' concerns regarding renting out

Please read carefully the list of concerns below and indicate how likely you are to have each of them.							
1	2	3	4	5	6	7	
							<p>Concern for physical effort</p> <p>(i.e., the hassle of meeting the renter in person to hand over the object and to collect it back)</p>
							<p>Concern for mental effort</p> <p>(i.e., learning how to use the app, terms and conditions and so on)</p>
							<p>Concern for communication with the other users</p> <p>(i.e., bargaining, meeting planning, conflict resolution)</p>
							<p>Concern for damage or unfair wear and tear</p> <p>(such that the object's final condition is worse than its initial condition)</p>
							<p>Concern for scam by others</p> <p>(i.e., no payment, no show-up, no-return)</p>
							<p>Concern for lack of hygiene</p> <p>(i.e., finding traces of others users' smell, sweat or remnants on the object)</p>
							<p>Concern for a change in the essence of the object</p> <p>(i.e., threats to the intrinsic value of the object that is beyond its physical substance)</p>

2b. Mean comparison statistics of providers' concerns

One Sample T Test against test value 4, n=104, df=103					
	t	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
Physical effort	2.599	.011	.4519	.107	.797
Mental effort	-7.270	.000	-1.1923	-1.518	-.867
Communication with the other users	2.382	.019	.3654	.061	.670
Damage or unfair wear and tear	32.193	.000	2.4423	2.292	2.593
Scam by other users	28.963	.000	2.3846	2.221	2.548
Lack of hygiene	13.463	.000	1.7596	1.500	2.019
Change in the essence of the object	7.046	.000	1.1058	.795	1.417

2c. Descriptive statistics of providers' concerns

One Sample Test against test value 4, n=104				
	Mean	Std. Deviation	Std. Error Mean	Cohen's d Point Estimate
Physical effort	4.452	1.7729	.1739	.255
Mental effort	2.808	1.6726	.1640	-.713
Communication with the other users	4.365	1.5645	.1534	.234
Damage or unfair wear and tear	6.442	.7737	.0759	3.157
Scam by other users	6.385	.8396	.0823	2.840
Lack of hygiene	5.760	1.3329	.1307	1.320
Change in the essence of the object	5.106	1.6005	.1569	.691

3. Stimuli Study 1a

Imagine yourself in the following scenario...

You bought this warrior costume for 50 euros last year.

You wore it once in a costume party. It has been sitting in your closet ever since.

You heard people are *renting out / selling* such items on a *peer-to-peer renting/second hand shopping* platform.

You decided to give it a try by posting this costume there.

Some days later, somebody contacted you on the platform.

They ask to *rent/buy the cloth only (dress and the cape) / the tools only (shield and sword)* for 15€.



4. Measures for the focal variables:

Scales (1-7 Likert response points from “strongly disagree” to “strongly agree”)

Anticipated Essence Threat

After being used by others...

... the essence of my costume/the car will not be the same.

... the essence of my costume/the car will be diluted.

... the essence of my costume/the car will be tainted.

... my costume/the car will not retain its essential value in my eyes.

... my costume/the car will carry nonphysical traces of people renting it.

... my costume/the car will pass other people's essence to me.

Experienced Disgust Scale adapted by Morales and Fitzsimons (2007)

After being used by others...

... my costume/the car will feel disgusting.

... my costume/the car will feel revolted.

... my costume/the car will feel gross.

... my costume/the car will feel unclean.

Scales for constructs used as control variables:

Spiritual Contagion Sensitivity scale developed by Kim et al. (2022).

I would feel uncomfortable touching a weapon that had been used to murder someone, even if it was completely sterilized.

I could never live on a piece of land where someone was tortured and killed, even if I built a brand-new house.

It would bother me to sit in a chair if I knew that years ago, someone had died while sitting in that same chair.

I would be fine drinking from a glass that was previously used by a Nazi, as long as it was sterilized. (R)

I would be excited to touch a piece of scientific equipment if I knew that it had been used to make a famous discovery.

I would be excited to hold a pen that was used to sign an important peace treaty.

I would be excited to hold an object that has traveled to outer space.

I would be excited to try on a jacket that was worn by my favorite musician, even if I could not tell other people about it.

I believe that when a group of people live on piece of land for enough generations, their essence becomes infused into the surrounding rocks.

I believe that family heirlooms, such as jewelry, are imbued with the spirits of the people they once belonged to.

The things I own contain some immaterial remnant of me.

The notion that objects can absorb the “essence” of certain people seems silly to me. (R)

Contagion Sensitivity Scale as adapted from Haidt et al. (1994) by Newman et al. (2011)

Even if I were hungry, I would not drink a bowl of my favorite soup if it had been stirred by a used but thoroughly washed flyswatter.

It would bother me to sleep in a nice hotel room if I knew that a man had died of a heart attack in that room the night before.

If a friend offered me a piece of novelty chocolate shaped like dog-doo, I would not eat a bite.

Superstitious Thinking subscale by Epstein & Meier (1989)

I have found that talking about successes that I am looking forward to can keep them from happening.

I do not believe in any superstitions.

When something good happens to me, I believe it is likely to be balanced by something bad.

Incorporation to the Extended Self Scale developed by Sivadas and Machleit (1994)

This object helps me achieve the identity I want to have.

This object helps me narrow the gap between what I am and what I try to be.

This object is central to my identity.

This object is part of who I am.

If it is stolen from me I will feel as if my identity has been snatched from me.

I derive some of my identity from this object.

A subscale of Desire for Control Scale by Burger & Cooper (1979) ($\alpha = .734$)

I consider myself to be generally more capable of handling situations than others are.

There are many situations in which I would prefer only one choice rather than having to make a decision.

I enjoy being able to influence the actions of others.

I would rather someone else took over the leadership role when I'm involved in a group project.

When it comes to orders, I would rather give them than receive them.

I enjoy making my own decisions.

I enjoy having control over my own destiny.

I prefer a job where I have a lot of control over what I do and when I do it.

I try to avoid situations where someone else tells me what to do.

I would prefer to be a leader rather than follower.

5. Sample responses for the open-ended question on essence definition

“With your own words, write your definition of what essence is in this context.”

- the intangible value/spirit of an object
- in this context, essence means the intangible value someone gives to something which makes it special to him/her
- I would say essence refers to the inner soul of a person, object etc.
- The invisible value that an object retains and cannot be seen
- The part of yourself that is in the object or the place
- The perception we receive when thinking about the object, based on our values and thoughts.
- Essence is like the energy that an object has
- Essence is what is left in something after someone has been with it for a period of time

6. Stimuli Study 1b

Imagine yourself in the following scenario...



Your household has a second car with lots of capacity. It is used only occasionally to carry things around and for other practical needs. This car has been serving well to these functions. It makes life easier to have one such car. Yet, it remains idle for most of the time. You are considering renting it out on the days you don't use it...

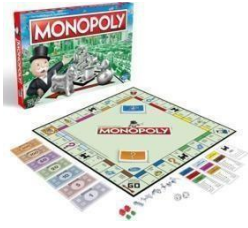
...Your friends suggested you a platform for this purpose: GetAround. The platform is well established with 5M+ users, easy to use and ensures security of your car.

You decided to post the car there. Some days later, a user contacted you on the platform. They want to rent it for *one week / an afternoon*.

7. Descriptive statistics of the variables of interest

Variable	Study 1a		Study 1b		Study 2		Study 3	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Willingness to Share	5.08	1.83	5.08	1.60	4.99	2.91	-	-
Anticipated Essence Threat	3.14	1.48	2.95	1.56	4.39	1.13	4.06	1.44
Disgust	3.27	1.76	2.47	1.44	-	-	3.71	1.98
Spiritual Contagion Sensitivity	4.87	0.96	4.34	1.08				
Self-esteem	-	-	0	0	3.00	.45	-	-
Contagion Sensitivity	-	-	-	-	3.90	1.34	3.99	1.38
Superstitious Thinking	-	-	-	-	-	-	3.52	1.20
N	148		226		219		238	

8. Study 2 and Study 3 Exemplary Product Visuals



9. Possession-Self Link Manipulation Stimuli

Functional value priming

Some possessions are owned purely because of their functional value. For instance, a tent provides shelter when you go camping; a power drill machine allows you drill holes on a wall; a bicycle gives you a means of transportation, and so on. Such possessions can serve their owners as tools to meet their daily consumption needs.

Psychological value priming

Some possessions are considered to have psychological value in addition to their functional value. There can be various reasons for those possessions to have psychological value for the owner. For instance, a high effort may have been put into finding and selecting them; a strong bond may have developed with the possession with usage over time; they may remind the owner of certain people, places, occasions, etc.; and so on. Such possessions can serve their owners as tools to learn, define, and show who they are.

10. Experimental Platform Terms and Conditions Page:



Terms and Conditions

We facilitate convenient, secure and rapid rental of goods between individuals who are in temporary need of items and others who own but not utilize such items.

By doing so, we help neighbor citizens earn money through their possessions or access a variety of goods besides reducing waste and supporting a more sustainable way of consumption.

Our users can lend or rent out various household items for a price and an additional insurance & service fee on which our company is dependent.

We cover the expense and the labor in case an item is damaged, broken or lost during the rental term. However, our service depends equally on the care given by the users. The renting users are responsible to ensure that there is no visible trace of their use (odor, strain, etc.) and that the item is completely cleansed from invisible residues and sterilized after their use.

11a. Study 2: Frequency of Objects Chosen by Participants

	Condition		Total
	Functional	Self Link	
suitcase	38	11	49
digital camera	10	33	43
sleeping bag	33	1	34
ski or snowboard set	15	15	30
game console	7	18	25
costume	3	16	19
box game	2	11	13
chess board	1	5	6
Total	109	110	219

11b. Study 3: Participants responses on how they think their chosen object fits the given description

Examples for Identity Condition:

- (digital camera) I've had that camera for quite a long time and I have taken it to many of my trips, is full of memories.
- (game console) as i play games competitively and need to put in high amounts of effort into them to stay at a certain level and keep on improving in them i t reflects my work ethic and my strive for improvement
- (costume) its a costume that i have always wear since i was small so neither my brother nor sister have ever try to put on it. The costume for me its special because my grandmother gave to me for christmas.
- (ski equipment) show that I am involved in this sports since a long term, it is a passion and it is a family thing since all my family has its own stuff of ski;
- (box game) It reminds me to when I was little and I used to play with my family.
- (box game) this game I own is called UNO panama. it relates to me because it is the regular UNO but made for panama. this game is was designed and fabricated by my dad, and that makes me proud and happy to hold on to this item.
- (suitcase) its a costume that i have always wear since i was small so neither my brother nor sister have ever try to put on it. The costume for me its special because my grandmother gave to me for christmas.

Examples for Function Condition:

- (suitcase) A suitcase allows you to travel. Without a suitcase you won't be able to take anything with you when you are going away. It is purely practical as i use it only for this purpose and it is essential to my travel.
- (sleeping bag) Whenever I go camping or I sleep in some place where no sheets are provided I use the sleeping bag so as to keep myself warm.
- (the ski/ snowboard set) It serves a very defined purpose: it allows you to practice this sport and be well equiped so that you can enjoy it.
- (digital camera) because it lets me capture all the moments lived
- (game console) Whenever you want to calm down or need to relax you can use the game console to play some games and relax.
- (costume) It's a very comfortable costume, high quality and it can be use in several events or meetings. It's dark blue so that helps to fit the different meetings and depending on the accessories you have you can wear it more formal or informal

Full list of responses:

<i>Condition</i>	<i>Object Chosen</i>	<i>Open-Ended Question: "How does this object relate to your identity / serves to its purpose?"</i>
Self Link	box game	With lots of values such as respect, power, sympathetic...
Self Link	box game	Box game are powerful items that remind me of the times I have played with it and the people I have played the game with, older box games bring me stronger emotions.
Self Link	box game	this game I own is called UNO panama. it relates to me because it is the regular UNO but made for panama. this game is was designed and fabricated by my dad, and that makes me proud and happy to hold on to this item.
Self Link	box game	they are mind games that stimulates the reflection
Self Link	box game	My box games relate my identity as it depends on which type of people I am or what my preferences, likes and dislikes are
Self Link	box game	It reminds me to when I was little and I used to play with my family.
Self Link	box game	I have always played lots of games with my friends and family, and therefore I attach value to such games since it is a time where I am connected to the people I am playing with, without distractions. My family and friends mean a lot to me, and so when I am able to sit down for an hour or two to play a game with them it means a lot to me.
Self Link	box game	A box game can reflect who I have been in a past. Sometimes box games are identified for people as the last era way of having fun. Nowadays electronic devices have taken the control. A Box Game such as Monopoly can have a sentimental feeling for me as I have spent lot of time playing it along my beloved ones. Monopoly makes me remind of childhood and having fun.
Self Link	box game	Well I suppose I am quite into that type of stuff and maybe that is why I chose it.

- Self Link box game According to me, box game is the best way I can spend my free time because you are forced to play with people. In fact, I like sharing time with my family and friends, getting to know people and creating bonds with others and I think Box game brings me what I like.
- Self Link box game my box game relates to my identity because it reminds me of my childhood and good memories
- Self Link chess board It is known that those who play better chess board are intelligent people, or that once they know about strategies and that type of things. So having that an opponent says about you that you are intelligent etc.
- Self Link chess board Playing chess was a bonding time for my dad and I. He taught me how to play, and every weekend we would play. I was getting better, and it was exclusively our time as I was better than my sisters. It made me feel important and loved, and motivated me to practice my skills so that I could eventually beat him. I still remember the time I beat him and sometimes we still joke about it. Chess, to me, reminds me of my father and enabled me to understand that a skill is practiced, not born with.
- Self Link chess board It is a curious fact, because I used to play chess with my father before he died. SO, this has a special meaning for me and also reflects my reflexive and analytical side.
- Self Link chess board I have written chess board because my grandpa used to have so many of them because he loved playing chess and when he died me and my siblings took one of his chess boards so we could have a memory of him. This is because our chess board has a special meaning and it is important to us.
- Self Link chess board Me and my family went through a lot of research to find it and it gives me many good memories of the past times
- Self Link costume it's a costume that I have always worn since I was small so neither my brother nor sister have ever tried to put on it. The costume for me is special because my grandmother gave it to me for Christmas.
- Self Link costume It's a certain reminder of some important events in my life. Associated with a range of emotions. I feel like those moments

could be defining to me as a person and item could be reminder of that.

- | | | |
|-----------|---------|---|
| Self Link | costume | I used to be a gothic person, more in the way I dressed than how I felt. Moreover, I love to get dressed and assume another personality for a while, it boosts my confidence so to speak, and reminds me who I am deep down and who I used to be, and the path that brought me here. Plus, I love scary costumes and scare people (in a funny way). |
| Self Link | costume | I arefully chose my costume according to my preferences and according to my style. It has a important signification to me because I bought it for my syster's wedding, and it allows me to express my style and to be different. |
| Self Link | costume | when i get a costume i try to find/make one that will make me feel comfortable and probably express bits of my personality. if i've made one myself, maybe i'll get a bit protective over it because i will have invested my time and resources into it and I wouldnd't want someone to maybe ruin it. also if it's made to fit me and my character. it wouldn't fit someone else's personality |
| Self Link | costume | It's a way to explain and show your personality or even different personalities |
| Self Link | costume | My costume does not identify me, instead it has really good memory linked to it; so every time i either see it or wear it i reminds of that night and the series of events that characterize the night. In order for a object to have more than just a functional value to it. Like in this case, i feel an object (costume) it must have been with me in a very important, fun or just plain out meaningful moment of my life. |
| Self Link | costume | I have some costumes that remind me of my childhood. They have a very special value for me and they represent a little part of myself. When I was I child, I used to like costumes and with my parents I always used to try them on. |
| Self Link | costume | I believe that my costum can define my identity, with a style which is not formal at all, but still elegant. And it also can define my age |

- Self Link costume I always wear the same costume and I am not likely to wear any other different.
- Self Link costume The costume in particular carries a strong emotional bond with me as it was a gift from a person I was really close with. I can recall many memories in which I have had plenty of fun and good moments wearing it, which adds to the importance it holds. Moreover, it is a costume that strongly relates to one of the aspects of my life as the person who made the gift made sure it was not just a randomly selected costume but one that correlates to what I enjoy doing.
- Self Link costume it describes depending on the costume how are your feelings in that moment and what do you want to representate
- Self Link costume If you made it or something, amd a costume littteraly means disguising into someone else, so into someone who ressembles to your personality.
- Self Link costume It comes from a personal choice, it represents a part of my identity because I have chosen it for a specific reason. It is way to express myself in a other way than words
- Self Link costume These costum was made by me during my last primary school year, it relates my identity because apart that I did it even though I was very little, it has important parts of me and my preferences.
- Self Link costume it reminds me the good old time with my friends when we had costume party or even now for halloween for example. Costumes are something we will encounter all our life because we are never to old to wear a costume. therefore it is always a good memory with your friends and family
- Self Link digital camera I feel like my camera and my eyes have the same perception, we are synchronized in a way that only I can use my camera.
- Self Link digital camera My digital camera relates to my identity as I have a passion for photography
- Self Link digital camera My digital camera enables me to capture every special moment. Therefore, digital camera is my identity because it has a big part of my live in photos. Moreover, every time that I travel

with my family or friends, every birthday or special event my digital camera is there to capture all these moments.

Self Link digital camera it shows memories and shows one's personality maybe even

Self Link digital camera it is the way I see the world

Self Link digital camera It is hard to find a camera that fills your needs, as you use it you understand more of it, what lenses could fit better, whether to buy a tripod or flash... It is a very personal thing

Self Link digital camera I make videos of my travels using my GoPro. It relates to my identity because travelling is something I love doing and I like to be able to reflect on memories I have of travelling by capturing certain moments.

Self Link digital camera I love taking photos of people, things and places around me. I wouldn't necessarily say that the camera in itself is what is close to my identity but more so the ability to record memories with it and to capture moments which I can later look back at. I don't think objects are what we hold closer to our hearts I think it's the memories behind them and cameras are made for capturing memories.

Self Link digital camera I consider that a digital camera allows you to capture some of the most important moments in life, hence as I enjoy taking photos and I consider it essential to capture the most important moments, I believe that the digital camera fits my identity and is something that not only expresses my passion but also my personality/values.

Self Link digital camera All the pictures, the people being with me in those moments, the different places and countries I have captured with it, all the many memories it reminds me to.

Self Link digital camera The camera captures moments and memories of a good or bad experience, which when looked back upon creates a feeling of nostalgia and past identity

Self Link digital camera It's a good camera, but not very sophisticated. Photography is something I like, but as I'm not a professional and I don't want things I really don't need, then my camera is not a super camera.

Self Link digital camera A digital camera allows you to record memories. You can take the camera to every trip you do, so this camera will conserve photos and videos and when you see them you will remember good days. The photos contain people and places who relate to your identity.

Self Link digital camera I choose this product because I love take photos of everything! Some sunrises, moments with my friend, mi family, etc.

Self Link digital camera I no longer own a digital camera (as it broke), but when I had it, it was very easy to bond with. While looking through the pictures, you only see the best things of your life: the places youve visited, your friends and family, you, unforgettable times altogether. When possessing a camera, it is something which s part of you

Self Link digital camera Since I was child, I wanted to have my own camera. This give me independence, quite freedom, creativity,

Self Link digital camera My digital camera relates to my identity because it enables me to take pictures and therefore keep memories of some moments that are part of my identity. It represents my perspective and can transmit emotions: That explains why it relates to my identity, everything I am witnessing in my daily life

Self Link digital camera Taking photos is a big part of my identity, i love them and i am very interested in photography in general

Self Link digital camera Taking photos is my passion since i was 6 years old more or less. It relates to my identity because shows that i'm an adventurous person, calm and perfectionist

Self Link digital camera The camera shows a part of my identity, the creativity and imaginative part, also the adventurer and explorer part of my identity.

Self Link digital camera i think that digital camera may help me to retain important memories from the past. So, related to my identity is that, usually i base my opinion through memories or things that have happened to me in the past.

Self Link digital camera it is an object that helps to develop my creativity by taking pictures of everything that I love

Self Link digital camera It has taken a lot of pictures of what it is important for me, and it reminds me the time that I have spent with my friends and family. So it has recorded part of my life.

Self Link digital camera I've had that camera for quite a long time and I have taken it to many of my trips, is full of memories.

Self Link digital camera I personally don't have a digital camera, but my perception is that this item is very often an item that is important to the owner. It may be because of the price of the artistic capabilities and satisfaction it can provide to the owner

Self Link digital camera I love taking pictures to remember the good moments. When I travel with my friends or family I make also a video with the camera, which then I edit it and save for the future. My digital camera let me remember my best moments where ever and whenever I want. It's like it give me freedom and happiness at the same time.

Self Link digital camera I have had my digital camera since i was 16. I brought it with me to the U.S when I was studying abroad so it means a lot to me. I took a lot of pictures with it and if I hadn't had my camera I could not have immortalized so many memories.

Self Link digital camera Any digital camera can stop moments and experiences that in one future can be very valuable for the person

Self Link digital camera taking photos is the best way to memorize the things I like, and it's expression of my identity.

Self Link digital camera a digital camera relates to my identity because there are a lot of pictures taken since when i was little with all my family and friends which are part of my identity.

Self Link digital camera I always take pictures of places that are special to me. My digital camera collects pictures of my day to day activities and it keeps nice memories with family and friends. It relates to my identity because I like to remember good experiences that I've had. I'm also a perfectionist so every detail is important.

Self Link digital camera i used to have a digital camera when i was little and in my opinion it is a really personal object in which you capture your

own private moments which you can share or not. It can really tell how a person is depending on the pictures that he makes.

- Self Link digital camera Contains my memories, captures moments which project different emotions
- Self Link game console i just really like playing with it and cant identify with any of the others
- Self Link game console At the age of 12 i got my first Ps4 for my birthday. Since then it has been an object that connects me too a lot of friends who i dont normally speak to in daily life as they life in different countries or cities. It enables me to play and talk to my younger brother who lives and Germany and who i dont talk too that much. Playing with him on the console enables that for me.
- Self Link game console Being a full time student, I always have a lot things to do and to think about. My game console gives me the opportunity to put everything else on stand-by and clear my mind for a couple of others. While I play, I do not have anything else to worry about. For me, it is an escape from the real world, helping me relax.
- Self Link game console My game console reminds of my time in Saudi Arabia where I used to invite y friends and play in my room all night. The console has sentimental value since it was my time consumer when I was all alone knowing the fact that I was an only child. It also reminds me of my old room which I miss very much due to the array of memories there.
- Self Link game console My game console relates to who I am because every time I play video games in my game console I feel free, introvert, challenged, I enjoy myself.
- Self Link game console me and my brothers played with it a lot when younger . It has shaped little but our personality was also affected by us using it.
- Self Link game console I've passed long hours playing with my game console. Great moments of my childhood have passed while I was using it and I've unpriceable moments with my cousins playing with it all together. Everytime I play with the game console reminds me those moments that have an unestimated value for me as they all were happy moments.

Self Link game console I have been playing with my console since I was a little kid, and I had a lot of great experiences playing with my friends, so when I think about my console I can relate to all this experiences.

Self Link game console out of all the listed items the game console most relates to myself as it reminds me of the times when i used to play frequently with my brothers.

Self Link game console Because I have dedicated many time to playing it, especially competitive games with my friends, in which I am very passionate, and practice constantly to improve, searching for tips and tricks something I always try to do in every aspect; Improve and use as many resources possible.

Self Link game console It reminds me in the summer when I played with my friends and it is related to that people and how I liked to spend time with them

Self Link game console My gaming console relates to my identity because it brings about many childhood memories with my family and friends. I do not use it as often as I used but for me it is impossible to sell it because I will be selling a part of my teenage years and memories with my school friends.

Self Link game console I like to have fun and spend time with my friends, and that's what I do with my game console.

Self Link game console well as I am the only male in my family, my sisters don't like playing ps4 therefore it is only mine. After a lng time having it I believe that it is part of my life in a sense that when I have nothing else to do I might distract myslef with it.

Self Link game console The bond with my console is based on the fact that it helps me relax and escape from stress

Self Link game console It is a game I always wanted to have and I began to play it very often and I was good at it. So I did some competition with this game and it made me like the competition of e-sports and it took a big time of my life.

Self Link game console I usually spend many times playing since I was a child. Moreover, I think with inventions and imagine person related with the game console

- Self Link game console as i play games competitively and need to put in high amounts of effort into them to stay at a certain level and keep on improving in them i t reflects my work ethic and my strive for improvement
- Self Link ski or It is pink and I am quite feminine. I always ask again for snowboard set Christmas whatever I feel I need for that ski season (maybe because the item is old or broken). I love skiing.
- Self Link ski or Its something which i use a lot and that I don't like to share snowboard set because it's really expensive in my case.
- Self Link ski or I am very passionate about skiing which is why my own personal snowboard set skiing set has a high value to me and relates to my identity. I started skiing when I was 3 years old so I have many memories connected to skiing that fill me with joy and happiness. My skiing set stands for all these memories with my family and friends.
- Self Link ski or They are fully adapted to my body and size so they fit and suit snowboard set me perfectly. Also I chose the set so it's the type that better defined me
- Self Link ski or The colours you wear may say something of you identitiy. snowboard set
- Self Link ski or Ever since I bought my ski set I have gone on multiple skiing snowboard set holidays with my best friend's family and mine. Over the years I have gained great memories and therefore, my skiing set gives me a positive feeling.
- Self Link ski or My ski set has given me a lot of moments of joy and I feel snowboard set identified with what it provides me and it defines myself
- Self Link ski or i like to snowboard and the equipments i would choose would be snowboard set personal and I would enjoy every second I use them
- Self Link ski or is my way of living.Ii like to do sport and when I'm using my snowboard set board, I feel very comfortable
- Self Link ski or show that I am involved in this sports since a long term, it is a snowboard set passion and it is a family thing since all my family has its own stuff of ski;

Self Link ski or My ski set really shows what my personality is like. If it has so
snowboard set many colors it means that you enjoy adventure and you like
people to look at you all the time. On the contrary, if it is all
white, it means that you are shy and you don't like people looking
at you while you are skiing since you think it is a sport you are
not really good at. in my case, i wear the second choice.

Self Link ski or I was gifted my ski set on a christmas of 4 years ago. besides
snowboard set representing something important because of it being a present
from my family, it represents at best an important part of my life
and personality: sports.

Self Link ski or I compete nationally in alpine ski racing so my skies are a huge
snowboard set part of my favorite activity. they have been through the ups and
downs with me. They bear the scars of any accident i have had or
any funny memory. i fully trust my skies and i identify with them
as they are just an extended version of my legs when i am on the
slopes.

Self Link ski or My ski set relates to my identity in the way that it reminds me of
snowboard set all the times i spent skiing with my family and it's something
unique.

Self Link ski or it shows how passionate I feel about sports, risk and adverse
snowboard set situations

Self Link sleeping bag The sleeping bad reminds me of my childhood, and gives me
very good memories from when I was young, the sleeping bad
kind of relates to me in a way in which I like adventures, and
sleeping in a sleeping bag kind of takes me out of my comfort
zone.

Self Link suitcase It reminds me of the places where I have been to, and all the good
memories I have about my trips.

Self Link suitcase becuase i love to travel and from all the items on the list is the
one that is more personal to me

Self Link suitcase The colour of the suitcase identifies your personality. Moreover,
the brand is can be also related to who you are and which are
your values. Furthermore, the shape of the suitcase shows which
can be your personality.

Self Link	suitcase	Means your effort during all your life
Self Link	suitcase	My suitcase relates to my identity in the sense that it shows the type of traveler that I am, and also what I want others to think of me. for that reason I do not use an expensive or luxury suitcase, but something of quality that could be expensive but not showy.
Self Link	suitcase	In my case. my suitcase is an old suitcase that my parents gave me when I first came to ESADE and to Barcelona. It'a a suitcase from a known brand that used to be my mother's suitcase when she was at university. So it reminds me of where I come and how I want to be like her when she was my age.
Self Link	suitcase	Because I always use my suitcase for all the short and long travels I do, so this remind me of going abroad and being so happy.
Self Link	suitcase	I spent one school year in Ireland, which was a really special experience for me. The suitcase I own is the one that I bought back then, in order to take it with me. Ir reminds me of the times that I came to visit my family and then went back there.
Self Link	suitcase	Suitcase can contain lot of stuff and can be very variable depending from the day or the needs of the day
Self Link	suitcase	My suitcase relates to my identity because it enables me to travel. Besides, i am very open minded and i think it is a kind of representation of this characterisitic
Self Link	suitcase	my suitcase has been with me since I was 8. It was my friends present. During that year, were we all made 8 years, we gifted between us with a suitcase. It was the same model but in different colors. Since that, every place that I have visited I remember my suitcase there with me, including trips with my friends or family
Functional	box game	Ga,es in general are ment to be social conjunctions. Therefore games bring people together, that means it gives humans a reason to establish a relationship with other human beings.
Functional	box game	Board games are the games that shape our childhood, where we learn how to lose, how to win and how to think, in a way. The more we grow up, the less we play thats why now they have precious value because they remind us of our joyful childhood.

Functional chess board It is only bought and used to play rounds of chess with friends

Functional costume It's a very comfortable costume, high quality and it can be use in several events or meetings. It's dark blue so that helps to fit the different meetings and depending on the accessories you have you can wear it more formal or informal

Functional costume It allows to be shared and used in different situations.

Functional costume a costume us used to dress up for a specific occation

Functional digital camera by taking pictures and sharing them with people, I feel happiness.

Functional digital camera A digital camera is a very personal item that it is to capture the moment that you take the photo. Normally that moment has a special meaning, that it's because of the place that you are or because of the people that you are with.

Functional digital camera I like to take pictures so with it i can do so whenever I want to

Functional digital camera I go everywhere with my digital camera. I love taking pictures of everything while travelling or visiting new places, as it helps to revive the memories once you look at the pictures when time has passed by.

Functional digital camera because it lets me capture all the moments lived

Functional digital camera The digital camera serves to caption the moments as our memory tends to forget some of the special moments we've lived. When you recover something with a camera, you are doing it to have a memory to look after.

Functional digital camera My digital camera basically does what is supposed to do, it takes pictures whenever I want of whatever I want. I also think that digital cameras are really exposed to damage that sometimes I rather not letting it to other people.

Functional digital camera Because i love taking photos

Functional digital camera The only function that it has its to take pictures. So i think its the best one that serves to its purpose

Functional digital camera My digital camera helps me to purpose because I love taking pictures

Functional game console you can go on the internet, connect with other people, communicate in real time and you can multitask

Functional game console Helps me to have fun and take time for myself to relax

Functional game console To communicate with your friends or other players

Functional game console It is a big part of my day. I play with it everyday with me friends from my home country. It serves the purpose of communication with them and also the fun of playing

Functional game console Because it helps me to disconnect

Functional game console Whenever you want to calm down or need to relax you can use the game console to play some games and relax.

Functional game console The main function it has the game console is related to have a good time with my brother playing FIFA or some times NBA

Functional ski or snowboard set A ski set is only used for the purpose of being able to go skiing. It can not be used for any other activity.

Functional ski or snowboard set If I want to go Skiing it is impossible to do so without owning a set of Skis. If I wouldnt go to Ski I wouldnt own a set of Skis. Therefor it only serves this one functional purpose.

Functional ski or snowboard set In winter, when you decide to go to the mountainside, you need skis in order to ski (or snowboard)

Functional ski or snowboard set My skies give me a lot more than expected, that's because I love the mountains and the sport. And a good ski is necessary if you have been skiing for a long time.

Functional ski or snowboard set The ski set allows me to ski so it serves to it purpose allowing this.

Functional ski or snowboard set So that I can ski without rentals

Functional ski or snowboard set Ski allows people to move across the snow and to cross mountains

Functional ski or snowboard set My ski set it's very important to me. I've changed my skis multiple times and right now i think i have one of the best i ever had. I love skiing so having the best materials to practice the sport makes it more enjoyable.

Functional ski or snowboard set It is very functional because it can only be used to ski

Functional ski or snowboard set it is the only object with which you can do the activity of skiing. Either you have skis or a snowboard. Renting is much more expensive when using regularly so it is not worth it

Functional ski or snowboard set I need it because I go every weekend so It is functional for me to ski.

Functional ski or snowboard set without the possession of a ski equipment you won't be able to ski so without it the activity has no use

Functional ski or snowboard set The ski/ snowboard set serves a very defined purpose: it allows you to practice this sport and be well equipped so that you can enjoy it.

Functional ski or snowboard set The ski set is the only type of clothing anyone could wear in order to go to the mountains and do that sport. Otherwise the rest of the clothing would not be enough and anyone could get a serious cold.

Functional ski or snowboard set It serves you to practice a sport

Functional sleeping bag You use it only for circumstances where you need heat and somewhere to sleep whenever you are camping.

Functional sleeping bag My sleeping bag is comfortable, big enough so I can fit and warm enough to sleep in a tent or outside my house

Functional sleeping bag I don't have a sleeping bag. I assume its purpose would be to act as a blanket that envelopes the body up to around the neck area.

Functional sleeping bag although it is not a daily consumption need as I sleep in a bed, it does serve as a bed when I travel.

Functional sleeping bag Whenever I go camping or I sleep in some place where no sheets are provided I use the sleeping bag so as to keep myself warm.

Functional sleeping bag The sleeping bag is a kind of object that you usually share with your friends, because it has a unique use, when you go camping and you need to sleep on the floor of a tent.

Functional sleeping bag The purpose of the sleeping bag is that when you go somewhere, for example camping, you can use it for sleeping in it., being warm and comfortable anywhere you go.

Functional sleeping bag it allows me to have a place to sleep with temperature and comfortability

Functional sleeping bag I use it when i go out to the mountain with friends. On summer i use to do excursions and sleep in the middle of the forest, so it serves to me because it's the only way to don't get cold in the night.

Functional sleeping bag I have a countryside house on the mountains, so during summer I love to go camping with my friends and without the sleeping bag I would be able to meet my needs of sleeping. so it is a very important tool

Functional sleeping bag A sleeping bag is a functional belonging because it serves the purpose of sleeping comfortably probably in a tent. Sleeping is a basic need for which we need objects such as a room and somewhere to lay down. In this case, it would be the sleeping bag.

Functional sleeping bag While there may not be many instances in day to day life where a sleeping bag proves useful. there are scenarios where it is vital. For example when going camping or sleeping over in a place where it is not possible to use a normal bed.

Functional sleeping bag when I go camping, i need to sleep somewhere and i hate sleeping without anything, so my sleeping bag helps me to sleep properly

Functional sleeping bag The sleeping bag can serve different purposes and can help in so many situations.

Functional sleeping bag My sleeping bag serves exclusively to it's purpose: it is used only to sleep on it, probably during excursions or places outside.

Functional sleeping bag My sleeping bag offered me a place to sleep and keep me warm at night when I used have sleepovers.

Functional sleeping bag It keeps you warm when you are sleeping in a cold environment. It also gives you comfort when you are sleeping in an uncomfortable place.

Functional sleeping bag it allows me to be warm during the night as it is like a blanket

Functional sleeping bag I only use it when i go camping or in a sleepover, otherwise I wouldn't use it for anything else, so its pretty functional

Functional sleeping bag During camping to sleep outside, and only to sleep.

Functional sleeping bag A sleeping bag is really functional and efficient. It can only be used or at least it is mostly used to do what it is meant to do with it which is sleeping.

Functional sleeping bag It helps me to sleep

Functional sleeping bag You can use it to sleep when you aren't at home, such as in a camping

Functional sleeping bag To make your sleep more comfortable when going camping for example

Functional sleeping bag It is useful when I go to some music festivals; we are in a camping so we don't have beds

Functional sleeping bag It allows me to rest and recover from a tiring activity whenever I dont have my bed near.

Functional sleeping bag In my opinion the sleeping bag has only one use which is sleep in it. I don't think it can be used for much more things.

Functional sleeping bag I tihnk my sleeping bag helps me to have a good rest to be able to overcome every day that is going to come having a good sleeping. When someone does not have a good sleep it is reflected on the next day as it causes a bad sensation and mood.

Functional sleeping bag As we are talking about the consumption of products regarding our needs, I think that sleeping is a fundamental human necessity and therefore the sleeping bag helps us to satisfy and fulfill our needs (here, sleep).

Functional sleeping bag using the example provided,in a camping, I'll use my sleeping bag to have something to cover myself at night in order to be more comfortable and warm

- Functional sleeping bag The sleeping bag serve to this purpose because I think that it is useful object that suites with the description made before.
- Functional sleeping bag sleeping bag only serves to sleep. It is purely fonctionnal
- Functional sleeping bag it warms me and protects me from the cold
- Functional suitcase You encounter many situations in life where you need together some of your belongings into one place in order to transport them from one place to another. A suitcase effectively carries your belongings in one place, and does not require you to carry your items in hand, which would require many back and forth transportation and prohibit the use of hands for other purposes.
- Functional suitcase you can use it in your everyday routine as if you travel or whatever
- Functional suitcase The suitcase allows you to pack and transport your personal belongings when travelling.
- Functional suitcase My suitcase is very resistant which is necessary when i am traveling. It also fits perfectly the dimensions so that I can bring it on the plane with me as a hand luggage. It allows me to put all my personal belonging in there, without hurting/changing its form which is the main purpose of it.
- Functional suitcase I use my suitcase only when travelling for putting my stuff in, not any alternative uses.
- Functional suitcase I use it to travel and pack this not only from here to home but also from home back to here. I am able to feel free when going to another country to take or shop as much as i would like.
- Functional suitcase I can use it to help me carry stuff. So I don't have to hold everything in my arms when traveling
- Functional suitcase A suitcase allows you to carry your belongings whenever you go for a trip.
- Functional suitcase To travel, move your stuff from one place to another in a practical and efficient way
- Functional suitcase My suitcase is useful to keep all my travel stuff whenever I want to use it, it serves it purpose to keep my stuff in a secure place

Functional	suitcase	It serves its purpose as it enables me to carry various things when I travel.
Functional	suitcase	You just can use it as it was a simple bag. You can store your things there, and comfortably move with all your things packed.
Functional	suitcase	You can put inside the clothes and things you need when you want to go anywhere.
Functional	suitcase	to travel I put my clothes and everything I want to bring in my suitcase, therefore it has a functional need
Functional	suitcase	To be suit up it can be very helpful in order to meet and greet some people so it can fit
Functional	suitcase	As i leave in a city different from my family i have to travel a lot so i use my suitcase very often
Functional	suitcase	A suitcase, protects my phone from crushing.
Functional	suitcase	A suitcase only function is to move my belongings from one place to another in a practical way
Functional	suitcase	A suitcase is the most efficient tool for traveling or for moving things from one place to another. Without them we would have to make many more trips.
Functional	suitcase	A suitcase is something that guards your belongings and helps you carry them wherever you go.
Functional	suitcase	A suitcase allows you to travel. Without a suitcase you won't be able to take anything with you when you are going away. It is purely practical as i use it only for this purpose and it is essential to my travel.
Functional	suitcase	to be able travel with my belongings wherever i want to
Functional	suitcase	My suitcase, I have it only for the use of transporting my things when I travel, so it has a functional use for me
Functional	suitcase	It serves so that you can buy, transport and storage food in the suitcase.
Functional	suitcase	It allows me to pack all I need when I travel.
Functional	suitcase	I believe a suitcase is essential for you to travel

Functional	suitcase	everytime i need to travel to go home or somewhere else i am able to bring my things with me thanks to my suitcase
Functional	suitcase	As i currently live in Barcelona but my home and family is in Roma, Italy, the suitcase is essential for me as I am always travelling back home.
Functional	suitcase	Whenever you do a trip and need to bring your clothes or any kind of item with you, suitcases fit perfectly as they are easy to handle and they do their function very well.
Functional	suitcase	The suitcase is just used as a mean of transporting clothes or objects from one place to another.
Functional	suitcase	It is used every time I travel anywhere, and without the suitcase there is no where for me to put my cloths to bring with me.
Functional	suitcase	It has a purpose of holding your belongings in a small space when you travel. That is the main purpose of this item, and serves its purpose for the needs the people have when travelling.
Functional	suitcase	You can use your suitcase for transportate all your stuff that you will need in case of travel.
Functional	suitcase	When going on holidays I cam transport all my belongigns without a problem.
Functional	suitcase	My suitcase is only ever used when I travel, otherwise it stays in a dark side of my room never used. It has no other use besides being a vehicle for my luggage as fly or travel by any means to another place.
Functional	suitcase	It was the clearest of all the options. A suitcase enables you to transport your belongings in the most effective way.
Functional	suitcase	It serves its purpose because many people nowadays have to travel because of their work. This is the reason why a suitcase will really help to make their daily life much easier; providing them storage to put their belongings while traveling.
Functional	suitcase	I do use my suitcase during the weekend as I go to my home town.

12. Study 3 Stimuli: Sterilizing Product Visuals



Control Condition Product Visuals



13. Study 3: Frequency of Objects Chosen by Participants

*Object chosen * Product Specifications Task Crosstabulation*

		Product Specifications Task		
		Control Products	Sterilizing Products	Total
Object chosen	audio equipment (speaker, microphone, instruments, etc.)	Count 22 18.3%	20 16.9%	42 17.6%
	trekking shoes or hiking boots	Count 23 19.2%	17 14.4%	40 16.8%
	suitcase	Count 20 16.7%	15 12.7%	35 14.7%
	game console (e.g., playstation, xbox, wii)	Count 15 12.5%	10 8.5%	25 10.5%
	travel backpack	Count 12 10.0%	11 9.3%	23 9.7%
	digital camera	Count 12 10.0%	11 9.3%	23 9.7%
	sleeping bag	Count 3 2.5%	15 12.7%	18 7.6%
	sports equipment (ski, snowboard, tennis rackets, rollerblade etc.)	Count 8 6.7%	9 7.6%	17 7.1%
	box game (e.g., monopoly, taboo)	Count 3 2.5%	6 5.1%	9 3.8%
	costume (e.g., Halloween, carnival)	Count 2 1.7%	4 3.4%	6 2.5%
Total		Count 120 100.0%	118 100.0%	238 100.0%

4. Consumers as Superheroes: When and Why Online Consumer Actions Manifest Underdog Effects

Abstract

A variety of tech-mediated consumption forms (i.e., uber rides, food deliveries, social media) prompt users to give instant feedback and thank-you money after a product or service delivery. While this practice is essential for the survival of both the platform and its service providers, little is known about consumers' decision-making in such settings. Previous research shows that informing customers of the underdog characteristics of a market player spawns positive responses, namely the underdog effect. Extant research also points out boundary conditions and limitations to this effect. We investigate whether underdog effects extend to some online behaviors (i.e., donation, WoM), which can affect underdog entities' success substantially. We propose and test that people use these behaviors to support entities with underdog characteristics due to personal motivations to reduce inequality.

4.1. Introduction

Platform websites such as Soundcloud, YouTube, and Etsy made it easier for creative content producers to advertise and disseminate their work at low costs. Parallel to this advancement of replacing middlemen with digital means, customers had more direct power in shaping the products and services by sharing feedback with these peer-providers directly, spreading WoM, donating to crowdfunding campaigns, and the like. While customers can empower peer-providers on these platforms, it is still the platform that controls the peer-provider and peer-user experience by design elements. In response to a constant flow of data from both consumer and producer ends, algorithms of such platforms are designed to suggest some options (e.g., best sellers, offers, sponsored content) to users, putting other alternatives in the underdog position (Mu & Zhang, 2021).

Previous research shows that informing customers on the underdog characteristics of a market player spawns positive responses (e.g., increased purchase intentions, brand loyalty, patronage) from customers, namely the underdog effect (Paharia et al., 2011; Jun et al., 2015). On the contrary, some research suggests that customers favor underdogs in attitude but not in action (He et al., 2020), even more so if their decision to choose an underdog involves high stakes or direct influence on their lives (Kim et al., 2008). People are more tolerant of underdogs than top dogs in failing to meet expectations if the failure relates to the product but not to interpersonal interaction (Kim et al., 2019). In the face of such conflicting findings on the underdog effect, our research investigates the role of the underdog effect on two types of consumer actions that substantially influence a peer provider's survival: crowdfunding and WoM.

We suggest that consumers' motivation to support an underdog's survival positively influences the size of their spending on crowdfunding donations and the valence of their public ratings in favor of this peer-provider. We also propose that individuals' intrinsic motivation to reduce market inequalities is the mechanism behind these positive underdog effects. Besides studying the underdog effect in a novel context (i.e., day-to-day, high-paced, low-stake, but consequential consumer decisions), we also propose an explanation for the conflicting pattern of results identified in behavior towards an underdog peer-provider (i.e., why the underdog effect manifests in some actions and not in others). In three studies, we test the underdog effect in consumers' decision to join crowdfunding through a donation and give more positive star ratings for peer-providers with underdog characteristics. We also incorporate the moderating

roles of peer-provider's performance and the order in which consumers engage in supportive actions.

4.2. Theoretical Background

4.2.1. Financing an Underdog

The concept of the "underdog" is defined as an individual, team, or entity perceived as having a lesser chance of success due to a comparative disadvantage, whether in skill, resources, or public support (Michniewicz & Vandello, 2013). In sports, underdogs are often smaller, less funded teams that face off against well-established, highly favored opponents; this can be exemplified with athletes from least-developed countries competing in the Olympics. In politics, underdog candidates often lack the backing of major parties or significant campaign funding, so their chances of winning an election are significantly lower. Underdog brands have a weak market standing in the market, which is a considerably smaller market share than those dominant brands in their category (Hoch & Deighton, 1989). Some examples of underdog vs. top dog standing in different markets are Bing vs. Google search engine, local coffee shops vs. Starbucks, online accounts of micro-influencers vs. celebrities.

Even though underdogs can have a significant market share through their unique offers, they are, by definition, less likely to be an optimal choice. This is due to their defining characteristics of being less competent, having fewer resources, and operating in smaller capacities (Vandello et al., 2007). Accordingly, underdogs are less likely to be selected when a decision entails patronage. People support underdogs in their hearts but choose to buy from top dogs (Kim et al., 2008). Yet, when spending is in the form of a donation for a social cause, several studies to date showed that people prefer to support the underdog recipient (Saito et al., 2019; Bradley et al., 2019) although the positive impact on the recipient would be higher if top dogs were supported because they should have a higher potential to make good use of a donation and attract more donations in the future (Vesterlund, 2003). In the next section, I discuss the social reasons for this behavior.

4.2.2. Social Beliefs and Attitudes

The literature documents strong reasons for consumers to choose or dismiss underdogs. Motivation to conform to norms to avoid possible embarrassment or social sanction for holding a divergent position directs people to the majority's choice (see Cialdini & Goldstein, 2004).

People are also more likely to make product choices in line with norms (i.e., the majority's choice) rather than their own preferences when they think of themselves as interdependent (Barnes & Shavitt, 2023). On the other hand, some people choose to buy from less preferred brands due to an intrinsic need to feel different from others in their consumption choices (Tian et al., 2001).

One reason to root for underdogs is the arousal of empathy and warmth. People form an empathic concern for another entity in need of help and want to help them (Cialdini et al., 1997). Arousal of empathy for an underdog is more likely than for a top dog for two reasons. First, underdogs are in need of resources available to their competitors (e.g., money, good network, experience). Second, underdogs are easier to relate to our selves, because people think of themselves as in a more disadvantaged position than their friends, members of their ethnic group, people in their social class, and people from their country of origin (Paharia et al., 2011). For holding empathic feelings for underdogs, consumers are shown to compromise underdogs' lack of competence by their superiority in personality-related attributes (e.g., integrity or friendliness) and prefer them over competent but immoral service providers (Kirmani et al., 2017).

The underdog phenomenon can also evoke inspiration, often through narratives of overcoming odds and challenging established hierarchies. An underdog can perform beyond expectations by having a winner mindset emphasizing perseverance, resilience, and a positive outlook in facing challenges. Resilience against the fact of being in an inferior position (i.e., being reminded about gender differences) can make women perform better in negotiation (Kray et al., 2001). Belief in one's potential to improve one's abilities boosts one's self-efficacy and can make one perform better despite being in an underdog position (Davis et al., 2011). When people attribute little credit to others in viewing them as underdogs, those others' low expectations can boost their performance (Nurmohamed, 2020). There are many examples of inspiring transitions from underdog beginnings to very successful careers in the entertainment industry. Sylvester Stallone is an excellent example of an underdog young actor who shows determination and perseverance in facing challenges (e.g., financial struggle, resistance from producers, lack of industry connections) to eventually become a Hollywood star.

Another reason to root for underdogs concerns effort. Even though people associate underdogs with lower ability, they believe underdogs exert higher effort and deserve support (Vandello et al., 2007). Even well-established market giant companies invest in this association between

underdogs and high effort by highlighting their humble origins in their brand biographies (Paharia et al., 2011). This underlines their remarkable and effortful growth in becoming what they are today; classic examples are Amazon, Google, and Apple having started in a garage. Attribution of increased effort and entrepreneurial spirit can make consumers willing to pay more for the same service when it is provided by a peer-provider instead of a traditional entity (i.e., a commercial company that uses corporate assets to offer goods and services to consumers) (Cakanlar & Ordabayeva, 2023).

Underdogs are not determined to succeed in the competition as the definition entails: “a loser or predicted loser in a struggle or contest” (Merriam-Webster, 1994) due to their disadvantageous status. Motivation to mitigate their negative fate and restore justice can explain why people show increased intention to buy from and pay a price premium at a coffee shop or restaurant in an underdog position (i.e., disadvantaged but have passion to succeed) (Legendre et al., 2017). McGinnis and Gentry's (2009) data collected through in-depth interviews and a focus group also suggests that people support underdogs to ensure the maintenance of equal opportunity in competition as an extension of their personal beliefs in equal opportunity. Moreover, a webnography into anti-brand communities shows how customers reject buying from big corporate brands in top dog positions in favor of underdogs (e.g., mom-and-pop stores) because they feel manipulated by their sales strategies and stand against those brands gaining more market power (Hollenbeck & Zinkhan, 2006).

Underdogs can also be defined as “victims of injustice” (Merriam-Webster, 1994). Recognizing underdog entities by this definition triggers a cognitive dissonance due to individuals' intrinsic will to believe that the world is a fair and just place (Jost et al., 2004). Consequently, people, consciously and unconsciously, look for facts that increase the legitimacy of the social system. Evidence supporting this argument proposed by system justification theory (Jost & Banaji, 1994) shows that when people face events of injustice in their or others' lives, they will justify these and perpetuate the status quo (Kay & Jost, 2003). In doing so, they follow a cognitive strategy to fit their observations of unfairness to their “belief in a just world” (Lerner, 1980) by attributing certain favorable personality characteristics (e.g., “poor but honest”) or favorable well-being positions (e.g., “poor but happy) to those who are less advantaged. Or they can choose to build a justification by derogating those in a weak position by believing that victims, including themselves, deserve their suffering (e.g., Lerner & Simmons, 1966).

4.2.3. WoM by Consumer Ratings

It is very often the case that consumers can only be fully informed of the exact quality of a product or service once they actually consume it. Under such imperfect information conditions, feedback (i.e., online reviews, star ratings, likes) from those who already used them plays a great role in assisting future consumers' decision-making (Kirmani et al., 2017). Digitalization helped mitigate this ambiguity friction by simplifying the collection and dissemination of consumer feedback (Khalid et al., 2020). Following the delivery of a digital product or service (e.g., listening to podcasts, watching influencer videos, doing online shopping), consumers are prompted to give immediate feedback (e.g., in the form of star ratings, like-dislikes) (Wirtz et al., 2019). The benefit of such inputs on consumers is twofold: feedback on one's preferences improves suggestions for one's future consumption, and aggregated pieces of feedback assist other customers' future decisions. Our research focuses on the latter.

User ratings are most often a widely available public good. Despite its availability, prevalence, and importance in consumers' decision-making, its reliability is challenged by previous research. Consumers can give product reviews based on many other factors besides their true judgment of a product's quality. Their mood or personal taste, availability of substitute products, or delivery conditions (i.e., damage or timing) that have no direct relation with the product's quality or producer's performance can influence the valence of their review (Holbrook & Addis, 2007 Alnemr & Meinel, 2011).

Furthermore, learning more about the producer (before or even after the actual consumption) can alter one's product evaluation. For example, being told that the producer is Chinese (instead of Swiss) changes how much people like the very same chocolate (Wilcox et al., 2011), or being told that the producer is an underdog yields lower quality judgments for the identical item (Kim et al., 2008). In a peer-to-peer context, people tend to give higher ratings for the service provider because the entity being evaluated is a person (e.g., Uber driver) rather than a restaurant, dry-cleaner, or bank (Filippas et al., 2018). Accumulation of such inflated ratings for peer-providers renders the rating system worthless over time.

Due to social motives discussed in the previous section, people might be motivated to favor underdogs by giving more positively valanced reviews, which could undermine the reliability of these reviews. Such actions involve minimal effort and take barely any time as compared to a money transfer. In addition, some platforms (e.g., Yelp, Google Maps, TripAdvisor) do not require previous purchases to leave a public review (Mayzlin et al., 2014), further decreasing

costs associated with reviewing. Hence, a desire to help an underdog may be enough to generate positive reviews on behalf of it, even though they are consequential for others' decision-making (Floyd et al., 2014).

When showing support for an underdog, personal motivations (i.e., sympathy, identification, desire for justice) and social concerns (i.e., risking one's self-image or social acceptance by a reference group) work in contrast to each other (Wangenheim, 2005; He et al., 2020). For example, spreading WoM for an underdog can serve one's self-enhancement because it allows expressing one's genuine opinions to others despite the risk that the consequences might not be positive (Wien & Olsen, 2014). To restrain these self-focused social risk-benefit calculations, in two of our decision scenarios (donation and feedback), we chose contexts where the source of review or money is private, but reviews are to appear publicly. This way, we instead focus on the consequences concerning the underdog.

In line with the findings of previous research and the above discussion, we suggest that consumers will be more willing to support underdogs with an intention to reinforce their existence in the competition. We further suggest that consumers spend more or give more positive product ratings to support underdogs to close the advantage gap only when they deserve support by showing satisfactory performance. Finally, we propose that the underdog effect persists even after engaging on prior supportive behaviors.

H1: Consumers are more willing to support an underdog (vs. top dog) peer-provider success.

However, when asked to act:

H2a: Consumers will provide more positive public ratings for the underdog (vs. top dog) peer-provider's product.

H2b: Consumers will donate more to an underdog (vs. top dog) peer-provider in online crowdfunding.

H3: The underdog effect on peer-provider crowdfunding is mediated by the motivation to reduce inequality.

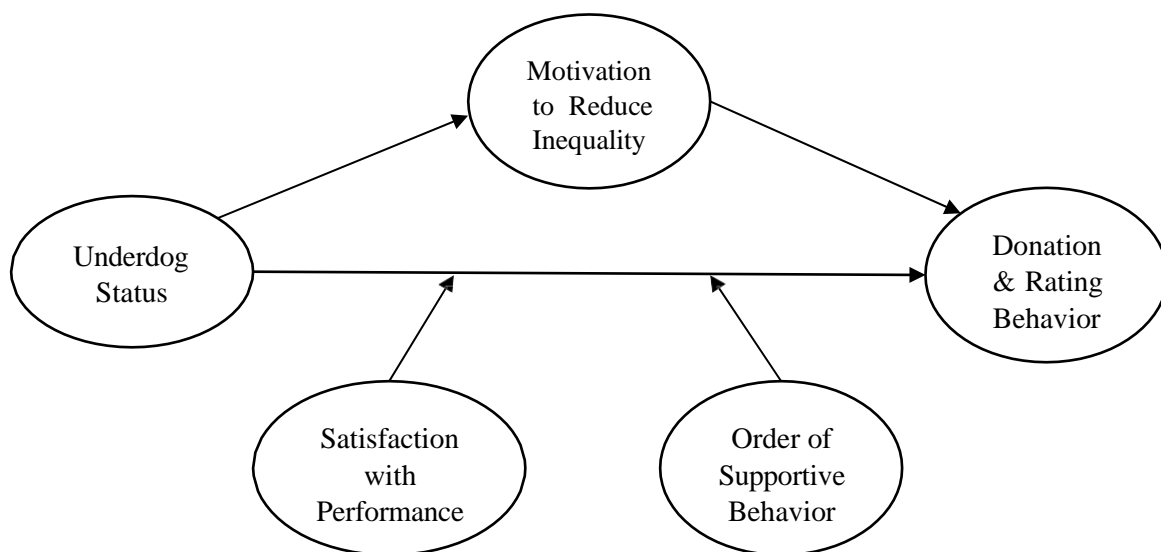
There are some important boundary conditions to this pattern of effects:

H4: The underdog effect on peer-provider donation behavior is conditional on showing satisfactory product performance, such that non-satisfactory product performance attenuates the underdog effect.

H5: Engaging in prior supportive behavior (public rating) will negatively influence donation behavior for a top dog but not for an underdog peer-provider.

Figure 4.1 depicts the hypothesized relationships. Study 1 tests the underdog effect on willingness to support, and shows that people are generally more motivated to support the underdog (vs. top dog), although this is not reflected in the positivity of their ratings and explores the moderating role of product performance in the underdog effect. Study 2 tests the underdog effect on a consequential donation decision in addition to rating behavior and it further tests the moderating role of product performance. Finally, study 3 investigates whether the underdog effect on donation intentions persists even when prior supportive behavior (public rating) is requested (i.e., by manipulating the order of these two decisions), and also tests for the mediating role of individuals' motivation to reduce inequalities.

Figure 4.1: The conceptual model



4.3. Study 1: Higher Motivation to Support but no Better Reviews for the Underdog

Study 1's goal is to show that people find more motivation in supporting the success of underdog producers than top dog producers independent of the quality of their performance. We also test if this motivation is carried to action by adjusting the valence of star ratings

accordingly. The experiment had 2 statuses (underdog and top dog) x 2 levels of performance (low and high) design with random assignment and one dependent variable (star ratings).

4.3.1. Procedure

Bachelor students from Spain and the USA (n=290) participated in this online study in exchange for course credits. The study started with the introduction of the online music-sharing platform Soundcloud, where singers at different levels of professionalism upload their recordings. The participants were instructed to listen to an allegedly randomly selected music track that a female singer uploaded. By random allocation to conditions, they listened to either a good or a bad performance of the same song. We chose the stimuli based on the number of likes and listening counts accumulated since publishing the performance. Then, the participants read a brief description of the singer who seems to be an underdog or a top dog (See Appendix), similar to profile bios that appear on Soundcloud.

As for the measures, they answered a single item for overall liking (“How much did you like this song?”) and three-item Wirtz & Bateson (1999) for satisfaction. Then they entered their choice of star rating out of 5 stars (“What star rating would you like to give to this music record?”), answered two items adopted by Hennig-Thurau et al. (2004) measuring motivation to help the singer on a 7-point-Likert scale (“I want to help the singer to be successful” and “In my opinion, this singer should be supported”). Following, we probed the effectiveness of the manipulation on perceived underdog characteristics on 7-point bipolar scales (authenticity: Newman & Dhar, 2014; external advantage and passion: adapted from Pahlia et al., 2011; ability and effort: Vandello et al., 2007). For control purposes, the perceived efficacy of leaving an individual review is measured by a single item on a 7-point-Likert scale (How much do you think your individual review influences this singer’s success negatively or positively?) adopted by Roser-Renouf et al. (2016). Finally, a recall question checked participants’ attention (“Which one of those below was the recording that you listened to before?”). All survey questions are listed in the Appendix.

4.3.2. Manipulation Checks

The participants perceived the singer to be more authentic ($p=.03$), more externally disadvantaged ($p<0.001$), more passionate ($p<0.001$), and showing greater effort ($p<0.01$) when she was introduced with the underdog bio, but not based on performance. It is worth noting that ability-related characteristic was left out as it was impacted by the performance

manipulation such that people judged the singer to have the lower ability if they sang worse ($p < 0.001$), not if they were underdog.

We used the mean scores for the 3-item satisfaction scale after testing scale reliability (Cronbach's alpha = .90). The participants reported higher level of satisfaction based on (good vs. bad) performance ($M_{\text{good}}=5.10$, $SD=1.43$; $M_{\text{bad}}=3.78$, $SD=1.48$; $F(1,263)=57.074$, $p < 0.001$, $\eta^2=.18$) but not based on underdog status ($F(1,231)=1.573$, $p=.21$). Our manipulation check confirmed that only the status manipulation impacted underdog perceptions for the singer and only the performance quality manipulation impacted satisfaction.

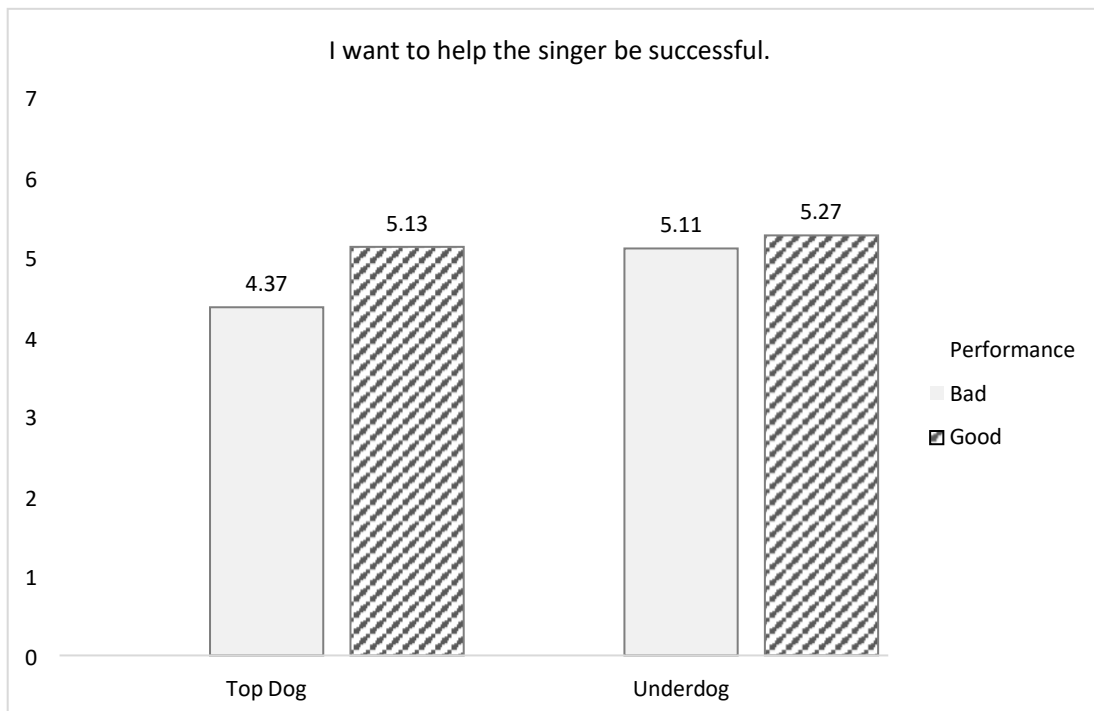
4.3.3. Results

The data was composed of 265 valid responses after excluding those twenty-five who failed the attention check question. Our data supported H1a such that people reported a higher willingness to help an underdog's success than to help a top dog's success ($M_{\text{under}}=5.18$, $SD=1.27$; $M_{\text{top}}=4.77$, $SD=1.50$; $F(1,263)=5.727$, $p=.02$). This finding repeats the findings from the literature.

However, this increased motivation to support an underdog was not reflected in star-rating reviews. The star ratings did not differ based on status manipulation ($M_{\text{under}}=3.71$ vs $M_{\text{top}}=3.57$, $F(1, 263)=1.242$, $p=.27$) but based on performance level ($M_{\text{good}}=3.98$ vs $M_{\text{bad}}=3.26$, $F(1, 263)=36.164$, $p < .001$). Given the exam-like design of the study and the young age of the student sample ($M_{\text{age}}=18.7$), the participants might have purposefully objectified their star review choice to reflect the quality. Also, the hypothetical nature of the star rating task possibly limited participants' involvement.

When we examined the role of performance, we found a significant interaction between performance and underdog status ($p=.02$) such that performance does not affect the extent to which consumers intended to help the underdog singer at any level of performance quality ($M_{\text{bad}}=5.11$ vs $M_{\text{good}}=5.27$, $F(1,130)=.639$, $p=.43$) while their extent of support for a top dog depended on whether the top dog's performance was good ($M_{\text{bad}}=4.37$ vs $M_{\text{good}}=5.13$, $F(1,131)=8.594$, $p < .01$). In other words, the level of support consumers intended to give to top dogs when they perform well is given to underdogs unconditionally; that is, independently from their performance quality.

Figure 4.2: Underdog effect on willingness to help



In addition, we randomized the order in which the singer information appeared and the satisfaction was measured. Because consumers set pre-consumption expectations and adjust their post-consumption quality judgments based on previously presented product or producer information (e.g., price, country of origin) (Wilcox et al., 2011). Showing the singer information before or after did not change satisfaction levels and did not interact with the independent variables. Thus, we conclude that the level of performance, their true judgment of the quality, determined their satisfaction; while knowing the producer's status (underdog or top dog) did not influence it. Holding the performance variable constant and given that customer satisfaction is a function of expectation and product performance (Engler et al., 2015), we can infer that the respondents did not adjust expectations after receiving status information.

4.4. Study 2: Performance as a Boundary Condition for The Underdog Effect on Donation Behavior

Study 1 tested the underdog effect on willingness to support and showed that even though people reported more willingness to support the underdog (vs. top dog). However, they did not give higher public ratings to them. Furthermore, their rating intentions paralleled the objective quality of performance. In Study 1, participants were asked to indicate what star rating they intended to give to the music record they listened to. Thus, absence of the underdog effect on

review decisions could potentially be attributed to student participants' low engagement in the decision-context.

Study 2 employs a larger and more diverse sample and a scenario in which we made the impact of participants' ratings as well as donation decisions more salient. The purpose of this study is to show that a singer's underdog status can influence consumers' supportive behavior in the form of donating money and giving a higher star rating. This study also tests the boundary condition of performance level that Study 1 signaled could be important in willingness to support. The experimental design had a 2-level design (underdog and top dog status) with random assignment.

4.4.1. Procedure

Prolific workers (n=320) participated in this online study in exchange for money. This time, in addition to introducing Soundcloud music-sharing platform we introduced its new donation function that came out after the COVID-19 outbreak with the motivation to support the creative community financially. Following, participants listened to the same 46-second-long music track that was allegedly selected from Soundcloud's database. Same as Study 1, they read the singer's bio that is either underdog or top dog profile. The participants were then asked to choose if and how much they would like to donate from their 0.10 GBP bonus payment to the singer. To increase participants' engagement with the donation decision, we informed them that the researchers would donate as much as collected by the study (such that if a participant gives up 0.10 GBP, the singer receives 0.20 GBP). The donation decision is followed by the other DV: star rate review. Measuring overall liking, satisfaction, motivation to support, and the perceived efficacy in making an individual donation and leaving an individual review, and the manipulation check on status followed.

4.4.2. Manipulation Checks

The participants perceived the singer to be more underdog ($p < 0.001$), more externally disadvantaged ($p < 0.001$), and showing less ability ($p = 0.002$) when she was introduced with the underdog bio. Perceptions of authenticity, passion, and effort were not significantly different across the singer status conditions. After ensuring scale reliability for the 3 items measuring satisfaction (Cronbach's $\alpha = .909$) we calculated the mean scores for this variable. As in study 1 again, participants' reported level of overall liking and satisfaction was not significantly different based on underdog status ($F(1,296) = .000, p = 1$ and $F(1,296) = .269$,

$p=.61$). Therefore, the status manipulation didn't impact their true evaluation of the performance, as planned.

4.4.3. Results

The data was composed of 298 valid responses after excluding those twenty-two who failed the attention check question. Contrary to the H2a, the results of this study did not show a significant effect of underdog status on star rating behavior. In other words, the status manipulation did not cause a significant difference in star rating. Instead, similar to Study 1 finding, this choice had a significant correlation with satisfaction levels ($r=.788$, $p<.001$). Also, there was no interaction effect of satisfaction and status on star ratings.

As hypothesized in H2b, the underdog profile received higher donations than the top dog profile, as confirmed by an independent samples t-test ($M_{\text{under}}=4.01$ vs $M_{\text{top}}=3.11$, $t(296)=1.908$ $p=.03$). In support of H4, satisfaction constitutes a boundary condition on the hypothesized underdog effect such that the underdog effect on donation was absent at low levels of satisfaction (-1 SD: $p=.67$; Mean: $p=.02$; $+1$ SD: $p<.01$). Therefore, judgment of performance quality moderates donation behavior ($\beta=.49$, $SE=.27$, $t=1.83$, $p=.07$).

4.5. Study 3: Sequential Decisions to Support the Underdog

Study 2 showed that people donate more to an underdog (vs. top dog), conditional on their performance level. Study 3 tests the interaction of underdog status and order effect in terms of which decision is made first: donating or providing a public rating. Because previous research showed that the order of rewarding actions matters. If rating precedes tipping, consumers tip less because they consider both rating and tipping "a reward" for the service employees (Chen et al., 2023). The purpose of this study is to show that the underdog effect on donation subsists despite the order effect. The experimental design has 2 conditions of singer status: top vs underdog.

4.5.1. Procedure

145 Bachelor students from Spain participated in this online study in exchange for course credits and bonus payment. Participants started the experiment by listening to an allegedly randomly selected music track from Soundcloud's database. All participants listened to the same audio. Then they read the singer's bio which is either underdog or top dog profile. Next, by randomizing the order between participants, we measured both donation and feedback

behavior. For donation action, we gave students the chance to earn 5€ on a lottery basis or donate a portion of it. Therefore, a donation could be a minimum of 0€ and a maximum of 5€. For the star rating decision, we told them the participants of the next study would see their ratings and choose songs to listen to accordingly to make the decision task more engaging.

Participants made the star rating review decision either before or after the donation decision. Then, we measured the control variable, anticipated efficacy of donating with 1 item ("How much do you think your individual donation influences this singer's success?"), and consumer motivation to help reduce inequality in the market by 3 items adapted from Acar et al. (2021). The measurements for overall liking, satisfaction, motivation to support, and the manipulation check on underdog status followed. An attention check question asked if the singer they listened to before works independently or with a record label company to check if they paid attention to underdog status manipulation material.

4.5.2. Manipulation Checks

The participants perceived the singer to be more underdog ($p=.02$), more externally disadvantaged ($p<0.001$), more passionate ($p=.01$), and showing more effort ($p=0.07$) when she was introduced with the underdog bio. However, across the status conditions, perceptions of authenticity and ability were not significantly different. There was no significant difference in overall liking and satisfaction across status conditions. Thus, we conclude that the level of performance and their true judgment of the quality were not affected by status manipulation.

4.5.3. Results

The data was composed of 124 valid responses after excluding twenty-one respondents who failed the attention check question on whether they were introduced to a singer with an underdog or top dog profile. Star ratings given were not statistically different between the two singer status conditions ($p=.86$) replicating the findings of the previous studies.

The results of this study also did not show a significant effect of underdog status on star rating behavior. Like in Study 1 and 2, the valence of star ratings was not significantly different between status groups. Instead, as in Study 2, the valence of ratings was very strongly correlated with satisfaction levels ($r=.788$, $p<.001$). There was no interaction effect of satisfaction and status on star ratings.

We only observe a directional effect of underdog status on donation amount ($M_{\text{under}}= 2.72$, $SD=1.99$; $M_{\text{top}}=2.53$, $SD=2.00$; $t(122)=.30$, $p>0.10$). We instead observed an interaction of underdog and order of supporting action. Confirming the findings of previous research that order matters, those who gave a star rating (vs. donation) first donated less on average ($M_{\text{rating-first}}=2.13$ vs $M_{\text{donation-first}}=2.99$, $t(122)=2.378$, $p=.01$).

We then performed planned contrasts to test H5. The order effect was significant in the top dog condition ($M_{\text{top-rating-first}}= 1.94$, $M_{\text{top-donation-first}}=2.97$, $F(1,57)=4.017$, $p=.04$) but was only directional in the underdog condition ($M_{\text{under-rating-first}}=2.31$, $M_{\text{under-donation-first}}=3.01$, $F(1,63)=1.989$, $p=.16$). In other words, while a preceding supportive action negatively influenced donation behavior for a top dog, it did not significantly influence the extent of donation behavior for an underdog.

4.6. General Discussion

Our research investigated underdog effects in an emerging context: supporting peer-providers' success by digital means of WoM and crowdfunding. In this novel context, we tested the underdog effect with 3 online experiments where participants faced consequential decision-making scenarios such that their choices could generate monetary support or more visibility for a real peer-provider producing music.

Study 1 tested the underdog effect on willingness to help a peer-provider's success and showed support for a positive underdog effect that manifests when the performance is satisfactory. Specifically, people wanted to support an underdog independent of their performance, whereas they wanted to support a top dog to the same degree only when they performed well. However, despite this higher willingness to support, people did not give more positive star ratings to the underdog peer-provider's product. Study 2 tested the underdog effect on fundraising and public rating behavior in more engaging scenarios. We observed the underdog effect only on fundraising, and it was moderated by performance such that at low levels of performance, the underdog effect on donation was absent, and the effect amplified from average to high levels of performance.

Study 3 showed that the presence of a preceding request for another supportive behavior (i.e., review) reduces how much people donate to a peer-provider. In other words, people donate less when asked to give a review beforehand. This is consistent with previous research that showed an order effect on consumers' tipping and reviewing behavior for service employees. The

current findings suggest that underdogs are not affected by this order effect, such that they can collect the same amount of donation regardless of the order donation or rating that was requested. Moreover, Study 3 also suggests that motivation to reduce inequality in the marketplace might explain the underdog effect on donation. This supports the hypothesized mediation model.

The hypothesized underdog effect on public ratings was absent in all our studies. Because we did not observe an effect on public ratings in the first two studies, we used a higher-impact review-making scenario in Study 3 to increase engagement and minimize the risk of a false negative result. Again, the findings conflicted with our hypothesis. Similarly, we used a more engaging design in Study 2 than in Study 3 for the donation decision, where researchers would double the participants' give away decisions, and we found a direct positive underdog effect on the average donated amount. Hence, people choose to support the underdog peer-providers' with resources but not their products through positive ratings, even when the former involves money and the latter does not. While the former is shown to be motivated by an intrinsic motivation to reduce market inequalities, the latter can be attributed to justice motives. Because we informed participants that allegedly, their star rating choice is going to impact the visibility of the peer-provider in the music-sharing platform (Study 1 and 2) and the future study participants' experience (Study 3), they might have reconsidered the valence of their public review to be just to other customers.

4.6.1. Theoretical Contributions

This research tested whether providing information about a peer-provider's competitive status when delivering their product can alter consumers' willingness to support this peer and their actual supporting behavior. We studied two types of supporting behavior: public feedback and private donation. These are everyday decisions in the context of digital consumer behavior, yet substantially determinant for a peer-provider's survival. We also explored the boundary conditions and underlying mechanism of the underdog effect manifested in this context.

From a theoretical basis, this study contributes to the growing literature on underdogs and the underdog effect in marketing. To our knowledge, this is the first study to report the underdog effects manifested in online peer-to-peer consumer interactions. Focusing on this new context is timely and relevant for two reasons. First, digital platforms increasingly digitalized and mediated consumer interaction with brands, products, and other consumers (Troise, 2020 & Kenney & Zysman, 2016). Second, the division between sellers and buyers is becoming less

definite due to platforms (e.g., Instagram, Soundcloud, Airbnb) allowing individuals to be sellers and buyers simultaneously. These trends expand the horizon of marketing and call for research on how individuals interact with each other under the influence of these new dynamics.

From another perspective, our research contributes to WoM literature, which has yet to fully explain the mechanism behind the review growth trends. Berger (2015) discusses how social dynamics can explain the change in the average product ratings as more ratings arrive. We study the role of underdog effects in creating WoM as star ratings. He and colleagues (2020) found that consumers show greater WoM intentions for underdog (vs. top dog) brands but they are more likely to generate WoM for top dog (vs. underdog) brands. In our experiments, participants were asked to give a star rating review without the option to opt-out, and we examined the valence of their feedback. We did not find an underdog or top dog effect on the valence of ratings as could be expected based on this previous research. We have seen that consumers are more willing to support an underdog's (vs. top dog's) success but this does not produce positively discriminated WoM.

This research also contributes to the body of research on the order effects. Order effects occur if the sequence of actions or information impacts outcomes, and this phenomenon has been studied in various consumer contexts. Chen and colleagues (2023) had previously shown that the order of rating and tipping matters. Our results complement their findings. We provided evidence for the existence of this phenomenon in a new context: when rating and donating are requested together. Acknowledging the body of research on how information given before or after consumption affects consumer judgment in evaluating the product (Plassmann et al., 2008; Lee et al., 2006; Wilcox, 2011), we randomized and controlled for the order of underdog information presentation and quality judgment measurements. In line with this research, we could expect that informing people about the underdog characteristics of a producer lowers post-purchase evaluations for the product. In our studies, we presented the underdog or top dog profile information after exposure to the product. Conflicting with these findings, we found no impact of underdog information on liking or satisfaction.

4.6.2. Practical Implications

Our research can spawn actionable insights for person-brands that use digital platforms to reach their audience. By intuition and also based on some previous research (Kim et al., 2008; Wilcox et al., 2011), peer-providers might tend to hide specific facts about themselves that might give

the image of an underdog, assuming this can hurt consumers' evaluation of their performance. However, we showed evidence here that knowing the underdog characteristics of a peer-provider did not influence consumers' quality judgments of this peer-provider's performance. Instead, peer-provider profiles with underdog characteristics can raise more funds due to consumers' intrinsic motivation to reduce inequalities in the marketplace. This also suggests that a peer-provider in the top dog position can benefit from integrating specific underdog characteristics in their self-introduction.

We also offer insights for digital platforms that showcase peer-providers with detailed profile info (e.g., Fiverr, Patreon, Instagram). Such platforms employ algorithms to determine which profiles to list first or highlight with a label (e.g., "Most Loved," "Suggested for you") (Song & Sela, 2023). Extant research points out caveats that reaction to such highlighted options can change based on the device in use, individual differences, or self-construal. People like personalized recommendations better when they are on a mobile instead of a computer (Song & Sela, 2023). In interdependent cultural contexts, people value a top-rated option significantly more than the best-seller option, whereas in independent cultural contexts, best-seller and top-rated options are expected to overlap and be evaluated comparably (Barnes & Shavitt, 2023). We have shown that a peer-provider is positively discriminated against by collecting more donations when people are informed of this peer-provider's underdog characteristics. Therefore, platforms should consider highlighting this information if they want to generate more patronage of this type.

Another design element for digital platforms to consider is the order in which they request users to take certain actions. Because technology allows requesting multiple types of follow-up feedback (e.g., rating the product, rating the seller, rating the platform), businesses might be prompted to collect as much information as possible. We highlight the caveat that asking for two types of actions (i.e.,) at once can render the peer-providers financially worse off. In our research, participants donated less on average when they were asked to donate after giving a rating rather than when they were asked to give a rating after making their donation choice. We also observed that this pattern disappears for underdogs. This highlights the possibility of collecting more feedback for this particular peer-provider subgroup.

4.6.3. Limitations & Future Research

Based on the findings of this research and considering what we underlined regarding the lack of knowledge in the face of the proliferation of peer-to-peer consumer actions, we serve to

portray the risks and benefits for consumers, producers, and mediator technologies. It is important and timely to study the underdog effects around personal brands or peer-providers.

The current study focused on a low-stake consumption event that is more likely to occur day-to-day. The extent to which underdog status information influences high-stakes decisions (e.g., choosing medical services or expensive purchases) is an interesting avenue for future research. Acar and colleagues (2021) extracted the insight that people associate crowdfunded products with lower quality, reducing their desirability in high-risk decision contexts. In line with such an unfavorable image of underdog options, consumers are more likely to choose top dogs for goods they will consume in public due to self-presentation concerns (Nagar, 2019). Consumption of digital goods like social media content or music typically incurs little cost to users and can be completely private. However, purchasing expensive NFTs from emerging artists or taking advice from an influencer on a travel destination can bear more costs and risks. While digital means serve an opportune environment for disadvantaged entities, consumers must be mindful of risks associated with unprofessionalism.

The crowdfunding scenarios used in the current experiments did not offer interaction between provider and user peers. That is, participants had limited visibility to a peer-provider's profile by listening to a part of their audio production and reading a brief introduction about them. In real life, peer-providers like singers or content creators make more engaging funding calls. For example, they give space to their fans to take part in their product development (e.g., by asking what they would like to hear about next, gamification, sweepstakes, milestone-based rewards, exclusive content, early access, or other perks). Future research can explore how the use of these interactive actions affects peers' response to fundraising based on the competitive status of the peer-provider.

Previous research has found that people with higher dispositional empathy show more positive attitudes towards a brand that highlights their underdog (vs. top dog) positioning in advertisements (Jun et al., 2015). Similarly, other personal characteristics or dispositional factors like top dog antipathy, underdog orientation, need for uniqueness, nostalgia proneness, empathic concern, and lower levels of materialism positively influence emotional feelings toward and support for underdog business entities (e.g., mom-and-pops vs. national chains) (McGinnis et al., 2017). Our studies have not accounted for the possible effects of these factors; they can be further explored.

The current research investigated the underdog effect by presenting underdog and top dog options in isolation instead of in a dual comparative position. Some examples of existing research compared two entities in a direct competition where an underdog and a top dog option simultaneously presented to an audience (Saito et al., 2019; Bradley et al., 2019). There are cases where underdog status is not clear-cut, the direct competition is fierce, and taste is more determinant in choice. For example, two movies launched in 2023, Barbie and Oppenheimer, were in close competition for box office leadership around the globe, but one rendered the other underdog in some countries. Similarly, Coca-Cola is generally seen as the dominant global brand in the cola market, but in some countries, it is in an "underdog" position against Pepsi. How people evaluate local vs global underdogs in such cases is also an open question for future research.

Finally, we studied peer-providers producing music. People use hedonic products (e.g., music, fashion clothing, and gourmet foods) to express their identity, status, uniqueness, social group, and kind (Gierl & Huettl, 2010). Because of this motivation, underdog brand stories raise higher brand identification with hedonic products than functional products (Li & Zhao, 2019). With more functional products such as online courses, tutorial videos, and business services, the underdog effect can be expected to attenuate fully to the extent that it can backfire. While the current research does not address this point, we leave this caveat for future investigations.

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4.8. Appendix

Intoduction to Soundcloud:



SOUNDCLOUD is an online audio distribution platform and music-sharing website. It gathers music tracks from various producers at every level of professionalism.

Underdog Singer Bio:

The music record that you listened to was made and published by a young and independent artist. Although working with a record label company would help her reach a larger audience easier, she chose not to work under a contract. Because she did not have financial means and interpersonal network, she had to try even harder than the others to compete in the market. Today, she is doing whatever it takes to overcome any obstacle in her way to produce high-quality work and to go up the competition ladder.

Top Dog Singer Bio:

The music record that you listened to was made and published by an experienced and professional artist. She works under contract with a record label company that allows her music to reach a large audience. Having had an established interpersonal network at the beginning of her career, she could quickly go up the competition ladder. Today, she continues delivering a work of high quality and focuses on sustaining her position in the music industry.

Satisfaction, Wirtz & Bateson 1999

7 point Bipolar scale

1. This experience was... terrible/delightful.
2. I am not at all satisfied / completely satisfied
3. No chance / Certainly ... I would listen to it again

Helping the Company, Hennig-Thurau et al. 2004

Strongly disagree - Strongly agree, 7-point Likert scale

1. I want to help the singer be successful.
2. In my opinion, this singer should be supported.

Manipulation Check: Underdog status

7 point Bipolar scale

Authenticity: Newman & Dhar, 2014; External advantage and passion: adapted from Paharia et al., 2011; Ability and effort: Vandello et al., 2007

1. Inauthentic / authentic
2. externally advantaged / externally disadvantaged
3. not passionate / passionate
4. low ability / high ability
5. little effort / great effort

Control Questions: Perceived efficacy of support actions adopted from Consumer activism response efficacy question by Roser-Renouf et al. 2016

Not at all - Very much, 7-point Likert scale

- How much do you think your individual review influences this singer's success negatively or positively?
- How much do you think your individual donation influences this singer's success?

Motivation to Reduce Inequality adopted by Acar et al. (2021)

Strongly disagree - Strongly agree, 7-point Likert scale

1. Supporting this singer financially would help reduce inequality in the marketplace.
2. By supporting this singer financially, I would signal that I value equality in the market.
3. By supporting this singer financially, I would support the idea that every person should have equal opportunities to rise up and prosper.

Attention Check Question:

Which one of those below was the recording that you listened to before?

Multiple choice questions with the two recordings used for the two performance conditions:

good / bad

5. General Discussion and Conclusion

5.1. Theoretical Contributions & Managerial Implications

This dissertation takes a consumer behavior approach to study diverse applications of peer-to-peer interactions mediated by platforms and digital technologies. It contributes to growing interest in digital consumer behavior and the platform economy with a specific focus on consumer decision-making that accounts for ever-evolving platform-based market dynamics and individuals' psychological processes. Below I elaborate on how each chapter contributes enhancing our knowledge in several research lines as well as providing managerial insights.

We will soon witness that “digital” as a context may not be of interest to the marketing field anymore since soon there will be digital aspects in almost all marketing activities (Lamberton & Stephen, 2016). In other words, digital will gradually become a natural part of marketing. However, a substantial amount of research on the topic has already been generated. There have been efforts to review past research on digital and social media marketing (Stephen, 2016), eWoM (Babić Rosario et al., 2019), consumer power in the digital age (Labrecque et al., 2013), online relationship marketing (Steinhoff et al., 2018) and more. In chapter 2, I aimed to join this effort by reviewing what is there in research and practice pertaining to consumer-to-consumer interactions- More specifically, I aimed to highlight key insights, define differences from established approaches, explore tensions, and identify knowledge gaps around this phenomenon.

Chapter 2 conceptualized a phenomenon that has become increasingly prevalent in marketing research: digitally mediated P-to-P interactions. I investigate the scope, state-of-the-art practices, and extant marketing research regarding this phenomenon. The analysis of the phenomenon highlights how increased digital connectivity among individuals has led to significant changes in business, marketing, and consumption practices. A good understanding of these fundamental shifts should enable marketers to develop sound strategies for enabling, influencing, and being influenced by peer-to-peer interactions. As to push the frontiers of the field, this present conceptualization and classification of digitally mediated peer-to-peer interactions provide a framework for future research, allowing it to be situated within a defined ecosystem. Considering the ever-changing landscape of digital consumer behavior and the constant evolution of digital technologies, I emphasize the need for continuous research. The chapter concludes by offering a list of future research questions that could enrich both marketing theory and practice.

Chapter 3 explored a research gap on the provider side of peer-to-peer goods-sharing activities. While existing research into sharing economy has extensively explored users' decision-making processes in the sharing economy, it has largely overlooked the provider's perspective, even though it is equally important and unique (Hartl et al., 2020). This research aimed to close this gap by investigating how concepts of contagion and the extended self in objects interplay in the providers' minds and restrain individuals from becoming peer-providers in the sharing economy. We investigated the role of contagion: a cognitive bias law that was initially established by anthropologists and later applied in consumer studies. We proposed that metaphysical (besides physical) contagion beliefs, particularly when self-identification with possessions is high, demotivate people from renting out their possessions in P2P platforms. By investigating the role of this magical belief, we also contribute to the study of novel constructs that have an influence on consumers in access-based consumption models (Eckhardt et al., 2019). Online and laboratory experiments showed evidence for the effect of metaphysical contamination concerns in isolation from physical contamination concerns. It also presented an effective way to mitigate these concerns. With multi-layered findings, this chapter contributes to several bodies of literature: sharing economy, magical beliefs, possession-self link. The findings also point to a caveat for both established sharing platforms and traditional companies that integrate access-based services into their business executions. Accounting for and attenuating the non-physical contagion concerns can increase their sales volume while assisting people to generate revenues through their belongings and making those goods be more efficiently utilized.

Chapter 4 investigated whether the underdog effect manifests in online consumer interactions with peer-providers. The underdog effect has been previously studied in marketing research with respect to brands and service providers. Previous research tested changes in evaluations of brands with underdog characteristics (Paharia et al., 2011), product-type-based consumer-brand identification with underdog brands (Li & Zhao, 2018), underdog effect for incompetent service employees (Kirmani et al., 2017), and WoM generation intentions for underdogs (He et al., 2020). Our investigation chose an online consumer behavior context due to the increasing prevalence of peer-provided goods and services as well as digitally mediated consumption. We examined the impact of providing information about a peer-provider's underdog (vs. top dog) status on consumers' willingness to support this peer together with their actual supporting behavior. We presented evidence that knowing that a peer-provider had underdog characteristics did not alter consumers' quality judgments of the peer-provider's performance

or the valence of their public reviews for this peer-provider's product. However, providing this information increased consumers' willingness to help and, as a result, they donated more to an underdog (vs. top dog) peer-provider because supporting an underdog helps reduce market inequalities. This implies that peer-providers should not hide their underdog characteristics, fearing this may hurt their success potential. Instead, market players could gain advantages by incorporating some underdog traits into their self-presentation.

5.2. Limitations & Future Research

Chapter 2 did a conceptual review of peer-to-peer interactions facilitated by digital technologies. The limitations of this research stem from the complexity and multi-faceted nature of digital consumer behavior, especially due to the rapidly evolving landscape of digital technologies. I narrowed our scope to decision-making processes at digital touchpoints and platforms' mediation of digital peer-to-peer interactions. I acknowledge and emphasize that there is much more to be uncovered in digital consumer behavior that involves interacting with other customers. This work reconciles our knowledge, attracts scholarly attention, and guides future inquiries. For future research, the study suggests exploring AI, addressing trust concerns, implementing safety measures, examining niche communities, and analyzing communication styles within digitally mediated peer-to-peer interactions. The need for ongoing study is underlined as essential due to the continuous changes in digital consumer behavior.

Chapter 3 explored a novel phenomenon, the demotivating effect of essence-related concerns, when providing access to one's belongings through sharing platforms. Due to the novelty of the concept, we had to first inform the participants about the existence of such sharing platforms. A low level of familiarity, especially to being on the supplier side of such a platform, may have lowered the engagement with the whole experiment. Additionally, data collection coincided with the COVID-19 outbreak, which likely heightened awareness of contagion risk and may have led to a ceiling effect, resulting in small effect sizes. To manipulate the degree to which touch triggers contagion concerns, we pre-tested various methods, including scrambled sentence tasks, introducing fictitious facts, and vignette-based manipulation techniques similar to those used by Newman et al. (2011). However, only the manipulation involving sterilizing products successfully altered participants' agreement with contagion-related concepts.

In that experiment, we were able to mitigate the expectation of contagion through a sterilization manipulation. Future research should explore other tactics to mitigate metaphysical and

physical contamination concerns. For example, divestment rituals like taking a photo of a belonging before donating it (Winterich et al., 2017) could be tested in these sharing contexts. Our research studied essence-related concerns in the context of shared physical goods with strangers, where people are more worried about contagion with closer or prolonged physical contact. Future studies can explore how these contagion concerns apply to shared digital goods (e.g., Netflix family account, Canva business account, Spotify duo plan), to examine if contamination concerns are in play when other users' behavior impacts the owner's experience or if the familiarity between users affects the perception of contagion.

Chapter 4 studies the underdog effect manifested in online consumer actions and its associated risks and benefits to peer-providers. Our studies tested the effect on low-stakes, everyday decisions, with very little amount of money involved. Giving away more money to an underdog might not be as common with high-stakes decisions, such as selecting medical services or making expensive purchases. In our studies, the product provided by a peer was a music record. Previous studies indicate that consumers often associate crowdfunded products with lower quality, making them less desirable in high-risk contexts (Acar et al. 2021). The effect might also change with other types of products, such as teaching or professional services.

Chapter 4 suggests multiple avenues for future research. One is to examine whether interactive engagement strategies, such as gamification and milestone-based rewards, have a different effect when applied by underdogs vs top dogs due to specific characteristics (e.g., low budget) associated with underdogs. Additionally, dispositional factors like empathy and underdog orientation, which were not addressed in this research, have been shown to influence attitudes toward underdog brands and warrant further investigation. Finally, the study calls for examining the underdog effect in peer-to-peer contexts where options are presented in direct competition, noting that perceptions of underdog brand status may vary by person or location, as seen in the competition between brands such as Coca-Cola and Pepsi.

5.3. Concluding Remarks

In conclusion, this dissertation makes significant contributions to our understanding of C2C interactions by navigating the landscape of these interactions and offering new insights into their increasing role in marketing practice and day-to-day life. By taking a behavioral approach in conducting empirical studies through controlled experiments, my dissertation extends current knowledge and provides valuable perspectives on the mechanisms underlying C2C

interactions. I trust that new avenues for research will emerge from here, while I also hope to continue creating knowledge on the understudied aspects discussed here.

Looking ahead, my future research could build on the discussions and findings here by further investigating the dynamics of C2C interactions across different consumer contexts, examining how emerging and evolving digital platforms shape these interactions, and exploring the role of new technologies such as AI and virtual reality. These future investigations will not only enhance our theoretical understanding but also suggest actionable strategies for businesses, platforms, and individual sellers aiming to harness the potential of C2C interactions in the digital age.

5.4. References

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