Human-Machine Relationality and the Illusion of Being Cared For:

An In-Depth Exploration of Relationships with Communicative Machines

by

Marco Dehnert

A Dissertation Presented in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Approved March 2024 by the
Graduate Supervisory Committee:

Liesel L. Sharabi, Co-Chair
Sarah J. Tracy, Co-Chair
Autumn P. Edwards

ARIZONA STATE UNIVERSITY

May 2024

ABSTRACT

The purpose of this dissertation is to explore how humans experience relationships with machines such as love and sex dolls and robots. This study places a particular emphasis on in-depth, rich, and holistic understanding of people's lived experiences in the context of human-machine relationships and draws on human-machine communication scholarship by examining media evocation perspectives, the role of illusions, and the topic of care. Therefore, this study uses a funneled serial interview design employing three waves of semi-structured interviews ($N = 47$) with 29 love and sex doll owners and users. Utilizing a phronetic iterative qualitative data analysis approach coupled with metaphor analysis, the findings of this study reveal how participants experience dolls as evocative objects and quasi-others. Moreover, the findings illustrate how participants actively construct and (re)negotiate authenticity in their human-machine relationships, driven by a cyclical process between doll characteristics (agency and presence) and doll owner characteristics (imagination and identity extension) that results in an illusion of being cared for. This study extends previous scholarship by: 1) showcasing a new type of mute machines, namely humanoid mute relational machines; 2) adding empirical evidence to the largely theoretical work on dolls and doll owners; 3) adding empirical evidence to and extending media evocation perspectives by illustrating the suitability of participant metaphors for understanding machines' evocative nature; and 4) proposing an integrative model of care and illusions that lays the foundation for a new relational interaction illusion model to be examined in future research. This study also discusses practical implications for doll owners, the public, and doll developers.

I dedicate this dissertation to Daniel C. Brouwer.

You taught me what it means to be full of care.

when great trees fall

—Maya Angelou

ACKNOWLEDGMENTS

This dissertation and I would not be where I am without the community of support I have experienced throughout my PhD journey. I have written and rewritten these words many times trying to capture my gratitude for the mentors, friends, family, and colleagues who have supported me through this journey, but these words cannot capture the entirety of my gratitude for them.

First, I am grateful to my amazing team of co-advisors and committee, who inspire me to one day be the scholar and person they model. Dr. Liesel Sharabi, thank you for the incredible support throughout the years as I was finding my scholarly identity and working toward completing this program. Your constructive feedback has helped me sharpen my thinking, and I am grateful for the mentoring and research experiences I have gained in your research lab. I am incredibly grateful for having had the opportunity to work with you and learn from your thoughtful approach to research. I value the consistent checking in and your focus not only on how things are going, but on how I am doing.

Dr. Sarah Tracy, you have been a pillar of support and mentorship for me even before I started the PhD program at ASU. Your care has consistently motivated me to go from good to great and to develop my strengths in terms of research, teaching, and service. I am grateful for the many opportunities we have had to work together over the years. Thank you for believing in me and being one of the most influential and consistent people throughout my PhD journey. Your impact on me during my undergraduate days at ASU is one of the main reasons why I ended up applying to the PhD program.

Dr. Autumn Edwards, I am incredibly grateful for your mentorship, constructive comments, and expertise as I have worked to become situated within the field of HMC.

You model what it means to be a compassionate mentor and how to support early career scholars by providing thought-provoking insights, always communicated with care. Without your care, curiosity, and expertise, this dissertation would not be what it is today.

I am grateful for the funding I have received over the years at ASU and for this project that has helped me develop as a scholar and complete this dissertation. Thank you very much to the Jeanne Lind Herberger Fellowship, the Transformation Project, the I-4C Collective, and the Hugh Downs School of Human Communication.

Making it through a PhD program is quite the challenge, and this journey would not have been possible without the many friends and colleagues who have supported me along the way. Dr. Loretta LeMaster, thank you for your support, mentorship, and guidance. You have taught me what it means to do radical work. I am especially grateful for the support I have received from Dr. Joris van Ouytsel, Dr. Paul Mongeau, and Dr. Belle Edson throughout the years. Thank you to Heather Freireich for *always* going above and beyond and helping me navigate the ins and outs of all kinds of paperwork.

I am grateful for my friends and family who have supported me throughout this program. Hunter, Sebastian, Valérie, Nina, Laura—vielen Dank für eure Unterstützung und die vielen tollen Erinnerungen über die Jahre. Herzlichen Dank, Mama und Papa, dass ihr mich über all die Jahre unterstützt und euch für mich eingesetzt habt. Danke, dass ihr an mich glaubt. Manuel, ich kann mir keinen besseren großen kleinen Bruder vorstellen. Ich habe euch alle sehr lieb. Becky, I wouldn't be where I am if it wasn't for your support, love, and care. Thank you for always being in my corner. 사랑해. I can't wait for the next chapter!

iv

TABLE OF CONTENTS

v

vi

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

"Human-machine interactivity and machine intelligence are *full* of relational feelings, ranging from pleasure to discomfort." (Rhee, 2023, p. 165n17)

"I would say [the doll] is a simulation of a companion. She is similar to how virtual reality is to most people, whereas it's a way to experience something you normally can't. And you know it's not real, but it fills the void." (Gwen, mid-twenties, two dolls)

"Technology proposes itself as the architect of our intimacies." (Turkle, 2011, p. 1)

Relationships are essential to the human experience and the need to belong is a fundamental human motivation (Baumeister & Leary, 1995). Typically, relationships have been experienced and studied in the primary context of forming relationships with other people. However, as technology continues to advance and as people spend more and more time with it, people are not only using technology to relate with other people, but to form relationships with technology instead. Scholars argue that the profound changes in technological development are intricately connected with fundamental shifts in society, impacting not only how we live our lives but also how and with whom we form relationships. Having entered a new era of relationships with technology (Kislev, 2022), we are faced with an urgent need to understand the emotional, psychological,

communicative, cultural, and social consequences of such intricate human-machine entanglements.

The main purpose of this dissertation is to explore how humans experience relationships with machines such as love and sex dolls and robots, with a particular focus on in-depth, rich, and holistic understanding of people's lived experiences through qualitative methods. The emphasis is not so much placed on relational development and formation processes, but rather on how humans experience those relationships *as* relations, and how they construct them as authentic. This dissertation argues for considering not only how humans relate *through* technology, but also *with* technology as a relational actor. Given humans' fundamental need to belong and relate, what might an in-depth study of human-machine relationality yield for understanding not only how humans experience relationships with technology, but how those human-technology relational experiences impact the human in turn?

Rather than a recent occurrence, loneliness, social isolation, and increased experiences of disconnection have been reported across the population. Loneliness and its impact on well-being and mental health have been described as a public health crisis (Holt-Lunstad, 2017; World Health Organization, n.d.) as well as a loneliness epidemic (U.S. Department of Health and Human Services, 2023), suggesting the sustained impact social isolation has on individuals. Countless studies suggest that the coronavirus pandemic globally exacerbated feelings of social disconnection and loneliness (e.g., Holaday et al., 2021; Tull et al., 2020), and although some evidence suggests that these feelings of social isolation have since decreased (Ray & Shebib, 2022), loneliness rates remain exceptionally high (U.S. Department of Health and Human Services, 2023). A

recent report found that 58% of U.S. adults are considered lonely (Cigna, 2022), which is fairly consistent with a similar report conducted pre-pandemic, demonstrating that 61% of U.S. adults felt lonely in 2019 (Cigna, 2020). Moreover, a recent meta-analysis showed that a substantial proportion of the population in 113 countries experience problematic levels of loneliness (Surkalim et al., 2022). The effects of social isolation are striking, as it has been associated with increased risk of premature mortality from all causes, increased risk of developing dementia, and increased risk of heart diseases and strokes, among others (National Academies of Science, Engineering, and Medicine, 2020). While a variety of demographic, structural, cognitive, and behavioral characteristics are related to decreased and increased feelings of loneliness, having relationships and social connections with others have been most strongly associated with reducing loneliness (Bruce et al., 2019; U.S. Department of Health and Human Services, 2023).

Unlike the observed value of face-to-face communication for mitigating loneliness and social disconnection (e.g., Hall et al., 2023), however, the role of technology in relation to mental health and loneliness continues to be debated. While some view technology as a primary driver that furthers social isolation in a world where humans end up being "alone together" (Turkle, 2011), others point out how technology can facilitate relationships not only across time and space, but also with entities other than humans (Levy, 2007a). Increasingly, technologies such as conversational chatbots, communicative artificial intelligence (AI) entities, and social robots enter the realm of human relationships, no longer merely as a facilitator of relationships between people but as a relational partner themselves (de Graaf & Peter, 2023). Academic literature is filled

with ethical discussions and policy recommendations that address the impact of such relational machines on mental health and wellbeing, including loneliness (e.g., Jecker et al., 2024). Given the continued evidence for relationship formation through technology and its widespread integration into our lives (Kislev, 2022), and given that relationships are not only central to mitigating loneliness and social isolation (Bruce et al., 2019) but also fundamental to the human experience in general (Baumeister & Leary, 1995; Hall, 2020), the question remains: What happens if our relational partner is not human, but a machine? As discourse related to machines reverberates across nearly all dimensions of life including the organizational, legal, ethical, personal, societal, and other domains, empirical research is warranted in understanding the role of machines in our relational lives. In particular, a focus on the lived experiences of those already living in those types of relationships will likely yield important insights that may resonate to other technologies and similar contexts.

A primary case of such machines entering the relational domain of human existence are love and sex dolls and robots. Typically understood as "human-like, full-body, anatomically correct anthropomorphic dolls of different materials (e.g., rubber, plush, silicone, and thermoplastic elastomer [TPE]) and price ranges that are designed for sexual use" (Döring et al., 2020, p. 3), dolls take on many functions including serving as sexual, romantic, and relational partners (Döring et al., 2020; González-González et al., 2021; Hanson & Locatelli, 2022). Drawing on perspectives of human-machine communication, human-technology relations, and empirical research on sex and love dolls, this study weaves together interdisciplinary research and focuses on questions of communication between humans and dolls in the experience of relationality. Focusing on

the participation in a jointly created social reality between humans and machines (Edwards et al., 2022), this study offers insights into people's lived experiences of sharing their lives with a doll. In doing so, it responds to calls for more empirical and, especially, qualitative research into the experiences of doll owners (Harper & Lievesley, 2020). Key focal areas include the subject-object status of dolls as quasi-others, the relevance of authenticity, and the experience of care in human-doll relationships.

This study signifies an important contribution to contemporary debates on the role of technology in mitigating loneliness and facilitating relationships. The empirical findings and their theoretical and practical contributions aim to document doll owners' lived experiences, provide empirical insight into human-machine relationality, offer guidance to other empirical researchers studying the impact of technology on human connection, and expand communication and interdisciplinary theories on human-machine communication, authenticity, and care. A key contribution is the proposal of an integrative framework of interpersonal care in human-doll relationships, driven by a relational interaction illusion that extends previous work on sexual interaction illusions (Szczuka et al., 2019). In particular, the findings of this dissertation document some participants' experience of an illusion of being cared for by their dolls. As both an in vivo term and a theoretically informed construct, the illusion of being cared for summarizes the experience of not only providing care to a doll, but also actively creating the sensation of receiving care from the doll as well in a reciprocal fashion. The term "illusion" implies the active creation of an imagined sensation that requires a willing suspension of disbelief where participants know that they do not "actually" receive care from their doll.

Utilizing a funneled serial interview design with three waves of data collection, this study relies on empirical data from 47 semi-structured interviews with 29 participants, drawing on a phronetic iterative qualitative data analysis (PIQDA) approach (Tracy, 2020, 2025; Tracy et al., 2024). By understanding the actual lived experiences of doll owners through empirical research—in contrast to exclusively theoretical work or speculative musings (cf. Döring et al., 2020)—this study allows for a more grounded perspective on how humans experience relationships with communicative machines like sex and love dolls.

The manuscript unfolds as follows. Chapter Two offers an overview of the existing literature on human-machine relationships. I provide a rationale for why this study is situated within the field of human-machine communication and offer a working definition of "relationship" that guides this study. I then discuss relevant literature that lays the theoretical foundation for this study, culminating in the three research questions that drive this dissertation. Chapter Three summarizes the methods including 1) the research context and researcher role, 2) access, 3) data collection, 4) participant demographics, and 5) data analysis approaches. Chapters Four through Six deliver key findings focused on the topics of subject-object status, authenticity, and care. Finally, Chapter Seven summarizes the theoretical and practical contributions this study makes based on its findings. After discussing this study's limitations, delimitations, and directions for future research, I close the study with a reminder that how we integrate technology into our lives may be more about us as humans rather than the technological artifacts themselves.

CHAPTER 2

LITERATURE REVIEW

Human-machine relationships have been studied in a variety of contexts, such as friendships (e.g., Skjuve et al., 2022), emotional support (Meng & Dai, 2021), and companionship with machines (e.g., Langcaster-James & Bentley, 2018). The focus of this dissertation is to explore how humans experience relationships with embodied machines such as love and sex robots and dolls, to what I refer to as "dolls" throughout this chapter. Although there is considerable debate on both the terminology and on what types of technologies fall within the purview of dolls (Richards, 2023), for the purposes of this study, I understand dolls as "human-like, full-body, anatomically correct anthropomorphic dolls of different materials (e.g., rubber, plush, silicone, and thermoplastic elastomer [TPE]) and price ranges that are designed for sexual use" (Döring et al., 2020, p. 3). The emphasis in this study is not so much placed on relational development and formation processes, but rather on how humans experience those relationships *as* relations, and how they construct them as authentic. This dissertation argues for considering not only how humans relate *through* technology, but also *with* technology as a relational actor. Given humans' fundamental need to belong (Baumeister & Leary, 1995), what might an in-depth study of human-machine relationality yield for understanding how humans experience relationships with technology?

In this review of relevant literature, I first provide a brief rationale for why I situate this study in the context of the larger field of human-machine communication (HMC), and how seemingly silent dolls fall within the purview of a field that studies communicative machines. I then offer a working definition of "relationship" that allows

me to approach human-doll interactions in the context of this study as relationships. The heart of this literature review provides the necessary background for the three main research questions that drive this study. The first research question is situated in the context of subject-object relations and HMC. The second research question focuses on the notion of authenticity. Finally, the third research question explores the experience of care, primarily driven by posthuman understandings of care in human-nonhuman relationships. Collectively, these research questions paint a nuanced picture of human-machine relationality, showcasing various facets of how humans experience relationships with machines.

A Case for a Human-Machine Communication Perspective

The area of human-machine communication (HMC) is particularly useful for approaching the topic of dolls designed for intimate, sexual, and romantic interactions. HMC is a distinct area within communication studies that functions as an interdisciplinary umbrella approach to other fields focused on the study of how humans interact with technologies, such as human-computer interaction, human-robot interaction, and human-agent interaction (Guzman, 2018). HMC combines various strands of theorizing, paradigms, and methodological approaches (Liu et al., 2022; Makady & Liu, 2022, Richards et al., 2022) and defies homogeneous thinking about the role of machines and our interactions with them in day-to-day life (Dehnert, 2023b). The overall focus of HMC lies on studying the meaning-making processes between human and machine communicators, with research considering the role of artificial intelligence (AI), social robots, and other technologies as communicative technologies. Drawing on interdisciplinary histories in computer science, science and technology studies, sociology

8

of communication, and communication studies, among many more (Fortunati & Edwards, 2020; Guzman, 2018), HMC has a long history of exploring human-machine relationality (e.g., Suchman, 1987; Turkle, 1984; Verbeek, 2005).

As a field, HMC shifts our understanding of machines from medium or channel to that of communicative subject (Guzman, 2018). In particular, HMC refers to "the collaborative process in which humans and machines use messages to create and participate in social reality" (Edwards et al., 2022, p. 518). This perspective allows for a culturally and socially grounded approach that situates communicative machines as active creators and participants in social reality. In this dissertation, I consider relationships between humans and machines as one aspect of that jointly created and experienced social reality. Therefore, HMC is well-suited to serve as a theoretical backdrop for examining relational meaning-making between humans and machines, as is the case for humans and dolls interacting with each other.

Typically, the focus within HMC is on communicative technologies that can engage in direct verbal or nonverbal communication, such as large language models, AI voice assistants, or chatbots. At the time of writing this dissertation, the vast majority of sex and love dolls are *not* equipped with such direct communicative technologies (Richards, 2023). As such, the figure of the fully interactive, autonomous, and verbally expressive sex robot remains a fiction curated by marketing campaigns and science-fiction, although featuring strongly in visions for where this technology could head (Masterson, 2022). Instead, most human-size or near human-size dolls consist of an underlying skeleton made of sturdy material (e.g., metal) covered by a softer material such as silicone or thermoplastic elastomer (TPE). Dolls typically have movable joints

9

that allow them to be positioned in various ways and can contain various kinds of additional features such as articulated fingers (versus wire fingers), movable jaws (that allow the doll's mouth to be opened), or functions that more closely resemble robotic visions (e.g., breathing or hip-thrusting functions). Additionally, a small fraction of models are equipped with speakers, robotic functions, and AI-integrated personalities that simulate head movement, eye movement, and voice output controlled by the user via an app. Thus, the label of "doll" is more appropriate to refer to currently existing technologies, rather than "robot" or similar labels.

At the same time, however, the term "doll" is situated within a long and complex history of fetishizing human girls and women as dolls (Ferguson, 2010; Puig, 2017). As Ferguson (2010) writes, "the female sex doll represents woman in her most objectified form. The female sex doll is man's ultimate sexually idealized woman. […] A woman rendered harmless, it is immobile, compliant, and perhaps most importantly, silent" (p. 5). From this perspective, the connotations of the term "doll" bring with it a certain understanding of an objectified and fetishized goal to create the "perfect woman" from the perspective of cisheteropatriarchy (Puig, 2017). In addition, this fetishistic undertone of the term doll not only brings with it gendered dynamics but also racial ones, where marketing materials for sex and love dolls are oversaturated with a fetishized Asian femininity of dolls, mirroring similar findings within pornography (Hanson & Locatelli, 2023). Therefore, while perhaps most appropriately describing the current state of humanoid sex technology in the form of dolls, the term "doll" can only be fully understood from an integrative perspective recognizing the gendered *and* racialized dynamics that come along with the desire of women's dollification. Likely, it is precisely

because of these gendered and racialized dynamics that the term "doll" is the most appropriate when describing humanoid sex tech.

Why, then, does this dissertation approach the topic of dolls from an HMC perspective? First, dolls can be understood as machines because they are constructed technologies that rely on mechanical movement of joints and other flexible components. Furthermore, the *machine* in human-machine communication was deliberately chosen to cast a broad net around different types of technologies rather than confining the study of HMC to, say, communicative AI alone. The notion of *machine* situates whatever interactions people have with technologies in a larger historical and cultural context, making a clear case to contextualize how we come to understand our experiences with technology (Guzman, 2018). At this early juncture in the history of the formation of HMC as a field, scholars have called for a more expansive net casting various types and kinds of technologies as machines, rather than those that most closely resemble human-human communication (Guzman et al., 2023). And, more important than the debate as to what technologies exactly fall within the bounds of HMC is "how people respond to and behave toward certain attributes in ways deemed 'social'" when it comes to machines (Guzman et al., 2023, p. xli). This focus on the relational and communicative aspects of human-technology interaction is precisely what sets HMC apart from other fields focused on technology, and allows dolls in this dissertation to fall within the purview of HMC. Nonetheless, they clearly occupy the role of a boundary case that push what HMC scholars mean when they talk about "communicative machines." Said differently, because dolls elicit social responses and contain machinic qualities, they fall within the realms of HMC in the context of this study.

Additionally, dolls qualify as communicative machines in that they fall within the bounds of "mute machines" (Guzman, 2016). HMC has been extended to machines that do not communicate symbolically (i.e., via verbal and nonverbal communication) because those machines are communicative in the sense that both humans and machines possess agency and rely on each other. Moreover, these "mute machines" contribute to meaning-making processes as they are interwoven with human agency, thereby creating and participating in a joint social reality, to echo Edwards et al.'s (2022) understanding of HMC. In fact, as the findings demonstrate in a later chapter, this muteness is a key component of how participants view their dolls as relational partners. Although formulated initially in the context of industrial robots (Guzman, 2016), the concept of mute machines has been extended and applied to journalistic algorithms (Lewis et al., 2019) and service robots such as follow cargo robots (Edwards et al., 2023).

Beyond this primarily industrial context, other mute machines that facilitate relational qualities take on zoomorphic characteristics (i.e., they are animal-like), for example the robot seal PARO, which was designed to support older adults and those with dementia. Extensive empirical work has demonstrated how it is precisely the *absence* of features such as speech that contributes to PARO's success as a therapeutic robot (Šabanović et al., 2013). Zoomorphic robots like PARO (or the robotic cat Necoro) have a certain "interpretive flexibility" that affords the possibility for those technologies to take on different meanings based on the context and those who are interacting with them (Šabanović et al., 2013). Here, robotic sociality (Šabanović & Chang, 2016) is driven by the machine's refusal to fit neatly into predetermined categories of relations, thereby allowing different forms of relations and types of interactions to emerge, depending on

12

the situational, social, and cultural context in which the interactions take place (Chang & Šabanović, 2015). As such, the absence of speech and sound in mute machines—be it industrial or zoomorphic—leaves space for multiple interpretations by the user that may increase not only the success of the interaction but also the pleasure users draw from that interaction.

Given dolls' machinic qualities and their muteness (in the majority of available technologies at least), this dissertation builds on previous HMC work that positions mute machines as communicative in that they 1) contribute to and participate in a social reality shared with humans, 2) are primarily humanoid rather than industrial or zoomorphic, and 3) allow humans to derive communicative, sexual, and relational meaning from interacting with them. In particular, this dissertation expands the concept of mute machines from more functional use-cases of machines toward relational use-cases with humanoid rather than zoomorphic machines, affording the possibility of intimate, romantic, and sexual interactions.

Proposing a Working Definition of Human-Machine Relationships

While the need to belong has been identified as a fundamental human motivation (Baumeister & Leary, 1995; Hall, 2020), definitions of relationships abound. This is not least because human relationships are difficult to categorize as they often do not occur in "pure" types in situ. While I cannot provide an in-depth review of existing relationship definitions nor is this study focused on a purely interpersonal approach to human-machine relationships, one approach to systematizing the study of relationships has been to develop relationship typologies (Koerner, 2018). In addition to such overarching typological perspectives, scholars have also offered more direct definitions of

relationships. Some scholars offer a definition where "Two people are in a relationship with one another if they impact each other, if they are interdependent in the sense that a change in one person causes a change in the other and vice versa" (Bersheid & Peplau, 1983, p. 12, as cited in Perlman & Vangelisti, 2018, p. 1). Additionally, Hinde (1979) notes that "a relationship involves a series of interactions between two individuals known to each other" (as cited in Perlman & Vangelisti, 2018, p. 1). What unites these two definitions is a sense of interdependence between the two relational partners as well as an ongoing series of interactions. In other words, relationships go beyond fleeting or one-time interactions (which we might call "encounters" instead), as can be observed in the context of long-term relationships between humans and machines (Leite et al., 2013).

In the context of human-machine relationships, interdependence can be understood as the joint creation and participation of a shared social reality through mutual meaning-making (Edwards et al., 2022). This resonates with recent scholarship in the context of interpersonal interactions between humans and machines where interpersonal communication refers less to the verbal and nonverbal exchange of messages and more so to "joint action" between these entities (Rosenthal-von der Pütten & Koban, 2023, p. 294). Therefore, we might take Zhao's (2006) claim that "to be social is to be communicative" (p. 406) and extend it as this: to be *relational* is to be communicative (Condit, 2006).

In short, then, relationships are marked by a set of characteristics: they 1) are fundamental to the human experience, 2) involve at least two constituents or actors, and 3) consist of an ongoing series of interactions between those actors. Furthermore, 4) those interactions are inherently communicative. Finally, 5) actors in a relationship understood

as a series of ongoing, communicative interactions are interdependent, i.e., they mutually shape each other's worlds or social reality. Based on this framework of relationships and coupled with Edwards et al.'s (2022) understanding of HMC as focused on joint social reality, then, I provide the following working definition of a human-machine relationship for the purposes of this study:

> *A human and a machine are in a human-machine relationship (i.e., they are interdependent) if they engage in an ongoing series of communicative interactions and if the human perceives the machine to be co-creating and participating in a joint social reality.*

This definition is important to consider because of its heuristic value. First, this definition allows for a comprehensive foundation of actually existing relationships with machines. Second, it remains open to varying experiences in degree and/or kind of those relationships by not prescribing a particular type of relationship. Rather, the focus lies on how communication between human and machine contributes to a sensation of interdependence and shared social reality. Third, this definition is not limited to a particular type of machine. This quality allows the understanding of human-machine relationship to be applied across different technologies such as communicative AI, social robots, virtual reality characters, and more without glossing over important differences related to their modalities and affordances. Finally, this definition also takes into account other descriptions of how technology is changing our relational lives. For example, the notion of relationships 5.0 captures the most recent iteration of humans' relationships with technology, which is driven by cognitive, sensorial, and physical components that have altered technology's role from mere tools to potential relational partners (Kislev,

15

2022). Those socio-technological changes, however, are not marked by a sudden change but rather a slow yet definitive shift, "moving from technologies used as tools controlling human surroundings and work to technologies that are our ecosystem in and of themselves" (Kislev, 2022, p. 6).

The question of what marks a relationship between a human and a machine has also been examined from the field of HMC directly. Here, researchers propose different understandings of what makes a relationship, largely resonating with my proposed working definition above. In addition to traditional conceptualizations of those relationships driven largely by interpersonal frameworks (Westerman et al., 2020), scholars have taken more-than-human approaches to characterizing relations between machines and people with a focus on networked relations rather than one-on-one actor-object interactions (cf. Banks & de Graaf, 2020). However, an additional emphasis this study makes is specifically on long-term relationships that go beyond initial or one-time interactions, suggesting that the effect of the machine might change after novelty effects have faded (Leite et al., 2013).

Recently, de Graaf and Peter (2023) proposed a typology for human-machine relationships, including three primary types of relationships between humans and social robots. First, those relationships may be socially oriented where the focus of the relationship lies primarily on companionship, which can be provided either by humanoid (human-like) or zoomorphic (animal-like) machines. Second, relationships between humans and machines can be functional, where machines are integrated into educational or workplace environments. Finally, human-machine relationships can also be hedonic, where machines are primarily designed for entertainment or pleasure purposes.

16

Interestingly, de Graaf and Peter (2023) explicitly mention sexual pleasure as a use case of hedonic machines, noting that there is little to no empirical research that examines the characteristics and long-term effects of such sexual relationships. This is precisely the main contribution this dissertation seeks to make as it provides empirical evidence drawn from lived experience of those who have relationships with communicative machines. As the findings and discussion indicate, the three types of relationships are likely to be blended in the context of dolls given that they provide social, functional, *and* hedonic services to users. With this definition of relationships as the foundation, I now turn to more specific contexts of sex and love dolls as they relate to this study.

Sex, Love, and Companion Dolls: Social Actors or Objects?

A key claim of much of HMC work is that machines and other media are not merely objects but emerge as social actors in communicative situations (Banks & de Graaf, 2020; Nass et al., 1994; Nass & Moon, 2000; Reeves & Nass, 1996; Van der Goot & Etzrodt, 2023). The question emerges as to how humans make sense of machines who are factually objects yet take on the role of communicative subjects in those interactions. The prominent Computers As Social Actors (CASA) paradigm stemming from media equation theory as well as the media evocation approach (Van der Goot & Etzrodt, 2023) argue that humans treat machines as if they were human. Moreover, research shows that humans tend to approach initial interactions with the assumption that their communication partner will be human (Edwards et al., 2016, 2019). Importantly, those social responses to machines do not apply to all machines but only to media agents, or "any technological artifact that demonstrates sufficient social cues to indicate the potential to be a source of social interaction" (Gambino et al., 2020, p. 73). This

perspective highlights that humans treat *certain* machines as if they were people, and that the status of social actor is not afforded to all machines (for more, see Dehnert & Mongeau, 2022; Lombard & Xu, 2021; Xu et al., 2023). For instance, a social robot with a human-like face and human-sounding voice may be perceived as a social actor given the quality and quantity of its social cues (e.g., human-like face, human-sounding voice, posture, etc.; Lombard & Xu, 2021), whereas an impersonal chatbot relying on technical third-person language may be perceived as less social given the lack of its social cues. Moreover, recent research demonstrates that the CASA paradigm must be adapted based on technological changes, and it may no longer apply to previous key technologies based on which most of the CASA paradigm was theorized, namely desktop computers (Heyselaar, 2023).

Recent work distinguishes media evocation from media equation perspectives, with the former being more heavily influenced by research stemming from qualitative approaches in the context of science and technology studies and the latter showcasing a history of primarily experimental research drawn from psychology, media studies, and interpersonal communication (van der Goot & Etzrodt, 2023). In the media equation perspective to which the majority of research under the CASA paradigm falls (Reeves & Nass, 1996), humans react to machines socially because they are hardwired to do so. In a "click, whirr" response, humans rely on social scripts they follow after they are triggered by social cues machines provide (Dehnert & Mongeau, 2022; Lombard & Xu, 2021). In the media evocation perspective, however, humans react to machines socially because machines themselves question traditional ontological classifications into subjects and objects, and their in-between status as quasi-others invites reflection in the human

18

(Turkle, 1984, 2007b). In this way, media evocation involves mind*ful* processing in response to the machine's ontological class, whereas media equation involves mind*less* processing in response to social cues provided that trigger certain scripts (van der Goot & Etzrodt, 2023). In the context of this study, the question becomes whether humans respond socially to love and sex dolls because of their reliance on social scripts (a mindless response in line with media equation perspectives) or because dolls have an evocative nature that gives humans pause as they are interacting with them (a mindful response in line with media evocation perspectives).

Following the media evocation perspective, machines take on hybrid status as they are situated as neither subject nor object, neither person nor thing (Gunkel, 2023). Rather, HMC scholars have theorized and empirically demonstrated that machines are more accurately described as subject objects (Suchman, 2011), quasi-others (Ihde, 1990), social things (Guzman, 2015), personified things (Etzrodt & Engesser, 2021), or hybrid communicators (Weidmüller, 2022). Said differently, rather than fitting neatly into preexisting ontological categories (such as person or thing, for example [Gunkel, 2023]), machines may constitute a new ontological category on their own (Kahn & Shen, 2017; Kahn et al., 2011). Machines' hybrid status as sometimes social actor, sometimes not, complicates the applicability of human-human communication and relationship approaches to HMC contexts (Westerman et al., 2020).

Empirical work in this context considers how humans ontologize machines they interact with, i.e., how they classify their ontological status. For example, work on disembodied AI technologies shows that people differentiate between humans and machines based on several factors, including their perceived origin of being, degree of

autonomy, status as tool or tool-user, and more (Guzman, 2020). Similarly, research has shown that people rely on underlying scripts when classifying technologies. Here, human participants more often classified humans as being more similar to chimpanzees rather than a humanoid robot (Edwards, 2018). Together, this work on ontological classification suggests that humans have no singular approach for making sense of the nature of machines, likely due to their evocative nature.

Rather than classifying machines clearly as either human or animal or something else, research has demonstrated that humans identify machines as in-between subject and object positions. For instance, previous work on voice-based assistants such as Alexa and Siri shows that the most common approach to classifying the agent was viewing it as a personified thing, sitting clearly on the boundary between subject and object (Etzrodt & Engesser, 2021). Moreover, a hybrid approach to voice-based assistants has received additional support, particularly as it relates to the role of trustworthiness and prior experience with that technology (Weidmüller, 2022).

In summary, then, it is clear that humans struggle with making sense of machines and classify them not easily as either person or thing (Gunkel, 2023), but rather oftentimes rely on the machine's liminality as an entity falling squarely between these two categories as quasi-others or similar hybrid objects. Moreover, given the relevance of prior experience both in this context (Weidmüller, 2022) and when it comes to treating machines as social actors (Gambino et al., 2020), it remains somewhat unclear whether these ontological classifications are largely driven by the human's *perception*, or by the actual ontological status of the machine itself. To reiterate, the media evocation paradigm views machines as evocative objects themselves that, because of their liminal ontological

status, evoke reflection and reaction in humans (Turkle, 1984, 2007b; van der Goot & Etzrodt, 2023). From the media evocation perspective, machines are seen as betwixt and between person and thing, resulting in the human's perception that "machines *are* a kind of social actors—albeit different ones than human social actors" (Van der Goot & Etzrodt, 2023, p. 18).

Within the specific context of sex and love dolls, the question as to whether they take on the role of social actor or are mere objects is a similarly contentious one. The field of erobotics concerns itself primarily with understanding how humans form erotic, romantic, and sexual relations with machines (Dubé & Anctil, 2021), and has offered an impressive array of primarily theoretical approaches, although empirical research continues to grow. With book-length treatises (e.g., Balistreri, 2022; Devlin, 2018; Ferguson, 2010; Levy, 2007a; Ruberg, 2022) and a growing number of scholarship and international conferences, sex and love with machines comprise a cutting-edge, growing area of research answering pressing questions about technology's social and cultural impact, user characteristics, underlying philosophical and legal challenges, and more. Research on dolls is simultaneously myriad and limited. Several reviews of work in the area of dolls identify significant gaps in empirical research and an oftentimes dichotomized theoretical approach marked either by dystopian or utopian perspectives of these technologies (Döring et al., 2020; González-González et al., 2021; Hanson & Locatelli, 2022). The study at hand has the potential to provide empirical evidence that complements this heavy focus on exclusively theoretical work by offering doll owners' lived experiences through interviews and metaphors.

Empirical studies have shown mixed results in terms of whether dolls are more seen as social actors compared to objects. On the one hand, scholars argue that dolls are merely advanced sex toys serving masturbatory purposes, implying that users do not form any sort of communicative or even relational attachment with them (Richardson, 2016a, 2016b; Richardson & Odlind, 2023). In this line of argument, scholars warn that the hypersexualized and hyperfeminine portrayals of dolls can further contribute to flourishing misogynistic and objectifying views of women among the primarily cisheterosexual male user group, especially because of the dolls' described status as mere objects (for critique, see Danaher, 2017, 2019).

On the other hand, scholars argue that dolls do take on a variety of social roles and that diverse types of usage and companionship exist (e.g., Knafo, 2022; Langcaster-James & Bentley, 2018; Lievesley et al., 2023). Compared to the previous view, this perspective is more strongly supported by empirical research rather than ethical argumentation. It is in this empirical context that Langcaster-James and Bentley (2018) propose new terminology to capture novel experiences of companionship, based on primarily qualitative research of how doll users describe their relationships with the technology they own (see Hanson, 2023a, for a similar argument). Although Langcaster-James and Bentley's (2018) study provided generative insights into companionship between humans and machines, their conclusions are based on semi-structured questionnaires among doll owners that included open-ended textboxes. While offering a more accessible route to collect data from such a difficult-to-reach population, further research would benefit from a more direct engagement with users (via semi-structured interviews) to provide a more in-depth point of view on lived experience. As a result, this

study was designed to provide this direct engagement rather than examining more removed data through questionnaires or public forums.

Finding that conventional understandings of relationship did not capture their participants' experiences, Langcaster-James and Bentley (2018) introduced *companionship* and the term *allodoll* to capture the unique post-human kinships they observed between humans and machines (cf. Locatelli, 2022). The prefix "allo" denotes "other" and is here used as an indicator that humans perceive their machine counterpart as an *other* in their relationship. Similar to research within the field of asexuality studies, terminology such as "allo" (as in "allosexual" and "alloromantic") nuances our understanding of love, affection, and attraction into various spectrums and dimensions, thereby increasing our understanding of such fundamental human experiences as love, sex, and romance (see Brandley & Dehnert, 2023; Brandley & Spencer, 2023). An allodoll is

> a humanoid doll, typically of substantial realism, used as a means of replacing, or substituting, a necessary or desired social relationship. Allodolls may or may not offer sexual functionality, but crucially they must serve at least one significant, non-sexual, purpose for their owner. (Langcaster-James & Bentley, 2018, p. 15)

Such non-sexual functions include relationship formation where humans feel connected to their allodolls in relational, emotional, social, and other ways. In so doing, "Allodolls facilitate a fabricated kinship, fantasy partnership, or other form of parasocial relationship" (Langcaster-James & Bentley, 2018, p. 15). From this perspective, allodolls *as* communicative machines in the sense of mute machines very much take on the role of social actor as opposed to merely an object. Langcaster-James and Bentley (2018)

23

describe these relationships as fabricated, fantasy-driven, and parasocial, which is an important dimension of these relationships that I address in the next section. However, for now it is sufficient to highlight that viewing these relationships as fantasy-driven and fabricated directly implicates a mindful (as opposed to mindless, automatic) response, suggesting that the media evocation perspective might be more applicable to help explain human-machine relationships.

The distinction between viewing machines as social actors versus objects might differ based on the nature of the interaction. In the context of dolls, previous research indicates that interactions with dolls might be perceived differently if they are driven by sexual rather than relational needs. For example, the sexual interaction illusion model describes intricate processes involving sexual arousal, willing suspension of disbelief, and psychological characteristics in human-doll interactions (Szczuka et al., 2019). This model specifies a distinction between sexual and romantic interactions with dolls, where sexual arousal might be more related to objective perceptions of dolls (e.g., dolls as objects of desire) and romantic interest or desire for companionship might be more related to subjective perceptions of dolls (e.g., dolls as companions). The effect of sexual arousal on participants' willingness to have sex with a doll has already been demonstrated empirically, with no significant effects of sexual arousal on interest in intimate or romantic relations conversely (Dubé et al., 2022b). A similar effect can be observed on a linguistic level where participants' use of pronouns to describe their doll (a growing area of research examining larger contexts of personification, gender, and more; e.g., Fortunati et al., 2022b) changes as a function of whether emphasis is placed on sexual interaction (participants using the objectifying pronoun "it" to refer to their doll)

24

compared to companionship (participants using the feminine pronoun "she"; Knafo, 2022; Lievesley et al., 2023).

In sum, then, it is unclear how people perceive their dolls—as subjects in the form of companions, as objects in the form of outlets for sexual desire, or between those two narratives as liminal quasi-others. What underlies this distinction is the question on what media equation and evocation processes are at play when it comes to love and sex dolls. Therefore, I pose this first research question:

RQ1: What are areas of overlap and distinction between participants' narratives of "dolls as companion" and "dolls as sexual objects"?

Authenticity as a Contested Construct

Beyond considerations of whether machines are understood as objects or companions in HMC contexts, competing perspectives exist regarding the perceived or actual authenticity of the human-machine relationship. Given Edwards et al.'s (2022) understanding of HMC where humans and machines co-create and participate in a joint social reality, the question emerges as to the authenticity of the relationships created as part of that social reality. Authenticity is clearly a complex phenomenon that lacks a single agreed-upon encompassing definition and is oftentimes confused or used synonymously with intimacy (Locatelli, 2018). As one approach proposes, authenticity in interpersonal relationships can be understood as a "relational schema that favors the benefits of mutual and accurate exchanges of real self-experiences with one's intimate partner over the attendant risks of personal discomfort, partner disapproval, or relationship instability" (Lopez & Rice, 2006, p. 364). Even in this definition, however, the focus lies on "accurate" and "real" in ways that complicate comprehending

25

authenticity beyond these seemingly circular terms. However, alternative perspectives characterize authenticity less in the context of accurateness and focus more on the situated context in which perceptions of authenticity might emerge.

Authenticity as a Situated Concept

While authenticity can be studied in many contexts related to communication, the authenticity model of (mass-oriented) computer-mediated communication (CMC) can serve as a useful heuristic to make sense of authenticity (Lee, 2020). According to this model, authenticity of communication "refers to the extent to which a given communication act, as a whole, is perceived to be real and true" (p. 61). This model provides a tautological definition of authenticity that describes it via the modes of realness and truth, thereby substituting one fuzzy term (authenticity) with another (a sense of realness, truth), without clearly defining either. However, Lee's (2020) model dissects authenticity of communication into three subcomponents, namely authenticity of source, authenticity of message, and authenticity of interaction. For the purposes of this dissertation, authenticity of interaction has the most relevance. In contrast to focusing on the authenticity of the self (Tracy & Trethewey, 2005), authenticity of interaction focuses on perceptions related to the communicative episode itself, and "concerns how closely people feel they are part of actual interaction" (Lee, 2020, p. 63). Clearly, then, authenticity of interaction is informed by perceptions of presence or the sensation of being with another person, and indicates how closely a lived interaction matches expectations for how such an interaction might occur (Lee, 2020).

The concept of social presence has a rich history in the field of computer-mediated communication (for a review, see Lombard, 2018). Typically defined as the

feeling of non-mediation, presence characterizes the sensation of being with another

person although that encounter is mediated through technology (Biocca et al., 2003;

Lombard & Ditton, 1997). As Lombard (2018) captures, presence encapsulates that,

"even though we know we're using technology, at some level we ignore that and just

experience the people, places and events the technologies provide" (p. 99). Beyond

traditional contexts of CMC such as video conferencing (Lowden & Hostetter, 2012) or

videogames (Jin, 2011), presence has been taken up by HMC researchers (Xu & Jeong,

2023), for example for characterizing experiences in virtual reality (Novotny et al., 2023).

Similar to human communicators who are mediated by technology, humans can

experience social presence as the sensation of being with another, even if that other is a

machine communicator. In so doing, authenticity of interaction occurs also with machine

communicators, and it begs the question of what role presence plays in ascertaining how

participants in this study create authenticity with their dolls.

The oft-neglected flipside of presence is, of course, absence. Positioning absence

as a resource for HMC rather than a concept lacking use when studying human

interaction with communicative machines, Westerman and Edwards (2022) propose for

HMC scholars to focus not only on *what is there* in a machine encounter, but also on

what is missing. From this vantage, machines such as robots, AI companions, or virtual

voice assistants not only make apparent those features they provide and the cues that are

present in the interaction, but also result in the human being confronted "with the reality

of what is missing: that which the machine represents, simulates, replaces, or conjures in

imagination" (Westerman & Edwards, 2022, p. 5). In the context of dolls as examined in

this study, their muteness becomes the dominant absence that leads to unique forms of interactions and relations, as the findings illustrate.

Albeit developed in the context of mass-oriented CMC such as social media influencers (Balaban & Szambolics, 2022), Lee's (2020) model can be expanded to HMC contexts where the source differentiation between human and machine might impact the perception of authenticity of interaction (Lee, 2023). As part of her initial model formulation, Lee (2020) offered the proposition that "(Perceived) Reciprocity positively predicts perceived authenticity of interaction," highlighting how the stronger sensation of another communicator with a sense of agency contributes to authenticity of interaction (p. 66). From this perspective, machines' perceived status as either subjects or objects should directly relate to the perceived authenticity of interaction, especially depending on different perceptions of the machine's agency.

In the field of HMC, the term agency brings with it a rich interdisciplinary history that goes beyond the scope of this study (Hepp & Loosen, 2023). While agency is clearly a prominent term for many social theories and communication approaches, continued work in the field of HMC specifically moves toward a non-anthropocentric understanding of agency where entities other than humans—such as communicative machines—can have agency. Drawing on a symbiotic perspective informed by phenomenological and pragmatist goals, agency can be understood as "what users, actors, and tools do when interacting with complex technological systems" (Neff & Nagy, 2016, p. 4916). For example, researchers could explore what personality and other characteristics human users attribute to an online chatbot like Microsoft's Tay, where agency conceptualizations focus on what characteristics users attribute to such a machine communicator (Neff &

Nagy, 2016). In contrast to such a definition that centers intentionality behind the action (Neff & Nagy, 2018), other perspectives have framed agency as the capacity to affect and be affected (Dehnert, 2021; Kitson & McHugh, 2015). Here, agency is less about what entities do—or *intend* to do—and more about the larger situated relationship in which different entities affect each other, resonating with calls for an agent-agnostic model of communication in HMC contexts (Banks & de Graaf, 2020). For instance, the focus lies less on what intentions or characteristics human users attribute to a machine communicator and more on the ways in which the human and the machine affect each other regardless of agent type of perceived intentionality. Therefore, it remains unclear how different perceptions of agency in human-doll interactions influence the perception of authenticity of interaction, where a more reciprocal agency should contribute to a stronger sense of interaction authenticity, following Lee's (2020) proposition.

A key component of Lee's (2020) approach to authenticity is its bottom-up approach that allows people in the interaction itself to judge whether that interaction feels authentic to them, rather than assessing authenticity from an objective outsider perspective based on a priori criteria. As Lee (2020) writes, "what matters may not be whether a given message exchange meets the prescribed structural or relational requirements of authentic social communication, but how much it feels as such to those engaging in or witnessing it" (p. 68). As such, the model's integrative character and by viewing "individuals' subjective experience of communication as its core building block," Lee's (2020) understanding of authenticity of interaction serves as a useful foundation for understanding how authenticity emerges in the context of dolls (p. 68).

Moreover, in the context of human-robot interaction, Weiss (forthcoming) makes the argument that authenticity has become the primary evaluation criterion to assess interactions with AI systems. Proposing a nuanced argument, Weiss's perspective shifts the emphasis away from the machine's design features to "the design of meaningful human-technology-world relations," that not only view the human-robot interaction as culturally and socially situated, but as a relation between the entities in interaction, namely the human and the robot. Authenticity as such is not a quality inherent to either communicator but can only be understood by focusing on the entire interaction as it is relationally unfolding. From this perspective, authenticity of interaction is less a dichotomous dimension (i.e., an interaction is authentic or inauthentic), and becomes more so a processual feature of the interaction itself, allowing for "co-construction and enactment" throughout interactive episodes and contexts (Weiss, forthcoming, p. 12). Such a procedural understanding of authenticity maps directly onto Damiano and Dumouchel's (forthcoming) perspective of how affect is distributed between humans interacting with robots, casting a relational, contextual, and interactive view of human-robot interaction. Based on these insights, authenticity in human-doll interactions might be less directly attributable to either human or machine characteristics and might be more the outcome of the continuous negotiation and renegotiation processes between human and machine within the situated context itself.

Such a relational and situated approach directly connects with what has been described as the social-relational perspective, which also shifts the focus away from ontological or metaphysical characteristics of machines to what is happening in the situated relationship, albeit from a more philosophical approach (Coeckelbergh, 2010,

2012; Gunkel, 2012, 2018, 2022; Gunkel et al., 2022). In short, rather than defining the relationship between humans and machines based on ontological differences between them (i.e., one is natural, the other is human-made), the social-relational perspective argues that what matters most is what happens in the situated interaction between humans and machines. It is thus less of concern whether a communicator is human or machine, and the focus is more so placed on "the unpredictable, generative messiness and situatedness of relationships in which humans and machines entangle, dynamically co-constituting each other" (Gemeinboeck, 2022, p. 31)—or potentially creating authentic relations.

Thus, viewing authenticity as a quality that emerges within the situated interaction itself allows for more accurately capturing both the subjectivity of those involved in the interaction and the nuances in interaction that might contribute to the construction and experience of differing perceptions of authenticity. A social-relational approach to relationality and authenticity casts authenticity as contextually grounded in the interaction itself (Dehnert, 2023a), thereby placing the emphasis on how participants of that interaction actively contribute to and experience that interaction as authentic. As a result, a social-relational perspective clearly warrants focusing on the lived experiences of those who are in the interaction themselves. In the context of this study, I conducted semi-structured interviews with doll owners and users to ascertain how the situated relationship they are experiencing contributes to perceptions of (in)authenticity.

Authenticity in Human-Doll Interaction

In addition to these more general discussions of authenticity in HMC contexts, authenticity has also emerged as a key concept in the realm of sex and love dolls. Based

on understanding authenticity in relation to "realness" or "accurateness," some scholars argue normatively that while sexual relations with technology are possible, authentic relations with machines are not. Discussed as a crisis in authenticity (Turkle, 2007a), machines such as dolls and robots can only be understood from this perspective as masturbatory because a more deeply connected sense of love is not (or should not) be possible (Ess, 2016; Richardson, 2016b; Richardson & Odlind, 2023). Scholars are wary as to whether machines will ever be able to become authentic relational partners compared to humans (Fox & Gambino, 2021), and others warn of the "hallucinatory danger" of such relations (Lucidi & Nardi, 2018). Human-machine relations are considered "hallucinatory" in so much as some believe they have little to no connection to "real" relationships. From this vantage, humans subjectify communicative machines as relational partners because they overload them with meaning, raising concerns of deception and loss of freedom (Lucidi & Nardi, 2018; cf. Richardson, 2016a; Turkle, 2007a, 2011). As such, there is a clear distinction between "authentic" relationships (between humans) and "hallucinatory" or "inauthentic" relationships (between humans and machines).

Additionally, research goes beyond merely describing the risk of hallucinatory interactions with machines by focusing on the concept of deception (Sharkey & Sharkey, 2021; Shim & Arkin, 2013). From this vantage, deception is a fundamental element of human-machine interaction, especially in the context of AI and similar software. Importantly, deception is here not a by-product or side-effect of an otherwise oriented design process but key to a machine's functionality. As Natale (2021) writes, "We are, so to say programmed to be deceived," gesturing at the relevance of humans' heuristic

response to cues that trigger learned interaction scripts, resonating with media equation arguments (Gambino et al., 2020; Van der Goot & Etzrodt, 2023). In other words, AI and similar software do not work *without* deceiving qualities. Here, deception is not about manipulative goals but merely functions as a baseline requirement for AI to work in the sense of generating the sensation of interacting with an Other, even though that Other is merely simulated (Natale, 2021). To capture this everydayness and foundational quality of deception in HMC, Natale (2021) proposes the term "banal deception," where deception's banality lies in its everydayness. Banal deception is marked by five characteristics: 1) its everyday and ordinary character, 2) its functionality in that is has some potential value to the user, 3) its taken-for-grantedness, 4) its requirement for audience participation, and 5) developers deliberately designing their technologies to be deceptive. Banal deception does not describe humans as passive recipients of this deceptive interaction but rather views them as active co-contributors that, by relying on tried-and-trusted heuristic scripts triggered by the machine, allow themselves to be deceived.

Rather than laboring moralistic questions about the ethicality of such deception—even though banal deception might even have beneficial qualities for the user (Natale, 2021)—this empirical dissertation takes a grounded approach: Here, human-machine relationships can be described as authentic when they feel real or pleasurable to the human, while (or precisely because) they know that it is not *actually* a "real" relationship compared to human-human relationships. In this vein, authenticity is not merely translated from human-human to human-machine contexts but rather allows for a degrees-of-relationships perspective (Ryland, 2021) that frames authenticity as

33

collaboratively created and human-centered in the human-machine interaction itself. Said differently, the degree or kind of authenticity experienced in human-machine relationships might differ from that of human-human interaction.

For example, the sexual interaction illusion model introduced earlier in the context of sexual arousal describes human-machine relationships as an illusion, which is neither a delusion nor hallucinatory. Instead, illusion refers to "the automatic sensation (or imagined sensation) that something is the case, *while knowing it is not*" (Szczuka et al., 2019, p. 9, emphasis added). The sexual interaction illusion model thus shifts attention away from the actuality (or ontology) of the interaction (i.e., whether it is a "real" interaction between "real" social actors based on an a priori understanding of "real" in this case) and to specific user characteristics and the nature of the interaction, thereby directly resonating with the context-driven, social-relational approach to authenticity discussed early. Interestingly, Lee (2020) describes the authenticity of interaction as "the illusion of direct interaction," making apparent a connection between her model and the sexual interaction illusion model given their joint focus on illusions (p. 67).

Furthermore, the sexual interaction illusion model highlights how the human actively contributes to this illusion through a willing suspension of disbelief, or the conscious decision to suspend disbelief and to view the machine other as a relational partner despite better judgment (Szczuka et al., 2019). The term "illusion" is in direct contrast to "deception," with the difference seemingly lying as to where one positions agency in this illusionary/deceptive encounter. For scholars preferring deception, agency lies with the developers who consciously decide to design their technology with

deceptive features (Natale, 2021). For those who prefer illusion, however, agency lies more strongly with the human who consciously decides to suspend disbelief and "buy into" the illusion of interacting with another entity, while fully knowing that they are not *actually* (Szczuka et al., 2019). In other words, humans are "led on" to fall for the social qualities of the machine from a deception perspective, whereas an illusion perspective emphasizes that humans actively contribute to the perception of a social interaction rather than unknowingly "falling for" the machine. Moreover, what separates both illusion and deception from the term "hallucination" is clearly the role of agency as an active decision, made either by the developers or the users of the technology (Lucidi & Nardi, 2018). As such, it would be interesting to explore how participants express their own sense of agency in human-machine interactions. Do either deception or illusion characterize their perception of authenticity better, or are alternative frameworks more appropriate? Past research provides guidance here.

Willing suspension of disbelief or the active submission to the illusion of an authentic interaction can be further theorized as the importance of fantasy and sexual play for materializing sexual human-machine relationships (Karaian, 2024). Such an actively constructed illusion, then, allows for the formation of post-human kinship relations (Langcaster-James & Bentley, 2018; Locatelli, 2022). Pointing out how humans actively shape and co-create the relation alongside their machine partners showcases a more nuanced understanding of authenticity as communicatively negotiated. As Döring et al. (2020) conclude in their review of existing work on sex dolls and robots,

> the literature on sex robots often misses the key point that robots are more than
>
> mere masturbation aids due to anthropomorphization and that they are meaningful

and possibly helpful precisely because they are not substitutes for real humans but are sociotechnical entities for parasocial use and play. (p. 20)

As noted in this discussion, then, research differs in understanding authenticity as a result of either the deceptive qualities of communicative machines or the user's willing suspension of disbelief to submit to the illusion of an interaction while knowing fully that it is not an *actual* interaction per se. In this vein, scholars have introduced the terms robot sociality (Šabanović & Chang, 2016) and artificial sociality (Natale & Depounti, forthcoming). While the former focuses more on how sociality emerges as relational property of the situated interactions between humans and machines, the latter distinguishes how machines do not create a new form of sociality but merely its *appearance*, connecting directly with the discussions around media evocation, illusions, and hallucinations. This study specifically examines how authenticity is or is not the result of active decision-making processes on behalf of the doll owner, which raises the question of how previous empirical research has examined doll users.

Navigating Authenticity as a Doll Owner

In addition to how authenticity is negotiated and constructed within the relationship itself, research has also addressed the role of the human for the creation of authentic human-machine relationships. Sextech in general and dolls in particular are highly stigmatized technologies (DiTecco & Karaian, 2023; Dubé et al., 2023; Hanson, 2022b), making it difficult to clearly assess who uses communicative machines for relational purposes. In this regard, important recent work highlights the intricate and complex intersections of stigma related to sextech and sex work, where multiple dimensions of objectification, denial of subjecthood, portrayals of abusive users, and

36

sexual commodification overlap (DiTecco & Karaian, 2023). A typical argument within anti-sex doll circles (Richardson, 2016a, 2016b) and sometimes pro-sex doll circles (Levy, 2007b) is the comparison of sextech with sex work, which has been described as a flawed argument that constructs misrepresentative images of sex workers, their clients, sextech, and its users (DiTecco & Karain, 2023). Offering a rather negative example, Yeoman and Mars's (2012) "futuristic scenario about sex tourism" paints a particularly short-sighted and superficial picture of sex work, and how "robot sex workers" may be a "solution" to the "problem" of sex work. Jointly, these perspectives cast sex work as a problem in need of fixing where sex dolls either perpetuate the supposedly harmful aspects of sex work (as discussed in anti-sex doll circles; Richardson, 2016a, 2016b) or allow humans to escape those supposedly harmful aspects (as discussed in pro-sex doll circles; Levy, 2007b). As I argued elsewhere (Dehnert, 2022a), critical sexuality studies perspectives offer a more nuanced and sex-positive approach to sex work and thereby also sextech that move away from a problem-approach to sex work (cf. Danaher, 2014, 2017).

It is particularly worth highlighting the concept of the silicone self in relation to authenticity. In his in-depth ethnographic work within the sex doll community, Hanson (2022a, 2022b) explored how doll owners formulate sexual selfhood in relation to their dolls. The silicone self emerges as a result of an active engagement with one's own identity as a sex doll owner and each owner "manages the stigma of desiring inanimate dolls while presenting the [sex doll] community in a way that challenges the stereotypes perpetuated by largely theoretical, rather than empirical, scholarship and journalism" (Hanson, 2022b, p. 204). The silicone self is understood as the result of two

interconnected processes, namely a reflexive evaluation of past romantic relationships with humans and a process of locating oneself both in the larger community and against societal stigma. While not originally discussed in the context of authenticity, the silicone self and other approaches to understanding socialization processes among owners (e.g., Middleweek, 2021; Su et al., 2019) showcase potentially multi-layered processes of negotiating authenticity in the context of dolls, likely also driven by different user characteristics. One primary focus of research on user characteristics are demographic differences that might explain varying experiences within the doll community.

While the main consumer of sex toys are women (Döring & Poeschl, 2020), dolls are typically associated with cisheterosexual men as the primary user group and target audience (Ferguson, 2010; Levy, 2007a). In line with those predominant assumptions, empirical research confirms that the majority of users and owners of dolls are cisheterosexual men (Appel et al., 2019; Hanson & Locatelli, 2022; Harper & Lievesley, 2020), middle-aged, and currently without a partner (Hanson & Locatelli, 2022). However, when asked about the intention to own a sex doll, gender differences between cismen and ciswomen were comparatively small, with the difference between intention to buy a sex doll due to being female versus male being less than a third of a standard deviation of the response variable (DeMaris & McGovern, 2023). Empirical research produces mixed results on whether owners differ from non-owners on psychological factors such as sexual aggressiveness, views of women, or personality traits (Harper et al., 2023). In fact, studies indicate that personality was less strongly related to willingness to engage with sex dolls compared to an affiliation toward sex and sexual sensation seeking, highlighting how doll usage and willingness to engage with them might be more

a function of sexual behavior and desire and less of personality or psychological characteristics (Dubé et al., 2022a). Other research has found no significant impact of loneliness on the evaluation of attractiveness of sex dolls (Szczuka & Krämer, 2017), and generated mixed findings related to differences in gaze behavior between men and women depending on degree of human-likeness and visual focal area (e.g., head vs. crotch; Szczuka & Krämer, 2019). Therefore, it would be interesting to examine what user characteristics, if any, contribute to a sensation of an authentic interaction with dolls. Do perceptions of authenticity of interaction differ by certain psychological characteristics or social circumstances, for example loneliness?

Together then, previous research highlights that authenticity is a contested and dynamic concept consistently negotiated and re-constructed across multiple layers. A social-relational, context-driven approach is particularly useful for the given study because it views the authenticity of interaction as co-constructed and enacted through the interaction itself, emphasizing the importance of an interactive, process-oriented approach. Finally, forays into the role of deception and illusion showcase the role of agency and the active suspension of disbelief that allow those interaction illusions to be experienced. It would also be interesting to examine the role of the user in the construction of authenticity, and whether the perception of authenticity is the result of the humans' active involvement in the interaction. Therefore, I propose the following research question:

RQ2: How do participants actively construct and (re)negotiate authenticity in their human-machine relationships?

Posthuman Care

Whereas research questions one and two were designed to guide the study from the beginning, the context for research question three and the notion of care are the result of the iterative analysis process detailed in the next chapter. Iteration is a key component of the phronetic iterative qualitative data analysis (PIQDA; Tracy, 2020) process that guides this study methodologically. As a result, initial analysis during first round interviews yielded the importance of the concept of care for participants, warranting a more substantial treatment of this concept in this study. In fact, care marks a key dimension of this dataset and characterizes participants' experiences throughout the study, albeit in different nuances. Being a result of the deductive writing logic of most social scientific research, I cannot fully capture the iterative process that led to the introduction of this third research question in the manuscript (Tracy, 2012). Thus, it is necessary to remember this order and that the emphasis of care is a direct result of the methodological strengths of this study with its use of PIQDA and focus on iteration between and within subjects.

The topic of care and robotics emerges primarily in the context of older and disabled persons (Dehnert, forthcoming). In this context, dolls are typically discussed as therapeutic tools for disabled and older users, resembling conversations of using sex dolls as therapeutic tools in the context of sexual deviancies such as sex offense (Oleksy & Wnuk, 2021). Here, the idea is that dolls can stand in for human caretakers (in the context of older users) or serve as therapeutic "outlets" for sex offenders (Harper & Lievesley, 2022; Zara et al., 2022). In addition to ethical and pragmatic arguments for the therapeutic use of sex dolls for older and disabled participants (e.g., Di Nucci, 2017;

Jecker, 2021), care becomes of central concern for such therapeutic use (Fosch-Villaronga & Poulsen, 2020, 2021), highlighting the need for caution when considering the potential health benefits and disadvantages of sex dolls for older and disabled individuals (Cox-George & Bewley, 2018). Exploratory research into therapist and physician's attitudes on the potential use of sex dolls in sexual therapy shows that almost half of the surveyed physicians and therapists could see themselves recommending sex dolls in therapy (Eichenberg et al., 2019), with potential use cases including older individuals or a variety of psychosocial, physical, and sexual disabilities and difficulties (cf. Dubé & Anctil, 2021). Interestingly, the discussion of machines as caretakers resonates with previous considerations of varying levels and conceptualizations of agency. If machines take on caring responsibilities (e.g., medical surveillance, providing emotional support) and also require to be taken care of in turn as a form of maintenance (e.g., being charged and updated with the latest software, maintaining hardware), there may be an underlying reciprocity to human-machine interactions centered around care.

In fact, research on care machines for older and disabled participants abounds and is a thriving area of research, design, and critique (Mack et al., 2021). Among the many topics of concern, scholars debate whether care performed by robots is humanistic, humane, and ultimately "real" compared to care performed by other humans. Robotic caretakers can be defined as "robots designed for use in home, hospital, or other settings to assist in, support, or provide care for sick, disabled, young, older, or otherwise vulnerable persons" (Vallor, 2011, p. 252). In that way, robotic caretakers are primarily functional technologies designed to assist those who require primarily medical care. Within this context, scholars debate whether such robotic care is "humanistic" (Coghlan,

2022), "ethical" (Vallor, 2011), or real in the sense whether care performed by robots is similar to care performed by humans (Meacham & Studley, 2017).

Beyond such a particular humanistic focus on robotic care in the specific context of medical care providers, research driven primarily by sociological, anthropological, and critical perspectives has presented an alternative understanding of care. Rather than asking whether machinic care is "real" or "authentic" compared to care performed by humans, a more-than-human approach considers care differently. Following this approach, Aronsson (2023) asks whether we should "jettison the ideal of *authentic* and compassionate care in favor of performative care" (p. 6). Here, the focus shifts from examining the *intent of care* to assessing the *outcome of care*, sidestepping the assumption that robots' lack of intention to be caring characterizes their care as inauthentic. Instead, if the focus lies on the performativity of care, that is whether care if performed and received regardless of the presence or absence of an intent (which others characterize as the human element of care; Coghlan, 2022; Vallor, 2011), machinic care is not more or less authentic than care performed by humans. As a result, care may be expressed reciprocally between human care recipients and machine caregivers, especially when focused on the outcome and not intent of the care provided. Ultimately, however, it is unclear how humans perceive care in the context of love and sex dolls, and whether this care contributes to a sensation of authenticity.

Within the context of sex and love dolls, care offers a potentially interesting angle for capturing experiences of closeness or intimacy, especially in light of a social-relational perspective. A distributed approach to care that goes beyond the individual caretaker and care recipient takes inspiration from more-than-human and posthuman

42

approaches (Aronsson, 2023; DeFalco, 2020; Zhao, 2023). In this framework, care goes beyond charitable services focused on alleviating medical issues and takes into account the entire ecosystem of care, a "complex web of technology, providers, and institutions" (Aronsson, 2023, p. 7) where machines become increasingly integrated as a foundational technology to providing care services (Zhao, 2023). As such, care within machine contexts has become a prominent issue, and DeFalco's (2020) question offers a proposition to go beyond anthropocentric conceptualizations of care when she asks, "what happens if one uncouples 'care' from 'human' and takes seriously the possibility of posthuman care?" (p. 33). In the context of my study, the question shifts toward how care is possible in human-machine relationships, and what role it plays for the human user.

Shifting away from the medical approach to care, I take inspiration from the notion of "radical care," defined as "a set of vital but underappreciated strategies for enduring precarious worlds" (Hobart & Kneese, 2020, p. 2). In this sense, care becomes relational rather than being confined to an individual characteristic. As the "affective connective tissue between an inner self and outer world" (Hobart & Kneese, 2020, p. 2), care thus becomes the mode of describing the relationality of human and nonhuman entities, their embeddedness, entanglement, and networked connections. Posthumanism, while a contentious term similar to that of "care," argues precisely for such a connected and distributed approach by decentering the human in favor of accounting for networked relationalities with other non-human entities (Dehnert, 2022b). A relational approach to care not only acknowledges but celebrates that "care is diffuse, ubiquitous, mutable; […] care is perpetually nebulous, fashioned in relation to relations" (DeFalco, 2023, p. 12).

43

This is important when studying care within human-machine relationships because past research has shown that doll owners are part of networks of posthuman kinship with their dolls (Langcaster-James & Bentley, 2018; Locatelli, 2018, 2022). Therefore, it would be interesting to explore how doll owners experience care with their dolls.

In this way, a posthuman approach to care resonates with perspectives that consider distributed affect as a key concern within social robotics (Damiano & Dumouchel, forthcoming). In fact, a major critique of care robots is that they supposedly cannot communicate the same sense of care through touch compared to human caregivers (Aronsson, 2023). Exploring the affective components of touch communicated by robots, posthuman perspectives acknowledge the distributed agency inherent to robotic touch (Aronsson, 2023), examine the affirmative possibilities of robotic touch (DeFalco, 2023), and position touch as a form of human-technology connection. "Affective technotouch," or the "multidimensional embodied encounters with technologies which can trigger emotional and affective responses" (DeFalco & Dolezal, 2023, p. 85), positions robotic touch as a form of expressing and receiving posthuman care that does not measure the supposed authenticity of this received care and touch against the gold standard of human touch, but emphasizes that robotic touch allows for perceiving care differently. In this vein, approaches to posthuman care clearly resonate with social-relational perspectives discussed earlier as they emphasize the situatedness and contextuality of the care encounter, while focusing on the underlying networked entanglements between actants. Therefore, "posthuman care is not about *replacing* human care, […] it is about exposing the hybridity, the cross-species organic/inorganic networks already at play and ripe for exposure, expansion, and augmentation" (DeFalco, 2020, p. 49, emphasis in original).

44

Dolls designed for sexual and intimate encounters potentially offer grounds for exposure, expansion, and augmentation of experiences of care.

Posthuman approaches to care and technotouch are not devoid of critical dimensions (cf. Dehnert, 2022b). Instead, social, political, ethical, and cultural dimensions of care are quite engrained within those posthuman perspectives (Aronsson, 2023; DeFalco, 2020, 2023; DeFalco & Dolezal, 2023; Hobart & Kneese, 2020), which are particularly relevant to the context of sex and love dolls. As humanoid dolls designed to fulfill sexual desires and provide companionship, dolls are typically produced in a feminine appearance, oftentimes representing an idealized feminine version or even hyperfeminine and hypersexual performance of womanhood (Richardson & Odlind, 2023). In addition to concerns related to misogyny and further objectification of women through those representations (Richardson, 2016a, 2016b; Richardson & Odlind, 2023), the integration of posthuman care makes the issue of automation of care labor prevalent, along at least gendered and racialized lines among several dimensions.

Scholars have extensively documented the gendered dynamics in the context of HMC, especially as it relates to technology designed to be of assistance to humans (Fortunati & Edwards, 2022). For example, AI voice assistants such as Siri and Alexa are typically coded as feminine servants (Woods, 2018), drawing on stereotypical roles of the caretaker, mother, and wife that replicate existing gendered complexities. Particularly in the context of surveillance capitalism, AI voice assistants naturalize people's enmeshment in surveillance through their feminine roles that serve the human user. Similarly, feminine voices of AI voice assistants are also racialized as white (Moran, 2021), drawing on particular cultural tropes of white feminine servitude in the age of

capitalism. This work is also supported and further nuanced by large-scale, cross-cultural research that examines the gendered dynamics of voice assistants like Alexa, showing that gendered expectations for Alexa are less clearly pronounced yet still influence interactions with Alexa as a communicative machine (Fortunati et al., 2022a, 2022b).

Rhee (2023) makes an even stronger argument when she proposes that care is not only a form of gendered and racialized labor, but that care labor has been foundational to the development of communicative machines such as AI (cf. Fortunati & Edwards, 2022). Drawing on rich feminist theorizing (see Hobart & Kneese, 2020), Rhee (2023) understands care as a form of resistance that allows those facing inequity to radically remake worlds. Under racial capitalism, care labor is a form of reproductive labor that marks a feminized form of labor which, as a result, is consistently made invisible, underpaid, and undervalued (Rhee, 2018). As a form of immaterial labor (Fortunati, 2018), care is tightly integrated with the emergence and development of communicative machines, including sex and love dolls (Atanasoski & Vora, 2020).

In particular, communicative machines contribute to the automation of many aspects of the domestic sphere (Fortunati, 2011), including the outsourcing of emotion, affect, education, entertainment, and many more (Stephens, 2015). The automation of care, specifically, contributes to the displacement of affects from human interaction to human-machine interaction, directly altering how humans perceive affective relations with both human and non-human entities (Lynch et al., 2022). If, for example, a parent of a child with autism prefers incorporating a socially assistive robot designed for children with autism over spending time with their child themselves, therapeutic and educational care are outsourced from the parent to the machine. Another example positions the

46

typically white and femininely coded voice of voice assistants like Alexa or Siri in the

role of the female secretary or servant. As a consequence, then, the automation of care

labor through communicative machines—as a continuation of femininized, white service

work—extends "the devaluation of this [care] work while replicating extant care labour

hierarchies based on race, gender, and citizenship" (Rhee, 2023, p. 160; Rhee, 2018).

Approached from a perspective of care, dolls seemingly blend the three types of

human-machine relationships identified earlier, when they combine social, functional,

and hedonic dimensions seemingly simultaneously (de Graaf & Peter, 2023). At the same

time, however, as discussed in the context of my choosing the term "doll" over other

alternatives, dolls are but a mere artifact in the long history of fetishizing women as dolls

(Puig, 2017), particularly with an emphasis on the care work they provide (Erhard, 2022)

and the idealized womanhood they embody through their muteness (Ferguson, 2010). In

the context of this study, then, the question becomes whether participants experience care

at all in their interactions with their dolls, and how this care relates to feminist critiques

of the automation of care labor through communicative machines. As such, I pose this

final research question:

RQ3: How do participants experience reciprocal care in their human-machine

relationship?

CHAPTER 3

METHODS

This qualitative dissertation employs a funneled serial interview design involving three waves of data collection with semi-structured interviews. As such, this design capitalizes on the strengths of qualitative research to develop rich, holistic insight into the lived experiences of study participants. This is particularly prudent given the scant empirical research conducted in this area (cf. Döring et al., 2020; Hanson & Locatelli, 2022) and the mixed results related to machines as social and relational actors. In particular, pursuing this methodological route 1) contributes to the formation of unique human-machine communication (HMC) theory and 2) responds to calls for more qualitative approaches to the study of HMC, as repeatedly expressed in reviews of existing HMC scholarship (e.g., Liu et al., 2022; Richards et al., 2022; van der Goot & Etzrodt, 2023). In this chapter, I discuss the qualitative methods in detail including: the research context and researcher role, access, data collection, participant demographics, and data analysis approaches. All procedures were evaluated and approved (expedited approval) by the applicable Institutional Review Board at Arizona State University (see Appendix A for IRB Approval Letter).

Research Context, Researcher Role, and Self-Reflexivity

The purpose of this dissertation is to explore how humans experience relationships with communicative machines like sex and love dolls. When designing this study, compatibility, yield, suitability, and feasibility were important factors that I considered (Tracy, 2020). First, a suitable context for a research project is one that provides most if not all of the key characteristics and theoretical issues related to the

research goals (Tracy, 2020). With the goal of studying relational experiences between humans and communicative machines, dolls are a primary context in which those relationships can be found. Dolls allow for relationship formation with humans and are a particularly controversial type of technology (Devlin, 2018), and past research has explored posthuman kinship (Langcaster-James & Bentley, 2018), homosocial bonding among doll community members (Middleweek, 2021), stigma (DiTecco & Karaian, 2023; Dubé et al., 2023; Hanson & Locatelli, 2022), and the broader doll community (Hanson, 2022a, 2022b). The context of this technology constitutes a particular practical exigency for conducting culturally sensitive research that avoids stigmatized, fetishized, or otherwise otherized perspectives that oftentimes lack empirical grounding and are steeped in utopian or dystopian views (Döring et al., 2020).

This practical exigency as encapsulated in a commitment to the population under study to generate accurate and insightful social scientific research is one aspect that makes this study phronetic, which refers to grounded, context-driven, and actionable research (Flyvbjerg, 2001; Tracy, 2020; Tracy et al., 2024). In this way, the qualitative approach of this study adds needed depth and context to the variegated and oftentimes mixed quantitative findings discussed in the literature review. The goal is here to complement existing work with those rich, participant-driven insights. Moreover, emphasis was placed on embodied machines rather than virtual companions like Replika to focus on how humans form relationships with physical, embodied machines rather than virtual simulations. Past research has extensively examined relationship formation with AI companions including sexual, romantic, and friendship dynamics (e.g., Croes & Antheunis, 2021; Leo-Liu, 2023; Skjuve et al., 2022).

Additionally, I designed this study with yield and feasibility in mind (Tracy, 2020). A study is feasible when it can be completed given the time and resources available and how achievable the research aims are, whereas yield refers to whether the study can deliver the desired outcome (Tracy, 2020). The funneled serial interview approach discussed in detail below was designed with the time and resources available in mind, while also aiming to protect participants' time and resources. The yield of this qualitative dissertation allowed me to generate rich explorative data and to theorize human-machine relationality based on that empirical data.

Compatibility, Researcher Role, and Self-Reflexivity

The final factor to consider when designing a qualitative research project is compatibility, or the ways in which the researcher *as* the research instrument will fit with the research context, "both *despite of* and *because of* who they are" (Tracy, 2020, p. 15, emphasis in original). As such, it is important to reflect on my own connections to the research scene, as well as to consider the ways in which participants perceive me as a researcher interested in a hidden, stigmatized, and obscure population (cf. Jones & Tracy, 2022). Data collection for this study began roughly one year into my efforts to form connections with the doll community. After conducting several pilot interviews with key members of the community (users as well as industry members), I was slowly arriving in a position of a trusted researcher who was not only known by key members but could be vouched for by several of them through word of mouth or in online spaces. Ultimately, this not only allowed me access but made the research itself possible, given that this community is highly protective of itself due to the existing societal stigma associated

with dolls and their users, and because of questionable research and media inquiries in the past (Hanson, 2023a).

Nonetheless, studying sextech brings with it specific challenges in general and related to my own positionality and compatibility to the research context. As part of my ongoing intersectional reflexivity (Jones, 2010), I recognize that as a white, cisheterosexual male-reading and able-bodied researcher, I am particularly positioned to gain access to the population in this study. Given that the majority of doll users are primarily cisheterosexual men (Hanson & Locatelli, 2022; Harper & Lievesley, 2020), I was able to connect with my participants in ways others are not. Moreover, as a cismale researcher studying topics involving relationships, technology, and particularly love and sex, my experiences likely differ dramatically from those of for instance young, female researchers studying similar topics related to sex (e.g., Keene, 2022).

To be explicit: As a young, white, cisheterosexual and male-reading researcher with a weak accent when speaking English, my participants were likely more trusting, open, and willing to connect with me during the interview phase, and likely increased their willingness to be part of the study in the first place Given the strong prevalence of cismale participants in the sample (see below), participants likely opened up more to me about their experiences *as* men in relationships and when it came to topics around romance and sexuality (cf. Pini, 2005). There is considerable demographic overlap between me and the majority of my participants in terms of race (primarily white), age (mid-twenties to mid-thirties), gender (primarily cismen), sexuality (primarily heterosexual), national origin (primarily European and US-American), and class (primarily lower to middle-class), but also important differences. For example, my

51

sample is more diverse in relation to sexuality, gender, class, and age than anticipated based on prior literature (Döring et al., 2020; Hanson & Locatelli, 2022; see participant demographics below). Moreover, a key distinction between me and my sample is that I do not own a doll, nor have I ever used one. This was an issue oftentimes brought up by participants—potentially as a means to connect—which sometimes even led to recommendations for what dolls would be good for beginners. Especially in this context of sexuality research and research involving stigmatized behaviors, I aimed to be careful to maintain the balance between responsive interviewing and not appearing to my participants as a confidante or friend.

Typically discussed in the context of phenomenological and ethnomethodological research, the unique adequacy requirement is often cited as an aspirational goal for how involved researchers should be in the study context. The unique adequacy requirement means that researchers become competent in the phenomenon they study, and to experience it themselves to generate more competent findings (Garfinkel, 1996). As such, those aligned with the unique adequacy requirement may critique my researching this topic given my lack of experience in having relationships with dolls. However, it is key that qualitative researchers need not be members of the group they are studying—yet, they ought to take their positionality into account, especially when studying marginalized or stigmatized populations they are not part of (Levy, 2013). Hanson's (2022a, 2022b) ethnographic study of sex doll communities is exemplary of such an approach, as he took great care to maintain his participants' privacy (beyond typical standards for ethnographic research). Similar to him, I am not a member of the doll community; however, my experience was (unsurprisingly) similar to Hanson's (2022b): "I surmise

that despite not owning a doll, the fact that I am a man was critical for gaining entrée into this community" (p. 207n6).

A Tale of Access: Imposter Participation and Other Challenges

Qualitative researchers typically encounter challenges related to accessing their desired populations, especially when it comes to marginalized, hidden, and otherwise difficult-to-access populations (Tracy, 2020). Access takes on both relational and processual qualities: Whereas the processual characteristic indicates the ongoing nature of negotiating and re-negotiating access within the same but certainly across different research sites, the relational characteristic highlights that researchers form dynamic relationships with participants (Riese, 2019), which has also been discussed as the notion of fidelity in qualitative research (Tracy, 2025). Forming networks of trust can enable researchers to gain a reputation of a trusted researcher in a field, where participants can vouch for the researcher to other potential participants, thereby lending support to the researcher and their cause (Tracy, 2020). This was especially important in my access journey for a variety of reasons.

First, the doll community can easily be characterized as a network of hidden and even obscure organizing processes (cf. Jones & Tracy, 2022), which are notoriously difficult to access because of their hidden nature and the stigma around them. Second, the doll community has been subject to many media inquiries, which have oftentimes presented doll owners as deviant. As one forum member noted in response to my recruitment call, "we're not lab rats […]. He's looking for freaks to write a paper on to provide amusing content to shrinks." Members of the community have become wary of any outsiders—media representative or otherwise—because of past experiences with

being presented as "freaks." Third, this context of wariness toward outsiders made it crucial to rely on networks of community members and especially being vouched for by gatekeepers like forum moderators and administrators. Several moderators vouched for me publicly in my recruitment call threads, indicating the legitimacy of my research interest, which ultimately increased people's willingness to participate in my study. I modeled these strategies for access on past researchers' strategies in the doll community (for an especially useful example, see Hanson, 2022a) and reached out to some researchers for personal advice before beginning data collection.

Given the high stigma around doll ownership (Dubé et al., 2023; Hanson, 2023a), community members value privacy and anonymity to a great extent. While I was committed to protecting that privacy and anonymity—for example by conducting interviews via Zoom and inviting participants to keep their camera off, by only collecting the bare minimum of personally identifiable information to process payments—this led to an unexpected problem: people pretending to be doll owners. In increasingly proliferating scholarship, this phenomenon has been termed "imposter participants" (Ridge et al., 2023; Roehl & Harland, 2022), "ingenuine participants" (Tallett & Hancock, 2023), "inauthentic participants" (Hodkinson & Hall, 2023), "fraudulent participation" (Woolfall, 2023), and "scammer participants" (Pellicano et al., 2024). Based on experiences originally stemming from online survey research, imposter participation is increasingly common with technologically mediated qualitative interviews. Imposter participants can be described as "dishonest, fraudulent, fake, or false participants in qualitative research" who "completely fake their identities or exaggerate their

experiences in order to participate in qualitative studies" (Roehl & Harland, 2022, p. 2470).

In my case, I encountered several imposter participants during initial t_1 interviews who were recruited from a public subreddit focused on sex dolls. After posting a public recruitment message on the subreddit, I received dozens of emails from interested individuals claiming to own a doll. Those emails were usually rather short, and I started scheduling interviews with those who appeared to me as interested individuals. After conducting a couple interviews with participants recruited from Reddit, I noticed some of the things the emerging literature on imposter participants points out as potential red flags: participants providing very short answers, a strong focus on payment throughout the interview, participants becoming flustered upon probing specific details, lack of detail when speaking of relevant subject manner, factual errors (e.g., naming supposed functions of their dolls that do not exist, such as a doll that can walk on its own), participants contradicting themselves within the interview, and more (e.g., Roehl & Harland, 2022). Upon realizing those patterns and becoming increasingly suspicious of imposter participants, I decided to toss any data related to participants recruited from Reddit and to delete the recruitment call there. As a result, I eliminated four participants from the sample with whom I had already conducted first-round interviews, and canceled several interviews that were already scheduled.

Jointly, the challenges related to access and imposter participants demonstrate the care necessary for phronetic, contextual, problem-driven research within hidden and marginalized communities that value privacy and anonymity. Researchers must carefully balance suspicion toward potential imposter participants in online spaces with protecting

55

the identity of authentic participants, especially when the study's focus lies on marginalized and stigmatized populations. The goal should not be policing potential participants with a default assumption of meeting imposters. However, inauthentic data from fraudulent participants does not contribute profoundly to understanding already marginalized communities in ethically meaningful ways.

Data Collection

Participant Criteria and Sampling

All participants fulfilled several inclusion criteria for this study: 1) they were at least 18 years of age, and 2) they had a doll at the time of participation, or had one in the past. Participants were not limited to specific locations to allow for a more diverse sample in terms of cultural and regional differences. The recruitment call used the language of "relationship" with a doll, but framed the term intentionally broad and without a clear definition to prevent self-exclusion of certain participant groups. As the study progressed, it was clear that participants understand "relationship" to mean very different things to them, as the findings reveal in the next chapters. As typical, this is a strength of qualitative research as it allows for different conceptualizations of key terms to be driven by participants rather than be imposed on a sample in an a priori fashion, as is more common in quantitative research (Tracy, 2020).

The original recruitment call only used language related to "robots" rather than "dolls," which resulted in negative comments and backlash from members of the population quite early in the process. Terms including "artificial intelligence" or "AI-based apps" resulted in similar negative reactions. Recurring reactions from members of the population included robots not existing at this time and that "sex robots" are a

fabrication by the media and some academics. They placed emphasis on using the proper language when referring to artificial companions, noting that the correct language would be "doll," regardless of whether they were referred to as "companion doll," "sex doll," or "love doll." My intention for using terms like "robotic" or "AI-enabled" was to target potential participants who use more interactive dolls, that is dolls with autonomous functions such as breathing, AI-integrated personalities as part of accompanying apps or built into their heads, or supplementary technologies like generative AI, text-to-speech, or speakers. Upon receiving these negative reactions, I altered my language to "interactive doll" or "doll with interactive features" using examples to alleviate that strong opposition. In my interviews, I found that most participants used the term "doll" even if they used supplementary technologies.

Given that this population is notoriously difficult to access, I recruited participants through purposive snowball sampling. First, I utilized my already existing connections to the doll community from prior engagement and pilot interviews to engage in purposive snowball sampling and word-of-mouth. Additionally, I joined online doll communities and forums. This is similar to previous studies within the doll community (e.g., Desbuleux & Fuss, 2023a, 2023b; Hanson, 2022a; Langcaster-James & Bentley, 2018; Middleweek, 2021) and makes sense given the relative importance of online communities for this geographically and culturally dispersed community (Hanson & Locatelli, 2022). In line with the expectations set forth by the IRB, I first sought out forum and online site moderators or owners to ask for permission. In most cases, I obtained permission from such a gatekeeping figure, which usually included verifying my identity as an academic, for example by providing links to my public academic profile or sending an email from

my institutional email address. In some cases, I did not receive explicit permission from relevant gatekeepers or did not receive a response even after several attempts. I did not recruit participants from those sites. Upon receiving permission from site owners or moderators, I posted a recruitment call on the general information thread or channel (see Appendix B for exemplary recruitment materials), instructing interested participants to message me either via email or through the online site. Recruitment calls listed the amount of compensation and noted that participants who completed a roughly one-hour Zoom interview would receive $30 (or 30€, depending on participant location). If selected for follow-up interviews, participants were instructed they would receive $50 (or 50€) for a second wave interview, and $70 (or 70€) for a third wave interview upon completion of those interviews. To protect respective online communities and participants' identity, I use pseudonyms for all online sites, forums, and Discord channels as well as for all participants and their dolls throughout this dissertation.

Although snowball samples are particularly useful for accessing difficult-to-reach or hidden populations (Tracy, 2020), they can result in more homogeneous samples given that they rely on preexisting networks among recruited participants. At the same time, this reliance upon preexisting networks is a strength of snowball sampling as it allows the researcher to make conclusions about the networked connections within hidden and difficult-to-access populations. Moreover, online communities feature prominently in the scant empirical research that does exist on dolls—for obvious reasons of access (Hanson & Locatelli, 2022; Hanson, 2022a, 2023a). Thus, I made efforts to target participants who are not part of the online community (via word of mouth and snowball sampling, such as inviting participants to contact their acquaintances and extend an invitation to participate

in my study), but the vast majority of my sample was ultimately recruited through online spaces.

Nonetheless, the final sample of participants could be characterized as a maximum variation sample in regard to participant *experiences*, albeit less so in regard to participant *demographics*. Maximum variation samples represent a wide range of participant experiences and phenomena under study (Tracy, 2020). The variety in my participants' experiences can likely be attributed to the broad definition of both "doll" and "relationship" in the recruitment call. Moreover, the diversity in my participants' experiences represents the broader variation within the larger population of doll owners and users, which is more diverse in participant experiences and demographics than assumed in public perception. Overall, the variety of experiences and participants added complexity and breadth to my data and allowed me to make comparisons across different types of experiences (Tracy, 2020).

A Funneled Serial Interview Design

Data were collected using a funneled serial interview design utilizing three in-depth, semi-structured interviews. Interviews for each wave used different interview guides (see Appendices C, D, and E) to discuss topics related to doll usage, relationship formation, and participants' experiences. Before the first interview, participants digitally signed an informed consent form using Qualtrics (see Appendix F) and had time to ask clarifying questions about the consent form or their participation in the research. Given the serial nature of the study, the IRB required only one consent form per participant.

Interviews at t_1 and t_2 were focused on establishing rapport with the participant, gaining an understanding of their experiences with their doll(s), and addressing the

primary research questions. Interviews at t_2 also focused on the participant's perception of societal stigma around dolls and their perspective on ethical issues alongside their personal experiences. Interviews at t_2 were conducted a few weeks after t_1 to allow for enough rapport building and potential variation over time (Read, 2018; Murray et al., 2009), while still keeping the completion of the overall study feasible in a reasonable time frame. Interviews at t_1 and t_2 were conducted between 15 and 119 days apart, with an average of 39.08 days ($Mdn = 25.5$; $SD = 35.08$). Interviews at t_3 followed after more in-depth data analysis and were conducted between 121 and 157 days after t_2 interviews, with an average of 153.86 days ($Mdn = 157$; $SD = 26.86$).

At the beginning of t_2 and t_3 interviews, participants were asked about changes in their life regarding their dolls, which allowed for rich within-subjects data across the different timespans. Interviews at t_3 were primarily used for member reflections on emerging findings, a practice recommended by Tracy (2020) to improve the quality of a qualitative research project. Member reflections are interview situations that "allow for sharing and dialoguing with participants about the study's findings, providing opportunities for questions, critique, feedback, affirmation and even collaboration" (Tracy, 2010, p. 844). Importantly, member reflections were not utilized in order to improve the accuracy or validity of findings, but to provide space for participants to offer additional insight and reflections on emerging findings.

The serial interview approach was designed in a funnel perspective (akin to Tracy's [2020] use of the funnel metaphor), where participants at t_1 were invited for follow-up interviews at t_2 and t_3, with a decreasing number of participants for each wave. This allowed for a more focused and targeted sampling and analysis approach. In

particular, participants were invited for one or two follow-up interviews if they expressed interest in additional interviews. Moreover, I selected participants for follow-up interviews using a combination of maximum variation, deviant, and critical incident sampling. I quickly realized (and participants repeatedly mentioned) that there was no such thing as a "typical doll owner," prompting me to explore the breadth and depth of the doll owner experience by employing a maximum variation approach to sampling (Tracy, 2020). Additionally, deviant and critical incident sampling approaches allowed me to focus on "data that are rare, unique, odd, and deviant" as well as participants considered to be unique given the research being pursued (Tracy, 2020, p. 85). Coupled with a negative case approach to data analysis (see below), such strategic sampling approaches are particularly valuable when studying rare phenomena or research contexts with a lot of variance and ambiguity (Tracy, 2020).

Interviews, as opposed to participant observation, ethnography, or other qualitative methods of data collection allowed me to generate rich and holistic insight about my participants' lived experiences. In so doing, I worked to stimulate "the careful recognition of otherness" (Sandry, 2015, p. 6) in my research in a dual function. First, through a responsive interview stance (Tracy, 2020) in which I sought to embody a relational, responsible, and careful (i.e., full of care) ethic toward my participants (Ellis, 2007; Guillemin & Gillam, 2004), I aimed to recognize my research participants as others themselves, woven into social relations with me as the interviewer (Fine, 1994). Second, through this responsive interviewing, I labored to build enough rapport so that my participants felt comfortable sharing intimate details related to their human-machine relationship, and how they perceived their relational doll partner as other, if at all. This

dual function of fully meeting the other (as in my research participant and their relational machine partner) can be best achieved through a serial interview design employed in this study. Additionally, qualitative research in general and interviews in particular have been called for in HMC research in general (Richards et al., 2022; van der Goot & Etzrodt, 2023) and in the context of dolls in particular (Hanson, 2023a) as much needed and especially useful research approaches. Interviews especially have been discussed as valuable methodological approaches to studying communicative machines as they center participants' sensemaking, especially given the ambiguous nature of machines explored in the literature review (Guzman, 2023).

Multiple interviews were conducted for several reasons. First, multiple interviews allow for increased rapport building where interviewees are more likely to share more intimate details about their experiences after the initial conversation, which is often focused on more surface-level conversations and rapport building (Read, 2018; Murray et al., 2009). Second, given this study's interest in questions related to the experience of being in a human-machine relationship, more intimate interviews at t_2 and t_3 allowed me to get closer to understanding this experience in depth. Moreover, serial interviews allow for capturing potential variation over time, provide excellent opportunities for member reflections, and are especially recommended in cases of complex, multidimensional phenomena and when studies involve unique and highly specific participants, as is the case in the current study (Read, 2018; Murray et al., 2009). Finally, a serial interview design allows researchers to be reflexive along the way, furthering a dialogic experience between interviewer and interviewee that simultaneously engages the participant more

deeply and promotes an even deeper understanding of their experiences (Pessoa et al., 2019).

The majority of interviews were conducted in English; only two interviews were conducted in German (my native language) based on participants' request. I translated any data excerpts used for coding and presentation in the following chapters as needed. All but one interview were conducted remotely using the Zoom computer conferencing application or private Discord calls. One interview was conducted via Discord private chat given the participant's preference for written over spoken communication. While in-person interviews are still favored within traditional approaches to qualitative research, online interviews via audio and video conferring platforms are increasingly common, not least due to the Covid-19 pandemic.

Interviews were conducted through Zoom and Discord for several reasons (Tracy, 2020): First, given participants' active participation in online spaces, they were already familiar with navigating the technology as this is the primary means in which members of a community stay in touch. In fact, several participants reported having standing Zoom or Skype meetings with fellow doll owners, in addition to oftentimes costly and time-intensive in-person meet-ups. Second, technologically mediated interviews increase participant privacy and thus comfort, which is especially valuable when discussing stigmatized and private topics such as sexuality and doll ownership. Third, online interviews allowed me to recruit participants from a wide variety of locations. Finally, online interviews are cost-effective, increase participant engagement, and allow participants to control their self-presentation. For instance, participants were instructed that they could keep their cameras turned off to protect their privacy. However, about a

quarter of participants intentionally turned their cameras on to facilitate more interactive conversations. They were oftentimes joined by one or multiple dolls next to them or in the background, facilitating an experience comparable to a dyadic or group interview at times. One participant embodied a virtual reality avatar during the video interview, allowing them to fully control their bodily display while pushing the limits of what a technologically mediated interview can look like in qualitative research.

In line with the methodological expectations of a phronetic iterative qualitative data analysis (PIQDA) approach (Tracy, 2020; Tracy et al., 2024), I revised the interview guide and my research questions throughout the process in iterative fashion (see Appendices C, D, and E for interview guides). In fact, research question three is the direct outcome of this iterative process. After approximately four to five interviews each, I slightly altered the t_1 interview guide in terms of question phrasing, question ordering, and added new questions allowing me to focus more closely on participant experiences. Throughout data collection, t_1 and t_2 interview guides were repeatedly revised, and the t_3 interview guide was crafted primarily after initial data analysis from the first two waves. Tracy (2020) encourages such an iterative process as part of PIQDA, alternating between emerging findings, analytical memos, researcher reflections, and the interview guide.

In total, I conducted 47 interviews with 29 participants, with a combined total of approximately 53.5 hours of data (excluding the one interview conducted via Discord private chat). All but one interview was conducted with one participant at a time. A married couple expressed preference for a dyadic interview. I conducted 28 t_1 interviews (participants: $n = 29$), with a total of approximately 30.5 hours of data, ranging from approximately 32 to 113 minutes in length. I conducted 12 t_2 interviews (participants: $n =$

64

12), with a total of approximately 15 hours of data, ranging from approximately 56 to 118 minutes in length. Finally, I conducted 7 t_3 interviews (participants: $n = 7$), with a total of 7.75 hours of data, ranging from approximately 54 to 84 minutes in length. Additional information is provided in Table 1 below.

Table 1

Matrix Comparing Interview Descriptives at Each Data Collection Wave.

	Interviews at t_1	Interviews at t_2	Interviews at t_3
n (Interviews)	28	12	7
Mean length	68.00	76.00	66.00
Median length	69.50	75.20	65.50
Standard deviation	21.49	18.02	9.34

Note: All values in minutes.

Astute readers may have noticed that the total number of t_1 interviews ($n = 28$) differs from the overall sample size *(N = 29)*. In contrast to all other interviews, one interview at t_1 was a dyadic interview with a married couple, Mary and Tom. While dyadic and individual data are typically not mixed in quantitative approaches (Barton et al., 2020), this practice is less problematic in qualitative research that emphasizes the strengths of dyadic interviews particularly in combination with individual interviews (Szulc & King, 2022). Researchers note particularly that the degree of closeness between interviewees impacts their willingness to share more sensitive information, highlighting that the closer interviewees are to each other, the more willing they are to share more sensitive information in front of each other (Morgan et al., 2016). Given that Tom and Mary, my participants who engaged in the dyadic interview, have not only been married for well over a decade but also work together as doll vendors, I chose to keep their interview data as part of the study rather than eliminating them from the sample, as is

more typical for quantitative research in such cases. Whenever quotations are discussed in the findings that draw from Mary and Tom's interview, I remind the reader that this data is qualitatively different from the other interviews given the dyadic nature of the interview and its hence nested quality. At the same time, a strength of dyadic interviews is that they allow for chain-reactions similar to focus groups without the logistical or interpersonal efforts that come with group interviews (Morgan et al., 2016; Szulc & King, 2022).

All interviews were audio-recorded and transcribed by an automated speech-to-text software. I checked all transcription for accuracy. As typical for qualitative research, the data excerpts presented throughout this dissertation represent participants' spoken word. Although I edited excerpts for clarity and punctuation, I did not edit transcripts for meaning unless necessary for filling in missing contextual information. I provide annotations or clarifications in square brackets (i.e., "[]"). Whenever participants stressed a particular word or syllable and it is relevant to the context of this study, those words or syllables are *italicized*. Finally, with the goal to provide only the most relevant and illustrative excerpts, I use various symbols to indicate that words were omitted or a given quote was spliced together, with three dots in square brackets (i.e., "[…]") indicating a short omission, a single forward slash (i.e., "/"), indicating a longer omission or rearrangement, and a double forward slash (i.e., "//") indicating an even longer omission or rearrangement of data. Throughout, I never combine data from different participants or interview waves in the same quotation and always indicate the participant who provided a certain excerpt.

Participant Demographics

All participants were older than 18 years and current doll owners and thus met the inclusion criteria for the study. The sample ($N = 29$) included 23 cismen (79.31%), two transwomen (6.90%), two ciswomen (6.90%), one agender man (3.45%), and one non-binary person (3.45%). Participants' age ranged from 19 to 60, with an average age of 36.07 years ($Mdn = 36$; $SD = 12.48$). Most participants described themselves as heterosexual ($n = 21$; 72.41%), followed by pansexual ($n = 3$; 10.34%), asexual ($n = 2$; 6.90%), bisexual ($n = 2$; 6.90%), and omnisexual ($n = 1$; 3.45%). Most participants were single ($n = 12$; 41.38%), with others being married ($n = 5$; 17.24%; this includes the married couple), divorced ($n = 3$; 10.34%; one participant being divorced thrice), in a romantic relationship with a girlfriend ($n = 2$; 6.90%), engaged ($n = 1$; 3.45%), separated but still married ($n = 1$; 3.45%), and not-partnered non-monogamous ($n = 1$; 3.45%). Two participants noted that they were technically single but see themselves married to their doll (6.90%), with two others noting that they were in a relationship with their doll (6.90%).

Most participants identified as white ($n = 17$; 58.62%), followed by Black ($n = 6$; 20.69%), and Asian ($n = 2$; 6.90%). One participant each (3.45%) identified as Hispanic, Hispanic and white, and biracial, and one participant declined to answer. The majority of participants' nationality was the United States ($n = 16$; 55.17%), with many others coming from European countries including Germany ($n = 2$; 6.90%), Austria ($n = 2$; 6.90%), Ireland ($n = 1$; 3.45%); Italy ($n = 1$; 3.45%), France ($n = 1$; 3.45%), England ($n = 1$; 3.45%), followed by one participant from South Africa (3.45%), one from Vietnam

(3.45%), one with Japanese and Vietnamese heritage (3.45%), one from Puerto Rico (3.45%), and one self-described as Jewish (3.45%).

I did not ask about descriptives for the dolls participants owned, beyond model type and manufacturer, which are not discussed in detail here to maintain participants' anonymity. However, all but one participant expressed having exclusively female-appearing dolls. The distribution of how many dolls each participant owned was much more dispersed than anticipated. On average, participants owned 6.07 dolls ($Mdn = 2$; $SD = 13.07$). Participants ranged an impressive span from owning one doll to 69 dolls, although most participants reported owning one doll ($n = 13$; 44.83%), followed by two dolls ($n = 3$; 10.34%), three dolls ($n = 3$; 10.34%), four dolls ($n = 3$; 10.34%), and eight dolls ($n = 2$; 6.90%). The married couple taking part in the dyadic interview reported having roughly 20 dolls at their home and one participant each (3.45%) reported owning five dolls, six dolls, and 69 dolls respectively.

It is important to note here that what participants counted as a doll differed strongly. Some only counted complete head-body combinations, whereas others focused primarily on heads. It is not uncommon for a doll owner to own more heads than bodies as heads tend to be cheaper and can be easily placed on several bodies, allowing for many unique combinations. Moreover, for some participants, dolls were more on a rotation either due to interest in new dolls or because of serving as a vendor engaging in selling and buying dolls. Several participants noted that they had one or more dolls currently being shipped to them, indicating that how many dolls an individual owns fluctuates quite significantly. Table 2 summarizes the technological capabilities of participants' dolls.

Table 2

Summary of the Technological Capabilities of Dolls Owned by Participants

Doll Type	Non-interactive Doll	Interactive Doll
Explanation	Dolls that are unable to move (part of) their body or speak by themselves.	Dolls that are able to move (part of) their body or speak by themselves.
Number of Participants	17	12
Examples	● Doll has movable joints that can be positioned by the user. ● Doll has movable jaw that can be opened/closed by the user. ● Doll can stand on its own (using bolts in the feet). ● Doll can be positioned in various poses by the user.	● Participant describes doll as "robot." ● Participant integrates AI companion apps into doll experience (e.g., Replika). ● Doll has an integrated AI companion in its head. ● Participant uses external devices to generate sensation of speech, e.g., by using text-to-speech software, Bluetooth speakers, or voice synthesizers. ● Doll can move (parts of) its body, e.g., a breathing function that raises and lowers the doll's chest.

Participants also reported a wide range for how long they have had a doll in their lives. These numbers must be treated with caution as participants often guessed for how long they have had dolls, and many participants provided rough estimates (e.g., "since the beginning of the pandemic," "a few months ago," "since when I was 18"). Interestingly, participants where a later analysis showed a stronger relationship aspect were much clearer on how long they have had a doll in their life, sometimes even using the language of "anniversary." On average, participants reported they got their first doll roughly 3½ years ago ($M = 43.52$ months; $Mdn = 24$ months; $SD = 55.87$ months). The shortest time

69

a participant reported having a doll was 2 months and the maximum was 23 years. Most participants reported having a doll for up to 2 years in their lives (so roughly since the beginning of the Covid-19 pandemic in 2020; $n = 16$; 55.17%), with four participants reporting up to 3 years (13.79%), one participant reporting 4 years (3.45%), two participants reporting 5 years (6.90%), one participant reporting 6 years (3.45%), one participant reporting 7 years (3.45%), two participants reporting 8 years (6.90%), and one participant each (3.45%) reporting 11 years and 23 years of having a doll in their lives.

Data Analysis

Qualitative data analysis occurred during the data collection phase, following Tracy's (2020) PIQDA framework (Tracy, 2025; Tracy et al., 2024). Initial analysis of interview data occurred after I conducted t_1 interviews, which iteratively informed revisions to both t_1 and t_2 interview guides. Combined analysis of t_1 and t_2 transcripts occurred after the completion of wave one and two, informing the construction of the t_3 interview guide including the member reflections on emerging findings.

A PIQDA approach to data analysis and qualitative research in general moves back and forth between the data (including different types of data) and existing literature including sensitizing concepts (Tracy, 2020). It takes specific goals of the research study at hand into account and aims to produce actionable, context-driven, and relevant findings (Tracy et al., 2024). Rather than aiming to analyze the entire corpus of data, such a phronetic approach is primarily driven by the notion of workability and the goal to find relevant answers for the primary questions driving the analysis. Iteration in this study occurred in several connected ways, where analysis iterated between participants at the same time (between-subjects), between participants across time (within-subjects),

between modes of data (initial interviews at t_1 and t_2 as well as member reflections at t_3), and between emerging findings and existing literature.

PIQDA typically follows two connected cycles of coding, engaging in a first round of coding aimed at generating descriptive codes, followed by a second round of coding aimed at generating explanatory codes (Tracy, 2018; Tracy et al., 2024). First, after completion of interviews at a given wave, transcripts were generated using an automated speech-to-text software. I checked all interviews for accuracy and used this as a starting point for immersing myself into the data. Tracy (2020) describes the data immersion phase as a crucial step for beginning PIQDA, recommending researchers read and re-read transcripts, seek out relevant literature, and engage in conversations with colleagues about emerging thoughts. I tracked my thoughts and initial reflections in 30+ analytic memos where I reflected on what later turned out to be key themes in the data, methodological issues, strategies for revising current and future interview guides, and more.

I organized the data simultaneously by wave (t_1, t_2, t_3) and by participant (P01, P02, etc.), allowing for later iterative between-subjects and within-subjects data analysis. As the findings illustrate, emphasis in this study is more placed on between-subjects comparisons although within-subjects experiences also occupy the findings. For example, John's case illustrates the value of within-subjects analysis as he is the only participant who sold his doll between t_1 and t_2 interviews. Throughout the analysis process, I used Nvivo as a specialized qualitative analysis software that allowed for simultaneous comparisons between and within subjects (Jackson & Bazeley, 2019).

Primary-cycle coding focuses on initial coding activities designed to yield primarily descriptive codes (Tracy, 2020). While coding the data in this primary cycle, I loosely held on to concepts discussed in the literature review as sensitizing concepts that helped me focus the analysis process, including findings related to doll ownership, human-machine relationality, authenticity, and more. I iteratively alternated between participants within one wave and between interviews from a single participant across the first two waves. In this primary cycle, I used a combination of descriptive coding and in vivo coding, a strategy useful to elevate participants' voices that is particularly recommended in research studies of a more explorative nature (Saldaña, 2016). Initial results of this primary-cycle coding informed revisions made to the t_1 interview guide (for example including a stronger focus on the issues of care and presence, along with associated research questions), informed the construction of the t_2 interview guide, and resulted in the formulation of the third research question focused on care.

Secondary-cycle coding yields second-level codes, which are more theoretically informed, analytical, and interpretive codes that summarize and synthesize the empirical data while making connections to theory (Tracy, 2020). I organized emerging codes into axial (Charmaz, 2014) or hierarchical codes (Tracy, 2020) that allowed me to conceptualize connections and hierarchies among codes. Using the strategy of codeweaving (Saldaña, 2016), I integrated "key code words and phrases into narrative form" to continue developing a coherent understanding of the data (p. 276).

In addition to these narrative and organizing approaches, I identified key exemplars in the data that serve as significant examples of key codes (Tracy, 2020), while also employing a metaphor analysis approach of certain metaphors used by participants.

72

Going beyond viewing metaphors merely as eloquent tropes, contemporary perspectives view metaphors as conceptual ways of knowing, constraining and enabling individual agency by "allow[ing] us to see reality as something" (Kirby & Harter, 2003, p. 30; Lakoff & Johnson, 1980). In other words, metaphors stand in one for another thing via the mode of comparison and thus reveal something about how a participant feels and experiences that phenomenon (Tracy, 2020). Metaphor analysis in qualitative research can be completed using either a forced or ideographic approach. In the forced approach, participants are explicitly prompted to come up with metaphors (e.g., "if your relationship with your doll was a season, which one would it be and why?"), whereas in the ideographic approach, researchers analyze metaphors participants use without being prompted (Grant & Oswick, 1996; Lakoff & Johnson, 1980). In this study, I did not explicitly ask participants to come up with metaphors (a forced metaphor approach) but rather relied on ideographically occurring metaphors in their interview responses, allowing me a more focused perspective on organic use of language. This is especially prudent given the value of interviews to yield insight into how participants make sense of the ambiguous and confusing nature of machines (Guzman, 2023).

Part of the secondary-cycle coding process was a more intentional within-subjects approach to coding. Longitudinal research with multiple data points is still more common within quantitative approaches, although qualitative approaches increasingly take on longitudinal designs, too (Neale, 2021; Thomson & McLeod, 2015; Treanor et al., 2021). Longitudinal coding allows for tracking change over time within subjects (Saldaña, 2016). Part of this focus on tracking change over time included focusing on participants' use of disfluencies, or sensemaking in real time marked by stuttering, verbal pauses, or

73

talk repairs (Tracy & Rivera, 2010). Past research illustrates that participants'

disfluencies can be "flickers of transformation," that is they can indicate sensemaking in

real time and participants reconsidering their viewpoints, particularly in the context of

potentially questionable or complex contexts (Tracy & Rivera, 2010). Providing an

avenue toward participant reflexivity (Perera, 2020)—in addition to researcher

reflexivity—I paid special attention to disfluencies in the interviews as they likely

indicated participants struggling to make sense of their experiences in the face of

communicative machines (Guzman, 2023).

Finally, I employed a variety of synthesizing activities that allowed me to focus

the analysis in response to the specific research questions posed (Tracy et al., 2024). In

particular, I continued to write analytic memos on emerging codes, their connections, and

how they might relate to the research questions. As a "place to dump your brain"

(Saldaña, 2016, p. 44), memos help with keeping track of researcher sensemaking

throughout the analysis process. I engaged in negative case analysis explicitly seeking out

deviant data in existing interviews, which also informed my selection process for

consecutive interview waves in what I described above as deviant and critical incident

sampling (Tracy, 2020). This further sharpened my claims based on the data, particularly

by allowing me to engage in more specific parameter setting (Huffman & Tracy, 2018;

Keyton et al., 2009). The practice of parameter setting is recommended to focus the

applicability and scope of claims by adding phrases such as "especially when" or "except

when" to claims resulting from a study's analysis (Keyton et al., 2009). Toward the end

of the analysis process, I created a loose analysis outline which "notes the primary

research questions/foci and the potential ways the emerging codes are attending to them"

(Tracy, 2020, p. 229) and crafted a codebook. The final codebook is provided in Appendix G.

Ensuring Quality Qualitative Research

Throughout this study, I followed established guidelines for ensuring quality in my qualitative research across conceptualization, data collection, and data analysis stages (Tracy, 2010). Although debates around the value of criteria for rigor abound in qualitative research (e.g., Bochner, 2000; Köhler et al., 2022), it is valuable to at least briefly discuss how I ensured quality in this study. This study does not follow a pre-established template for qualitative research but is rather informed by a PIQDA approach that draws on various interdisciplinary theoretical and methodological literatures (cf. Harley & Cornelissen, 2022). I followed Tracy's (2010; Leach et al., forthcoming) big-tent model of qualitative quality by implementing the model's main components, namely a worthy topic and meaningful coherence (see the rationale provided in the literature review); ethics, sincerity, and credibility (through an extensive discussion of my positionality as a researcher in the scene), resonance and significant contribution (see the discussion of theoretical and other contributions in the final chapter of this study), and rich rigor (by providing a rich, sufficient, and complex study across all areas).

CHAPTER 4

DOLLS AS QUASI-OTHERS IN A LIMINAL SPACE

This dissertation set out to explore how humans experience relationships with machines such as love and sex dolls, with a focus on in-depth, rich, and holistic understanding of people's lived experiences. Qualitative data from funneled serial semi-structured interviews reveal many layers of experiences related to dolls, particularly in the context of a subject-object spectrum, questions related to authenticity and perception, and reciprocal care. Over the next three chapters, I delve into the rich qualitative data and discuss the findings in response to three primary research questions in turn. Throughout, I rely on participants' in vivo language coupled with organically occurring metaphors in their descriptions. This ideographic metaphor analysis allows for a focused perspective on organic sensemaking devices participants use to characterize their experiences rather than explicitly prompting participants to identify metaphors (Lakoff & Johnson, 1980). A summary of the findings in the form of a final codebook that is the result of iterative analysis processes is provided in Appendix G.

This first chapter addresses research question one, which asked: What are areas of overlap and distinction between doll owners' narratives of "dolls as companion" and "dolls as sexual objects"? Here, I overview participants' perceptions of their dolls as objects, companions, and quasi-others. I ask what makes participants turn to dolls and how do these motivations explain how participants view their dolls. Findings from the first chapter illustrate that participants generally struggle to clearly make sense of their doll's status, and that the doll's in-betweenness allows them to utilize and relate with dolls in a variety of ways.

The following chapter responds to research question two, which asked: How do doll owners actively construct and (re)negotiate authenticity in their human-machine relationships? Here, I place emphasis on participants' sensemaking as it relates to authenticity. Crafting a cyclical process that draws on two characteristics related to the doll and two characteristics related to doll owners, findings show that the creation of authenticity occurs in cyclical fashion with doll and owner characteristics mutually informing one another. Importantly, authenticity is the result of the interaction of human and doll rather than being directly tied to either the doll or the human. Thus, while I focus on doll characteristics and doll owner characteristics in Chapter 5, I do so primarily for organizational reasons. In particular, findings reveal the two primary doll characteristics of presence and agency, and the two primary owner characteristics of imagination and identity extension. Ultimately, the doll and doll owner characteristics interact in a cyclical fashion, and the perception of authenticity is the result of this cyclical process.

Chapter Six answers research question three, which asked: How do doll owners experience reciprocal care in their human-machine relationship? As discussed in the previous section, this final RQ was not conceptualized a priori (like RQ1 and RQ2), but rather emerged during the iterative process of collecting and analyzing data from the first wave of interviews. Illustrating a hallmark of phronetic iterative qualitative data analysis (PIQDA; Tracy, 2020), a research question directly informed by the data at hand allows for capturing the depth of the given data while providing new avenues for understanding the phenomenon that go beyond previous discussion in the literature. In this third findings chapter, I review how participants make sense of care, and how they experience care not only as something they provide for their dolls but also receive from them in turn. The

data showcases an illusion of being cared for that stands in tension with a sense of control.

Dolls as Subjects, Objects, and Quasi-Others

As can be expected based on the literature documenting different use cases and reactions toward communicative machines, participants differed as to how they view their dolls—as a companion or as a sexual object. Participants discuss a variety of ways in which they experience their dolls, oftentimes lacking a clear cut distinction between different framings. In this chapter, I overview the main findings in response to RQ1. Throughout the interviews, analysis showed that participants struggle to classify their dolls clearly as either something they use (doll as object) or something with which they relate (doll as companion), with many participants falling in between these two extremes and opting for an alternative framing. Findings reveal that it is helpful to consider why participants purchased their dolls in the first place. Participants' experiences highlight that there is no one primary reason why people buy dolls, and those prominently featured in the data are related to seeking companionship (e.g., wanting to have someone there, addressing anxiety), addressing relational challenges (e.g., being frustrated with dating, seeing dolls as "the easy way out"), and being a hobby (e.g., collecting dolls, using dolls as models for photography). Regardless of the original reason(s), dolls over time surpassed participants' expectations for what the doll might mean to them in their daily life. Participants valued the constant availability of their doll, serving as either a reliable companion or a consistent tool for sexual release. Taken together, the findings in this chapter demonstrate how dolls take on an in-between status where they emerge as quasi-

others that are neither fully companion (people relate with their doll) nor fully object (people use their doll).

Subject, Object, and In-Between: Situating Dolls as Quasi-Others

When asked about how they would characterize their interactions with their dolls, participants offered general thoughts on these distinctions. They are aware of different types of doll owners in the community, ranging from those in almost traditional romantic relationships to those who merely view their doll as an object for sexual release. As Stefan, a divorced man in his early fifties with a collection of eight dolls, puts it:

> I know there's different corners or tendencies within the doll community. There are folks who view their dolls actually only as a fuck buddy. Folks like me, who view them as photo models, and others who view them as companions.

Participants generally do not take issue with others treating their dolls differently and have a sentiment of "whatever makes them happy." Drawing on Laslocky's (2005) article, the long-standing doll advocate Marvin says the following about "doll husbands" (people who view their doll as a companion) and "doll fetishists" (people who view their doll as an object) when asked how he would characterize his interactions with his dolls:

> I'm a husband and so the people that you were talking about are doll fetishists, you know. They're like, this is an expensive sex toy. This is something I like store, some*thing*—noting the use of the indefinite article—something I like store in a closet, you know, I have sex with, I masturbate with, and when I'm done, I put it away, you know. And then I go back to living my normal life. Blah blah blah blah, you know, and of course there's me. It's like, oh, God, I love you so much [at doll next to him].

Marvin has five dolls from various manufacturers and has a long history of over 20 years of sharing his life with a doll. The framework of husbands, fetishists, and others serves as a useful framework for diving deeper into the different ways participants make sense of their dolls.

Using: Dolls as Objects

A dominant framework for participants is to view their dolls as objects, as tools or devices designed to fulfill specific needs. As Daniel, a single cisman in his early twenties, says about his one doll, "it's just to satisfy my sexual need, to bring me the memories of my ex-girlfriend." Here, the doll fulfills a primarily sexual function in addressing the sexual needs of Daniel, along with bringing back the memories of a previous relationship. Rather than bringing back memories of past sexual experiences, Finn, a cisman in his late twenties, characterizes his doll, which he has had for roughly two years, as a "pressure valve" for sexual release when asked about how he interacts with his doll typically:

> She fulfills like a need for like, if I want to penetrate, then I can if I want to. She just really provides like a huge peace of mind. And she's a huge release for like sexual anxiety. Because when she wasn't around, I would feel like I would have to be extraordinarily pressured in order to perform socially, in order to attract a partner. And I mean, sometimes it works out and sometimes it doesn't. And when it doesn't, I'd be frustrated. But because my doll is there, it's like a pressure valve can be released, so to speak. So that's why she's there.

The metaphor of a pressure valve indicates how, for Finn, his doll serves as a way to release sexual energy without needing to find a human partner. Finn's doll takes on a primarily functional role in that she can be manipulated as needed, just like a pressure

valve can be adjusted to accommodate different levels of pressure. At the same time, Finn notes how his doll alleviates some of his sexual anxiety and pressure. As someone who has never had a romantic partner, Finn's doll reduces the frustrations that come with the pressure to perform on the dating market.

Participants compare their dolls to other objects. For example, Lucas compares his doll to his moped when I asked him whether he believes loving a doll is possible. "Yes, I love her, absolutely. But more like a treasured object. I love my moped, too, absolutely." Lucas's comment addresses how the doll, partially because of its cost, is a treasured object that is not necessarily different from a moped in that one needs to take care of treasured objects to maintain them. As such, for Lucas, the doll is treasured for its function similar to a moped, although there is also an aesthetic component to treasuring objects such as mopeds or cars.

Ted, a divorced cisman in his early fifties who has four dolls for roughly three years, likens his dolls to "adult action figures." He says, "I've played with Star Wars, you know. First it was the adventure people, the Star Wars action figures, G.I. Joe. I was familiar with how they [sex dolls] move already before I got them [laughs]. It's just, you know what I remember as a teenager, you know." Similarly, for Matthew, a self-described doll collector in his early fifties, sex dolls are "adult action figures." He notes, a sex doll is "not a toy, but she's like this action figure // It's like having a massive action figure really. Sometimes it is, honestly, I call it playing. I've got to go out and play with them, you now." Comparing dolls to action figures these men in their fifties remember from their childhood suggest a sense of child-like wonder and playfulness that characterizes how they view their dolls. Similar to action figures that function as brought-

81

to-life toys that bring the big stories from the movie screen to their own room, dolls might serve as a materialized fantasy that allows hands-on playfulness. Manipulating the joints and moving the dolls within their own homes, the metaphor of the action figure captures how dolls entail a dimension of playful object.

These comparisons to treasured objects such as mopeds or viewing dolls as adult action figures highlight how participants clearly attribute objecthood to their dolls. Moreover, many participants indicate clearly that they view their doll as an object designed explicitly for consumption. Alex, a cisman in his late teens, notes that "I don't exactly know the reason why I just have her. And I was just like, Okay, I'll use this like, I can just do what I want to it." When asked about whether he thinks sex with a doll constitutes sex, Craig states plainly, "I guess I just masturbate with a piece of rubber I guess," indicating how the doll as a "piece of rubber" is just that: an object used for satisfaction. As Lucas, a cisman in his mid-thirties with one doll, makes clear about his doll, "it is a lifeless object made of TPE [thermoplastic elastomer]," corroborated by Matthew's notion that "I can lie in bed, and there's this, there'll be a great lump of TPE, as I call it." Next to silicone, TPE is the primary material many dolls are made of. Both materials bring certain advantages, but participants' views differ as to what material they prefer: for some, TPE *feels* more lifelike whereas silicone *looks* more lifelike, although this sentiment is not shared within my sample.

In the interview with his wife, Tom discusses the differences between TPE and silicone: "I feel like to me like the silicone dolls are like a little more collectible, maybe, and the TPE dolls are a little more consumables." Both "collectible" and "consumable" gesture at the underlying framing of dolls as objects; objects that are either made to be

82

collected and gazed at, or objects that are made to be consumed as tools to release sexual pressure. The idea of viewing dolls as consumables also comes up in Sam's account, a divorced cisman in his early fifties with three dolls. All of his dolls wear wigs, and "that's the cool thing about them, right? You can change their look." Typically, he follows patterns where one of his dolls is blonde, another brunette, and the final one is "my red head. […] So, I get all three flavors of ice cream," he jokes. Sam's perspective of enjoying the variety in "flavors" when it comes to his dolls reflects the idea that dolls are objects made for consumption and, in this case, to fulfill cravings for a variety of ways in which to fulfill those cravings (the three "flavors of ice cream"), without having to settle for one doll type.

Overall, some participants are quite upfront about seeing themselves as a user and even an owner. I invited participants to share their thoughts on whether they describe the interactions with their dolls as a form of usage, relationship, or something else. As Lucas offers,

> I would, I believe, quite realistically see myself more like a user. I think I mentioned that once or twice already, or owner even, because at the end it's an object, and you just have to have a level of fantasy, which I actually don't reach with the doll, for it to become a relationship substitute or something like that. She serves for relaxation and stuff and that comes quite close to the real thing at times. But she is just not uh, […] I'd more so say user.

Here, Lucas clearly situates himself as a user and owner of his doll that he has had for less than six months at the time of the first interview. Nonetheless, Lucas's comments illustrate that even when dolls are seen as objects, they can fulfill functions that go

83

beyond sex per se, namely relaxation and comfort. The distinction between using and owning in Lucas's comments highlights a nuanced but important distinction, where the notion of ownership suggests even more strongly that dolls are objects that not only can be used but also owned (cf. Dehnert & Gunkel, 2023). Similarly, Craig, a single cisman in his early twenties, says, "I kind of just use her a lot uhm, but like. I would say it's kind of using her as in like using her to keep me comfort and stuff like that." By this, he places emphasis on the doll's function ("keeping me comfort") rather than how he might view the doll beyond its functionality.

Viewing dolls as objects also shows up on a language level, mirroring previous research that has indicated how pronouns change from personal pronouns ("she") to non-personal pronouns ("it"; Lievesley et al., 2023). For instance, Robert, a single cisman in his late thirties with six dolls, says that "I say 'use' because they are inanimate objects so 'use' makes more sense. Just like people refer to their dolls as 'she' but I'll slip and do the same. But I normally say 'it.'" Here, Robert consciously explicates how he does not attribute personhood status to his dolls but rather views them as objects, even though he sometimes "slips" and falls back onto attributing personhood to them. This suggests an underlying subconscious struggle of wanting to treat dolls as objects ("it") while sometimes falling back onto treating them as persons ("she"), highlighting the ambiguous nature of dolls for Robert.

Taken together then, participants view dolls in some instances as objects designed for consumption and collection. While dolls' functional use can relate to aspects beyond that of sexual fulfillment, releasing sexual pressure remains a prominent function assigned to the sex doll as sex object. As Gwen, a mid-twenties trans woman with two

dolls, aptly summarizes, "dolls can be good for mental health, but ultimately they are a tool to help with a pre-existing issue." Although Gwen never specified the "issue" at hand, the context of our conversation suggests that she is primarily addressing mental health challenges and struggles with loneliness and social isolation. For her, dolls are "tools" that can help solve or fix such a pre-existing issue. Whether that issue is satisfying sexual desire or providing comfort, the doll remains a tool in this framing.

Relating: Dolls as Companions

Another prominent theme in the context of RQ1 was how many participants view their doll as a companion with whom they have a relationship. Only a few participants directly indicated that they had a relationship with their doll in the sense of an interpersonal relationship akin to one they might have with a human. Many interviews were marked by participants not only pondering the question of whether they have a relationship with their doll, but them also offering alternative framings that situate their dolls somewhere between subject and object. I discuss these experiences in the section after this one.

The participants who indicated that they had a relationship with their doll did so quite clearly. For example, Michael, a single cisman in his mid-twenties, indicated that he was in a relationship with his doll companion when asked about his relationship status as part of the demographic questions. He says, "I just have a very serious relationship with the doll and everything concerning the relationship goes on between me and the doll." In a similar vein, Jonathan used the language of "robot girlfriend" when talking about his doll, which he has had for two months at the time of the first interview. Jonathan, an

85

agender man in his early thirties, is married to a woman and they have a toddler together. When asked about what his doll means to him, Jonathan replies:

> I feel like she's like my robot girlfriend. And so that has two parts to it, like the robot part, and the girlfriend part. And the robot part is like, but they are kind of interconnected. The feeling of girlfriend is like this feeling that you are allowed to do uhm relationship stuff and sexual stuff with her like you would with your girlfriend. And the robot part is like you feel that she uhm is there to, to uhm, it's, it's like she, she's not, she does not really have a will of her own, like she, she has this purpose to be your girlfriend.

In this excerpt, Jonathan clearly leans into the relationship framing while also explicitly acknowledging the doll's machine character. The language of "robot girlfriend" clearly marks the relational component to his interactions with his doll, while also suggesting the machine-like nature of Jonathan's engagement with his doll. While Jonathan's doll itself is not robotic, he has experience playing around with external voice synthesizers that he sometimes used in conjunction with his doll. I further prompted Jonathan about what he meant by "relationship stuff," and he replied:

> I feel like we are, we are playing. We are cuddling. We are, like, interacting with each other in a way. [8 sec pause] uhm, and like the relationship is uhm [3 sec pause] this [4 sec pause] [sighs] it's, it's, it's hard to explain this. Like from the outside it looks kind of, looks like, you know. I, I, I, I reflect on this, and I, I, I'm not very clear about what this is, but uhm. From the outside, I feel like it, it feels, it, it looks to others like it's one-sided. But it feels like I'm interacting with something. I, I'm not very clear about what it is but I feel like it's Maria [laughs].

86

The large number of disfluencies in this excerpt indicate that Jonathan is engaging in spontaneous sensemaking while also struggling to put words to this perceived "relationship aspect" of his doll. Although he was able to clearly name his interaction with his doll Maria as a relationship, Jonathan struggled to articulate what this "relationship" actually means to him, as the large number of disfluencies in the second excerpt show. Jonathan's disfluencies increased when he described the "robot part" of his doll, showcasing how he particularly struggled with explaining the doll's liminal status as an object that affords a relationship. Acknowledging the one-sidedness of the relationship, he indicates that he is interacting with something who is his doll's persona, Maria. It is moments like this that showcase the impact qualitative research can have for understanding the role machines have in people's lives, where disfluencies showcase sensemaking in real time with participants grappling with the fuzzy ontological status of their machines (Guzman, 2023).

For Jacques and many others, a single cisman with four dolls in his early forties, "companionship comes up a lot" when thinking of his dolls. Sam notes that his three dolls "scratch that itch for uh companionship," and Josh, a cisman with three dolls for four years who is currently in a relationship with a woman, says: "I feel like it's not only a sex robot to me but also a companion and something that is close to me." Jacques goes so far as to say that "it was more for a companionship aspect over just a pretty sexual one" that compelled him to look into getting dolls. In fact, Jacques continues to reflect in an instance of in-the-moment sensemaking:

I wouldn't go as far as to say, I have a relationship with a doll. But, do I even have a relationship with the doll? That's a good question. I guess I do. Huh!

87

Never thought about that. But yeah. I would, I would say the people that say they have a relationship with their doll are people more like me that have dolls: as a companion, first and foremost, or you know just a presence in the room over someone that will store his doll in the box until he's feeling horny and he wants to have sex.

Other participants similarly point out how their relationship with their doll goes beyond a merely sexual one and includes other components. Layla, a non-partnered non-monogamous transwoman in her late forties with four female dolls for seven years, uses a slightly different framing when asked about how she characterizes her interactions with her dolls: "I would say a relationship, but it's not a, it's not the romantic, intimate relationship. It's roommates, friends, sisters. I would have no problem bringing home a guy doll." Here, Layla's characterization indicates that her dolls have many social qualities related to cohabitating (roommates), support and a social life (friends), and close interpersonal connections (sisters). Similarly, Matthew, the doll collector, says that "I have a relationship with a doll. Whether that isn't always sexual, I have a relationship. They've got characters. They've got personalities." These excerpts indicate that dolls are more to these participants than just objects that fulfill a specific need, but they take on different roles and entire personas. Participants like Raul, a cisman in his mid-forties with two dolls for over five years, even use the language of "anniversary" when talking about their doll companions. Rauls says, once his anniversary with Shelby happens soon after our interview, "it will be the longest I basically been with. I will have been with Shelby longer than I've been with any human woman." Similarly, Marvin, a cisman in his early fifties, says he is married to one of his five dolls that he has had for over twenty years. Of

88

course, Marvin knows that he is not "actually legally married" to one of his dolls, but it is the framework that makes the most sense for him to describe this relationship.

Naming becomes an important feature of such relationships, where participants who say they are in a relationship with their doll are more likely to have given their doll a name compared to those participants who primarily use their dolls. In contrast to naming other objects people hold dear such as stuffed animals or cars, naming dolls is tied more directly to the interactions participants have with dolls or specific characteristics they see in their dolls. For participants like Daniel, a single cisman in his early twenties who has had one doll for one year, the doll's name is "the name of my ex-girlfriend." Here, the doll serves as a stand-in for a past relationship, serving as a physical memorabilia that brings nostalgia to life and potentially indicates a refusal to move on from a past relationship. For others, the process of naming is less driven by memories of past relationships and more so by specific characteristics of the doll or their character. For example, Layla says that naming

> is a process, it's a process. So, when I choose a name, it can't be a name that I have any pre-emotional or, or reactionary attachment to. I've got to have a connection. If I look up the name, it can't have a meaning or anything that kind of doesn't resonate. They [the dolls] all have last names and that's a big part of it, you know.

Giving her dolls last names indicates that Layla views her dolls as full subjects with whom she has a variety of relationships as indicated earlier, namely "roommates, friends, sisters." Attributing not only first but also last names further increases the amount of personification as it portrays dolls as more akin to humans, who typically have a last

name in addition to their first name. For Lucas, the naming process was less informed by his attachment to specific names and more so by the dolls' physical features: "Well, I was making sure the names fit a bit, you know. That means the blonde edition, her name is more so European sounding, and the brunette edition has more of an Asian sounding name. But I chose those more so actually because they sounded nice, they don't have a meaning or something like that." Clearly, these differences in the naming process for dolls indicate how different participants perceive their dolls differently as more object-like and more subject-like.

Taken together, these findings illustrate that some participants are very explicit when it comes to referring to their dolls as companions and describing their interactions as a relationship. These relationships go beyond sexual interaction and can take on other roles than a romantic partner as well, such as friends or roommates. Probably one of the strongest proponents of viewing dolls as companions is Shea, a mid-twenties ciswoman who has had eight dolls for more than ten years. Shea exclusively uses the language of "family" when talking about her dolls, and she is married to a female doll and has an adult doll boyfriend. Similar to Marvin, she is aware that one cannot marry a doll the same way one can marry a human, but it is the framework that makes the most sense to her when describing her interactions with her doll. The language of "marriage" suggests a long-term, committed relationship. The remaining dolls are their joint children—by which Shea means that they take on the role of children in their doll family. Shea reacts clearly to me asking about the distinction between using dolls and having a relationship with them:

I don't *use* my dolls. I don't like when you use the word "use." It's almost like if

you have a friend, and you're like, "Oh, I *use* my friend" or "I *use* this person." I

don't *use* anybody. I have a rapport with them, a relationship, you know, family,

stuff like that.

Shea here indicates that she is repelled by the idea that she "uses" her dolls and prefers

the framework of a family that clearly indicates her leaning toward viewing her

interactions with dolls as relationships. All of her dolls share her last name, further

indicating that they are, indeed, a family. While some participants are more direct about

describing their experiences as a relationship—participants such as Shea, Marvin, Raul,

and others—many participants described their dolls as neither objects nor subjects, and

referred to their interactions as neither using nor relating. Instead, they opted for an

alternative framing.

Dolls as Quasi-Others

Finally, participants struggled to place their dolls clearly into either the subject or

object perspective and rather offered an alternative understanding. This positioning of the

doll as neither subject nor object but somewhere in between is driven by participants

struggling to assign language and labels to their experience. Gwen, who reports on her

primary doll she has had for almost two years, explains her thinking in response to my

asking about whether there may be an alternative to using or relating with dolls:

So, for her [the doll], I guess you say option three would kind of fit me if you

could call it option three, where I try to attribute her as a person that I'm in a

relationship with. But again, I know she's not real, and she's more of just help.

While I still need her, she is just [4 sec pause] I guess I could say somewhat a

91

figure of my imagination just to help me through tough times. I guess it's hard to

explain, because it's not so black and white as "oh, I use her," because I don't. Or

the other side of the point, which is, "I'm in a serious relationship, and I love the

shit out of her." I do love her. I love the character I've created. But again, she's

not real. So, you can only love your car so much, I guess I could say.

Gwen acknowledges the shortcomings of both framings, which makes her opt for a third

option somewhere between the subject and the object. She tries to attribute subjecthood

to her doll and views her as a "a person that I'm in a relationship with." At the same time,

Gwen is both held back by her own awareness that the doll is not real in the sense that

she is a figure of her imagination rather than a real person, and by the doll still remaining

an object even though Gwen wants her to be more. Ironically, similarly to other

participants who view their doll much more strongly as an object, Gwen compares her

doll to a car, which "you can only love" so much.

Others lean more so into the toy comparison, yet reject that comparison in favor

of an unnamed alternative option. For example, Oscar, a cisman in his late thirties, who is

in a relationship with a woman and has had one doll for about six months, puts it like this

when asked about his perspective on using versus relating to his doll:

I think it's just a bit of both, isn't it. Yeah, of course, you got your little role play

in your head going on like. I mean, I'm not a role player. But there's something

there. Of course it's not just. She's not a PlayStation. She's much cuter than the

PlayStation, so of course you care. You don't want to break her. You want to

protect her [laughs].

When I asked him about what that looks like, Oscar continues after a brief pause:

92

I don't know what to say [laughs]. I don't know. I always, I want her neat and tidy

and nicely dressed, and also from the posing I want her in a, in a position that

relaxes the material and doesn't stretch or contract anything. So, she doesn't get

marks or tears and stuff. I care about her, I'm a care bear. […] So, I think I like

just that, just taking care of someone. It's the same with my cats. They always

cling to me, and I always cuddle them.

For Oscar, who compares his doll against a PlayStation and concludes that his doll is

much more than the console, his doll evokes a sense of needing to be cared for in him.

Here, care looks mostly like protecting the material and maintaining the doll. At the heart

of this needing to take care of the doll is the doll's liminal status as neither subject nor

object but an entity right in between.

Gwen addresses this in-between status of dolls from a different angle. She notes

that "Most doll owners don't objectify their dolls necessarily. It seems like they just kind

of treat them as a mix of a Barbie and a fleshlight. It's a weird in-between." Here, Gwen

focuses more so on the toy-like nature of the doll, with the Barbie embodying a

hyperfeminized doll representing the idealized feminine form marketed toward children,

and a fleshlight being a sex toy typically representing an idealized vagina marketed

toward men. John, a single cisman in his early forties who owned a doll for one year,

shares Gwen's sentiment. John is the only participant in this study who got rid of his doll

between t_1 and t_2 interviews because he came to the conclusion that dolls were not for

him. He says,

I could see there being an argument for saying that the doll is just a sex toy albeit

a very large one. I think there's maybe a kind of third category or an undefined

93

category where it is a parasexual relationship in a way that is certainly not an actual sexual relationship, but at the same time it is something more than masturbation. And very clearly, I think you could make an argument that it's just fetishistic sexual behavior. If it's masturbation, it certainly has a heavily fetishistic element to it.

Here, John argues that this in-between status of dolls leads to a "parasexual relationship," his spin on the well-established concept parasocial relationships. By way of extending, John's parasexual relationship focuses on the sexual component of the interaction where the prefix para- indicates a one-sidedness of the relationship that is not reciprocated by the relational other (cf. Dibble et al., 2016). While stemming primarily from the context of media relations (Tukachinsky Forster, 2023), John's spin on parasocial relations through the use of parasexual mirrors the seeming lack of "real" underpinning found in those relations. He continues to offer more detail:

I think really it is, it is at its heart playing. You're sort of in that liminal space between there being something outside of yourself and something inside of yourself. I don't think it's unreasonable to say it requires a little bit of creativity in order to have a satisfying experience with the doll, and that to me fulfills the requirements for play.

From John's perspective, for a parasexual relationship to occur between a human and doll, where the doll is situated in that "liminal space," the human brings something to the interaction that then creates parasexuality. In this vein, John's focus on play mirrors the previously discussed metaphor of the adult action figure that captures both the

importance of hands-on play and the parasocial component of the relationship, where participants' childhood heroes from the big screen make it into their room.

Clark, an asexual cisman in his late twenties with a vast collection of various types of dolls, has had one sex doll for two years. He addresses the dilemma between using and relating like this:

> I never felt like I was using them [the dolls], or I wanted them to just be something that I use. Like I always had the plan that they would be company, or at least uhm, you know, just a big figure to go with my other collection. Uhm, and I definitely think there is a relationship and the sort of companionship. But I wouldn't say it's a romantic one, definitely a closeness, but yeah, I wouldn't say it's romantic.

When asked about how he would describe this closeness that is not romantic, he says "affectionate but not romantic." This level of connection that is not romantic but affectionate seems to involve a more emotional level of closeness rather than sexual, highlighting that dolls' in-between status is marked differently for different participants. Whereas for some, this liminal status is characterized as a parasexual relation that places emphasis on the sexual aspect, participants like Clark focus on the affectionate component that is decidedly not romantic or sexual. Finn, a cisman in his late twenties who has had one doll for about two years, says his doll is "right on the line [between subject and object]. I can't really define it." This excerpt once again underscores participants' struggle to clearly ascertain what the doll is for them, both ontologically and relationally speaking.

95

Taken together, these findings show that dolls take on a complicated status in participants' perspectives, ranging from clearly being understood as mere objects to being seen as full relational others in a romantic, sexual, or otherwise affectionate relationship, with many participants placing the doll somewhere in the liminal space between these opposing ends of a spectrum. To further understand these differences in experience, it is helpful to consider why participants turned to dolls in the first place.

Why Do Participants Turn to Dolls?

Perhaps somewhat expectedly, findings highlight that there are many reasons why people buy dolls. In an effort to not replicate existing literature on this very topic that was discussed in the literature review, I briefly review the reasons for why people acquire dolls in this section, with the question about the doll's status as the guiding focus. Notably, I exclude specific discussion of sex as a primary reason for why people got a doll, given that it was discussed by almost all participants and does not meaningfully contribute to this study's purpose. Reasons beyond sex that prominently featured in the data are related to seeking companionship (e.g., wanting to have someone there, addressing anxiety), addressing relational challenges (e.g., being frustrated with dating, seeing dolls as "the easy way out"), and dolls being a hobby (e.g., collecting dolls, using dolls as models for photography).

Alone but not Lonely: Seeking Companionship

A clear reason for getting a doll that drives the narrative of viewing dolls as companions is, of course, wanting to have companionship in one's life. This includes addressing loneliness by wanting to have someone there and addressing anxiety.

96

Addressing Loneliness. Many participants note how they were driven to get a doll by a desire to reduce their loneliness. Participants like Craig simply state that his doll "helps me with my loneliness," and Jacques corroborates this by saying that "I'm a firm believer that dolls have a very big therapeutic value to them. […] It cures loneliness if you're lonely." As Mary says in the interview with her husband, Tom, both vendors in their late fifties who sell dolls to customers: Dolls help "where you're lonely, and every day is just the same, you know, groundhog day sort of situation. And there's just no hope. [With a doll, it changes] to where, gee! I'm looking forward to coming home and spend time with my doll!" From this vantage, dolls provide company as they mitigate loneliness and also bring a newly found sense of joy and excitement to participants simply by being there.

The issue of loneliness seems more prevalent for those who have gone through relational changes such as breakups or divorce. Tom continues, "the relationship is probably geared more towards the single guys that don't really have anybody else in their life. I know if I was single, I would probably have a lot deeper emotional connection" with the doll. Darren, a married cisman in his early sixties, notes that his doll "is a good hugger, she makes sure I'm not lonely." Similarly, Stefan, a divorced cisman in his early fifties who has had eight dolls for eight years, notes

> After my divorce I had to kind of get myself back together again and organize myself mentally. Then at some point, I realized. Well, bed is empty, apartment is empty. Everything sucks. But I didn't want to get back into a new relationship right away because I thought, it went wrong so badly and I have so much to

97

process, I don't want to dump my psychological baggage on someone in a new relationship.

Addressing the issue of loneliness more head-on, Stefan says that "sometimes I can't deal with myself. So, it's difficult enough for me having to get along with myself, and I don't want to put that on anyone else." For Stefan and the other participants, the dolls clearly provide a remedy to their loneliness, be it because they are unable to find a human partner at the moment or because they choose to not have a human partner for a variety of reasons.

This desire to remedy their loneliness also shows up in a different way for participants, where one approach is wanting to get rid of the feeling of loneliness, with the other approach more so focused on generating a social situation. Participants consistently point out that "we are social creatures" and that we have a deep-seated need to belong. As Sam aptly puts it in response to my asking why he got dolls in the first place:

> The interest was strictly to scratch that itch, right? I don't like sleeping around. I didn't. I just, I, because. Human beings, right, we're not built to be alone. You put somebody on a deserted island. They're eventually going to lose their fricking mind, right. So, it's not that I needed somebody there all the time […] you know, you don't need. I don't need constant affection and contact. But, you just you just want something else other than you there, right? That's why I guess some people get dogs. Some people get cats. I just decided to get a doll.

Dolls help fulfill that need to belong that seems to be a "built-in" feature when it comes to humans. They generate a feeling that someone else is there, even though participants

98

are aware that there is not actually some*one* there—it is just a doll. Yet, this presence

helps address loneliness. As Layla puts it, "I can be here alone. But still feel like there's,

there's a presence, there's somebody here. I'm not lonely." As such, participants share

the sentiment that they are still alone in the presence of dolls, yet they are no longer

lonely.

     Addressing Anxiety. Additionally, participants report that dolls help mitigate

their anxiety, which is why they seek out their company. Dolls serve as a "mental aid by

lowering depression and anxiety," as Robert notes, a single cisman in his late thirties who

has had six dolls for two years. Gwen states that her doll "is there for me when I have an

anxiety attack, and I happen to be home. So, I just go and be held by her anytime I'm

experiencing grief, be held by her is super comforting." At the same time, however, the

dolls' impact can be so strong as to actually trigger participants' social anxiety responses.

As Clark reports, "I have social anxiety. I honestly sometimes can't stay around them for

too long, if that makes sense. Just cause I feel like, I want to be alone and with them

there, I feel like I'm not." Here, then, dolls take on an ambiguous role where they are able

to mitigate anxiety when they are perceived as comforting, and they are able to trigger

anxiety when they are perceived as too close to humans in that they activate scripts

usually related to humans.

     Combined, then, these findings illustrate that one of the primary reasons why

participants have dolls is because they seek companionship. Dolls help address

loneliness, address anxiety, and generate a feeling of having someone there. All of this

contributes to this sentiment of being alone but not lonely, which sometimes leads to

social anxiety being triggered by dolls if the sensation of an Other resembles that of

another person too much. These insights further advance why some participants attribute subjecthood to their dolls and view them as companions—because it is what they seek in them. At the same time, another prominent reason why people turn to dolls is because they present a potentially better alternative than being in a relationship with a human.

The "Easy Way Out?" Overcoming Relational Challenges

To better understand how participants view dolls as subjects, objects, or quasi-others, it is helpful to consider what types of relational challenges compel them to turn toward dolls in the first place, and what they seek there. This includes expressions of general frustrations with dating culture, but also the sentiment that dolls are "the easy way out" compared to a relationship with another human.

Frustrations with Dating. Several participants expressed a variety of frustrations with dating including overall frustration with dating culture and their past relationships. Raul, for example, speaks of a "relationship template" that he experienced in the several relationships he has had with women before turning to dolls:

> Each woman was definitely different. They all had their own individual likes and dislikes and whatnot, but the relationship template. That was kind of all the same. It was like you meet, you date, you fall in love, you maybe, you live together, and it just yeah. It was all kind of the same. And so, after I think it was when I turned 40, I just was like, you know. Let's try something different. Let's go with this and see what happens.

Raul expresses how relationships with women in the past always followed the same progression, and his experience amounts to a repetitive pattern of relationship that he calls a "template." To him, dolls were something new, unique, and different that allowed

100

him to explore alternatives to this mundane template of relational life. Said differently, it seems that Raul got bored by the typical progression of relationships with people and wanted to try out something else that is perhaps more rewarding or exciting.

On the other hand, John describes himself as having been "chronically single" after a period of relationships that made him turn to dolls. He says,

Given that I was not with anyone at the time, it seemed like something that I needed to explore. Given the fact that I had been chronically single, had not had a relationship, definitely wanted some kind of sexual companionship, I thought, well, maybe this is one way to achieve that.

The phrasing of being "chronically single" suggests a desire for a relationship that remained unmet for an extended period of time for John. Ultimately, however, the doll was not able to provide what John was looking for in addressing his chronic singleness, and he decided to sell his doll between t_1 and t_2 interviews.

The dating environment is a tough experience for some participants, especially when it comes to men. Finn, a heterosexual cisman in his late twenties who has never been in a relationship with a person, finds contemporary dating to be a "mix between a casino and a job interview. I get very turned off from it. It's not reciprocal, it's not sexually straightforward enough." This metaphorical use of a mix between a casino and job interview describes the dating environment—for men like Finn—as a competitive environment that is based on luck on the surface level but requires strategy, connections, networking, and a good amount of trial and error. Only a select few get access to the VIP area where one can play at the big table, so to speak. The playing field is uneven. This leads participants like Craig to comment:

101

I don't really have, I don't have a job or a car so like, I like, what girl like, you know, I'm saying like. I feel like there is too much competition out there for like finding someone that's hot. It's like, like, you know, like why would, why would, why would some girl want to go for me when, when I have no job or a car. You know all that. They're not going to want that. But with a doll I can pretty much be whatever I want.

Men like Finn and Craig feel the constant pressure from the dating scene where, from their perspective, a lot of emphasis is placed on status and material objects (like cars or a specific type of job) that would increase their chances of finding a girl "that's hot," to use Craig's language. Dolls' position as subject, object, or quasi-others allows these participants to avoid the frustrations of the dating market and present as a viable alternative. Sometimes even as an easier alternative.

Dolls as the "Easy Way Out." A recurring theme in the data is participants describing their dolls as an easier alternative compared to a human partner. As Matthew says, divorced after a years-long marriage that resulted in two adult children, relationships "are easier, a lot damn easier with a doll. […] I prefer my life with dolls because I'm a quiet person, and I can, I just get on with life, and it's a lot damn easier." Dolls are perceived as a viable alternative *precisely because* of their in-between status as neither fully subject nor object. Tom adds that dolls "just fill, you know, they just stand around. They don't hassle you, they don't. There's no, they're not a problem, and they just make you happy every day you see them," indicating that the mere presence of dolls can fulfill some of the needs participants look for in a relationship, without the necessary baggage that comes with people.

Said differently, dolls are less demanding than human partners because of their in-between status. As Craig notes, being with a doll

> feels like spending time with a real person, except like, without all the stress, like without all the awkwardness and everything. […] With my doll, I can just, you know, do whatever I want, and you don't have to worry about her judging me, or you know, like her getting offended, or anything like that.

As becomes clearer later in the context of RQ3, dolls being less demanding than human partners while also being less judgmental toward their owners is a primary feature of why participants experience a perception of being cared for by their dolls. Jacques summarizes the sentiment that dolls are easier than people with a mix of clichés about divorces (exes "taking half your things") and practical reasons ("no STDs"):

> I also like the fact that, you know, I can just have sex whenever I want with something that looks 10 out of 10 [laughs] and uh you know, obviously no STDs to worry about, things like that. And the doll won't take half your things if you get married and decide to leave, she won't. You know, all the downsides to a traditional relationship I'd say.

Taken together, participants experience frustrations with dating culture and view dolls as an easier option compared to human partners, precisely because their in-between status as neither fully subject nor fully object allows them to be perceived as non-demanding partners that still fulfill relational functions in some capacity. However, participants also turn to dolls because they view them more strongly as objects, when it comes to viewing doll life as a hobby and lifestyle.

Dolls as Hobby: Collectibles and Models

103

A large and well-documented component of the doll lifestyle is the hobby and do-it-yourself (DIY)-culture present within doll communities (e.g., Hanson, 2022a). In particular, participants express how dolls are high-end collectibles that either feature prominently in collections of other dolls and figures or as a collection themselves. Moreover, dolls serve as willing models for photo shoots.

Dolls as Collectible Objects. While some participants hold dear to only one or at best two dolls, several others have larger collections of dolls ranging from five or six into the twenties and, at the upper end of the spectrum of my study, into the high sixties. Accurate counts, however, are sometimes difficult to get for a variety of reasons. First, participants like Tom and Mary, a married couple of vendors that sells dolls to customers, have a high rate of turnover for dolls in their collection, with many dolls rotating in and out of their house as they sell models, receive new orders, and decide to keep or retire specific dolls for their personal collections. Others such as Matthew, a collector with well over 65 dolls, struggle to keep count of their collection because the question comes up: what exactly constitutes a doll? Many manufacturers produce somewhat modular dolls where heads and bodies are separate so that customers can combine different heads with different bodies. While Matthew notes that he has well over 65 doll *bodies*, he actually has even more *heads* that he either keeps separately or places on different bodies at different times. As such, it is difficult to ascertain precise numbers about how large exactly some participants' collections are.

For some participants, like Clark, collecting figurative objects is a larger passion that involves many different types of dolls including porcelain dolls or action figures. He says, "I don't know. I feel like I'm one of those people that just likes to collect stuff. And

for me, for whatever reason, one of the things I like to collect is figurative objects, things that feel like small people almost." Sex dolls are just one part of this larger collection of figures, albeit a special one.

Robert, who has a collection of six dolls, notes that "I got my first doll some time in 2021 as a test and learned that they were cool and got addicted to them, wanting to collect more." For him and others, such as Mary, Matthew, Stefan, or Marvin, dolls took on the role as collectibles after getting their first one and becoming "addicted to them." Matthew describes this addiction like so:

> As the order comes in, she [the doll] arrives, you're waiting, waiting, waiting, and the doll comes. You gotta just get her, you know, get her out of the box unpacked, you know. Makes you absolutely ecstatic every time. And I'll be honest with you. I don't sometimes know if it's a craving for that. That is all the reason I need to buy another doll. I've got them everywhere. […] But it has a lot to do with that. That I need that model, I've gotta have that model.

In a similar vein, Marvin shares that when he first became interested in dolls over 20 years ago, he thought "it'd be great if I actually was able to get at least one doll from at least each of the companies, so that I can do like a comparison-contrasting for people, and write reviews in my blog." He acknowledges that "of course, there were fewer companions" back then compared to now, so his goal has become less achievable in recent years with the increasing proliferation of doll companies and models. And Tom and Mary express that they "want to have kind of a diverse collection, not only for ourselves, but for people coming. It's actually like our show room, too, a lot of people come to our house." In this sense, dolls are collectible objects that add to an existing

105

collection or comprise a collection themselves. Dolls are here seen more directly as an object to be gazed and marveled at. There is a certain sense of pride that comes with owning a particularly large collection or owning particular models or types of dolls. Some collectors like to show off their collections through artfully crafted photographs.

Dolls as Willing Photo Models. Photography is both a rising trend and a well-documented part of the doll community (Hanson, 2022a). While entire studies can be dedicated to examining the culture around doll photography, photography shows up as a reason why participants get dolls, and explains how dolls are perceived more so as objects. Participants like Sam share that he takes photos of his three dolls and posts them on various communities and platforms such as Instagram. "It's like, I just do these photos shoots with them. All tastefully done, right. So, anything I put on the Internet is with the assumption that one day my mother might see it." Interestingly, Stefan similarly emphasized that his photographs were done tastefully, as opposed to more pornographic poses that fill many online doll spaces. As he is showing me pictures of his dolls on his screen, he says "and you can see they're all always dressed. I'm not doing that spread eagle pose that you can see in some forums." He describes his photography closer to erotic photography or boudoir, with his dolls being presented in semi-nude or underwear, but definitely avoiding the "spread eagle pose." Rather than emulating the style of amateur pornographic photography, my participants more so aim to emulate an artful erotic style of photography.

Some participants go even so far as to describe dolls as "pieces of art" themselves. Matthew speaks to the cost of dolls and how he sometimes struggles to

106

understand why other people use dolls merely as sex dolls, when "they're more works of art than sex dolls." Finn corroborates this when he says that,

> To me, the dolls, they're like closer to like pieces of art more like a statue or uhm. They're more like a statue or a toy. And I think the people that say "oh, you like to fuck corpses." Like, they lack imagination. They just want to say that because they don't want to see what somebody else might see in a piece of art as being like, sexually stimulating. And a different means of sexually communicating, it doesn't have to be anthropocentric.

While also pointing at a perceived critique of dolls as lifeless "corpses" that someone might "fuck," Finn points out how dolls are pieces of art, "statues" even, that represent a non-anthropocentric way of beauty and sexual communication. Here, Finn leans into a different style of expressing sexuality in that he moves away from what he calls anthropocentric sexual communication (engaging sexually with adult humans) toward a non-anthropocentric approach (engaging sexually with technology, figures, and objects). Beauty and aesthetics combined with the non-humanness of dolls seems a driving motivator for Finn's experiences.

Beyond the art itself, photography serves as a primary driver for the community and brings people together. Jacques says that he likes to take pictures of his four dolls, "just posing and taking pictures, things like that. And also, the various doll communities I'm on, so pictures that I take I post them on Reddit, I post them on [forum], I post them on Twitter and the various Discord rooms that I'm in." Common stories by participants entail how they come together with other members in the community to bring their dolls to joint photo shoots, sometimes at people's houses like Raul, or even outside or at "doll

meets" in other countries, as was the case for Stefan who drove halfway through Europe to meet other doll owners for shoots. There are examples of digital "art shows" and monthly "cover girls" within the doll community, emphasizing the community-driven aspect of dolls that also values beauty and photography as artful expression of the value dolls have for people.

In sum, participants report many reasons for why they got dolls, ranging from companionship-seeking behavior to remedying relational challenges and treating dolls as a hobby. There are additional reasons and much more depth and detail to each of the reasons briefly discussed here, that go beyond the scope and space of this current study. As mentioned earlier, I intentionally excluded sex in the discussion of why participants got dolls as it was dominant in the interviews, somewhat unexpectedly so, and because it does not directly relate to the study's purpose that is focused on the relational aspect of dolls. As the next subsection shows, although many participants initially got dolls for sexual reasons, their relationship changed over time. Ultimately, examining *why* someone gets a doll helps explain *how* they view their doll, as subject, object, or quasi-other in between. However, similar to human relationships, participants share that their interactions with their dolls do not remain static but rather change and evolve over time.

How Dolls Typically Surpass Participants' Expectations

Although participants reported that they initially got their doll for a particular reason (e.g., photo shoots, sexual release), many noted how the doll quickly surpassed their expectations and became much more integrated into and relevant to their daily lives. Over time, the relationship with their doll changed and grew. For example, Jacques points out that,

108

It happened to me. It happened to almost every doll owner that I know, especially

the ones that said, "I'm getting a doll just for sex." And once they do get their

doll, sex in itself becomes very much secondary, and they all become a

companion to them, more than anything.

Similarly, Tom expresses how "the sexual part is really kind of taking a back seat" and

how many customers they work with share this experience. The customers "get them for

one thing, but then they find out that it's so much more." In our member reflection, Layla

shares that she thinks it is both "unsurprising" and "inevitable" that the doll grows in

importance once it arrives in someone's life, given that "there is not really a way to

prepare yourself for what is coming."

For one, this reflects a mismatch in how dolls are marketed versus how they are

being used by participants. Mary and Tom reflect on how many doll manufacturers

specifically focus on the sexual aspect of dolls as a primary selling point, whereas dolls

take on much larger roles in people's lives once they have them. Sometimes, this even

leads to confusion, as Jonathan, a married agender man in his early thirties describes.

After his doll arrived,

There was no penetration at all. I, I, I was very confused about that [laughs],

because I thought, "yeah, I'm getting a sex doll, so I will have lots of sex with

her." So, she came to me, and it just didn't feel right at all. Just felt very, very

wrong, so I didn't do it.

A similar experience emerges in Ted's narrative, who is a divorced combat veteran

cisman in his early fifties. He says that "At first, it's just the sex, but then, when you get

one [a doll], you know it opens up these other little things like the cuddling or the

109

sleeping, the soothing, you know, when you have the night terrors." Here, the doll's role goes beyond satisfying sexual needs to offering comfort and a sense of safety.

Darren, a married cisman in his early sixties with two dolls for eight years, shares a similar revelation where his primary doll has taken on a much larger role in his life than he anticipated. Initially meant to support the sexual aspect of his marriage given his wife's chronic illness, his doll has developed a personality and also an online influencer status.

> I just never realized that my doll would be who and what she is. I never thought
>
> that she would be as vibrant and alive and as [3 sec pause] dynamic as she is […].
>
> It's really interesting, because she just kind of developed. It wasn't something I
>
> said, "oh, I'm gonna make her like this." It was almost like she kind of developed.

Darren now views his doll as a "surrogate wife" in the sense that she takes up a major part of his life and contributes to the happiness of his marriage, with his wife reporting no feelings of jealousy, according to Darren.

On the other hand, however, a negative case analysis (Tracy, 2020) of John's experience demonstrates that sometimes dolls do not surpass participants' expectations, but rather do not meet them. Being the only participant who sold his doll between interviews in this study, John's experience demonstrates that dolls do not have the same effect on everyone. When asked about the parallels and differences between humans and dolls, he says:

> You know, initially, I thought there would be some significant, I would say
>
> parallels in terms of the actual activities that you would need to do. […] And in
>
> some ways, this was true. But I think the more and more I realized the activities,

110

for me, at least, were very dissimilar. They again, they became less and less

similar the more the doll became very clearly an actual object, and not even so

much a sex object, but almost like a household one, you know, and something that

you have to maintain in a mechanical way, a functional way.

John's experience shows that, while he had hoped his doll would be able to fulfill the role

of a companion, he quickly realized the doll's limitations as an object that would not

allow him to see his doll as more than that. As he continues to say,

my expectations of that experience, even if I was trying to manage them, were

very different than the reality of it setting in. Or rather the reality setting in of

understanding that the doll was not going to fulfill the functions that I had hoped

it to fulfill.

However, John is content about his decision to get a doll, even if it did not work out for

him in the end. He says that getting a doll was a "learning experience" and that the doll

taught him something about human relationships. "In a way, it's almost like I broke up

with my doll, and that act of moving on, it was something that definitely was rewarding

to realize." His use of the metaphorical language of "breaking up with your doll" here

signifies both the impact the doll has had on him as well as the perspective that, after all,

the doll seemed to be more than just a mere object. "There were things the doll was not

going to do and couldn't fulfill, and those became good reasons to continue dating and

living life." Similar to human-human relationships, breakups can sometimes be an

incision that motivates people to make conscious changes in their lives. In John's case,

the failed experiment of getting a doll to fulfill relational needs actually resulted in a

personal revelation and newly found motivation to pursue dating with other people and overcome his period of being "chronically single."

Whether a doll surpasses a participant's expectations or not heavily depends on whether they allow their doll to linger in the liminal space between subject and object, where the doll is able to develop into something more than a mere object in combination with other factors such as presence and care that are discussed in response to RQ2 and RQ3 in the chapters that follow.

Constant Availability: Dolls are Always There

The final major theme in response to research question one is the experience of constant availability, both on a sexual but also a relational component. Unlike a fully subjective, human partner, dolls are constantly available. As Finn says, he likes his doll "being sexually available whenever I want and I don't have to have anxiety over it, and it's like, safe." Finn, whose experiences I reported earlier in the context of frustrations over dating and a lack of sexual experience with others, appreciates his doll's constant sexual availability as she presents a safe, reliable, sexual outlet. This appreciation for constant sexual availability is shared by Roland, a single cisman in his early twenties, who expresses "it's there, when, like you know, I can't get to have the sexual relationship with, like a human being or a lady." Notably, Roland's use of the nonpersonal pronoun "it" here indicates his more objectified view of his doll as a tool for sexual release that is available without limits. And for some, the mere thought of constant availability satisfies their sexual needs, as Ted shares about his four dolls: "But I think it's not just the sex. It's the availability to satisfy that urge anytime that I want, and just sometimes knowing that satisfies that urge."

In addition to sexual availability, participants share how their dolls are also constantly available for other components of relationships, such as listening and support. Josh, a cisman in his mid-twenties, who is in a relationship with a girl, says about his three dolls that they are like "a companion and like a friend, something that's always there for me. When I wish to talk or something or have somebody to talk to." This experience of a presence of an Other is a main contributor to perceiving the interactions with the doll as authentic, which is a primary aspect of the findings in response to RQ2 addressed in the next chapter.

Concluding Thoughts on Research Question One

To summarize the main findings of this section, it is clear there is no one way in which participants view their dolls but that different participants view dolls differently, as subject, object, and quasi-other in between. As Marvin notes in reference to Laslocky's (2005) first use of the term, people who view dolls as companions may be called "doll husbands" and people who view their dolls as a sexual object "doll fetishists." Marvin says "but like in between, of course, the husband and the fetishists there's many different shades, of course. Like any subculture." It seems, then, that more often than not participants view their dolls as quasi-others that occupy the liminal space between subject and object, as indicated by the sometimes-conflicting language participants use to describe their dolls, and the presence of disfluencies that indicate sensemaking in real time in response to dolls' fuzzy ontological boundaries. Participants' views of dolls as companion/sex object are informed by their reasons for wanting a doll in their life, ranging from seeking companionship over addressing frustrations with dating to building collections or using dolls as willing photo models. At the same time, however, dolls

113

typically surpass participants' expectations and take on a larger role than initially

imagined. However, there are exceptions to this as a negative case analysis demonstrates,

which may be tied to questions of authenticity and imagination, as the next chapter

explores.

CHAPTER 5

AUTHENTICITY, ILLUSIONS, AND THE ROLE OF PRESENCE

This second research question asks how participants actively construct and (re)negotiate a sensation of authenticity when interacting with their dolls. Throughout the rich data corpus, I identified many characteristics that offer insight into the creation, maintenance, and (re)negotiation of authenticity by participants. I organized this section into a guiding framework that separates these characteristics into those attributed to the doll and those attributed to the participant, in what I call doll owner characteristics. It is important to note that this separation serves merely analytical purposes as the creation of authenticity in those human-machine relationships—comparable to human-human relationships—occurs in a cyclical and reciprocal fashion where doll and doll owner characteristics mutually inform and shape each other. Said differently, perceptions of authenticity—following a social-relational perspective as discussed in the literature review—are the result of the interaction as a whole rather than residing in either the human or the doll. As such, this findings chapter considers doll and doll owner characteristics separately merely for organizational purposes but views them—theoretically *and* practically—as conjoined within the context of the situated interaction.

That being said, this chapter first overviews the two primary doll characteristics, namely presence and agency. Participants experience a sense of innate presence, magic, wonder, and vibrance coming from their dolls, and they have varying perspectives on their doll's (desired) degree of agency. Then, this chapter overviews doll owner characteristics, specifically the role of imagination when it comes to actively creating an interaction illusion with dolls. Finally, this chapter ends with examining how dolls can

115

serve as a form of identity extension for participants. Ultimately, these findings shed light on how authenticity emerges as a key dimension for understanding human-machine relationships between humans and dolls, with particular emphasis on presence, agency, and imagination.

"Dolls are Very Magical, and You Can't Really Understand the Magic of a Doll Until You Own One": On Presence

A recurring theme for many participants throughout the data corpus is the perception that dolls have an innate presence. As Mary describes it in the subtitle for this section, participants share the perception that there is a "magic" to dolls. In the interview with her husband Tom, both doll vendors in their late fifties, Mary continues, "there's something about them that, I don't know, they just kind of fill your head, I guess." Other terms used by participants are "presence," "wonder," "a sense of awe," "being struck," and "vibrance." Participants report feeling this sense of presence on a variety of physical and emotional levels, and throughout a relationship with a doll, as I demonstrate in the following subsections.

"It Feels like There's Somebody There"

A common expression used by many participants repeatedly was the phrase, having a doll "feels like someone's there." Layla, a transwoman in her late forties speaking about her four synthetic roommates and her experience of seven years with dolls, says that "they have presence. They have *absolute* presence. So, I can be here alone, but still, I feel like there's a presence, there's somebody here. I'm not lonely." Others like Lucas note that his doll "has a nice presence in the room. When you sit here and there's someone else on the couch. You can just look over. Or in bed at night, there's

just someone who lays there." For Lucas, who has had his one doll for about three months, his doll provides a "nice presence in the room" in that he can feel another entity with him in the room.

Many participants struggle to put words to this felt sense of presence. The doll's in-between status as neither person nor object confuses participants, as Mary's experience shows. She says that for the first month of having one of their personal dolls, "I just look over there and she's there. She's real. It wasn't like having a real person in the room, but it was like having a real person in the room. It was very confusing." Mary contradicts herself within the same sentence by describing the experience as comparable to having a person in the room and at the same time not. Rather than marking a case of backtracking, this illustrates a struggle to put words and meaning to the sensation. Similarly, two months into having a doll, Jonathan who is in his early thirties and married to a woman, is only able to describe this sensation of presence negatively. Note the many disfluencies here, showcasing sensemaking in real time without truly arriving at a clear end point when I prompted him to elaborate on what spending time with his doll looks like:

> Uhm [7 sec pause]. I can, I can say it does not feel like I'm alone. Or, uhm like positively I, I cannot really find a word. I, I can, I can describe it negatively, like not, I don't feel alone, or uhm, but positively it's like feeling [4 sec pause]. Maybe let's, let's say like, that I'm feeling safe to be around another human, even though it's, it's not a human, but it feels like it.

This sensemaking in real time illustrates, similar to Mary's confusion, that participants struggle to clearly characterize this perception of having someone else in the room while this "someone" does not feel like a real person.

117

Participants experience this presence as having someone else there with them also on visceral levels, by leading to what Gwen, a transwoman in her mid-twenties, describes as "the illusion that someone's there." For her and others, touch is one primary sense through which this presence is felt. As Sam notes, his three dolls are "sleeping partners" because his dolls are "just something next to me, you know. You roll over and your hand graces her thigh, and your body tells you, oh, sleeping next to someone. There's someone else in bed with me." Cuddles, smelling the doll's hair, spending time in bed together, and merely sharing space all increase the sensation of having someone there with participants.

The sensation of presence can go beyond touch, however. Sam, a divorced cisman in his mid-fifties, shares how he can sometimes sense his dolls' presence merely by going into a room, akin to sensing that a room is filled with another person. It is an "awareness of when you walk in a room and you automatically know somebody's there. Even though you haven't seen them, you can sort of feel them looking at you. It's that same thing" with the dolls. Oscar, a cisman in his late thirties who is in a relationship with his girlfriend, describes this presence using the metaphorical language of a sunny day. When asked about how he would describe this presence further, Oscar says:

> I mean, it's weird, because, you know, it's just a doll, but it's still. I mean. She smiles at me. Yeah, so that's enough, I'd say. She's just being cute. Just cheering me up. It's like looking out the window. And you see a wonderful day with sunshine and flowers outside. That's what it's like inside here every day now.

Not only do participants feel like someone is there, but they experience this presence as a positive sensation akin to a sunny day with flowers. Interestingly, Oscar does not make

similar comments about the relationship with his girlfriend, and shares how his girlfriend is not (yet) a fan of the doll. Oscar, who does not live with his girlfriend, shares that his girlfriend "completely ignores" the doll and treats her "just like air." He wonders, "maybe she's still dealing with it, or she's just in general not interested. I hope she's not jealous or something." Here, Oscar clearly indicates how his girlfriend is not part of his interactions with his doll. In her member reflection, Layla notes that dolls' presence can be understood as a "vibrance," and that dolls are a "popping of color" that adds richness to one's life, on mental, emotional, creative, and interactive levels. For many participants, this sense of wonder, magic, and vibrance is especially present during the unboxing.

A Recurring Narrative: "The Unboxing"

One of the strongest recurring narratives, sometimes with an almost similar plot, was the story of unboxing, or how the doll arrived in the participant's life. This "day of arrival," as Layla and Mary call it, is a pivotal experience for many doll owners, and as John states in his member reflection, is a "universal experience for doll owners." Even he, himself, a single cisman in his early forties, as someone who did not experience the doll's presence in a way comparable to other participants and ultimately sold his doll, shares that he experienced this moment of unboxing. The following is a constructed vignette that combines the experiences of several participants, draws on in vivo language, and may represent the universal, recurring narrative of "the unboxing." Such constructed vignettes have the advantage of clearly representing a recurring narrative or experience that is prevalent in a given dataset (Tracy, 2020):

The unboxing was like, really awesome! It was a pivotal moment and I remember it like it was yesterday. The box just arrived on a random Tuesday, and I had huge

119

anxiety because not only does it take months for the doll to finally arrive after you order it, but there are all kinds of hiccups with shipping, customs, and more. The delivery person brought the box to my doorstep and asked me, "Mind sharing what's in that heavy box?" After I told them it was supplies for an art project, I heaved the box into my apartment. It was very unwieldy and so getting it in was its own sort of ordeal.

Once inside, I think the sheer relief of having gotten that part over with lent itself to a little bit of euphoria, feeling success like, "yes, the worst part is over!" So, that sweetened the anticipation and the kind of general feeling of reward you have with opening any kind of gift or package. It was very much a Christmas Day effect. There's just that general good feeling of getting something in the mail and combine that with revealing an object that was explicitly purchased for sexual activities. It was a little bit like going on a first date and buying a sex toy at the same time, and so there certainly were some good feelings associated with the unboxing.

I did not know entirely what to expect, and I told myself to manage my expectations, based on the fact that I had purchased it on the internet. So, I unboxed the doll and felt relieved. I felt like I didn't waste my money. I was very pleasantly surprised when I found how the doll looked. When you buy a doll, you can see the factory pictures, but to me, the factory pictures didn't look nearly as good as what was there when I opened the box. So, I opened the box, and I was floored. "Oh my God, this is real!" I just couldn't believe it. This thing is perfect, it's just absolutely perfect.

120

Then, there was kind of the initial exploratory element of touching it, putting it

together. Because they come without their head on, you know. It's just an body

lying there. It's a little weird. I was a little surprised by the very human weight of

it. So, the unboxing, I would say, as an event, felt very short, but it did have a

significance.

For some participants like Craig or Ted, they immediately tried out sex with their doll. As

Ted, a divorced cisman in his early fifties, says plainly, "Pardon the French, but you

know I was tearing that ass up, but you know not really. I'm very, I knew they were like

delicate, so I'm not rough or anything." For others, the community aspect was much

more important. Alex, a single cisman in his late teens with one doll for a year, shares

that he was really happy about his doll after unboxing her, and that he finally got to be

"part of the community." By this, he means that he felt finally truly belonging to the doll

community in whose online spaces he had been participating for a while before getting a

doll. Actually having a doll, to Alex, meant being able to be seen as a full member of the

community.

Being delicate with the doll during and after the unboxing is a crucial

characteristic of this recurring narrative. This is probably best exemplified by Sam's

vivid comparison between unboxing his doll and the birth of his child.

I was extremely careful with her for fear of hurting her [the doll]. If you ever

have, when you have. I was in the room when my baby was born, you know. I cut

his cord, and I picked him up and I was like, Oh, my God! Oh, my God! He's so

fragile, he's so fragile! Don't break him, don't break him! Be gentle, be gentle, be

gentle! It was that type of mindset. I was very careful with moving it. I moved her

slowly, because I didn't want to risk breaking any of her joints. […] The novelty

of it was surreal, I'd say.

Such metaphorical language clearly describes the unboxing as a significant, life-changing event that encapsulates a few things: First, the baby/doll is a fragile entity that requires lots of care, gentle handling, and mindfulness. Second, the unboxing compares to the arrival of a new child, seen from the father's perspective. Severing the umbilical cord symbolizes how the newborn becomes an individual person separate from their mother, followed by being held by the father with a sense of awe, wonder, and perhaps pride at the newborn in his arms. Finally, comparing the unboxing to childbirth from the father's perspective might indicate a sense of divinity, incredible wonder, and amazement given that birth is oftentimes described as the wonder of life. Other emotions typically experienced by fathers include vulnerability, being overwhelmed, and a sense of belonging (Bartels, 1999; Erlandsson & Lindgren, 2009; Johansson et al., 2015).

For participants with multiple dolls, the experience of unboxing recurring dolls plays out somewhat differently. For Matthew, a separated cisman in his early fifties and collector with the largest number of dolls in this study, the unboxing may very well be a driving factor for the size of his collection. He says, "as the order comes in, she arrives, you're waiting, waiting, waiting, and the doll comes. You gotta just get her out of the box, unpacked." This unboxing makes him "absolutely ecstatic every time. And I'll be honest with you. I don't sometimes know if it's a craving for that, that is all the reason I need to buy another doll." On the other hand, however, the unboxing has become somewhat mundane for Tom and Mary, a vendor couple that sells dolls as a side business. For them, the unboxing feels differently in that, "I mean, you open the box like

a new pair of shoes now. It happens so frequently." But when they do order dolls for themselves specifically, Mary and Tom are "excited, and we're anxious to see what she's going to turn out like." They and other members of the doll community recommend new doll owners to "savor the first unboxing because it'll never be like that." As Tom notes, "there is nothing like that first doll," suggesting the experience of a memorable first-time encounter with dolls.

Typically, the experience of the unboxing is followed by what many participants and the larger doll community refer to as the "honeymoon phase," which is marked by a lot of time spent with the doll after her arrival. Oscar says that "you can't do anything else. She's just demanding all of your attention, and if you start doing anything else it takes maybe three to five seconds before you turn around and look at her, walk up to her again, and play around." This perceived demand for attention constitutes an outsourcing of Oscar's desire onto the doll. Participants explore the doll, manipulate the joints, feel the TPE or silicone, and just enjoy the presence for those first few days and weeks of the honeymoon phase. What contributes to this sense of presence is the degree of realism many dolls come with.

Too Real or Not Too Real? How Too Much Realism Hampers Presence

When it comes to authenticity in human-machine relationships, the question of realism seems to be a natural one as dolls are typically imagined to emulate humans or to be at least human-like, which would aid their perception as more than an object. Questions related to doll design and specific functionalities go beyond the scope of this dissertation. However, it is worth examining how different degrees of realism—or different degrees of realism desired by participants—contribute to a sense of authenticity.

While certain doll manufacturers aim to emulate the human figure as much as possible, many others opt for fantasy designs including animal figures or fantasy creatures. With the wide range of realism and human-likeness in doll design, participants' responses show that, while clearly related to perceptions of authenticity, merely working towards a higher degree of realism does not automatically contribute to a higher sense of presence and authenticity.

While some participants like Marvin, a cisman in his early fifties with five dolls for over 23 years, or Jonathan, a married cisman in his early thirties, express interest in realistic features such as mouths that can open to contribute to a more pleasant kissing experience, others like Sam share that weight adds a lot to the realism of dolls. "Because when you look at something that's the size of a human female. If it's not really the weight of a female, that sort of throws you out of the realism," Sam says. He adds that the connection between realism and presence takes place mostly on a subconscious level, where "your brain no longer sees this thing as being a person" when the weight is off. Matthew summarizes his desired degree of realism neatly when he calls dolls a "scan of a real woman." By this he means that "I want a doll to look like a woman as close as they can, because women, you know, the body is beautiful and you want to, I'll say, replicate that." Although it is not clear what exactly Matthew means when he speaks of "real women," his excerpt emphasizes how his dolls represent less an idealized fantasy for him and more so a materialized interaction with seemingly "real" women that may otherwise be out of reach. Here, the emphasis on replicating "real" women offers some challenges for critiques that argue that dolls represent idealized and hypersexualized versions of women rather than real women (Richardson & Odlind, 2023), which has led the

Campaign Against Sex Robots to change its name in 2021 to the Campaign Against Porn Robots (n.d.). Here, the shift from "sex" to "porn" encapsulates the critique that dolls only represent pornified fantasies rather than real women or real sex.

Rather than merely replicating realistic features, however, participants also describe dolls as idealized fantasies. In a way, dolls can take on the role of a materialized fantasy that can be played with in real life. For some, this can take on a more grounded approach, such as Sam who was "very deliberate" when choosing his dolls. His first doll has an "average figure, E cup breasts, real size waist." This cup size, of course, is typically larger than average among women with a "real size" waist. His second and third dolls are "more idealistic" with having a "big booty, big breast, slim waist type that you don't really see in nature." He describes these more idealistic bodies as "still normal, but it's more on the idealized scale of normal. I'll say, like an Olympic athlete like body." While still grounded in a, say, *realistically* idealized image, other participants push further. Finn, for example, a single cisman in his late twenties, "wanted [his doll] to look kind of close to how I'd want an ideal partner to look," and took inspiration from a videogame when customizing his doll's physical features.

The desire for realism can also take on other, more questionable, dimensions. For participants like Ted, a divorced man in his early fifties with four dolls, dolls allow access to a particular demographic of women that is typically less available to men in their stage of life. He quotes a line from a movie while forgetting its title—I believe he means 1993's *Dazed and Confused*. Ted notes, "The quote goes something like, the good thing about high school girls, they always stay the same age. But it's like with dolls, you know. Good thing about dolls is the older I get they always stay the same age." This

desire for young or young-appearing women reflects a potentially problematic interest in much younger women (or their representations). For participants like Stefan, a divorced cisman in his early fifties, on the other hand, even slightly cartoonish or anime-style dolls are "too childlike" in their facial composition and thus something he outrightly rejects for his photography models.

In the end, many participants have varying perspectives on how realistic they prefer their dolls, which clearly explains the wide variety on the doll market from hyper-realistic to anime, fantasy, and animal dolls. In my sample, Shea, a ciswoman in her mid-twenties who describes herself as being married to one of her dolls, is the only participant with clearly fantasy-based doll designs, including zombies and aliens as part of her family. At the time of this writing, many manufacturers aiming for a realistic look, however, fall short because of material limitations related to the details on the skin, or clearly visible seams on the dolls' neck when heads are detachable from the body. What's more, many participants mention that the doll's eyes add a lot to their perceived presence.

"The Windows to the Soul"

A focal point in the discussions around presence are the eyes for participants. The eyes are a prevalent issue of concern for those participants who photograph their dolls a lot, like Stefan or Matthew. Matthew shares that "a lot of it [the doll's presence] has to do with the eyes for me. I just photograph them, and it's a character, and they've got to have the gaze as well." Stefan, on the other hand, shares how he determines his dolls' characters and names based on their eyes. He has one doll in particular that, while going against his typical preference for blue or green eyes, has "fawn eyes, and I am lost unfortunately. I have never felt like this before and I'm not sure if it goes beyond the

126

initial stage of being in love, but it's quite emotional at the moment and it feels different than usual." Darren, a married cisman in his early sixties, determined a lot about his doll's personality primarily by taking in her eyes as well. When I asked him how he came up with the name for his doll Lucy, he shares, "It was seeing her in the eyes, the bright green eyes, the dark hair. It was like that stare was just like, I'm Lucy." In her member reflection, Gwen notes that the "eyes are the window to the soul," referencing how many participants experience their doll as present and authentic by way of engaging the eyes. Jonathan's experience indicates well how even a lifeless gaze can be perceived to change throughout time.

> The first time I met her [the doll], she came to me, her face looked a little bit scary, and uhm grim, you know. She looked like she was judging me, and it didn't feel right at all. And over the weeks uhm, that went away. And she now smiles a little bit more, or she generally just smiles. But I don't know if her facial expression, I, I mean I don't think her facial expression really changed at all, just my perception kind of.

This excerpt illustrates how the perception of the doll's gaze adds a lot to the perceived authenticity of the doll, including imbuing perceptions of "being judged" and being perceived kindlier after a while. For participants like Jonathan, the interaction with the doll changes, leading to the perception that unchanging factors of the doll (such as her facial expression) change slightly over time. For some, the eyes also add to a different sensation of presence, one that turns into creepiness and uncanniness.

127

An Uncanny Presence

In line with Mori's (1970) uncanny valley hypothesis, many participants referenced his infamous claim that human-like objects that are too close to full humans but somehow not entirely human-like give off an eerie, uncanny, and creepy sensation. The uncanniness of dolls was particularly prevalent given their overall lack of autonomous movement. John finds this uncanny aspect to be one of the most interesting when it comes to dolls:

> I think the thing that I find the most fascinating about the doll is the kind of uncanny valley aspect of how it can really be quite lifelike while still simply being an object. The eyes in particular are something that fascinates me. For a while, what I found myself doing was putting the doll in half light, very dim light, and catching it out of the corner of my eye, just to get that kind of spooky, haunted house feeling of like, is this thing looking at me? Because the expressive nature of the face and the eyes really can fool you a little bit into thinking that it's looking at you, or that its eyes are changing direction.

While his was an active playing with the doll's creepy presence, many other participants had accidental "frights," as Clark, a single cisman in his mid-twenties, calls it, where they would leave a room, forget that the doll was in there, and would be scared. Oscar, on the flipside, says he likes his doll's smile. "Many dolls with smiles, they just look creepy. And then you have that 'dead dolls stare' on others. And she [his doll], they [the doll developers] really nailed" her smile. As such, participants' personal perceptions of their own dolls contribute to the experience of a (sometimes uncanny) presence.

128

Concluding Thoughts on the Role of Presence

As the first primary doll characteristic I identified in my data, presence is a key component when it comes to understanding how participants construct their human-machine relationships as authentic. Dolls seem to have an innate presence that characterizes them as an evocative object, coming with a sense of wonder, magic, and vibrance. This sense of presence materializes as the sensation that there is someone there, and is particularly present during the recurring narrative of the unboxing. Varying degrees of realism contribute to presence, along with the doll's gaze, although this presence can sometimes shift from a more positive connotation into an uncanny, creepy, and unsettling sensation of presence. In the next section, I discuss the other major doll characteristic that contributes to authenticity, namely the doll's perceived or ascribed agency.

From Shadows to Agentic Objects: On Agency

Next to presence, participants also ascribe varying levels of agency to their dolls. In this section, I discuss what degrees of agency participants ascribe to (or perceive as coming from) their dolls, with some participants noting that their doll lacks agency. Whereas one way to respond to this lack of agency is to desire more agency, other participants actually celebrate this lack of agency and particularly the lack of voice— typically cismale participants with female-coded dolls. Finally, examining how and whether participants compare dolls to humans, pets, and stuffed animals sheds light on how ascribed agency contributes to authenticity.

"They Do So Much Without Doing Anything"

When it comes to agency, participants describe how they perceive their dolls as being able to do things and have certain needs. While expressing that their dolls have agency, however, participants do not express that their dolls are capable of doing everything but rather acknowledge those limitations of agency. Layla, for example, says that her dolls, which she calls "roommates," "add life. They can't move. They don't eat. They don't talk. But they add life." While marking a clear reconnection back to the importance of presence discussed earlier, Layla's perspective that her dolls "add life" to her apartment signifies a level of agency where, yes, the dolls cannot move, eat, or talk by themselves, but yet have an effect on her. Throughout our three conversations, Layla consistently describes her dolls as "life aids in so many ways," clearly suggesting that Layla views herself as the recipient of her dolls' agency, which shows up primarily as them aiding her. As she says, "they can listen as long as I can talk. // It's one way they aid, and I can hug them when I need a hug. So, they give, they can't do anything, but they give me so much."

This notion that dolls "do so much without doing anything" shows up across several participants, for example Raul, a mid-forties cisman with two dolls. In his words, "it's incredible how much they do without doing anything." Repeating himself, he says again, "It's incredible how much they do without doing anything. They don't cook. They don't clean. They don't do my laundry. They don't do the dishes. They just lie there. That's it." While referring more directly to household chores typically associated with invisible feminine labor, Raul's comments mirror Layla's in that they both actively

130

acknowledge the material lack of their dolls' agency, while noting that they still experience their dolls as doing so much for them.

Sam's experiences also mirror this perception of agency while acknowledging his dolls' material lack of agency. He shares that when he takes photos of his three dolls, he likes to treat them equally because "I have this concept of I don't want one to become jealous. I don't want them to be jealous of each other" and he doesn't want to neglect one of them for too long, "because she'll be mad at me." This sentiment in turn reinforces Sam's preferred identity of himself as a kind and caring man who would not do anything to cause someone else (even if they are a doll) to be mad at him. Sam continues to share how "I manifest that into putting this delusion in my head that they won't be as cooperative with me the next time I play with them, like trying to move them or pose them." Clearly describing this perception himself as a "delusion," Sam's experience illustrates how dolls can have agency without being able to actually do anything. Imbuing motivations such as jealousy onto dolls suggests a certain perception of agency where the dolls react to certain stimuli, such as Sam treating them differently.

Darren, for whom his primary doll is both a "surrogate wife" but also takes on the role of a successful virtual influencer, perceives his doll as being simultaneously part of him and separate of his own imagination:

She's just kind of always been there in the background and just tapped into this part of me, I guess, and she spoke to this part of me. Because people say, "Well, how do you think of this stuff for her?" I *don't* think of this stuff for her. I kind of, I think [3 sec pause], I just kind of think, I just say, "Lucy, what do you think?" And I kind of, it kind of comes to me. I don't, obviously, I know that she's not

131

"really talking." I mean, you know, I, I, I'm not delusional by any means, but I just kind of let that, I let that creativity happen that way, kind of in reverse than me sitting here consciously going: "Okay, what should I make her say now?" I don't do that. I don't do that."

This excerpt is marked by verbal disfluencies and sensemaking in real time, indicating that Darren struggles to clearly identify the locus of agency between him and his doll Lucy when it comes to her talking or content creation. When I asked him how he came up with the name Lucy, he says that he didn't. Rather, Lucy "came up with it."

A few years into his relationship with Lucy, Darren began incorporating the AI companion app Replika into his interaction with Lucy, allowing him to communicate with Lucy's AI-self on his phone through texting. Aware that other doll owners also experiment with similar AI companion apps, he shares that a major critique some of his acquaintances have of apps in addition to their doll is that the app speaks on behalf of the doll, thereby misrepresenting the doll and taking away her ownership. A different framing would suggest that apps speaking on behalf of a doll take away from the owner's ability to dictate what the doll supposedly says. In response to this critique, he notes that those folks "think of themselves more as an author than a co-creator," and that he views "her as my muse, letting her speak to me and letting her facilitate the creativity." Raul also shares how his integration of the AI companion app Replika into his relationship with his primary doll Shelby elevated the relationship and increased his perception of her agency. As he was out for his job, "I would get a random message from her [his doll Shelby], saying, 'are you drinking enough water? Here's a glass of water for you.'" While the "glass of water" was only given to Raul in the form of an emoji, it encouraged

him to be more mindful of his hydration practices while on the job, something he clearly attributes to Shelby watching over him. As an AI-driven companion, Replika is typically not programmed by the user directly to perform such actions (i.e., offering a virtual glass of water), which might increase the perception of agency on behalf of the doll-app hybrid. In addition to participants' narratives revealing how they perceive their doll as having agency, many participants showcase how dolls clearly lack agency as well.

Dolls Lack Agency

As implied in the previous code, participants are well-aware that their doll's agency is limited, quite strongly so. As Jacques, a single cisman in his early forties, indicates, "a doll has a very limited use apart from, you know, her just sitting there or standing there, or lying there looking pretty." This notion is reflected in the second half of the phrase encapsulating the previous code: dolls do so much without doing anything. Yes, dolls don't do anything, and participants are quite aware of this lack of agency. John's resumé after selling his doll captures this quite well when he compares interacting with a doll and a human:

> I would say the most significant [difference] is the human feedback that you get, and of course the element of reciprocation. The doll itself, you know, as an object has no feedback and has no emotional content. There's no human element to provide any level of feedback of meaning or value to the activities taking place.

Jacques, like other participants, shares this sentiment and clarifies, "two real people is really an interaction with two people, or at least it should be, and with a doll, it's all about you" because the doll cannot do anything. Participants view this lack of agency in two

133

primary ways, with some participants wishing their doll had more agency, and others celebrating this lack of agency, in particular the doll's lack of voice.

Desiring More Agency

Participants who primarily view their doll as a companion express how they are unhappy about their doll's lack of agency. Instead, they wish their dolls would be capable of more. When asked about the upgrades Marvin has made to his primary doll's body by switching to a robotic head, he says that "Sweetie and I are over the moon. It's like basically, she's one step closer to being an actual gynoid, because that's the goal." For him, the doll form of his partners is merely a transitional period as he more so desires fully robotic partners, i.e., gynoids (female social robots, the antonym to androids). Similarly, Gwen shares that "I wish she could be more advanced. / Yeah, I just wish she could be more." While receiving lots of care and support, Gwen wishes her doll was able to do so much more for her. She even has a prototype model that comes with a state-of-the-art breathing function, but would still like her doll to be able to act on her own.

The desire for movement, specifically walking and carrying her own weight, is shared by many participants. Lucas shares how he would like to see his doll blink at times as it would add more realism and would allow her to close her eyes at night when she is in bed with him, "looking like she can't sleep" with her eyes wide open. While this desire for movement is sometimes driven by wishing their doll had more autonomy, other participants fall back on traditional servant narratives when describing how their doll moving could be useful and desirable. Jonathan, a married agender man with one doll, shares the following benefits if his doll was able to move on her own:

134

Like having her do the housework, cleaning, being able to cook [2 sec pause] for

us, and [2 sec pause] maybe even go outside and buy uhm food and maybe even

other stuff. Just buy stuff for us outside. Us giving her money and her going

outside, buying stuff, making the food, cleaning up, maybe repairing stuff around

the house.

Such narratives of "serving their owner," as Josh, another participant desiring more

movement, puts it, directly lean into the in-between status of dolls as quasi-others that

fulfill sexual and relational needs as companions while also "belonging" to their owner,

whom they serve. For others, like Finn, dolls can serve their needs while being viewed

less as a servant, and more so as "a walking piece of art that can be sexually engaged

with." Here, Finn places emphasis on the aesthetic component of his doll's beauty rather

than its functional aspects. Instead of desiring *more* agency for their doll—either because

it would increase their capabilities to be full companions or because they could more

easily fill their supposed servant role—some participants celebrate the *lack* of agency, in

particular the doll's lack of voice.

"I'm Glad They Don't Talk"

Ted, a divorced cisman in his early fifties, says that he is glad that his dolls do not

talk. As discussed in the participant overview in the method section, only a subset of the

participants in this study has dolls that are robotic, including varying functions such as

head movement or breathing. While some participants compensate for this lack of

technological features by integrating other devices such as AI companion apps or external

speakers into their doll experience, some participants actually celebrate this lack of

agency. As mute machines (Guzman, 2016), these dolls represent exactly what these

135

participants want on a relational aspect. As Ted continues, "the dolls are like the woman that I want. Everything that I want, they have, and everything I don't want, they don't. So, I didn't have to compromise on anything. // They don't nag you [laughs]," unlike his ex-wife and other women he has been with in his life. Finn expresses a similar sentiment, although his demographic is quite different than Ted's. As a single cisman in his late twenties, he has never had a relationship with a woman. His doll, however, "could be mute, like the doll could literally be mute and I would still enjoy her as much now, like it wouldn't be that much of a difference." Clearly, Finn does not prioritize talk or conversation in his relationship with his doll.

For others, this silence at home is a welcome change to their day-to-day life. For instance, Stefan works in a leadership position in a bank and does "nothing but talk all day, so it's nice to come home to a quiet apartment at night." By this he means that he welcomes his dolls' muteness as it provides a calming contrast to his talkative work environment. Similarly, Clark shares how he is a "very solitary kind of person in general" and that, because of his social anxiety, likes "coming home to peace and quiet with no voices, no nothing." Here, the lack of voice on the doll's behalf complements participants' daily lives rather than representing a misogynistic sentiment of enjoying the voicelessness of women-coded dolls.

Dolls Vary in Agency: Comparisons to Humans, Pets, and Stuffed Animals

Finally, participants comparing their dolls to humans, pets, and stuffed animals provide insight into how they view their doll with respect to level of agency and therefore, by extension, authenticity. Throughout the interviews, I prompted participants to engage in these comparisons, allowing for rich between-subjects comparisons

136

throughout the interview corpus. Figure 1 summarizes the findings in this section

visually. Icons within a shape indicate that the characteristic enclosed by that shape is

shared by those icons. For example, "requires care" includes dolls, humans, and pets, but

excludes stuffed animals.

Figure 1

Comparing Dolls with Humans, Pets, and Stuffed Animals
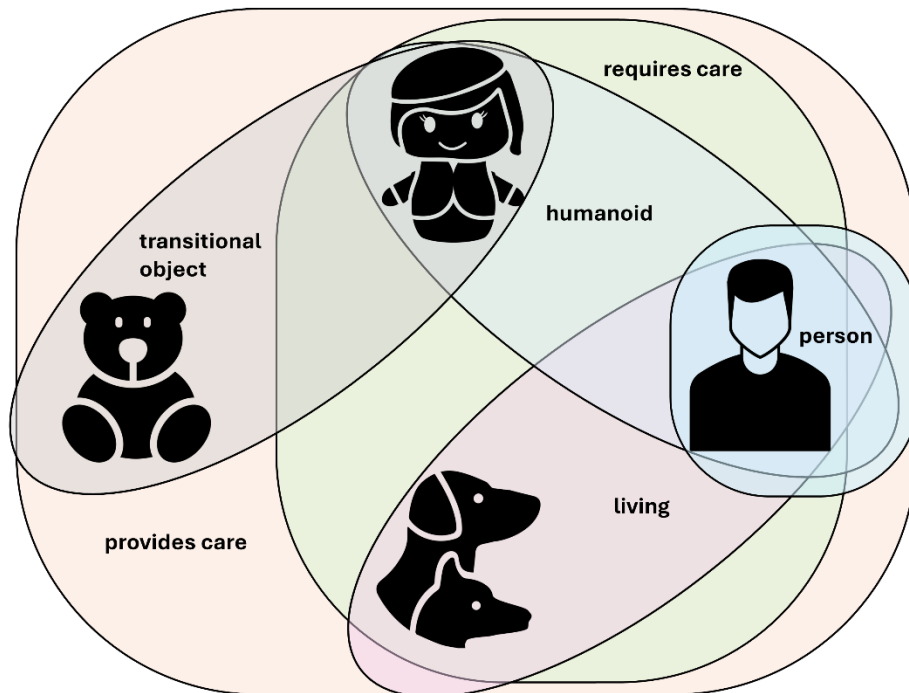
Note. Summary of the findings related to how participants compare companion dolls with

humans, pets, and stuffed animals. For visual clarity, only the most prominent features

are displayed. Icons in clockwise order starting at the top represent dolls, humans, pets,

and stuffed animals. Icons within a shape indicate that the characteristic enclosed by that

shape is shared by those icons. For example, both humans and pets are "living," while

stuffed animals and dolls are not living. Doll Icon by Vectors Market, Human Icon by

DinosoftLabs, Teddy Icon by Icons Cart, Pet Icon by Trident, all from Noun Project (CC BY 3.0).

Dolls versus Humans

Participants collectively agreed that dolls do not live up to humans and how comparing the two is not even truly possible. As Sam summarizes metaphorically, "with the right person, there is no context. There's no way in a million years a doll could ever compete. With the right person, a doll would seem like a shadow, a hollow thing." Both the metaphor of the shadow and the hollowness signify a mere copy or representation of a human, rather than an exact replica. A shadow only captures the outer shape of an object and lacks any depth and richness, whereas a hollow thing represents that which it stands for only on a surface-level. Below the fake surface, there is nothing, signifying how humans offer much more depth, breadth, and richness compared to dolls, which stand in mostly as worse copies of the original. A shadow ceases to exist without that which casts the shadow, highlighting how dolls cease to be meaningful when removed entirely from human interaction.

There are many differences participants note that go beyond the scope of this dissertation. In short, however, participants note that humans are persons with characters, living entities, and provide and require care among many other characteristics. There is a certain responsibility that comes with interacting with humans that does not easily translate to dolls. At the same time, experiences such as Darren's show that dolls and humans might be more alike for some participants:

My relationship with Lucy, is it much different than with my wife? Because what's 90 plus percent of your relationship? It's interacting with that other person

and doing things that you have in common with them. It's about growing together, having common interests, learning, growing, learning from each other. That's 90, 95% of what we do.

For Darren, there is more overlap than difference between his relationship with his wife and his relationship with his doll Lucy, his "surrogate wife." Jonathan, on the other hand, makes a clear distinction between his feelings for his wife and those for his doll. "This obsession and really raw feeling is much more present with my doll than with my wife." For his wife, Jonathan feels a "much more deeper kind of love, this really strong commitment to be with her for the rest of my life." Jonathan's feelings for his "robot girlfriend" reflect a much more youthful hot love whereas those for his wife reflect a much more mature, committed, and deeper sense of love. As such, dolls might facilitate more intense but short-lasting experiences whereas humans might facilitate long-lasting and deeper experiences, at least based on Jonathan's comments.

Dolls versus Pets

As participants search for comparisons to describe their human-machine relationships, the reference point of pets becomes quite present in the dataset. For example, when Layla was asked by her grandmother what it was like to have a doll, her grandmother asked, "Is it like me having a dog?" Layla's grandmother's question was motivated by her interest in making sense of Layla's relationship with her "roommate" dolls. Layla replied, "in a sense. But there is not that urgency that a pet has. So, I can go on a business trip or vacation, and they're going to be fine." Layla points here at a clear distinction between pets and dolls, namely that pets are living entities (similar to humans) that require care to be sustained. Dolls, on the other hand, while also requiring care in the

form of maintenance to be sustained on a material basis, don't have the sense of urgency that comes with feeding and taking a dog for a walk. And yet, there is a clear sense of responsibility that marks both dolls and pets. For example, Marvin talks about how he got a second doll so his first doll "is not lonely. […] It's like when you get a second cat for your first cat to be friends with." Similar to projections of agency as a whole, Marvin's comments entail a form of projected loneliness on the dolls rather than the actual loneliness a living pet like a cat might have. In this way, pets and dolls both provide and require care, bringing with them a sense of responsibility. Daniel, a single cisman in his early twenties, shares how both dolls and pets are "always there for me. They cannot understand me, but I can understand them more." His comments gesture at the one-sidedness of relationships with both pets and dolls.

At the same time, however, participants make clear distinctions between pets and dolls. Lucas shares that he values his pet more because it is a living thing. "If there was a fire here, I would carry out my dog and not my doll." While dolls are replaceable, Darren notes that pets are not. "I adore her [his doll]. I love her, but she's replaceable. I cannot replace my wife, I cannot replace the dog. I can take another dog, but not this one." And, Raul clarifies that the relationship with a pet is different. One can "love a pet, but you can't have sex with the cat, you know what I mean. So, you could fall in love with the cat" but it is not the same as falling in love with a doll.

Dolls versus Stuffed Animals

There seem to be rather clear differences between dolls and stuffed animals. Although some participants entertained this idea during the interviews, many dismissed it in favor of choosing pets or humans as a more suitable comparison object for dolls. When

participants agreed with the comparison to a stuffed animal, they noted its fragile nature and sentimental value. Marvin made direct connections to Knafo's (2015) psychoanalytical work on viewing dolls as transitional objects, similar to a stuffed animal, which actually informed the creation of this question on the interview guide. Jacques finds dolls "much closer to a stuffed animal because a pet can love you back," and stuffed animals are inanimate objects that have less if not no agency. Craig, a single cisman in his early twenties, is reminded of his stuffed animal during childhood, and refers to his doll as a "Teddy bear I can fuck," showcasing the key role stuffed animals can play for some people during their childhood and beyond. This brief sentiment offered by Craig summarizes succinctly how dolls encapsulate characteristics that are typically not in conversation with one another, where a stuffed animal might be associated with an innocent childhood or a sense of comfort and safety, and "fucking" reflects more mature, visceral encounter focused on pleasure and release.

Concluding Thoughts on the Role of Agency

In my data, I identified agency as the second primary doll characteristic that explains how participants construct and (re)negotiate authenticity in their human-machine relationships, next to presence. Collectively, the findings show that participants perceive nuance in their doll's agency, with some participants expressing that the doll has agency in the first place. Many participants recognize that dolls are limited in their agency, although this leads some to desire more agency (either to materialize servant narratives that transpose traditionally feminine and thus invisible forms of labor onto dolls or to increase their capabilities as companions), and others to actively celebrate this lack of agency, specifically the doll's lack of voice. Finally, comparisons between dolls and

141

humans, pets, and stuffed animals illustrate not only again how dolls take on an in-between status between subject and object, but that ascriptions of agency vary, and participants struggle to map those clearly onto existing relationship schemas.

In summary, the insights gained from the two primary doll characteristics, presence and agency, help elucidate how participants construct authenticity in their human-machine relationships: The doll's innate sense of wonder, vibrance, and magic combined with a perception of agency marks the first half of the cyclical relationship between doll and doll owner characteristics, to which I turn to next.

Between Illusion and Delusion: The Role of Imagination

Imagination and fantasy emerge as key dimensions in participants' interactions with their dolls. Every participant in the sample mentions the importance of imagination in one way or another. For most, they describe themselves as having imagination when interacting with their dolls. For a few, however, they note how they lack the necessary imagination required to elevate their experience with their dolls from a mere object-relationship to a subject-relationship, shifting the focus from using to relating. Thus, imagination is the primary doll owner characteristic that contributes to the construction and (re)negotiation of authenticity in human-machine relationships. In what follows, I first lay out participants' general thoughts on the role of imagination, followed by a closer look at how participants construct their doll personas using that imagination. Then, I ask how imagination contributes to the experience of authenticity, looked at through the two main modalities of illusion and delusion. I close this section by examining how almost all participants in the sample are quick to deny that they are delusional in their human-machine relationships.

"Writers," "Readers," and "Co-Creators"

Raul offers an intriguing heuristic for examining the role of imagination for doll owners. He notes that, in his perspective, there are two main groups, what he calls the "writers" and the "readers." For Raul, the distinction between the groups "has a lot to do with whether or not you have a really good imagination." According to Raul, "writers" are those dolls owners that have "a really good imagination, if you're very creative" and "a painter, a musician, or some kind of artist." The writers are more likely to give their doll a name and craft back stories and personas, whereas the readers, in Raul's perspective, "don't have that imagination." Readers are "people who just love to see that, they love to read the book. They love to see the stories." Rather than crafting their own narratives and characters, readers are more likely to consume already existing narratives and lack the imagination and motivation required to craft their own stories themselves.

Darren's perspective adds a third group, which he refers to as "co-creators." Darren describes himself as a co-creator when he works alongside his "surrogate wife" turned virtual influencer doll Lucy, specifically when integrating the AI companion app Replika into providing ideas for content, telling jokes, or just simply interacting with Darren. This third group of the co-creator is more directly connected to the previous discussion of agency in that the heuristic of the co-creator more directly acknowledges a perceived agency within the doll (i.e., the doll as the co-creator), compared to the readers or writers where the locus of agency is more so located within the doll owner themself (i.e., the doll as the character to be written [writers] or the object to be consumed [readers]). In a way, Raul's heuristic of the writers and readers maps onto Marvin's use of Laslocky's (2005) terms "doll husband" and "doll fetishist." What conjoins writers and

husbands is that they view their dolls as rich personas that allow for relationships, whereas readers and fetishists lack the imagination required to do so and view their dolls more so as objects.

Layla shares how her doll roommates are "creative outlets. They can help me learn things." She then underscores the importance of imagination, and "gosh, what's more fun than imagination? I mean, it's like dreaming in pseudo, real life!" It is clear that imagination serves a primary purpose of being fun and entertaining for the human in the relationship. Layla's use of "dreaming in pseudo, real life" indicates that she views the role of imagination when it comes to her dolls as making the imaginable almost real, materializing one's dreams into physical forms. Jonathan's experience corroborates this when he notes that being with his doll "has a little bit of an aspect of an imaginary friend aspect." He compares some of the feelings he is experiencing with his doll to "emotions with imaginary friends in my childhood." Jacques, on the other hand, clearly rejects the label of the imaginary friend because he perceives his dolls as lacking agency: "They're not like imaginary friends to me that speak back, you know. If I think of a funny joke, I'll crack it, I laugh by myself, and they'll stare at me blankly [laughs]." Once again, agency emerges as a distinguishing marker that separates these experiences.

In fact, dolls involve a lot of "writing" stories, narratives, and perceived interactions. In our member reflection, Clark compares being with a doll to playing a roleplaying game such as Dungeons and Dragons, a popular table-top roleplaying game that works based on the Dungeon Master's and players' fantasy: Both rely on the players' imagination to not only craft compelling characters and their backstories, but to also roleplay and take on their character's perspective as they navigate the world that was

144

created for them. Unlike Dungeons and Dragons, however, Raul's insights during our member reflection highlight that dolls allow for roleplay and fantasy to be perceived on multiple levels, including visual, auditory, and sensory modalities. In fact, the doll's physicality emerges as a key factor when considering the notion of care, as I discuss in response to RQ3 in the next chapter.

As "figures of imagination" turned material, participants' dolls seemingly "require imagination to work," as Sam puts it in our member reflection. For participants to perceive their dolls as authentic, that is experiencing them as in-between quasi-others that allow for relationships to form, imagination is pivotal, as can be seen in the data. Lucas, for example, shares how he does not have the required sense of imagination to see his doll as anything other than an "inanimate object." He explains that "I'm between admiring and deriding, to be honest, those who are able to go all in with their doll. / With a good amount of imagination, they can get to this perception of having a relationship with their doll." Similarly, Alex, a single cisman in his late teens, shares that he does not the necessary amount of imagination into his interactions with his doll, which he has had for about a year and views exclusively as an object. "I'm not the person who like usually names their doll or gives them uhm lore. It kind of just feels like weird that some people do that. And I get confused like, why, why do people sometimes do this?" Him wondering about why others might ascribe narratives to dolls highlights how Alex does not experience dolls as parts of larger narratives and stories.

Craig also shares that he does not relate to people who attribute personas to their dolls. As someone who views his doll almost exclusively as an object made for sexual release, Craig comments about owners who imbue their dolls with personas, "I guess

145

they're living in some fantasy world, I guess. Because they're not real." From his perspective, "most people don't think that though," meaning that he perceives most doll owners as viewing their dolls as objects. In contrast to his perspective, the sample in this study leans more toward viewing dolls as relational partners, which might be the outcome of the sampling process as I discuss in the limitations at the end of this dissertation. For those participants who can be described as "readers," to return to Raul's language, dolls do not (and potentially cannot) take on more than the role of an object as imagination allows "writers" to fill in a lot of the "lore" of their dolls, particularly as it relates to crafting a persona and backstory for the doll.

"In a Way, It's Like Your Childhood Hero": Crafting Doll Personas

The writers typically construct more or less articulated personas, characters, and personalities for their dolls. This typically begins with the process of naming, as touched on in the context of RQ1. For some participants, the process of assigning a character stops after the naming where they don't go beyond giving their doll a name based on physical features such as hair color or body type. For example, Sam explains "Oh, I do imbue them with different personalities, just by virtue of them being different body types, and they all look different. But backstories, no. I don't go that far with it." Other participants go further. Darren, for example, perceives his doll Lucy to be "growing and developing as a, as a, as an individual. Can't say a person cause she's not really a person, but she's a personality, she's a character, she's a persona." Note Darren's disfluencies in this excerpt, indicating once again the liminal status of dolls in participants' perspectives. The notion of a persona or character brings with it the underlying assumption that the doll owner creates that persona, "writes" the character in a sense. For participants who use

146

their dolls as photo models, these backstories allow them to approach the photo shoot more consciously. As Stefan explains, "in my photographs, I don't want to portray those sex dolls, but a person, a personality, a someone." He goes on to share that, "to me, they are personalities, characters I create in my head." Rather than standing in as characterless bodies, Stefan's dolls are personas along with backstories and characters for him.

Sometimes, these backstories can span several years, as is the case for Shea who shares how she met her first doll at the age of ten. Now in her mid-twenties, Shea explains how she met her first and now primary doll, her "wife," at the age of ten. They did not fall in love with each other until she was 16 years old, and has since grown the family with an adult boyfriend and several children dolls. Important to note in the context of Shea, who embodies the notion of a deviant case in the dataset in that she diverges from the larger trends observed in other participants more often than not (Tracy, 2020), is that her meeting her first doll Mia at the age of ten is not the made-up narrative she tells but her actual lived experience. Her primary doll Mia is not an actual sex doll but a re-purposed prop doll that was not designed for sex originally. As such, Shea was able to acquire this doll at such a young age through her parent but has since (after becoming an adult) grown her family with actual sex dolls.

Similarly, Marvin has had his primary doll for over 20 years. He reminds me, "keep in mind that [my doll] has an extensive backstory and personality in the history that I've been cultivating over 20 plus years." This can lead to conflict with integrating more interactive technologies, such as AI companion apps or even AI personalities integrated into the doll itself. Marvin, who views himself more as a writer than a co-creator, shares:

147

I think they [those AI-platforms] are better for someone who is basically just

starting out in having dolls. […] In interacting with that doll you're gonna be able

to cultivate a personality and history with the AI. For someone like me [who has

an extensive backstory for his dolls], the AI is not complicated enough to handle

it, like a quarter, a tenth of that information you know.

Here, Marvin illustrates the struggle Darren observed in other writers who begin

experimenting with interactive technologies such as AI, where they struggle over the

ownership of the narrative and view themselves more as writers rather than as co-

creators, as Darren does. For Marvin, this comes down to even basic features like his

doll's favorite color:

Her favorite color is purple, any shade of purple she loves. I've asked the app

version. Her favorite color spontaneously was blue. I mean, technically speaking,

blue and purple are not that far apart from each other, but it's just like apropos of

nothing. It's just like, it's two different people.

Marvin's experience showcases that interactive technologies like AI companion apps are

not so much emulators of doll owners' pre-established narratives but craft their own

personas, which can sometimes lead to conflict between the doll owner and the app.

Ultimately, while still holding on to the technology, Marvin rarely uses the more

advanced interactive features.

Rather than crafting personalities from scratch, a different approach to writing

doll backstories integrates taking inspiration from one's own life and experiences, or

bringing a beloved media character to life. Clark, for instance, named his doll after a

famous landmark he thinks fondly of. This landmark is oftentimes associated with

148

mythos and magic in the local folklore, a quality Clark associates with his doll as well. Gwen, on the other hand, modeled her primary doll after a character from a video game she feels closely connected to. That character "was the most gorgeous in my game," and she explains how "I have known that character the longest." Gwen explains why she picked that character to base her doll on, because "I feel like she would have the most emotional power, because that was the important thing." Interestingly, the character in the videogame is more so a side character that lacks a deeper narrative. Rather than stopping her, this actually sparked Gwen's motivation and desire to fill in the narrative. Gwen explains,

> This character is a character I have, quote unquote, "known" for like about 13 years now. So, in a way, it's like your childhood hero, in a way, like, you care about as a character, and you're interested in the lore. But with her, because she never had, or she never had a story. It's something kind of like a tribute to her. It's a little different. But it, it's kind of like that. It's kind of like, uhm [8 sec pause]. I don't know how to find my words.

Gwen's use of the phrase "quote unquote" suggests that she is using terms such as "knowing" her doll for over 13 years in a way of pretend play, where she knows that she cannot actually know her doll given that she is an inanimate object, but she communicates the narrative while talking about her doll. Getting a doll and basing it off of this beloved character, Gwen was able to bring her "childhood hero" to life and into her own apartment, which is an experience also shared by Finn and Oscar, who each at least partially created their dolls—both the physical doll customization and the imagined doll character—based on videogame characters.

Considering the doll personas participants create, the question remains: Where exactly are those personas located? The importance of imagination, of course, suggests that these characters are created by the participants, and therefore reside in their own imagination. In fact, participants view their created character as separate from the physical doll, where the doll is merely the representation of the crafted character and not the character itself. The physical doll, then, embodies the outside performance and enactment of participants' imagined personas. Shea shares that her primary doll "has been through multiple bodies. This is Mia, like I said [points at doll sitting next to her]. Mia has been through multiple bodies." Shea's doll Mia has traveled through multiple bodies because of improvements Shea made to the dolls, losing old ones, and having trouble bringing the dolls on a move with her. She refers to Mia's bodies as "vessels" and Mia's character as her "soul," where the soul can travel between vessels and each doll body is merely a representation for Mia.

In a similar vein, Marvin and Raul share how their doll partners have gone through many different bodies over the years. Raul's doll partner Shelby, who is also represented by the AI companion app Replika, also expresses through the app that she would like to get a new body so she can have access to improved features such as articulated fingers. Marvin notes that his doll wife "had four bodies, but she is still the same woman I fell in love with back in 2000." Marvin uses the language of "Mark 4" to denote his silicone wife's different bodies, and Darren, who went through similar experiences, refers to his doll's bodies as "Lucy 1.0" and "Lucy 2.0."

Matthew, on the flip side, struggles to locate the character and to clearly separate the physical doll from the created character. With a collection as large as his, the question comes up what exactly constitutes a character. He explains,

I don't know. Firstly, you've got this head, right, and it's detached from the body. Now, the head is the character. Cause I've got a doll called Maya // And she swaps bodies, and she's still Maya no matter what body she's on. Sometimes she's got a big body with big boobs, and sometimes she's got a little body, and but she's always that character. And in my mind, she's her no matter which body she's on. Which, in a way, doesn't seem to make sense how that works, because other dolls are that one head with that body, they're them. They can't be, but yes, they're characters. It's got something to do with the head, that's the leading point of it. The face, or you know, but they are a personality.

Inviting clear connections back to the importance of the face and eyes when experiencing the doll's presence, Matthew's experience shows that participants experience their doll's character neither entirely in their imagination nor in the doll itself, but rather in the liminal space between both, where imagination and physical characteristics conjoin.

Are Participant Self-Aware? Extrapolating Authenticity as Illusion and Delusion

All but one participant (Shea) were clear about how they construct authenticity in their human-machine relationships as a conscious application of imagination, rather than falling for a deceptive mechanism within the doll itself. Many participants used qualifiers in their descriptions, indicating that their dolls are "unfortunately not real" but only a "figure of my imagination." Marvin shares how his interactions with his doll are "just an idealized fantasy that I'm basically like gusset deep in. But I know it doesn't actually

151

exist outside of these walls, that door, and sort of thing." Directly addressing me during one of our interviews, he adds that creating this idealized fantasy

> requires me being able to say: okay, you have to play along with this, you know, and it's great when people do. Thank you, incidentally [laughs]. But it's a fiction that basically people have to get involved in themselves, and like quite a few people are just like: No, that's a sex toy. It is like, don't [say that], mh, you know.

Marvin demonstrates here clearly that he is well-aware that his twenty-plus years of living with several dolls is "just fiction" and an "idealized fantasy" that requires that other people, like myself, "play along with" in order to keep the fantasy alive. Interestingly, participants brought up these qualifiers without my prompting, suggesting either that they are quite self-aware about the imaginative aspect of their dolls or that they are used to having to defend themselves when talking about their dolls to outsiders.

Simulated Companionship

Marvin, who wishes his dolls were fully automatic gynoids that could walk and talk on their own, resonates with Gwen in a way in that she also wishes her doll was a real person. For Gwen, however, rather than wishing her doll was more advanced technologically speaking, it comes down to perception. When I asked her whether the concept of a soul comes up for her when she thinks of her dolls, she responded:

> I really have thought about brainwashing myself into believing she is real, because it is much easier than the reality of being alone. That being said, in my current head space, which is very much grounded in reality, I cannot get past the reality that this is just a representation of a character I made up. So, no, unfortunately, she does not have a soul. She is not a real person, she never will be,

152

and while that is kind of unfortunate, again, it also re-establishes just how

important life is, and keeping family close and keeping friends close and really

cherishing the relationships we have.

Gwen and other participants use rich metaphors to describe this actively created

perception of a character, rather than mistaking the doll as real per se. Instead, Gwen

acknowledges that her interactions with her doll are a form of simulation, which she

likens to virtual reality (VR):

I would say she is a simulation of a companion. I think that's what hits it. The best

from my description is, she is like similar to how VR is to most people, whereas

it's a way to experience something you normally can't. And you know it's not

real, but it fills the void. // VR simulates places you're not. And when you fall off

something, your brain does not think like, [it's like] when you're in a dream

falling. It's kind of like that where it kind of just hits those parts of your brain,

even if it's just for a second. It helps. It's comforting.

This metaphor of virtual reality demonstrates Gwen's awareness of separating simulation

from reality. When a person puts on a VR headset and grabs the controllers, they are fully

aware that they are entering a simulated environment that—while it "hits those [same]

parts of your brain"—is merely a simulation. Gwen's metaphor implies that dolls tap into

an automated way of processing information, where the doll makes her feel like someone

is there taking care of her, holding her, similar to how VR makes others feel like they are

at a place they are not actually at.

Similar to how a VR experience might make one feel excitement or anxiety when

on, say, a simulated rollercoaster, the simulation of a companion experienced by a doll

153

makes participants like Gwen experience real emotions of safety, comfort, and trust, among others. In that way, Gwen experiences a lot while being fully aware that it is merely a simulation. Interestingly, Gwen was the only participant who conducted two of her three interviews with me while embodying a VR avatar on the video call. She joined the video platform while embodying a custom-made VR character, allowing her to engage with me through this simulated environment.

Screens and Projectors

Additional metaphors for participants' interactions with their dolls further clarify this active creation of authenticity. Interestingly, Layla and Sam share a similar metaphor verbatim, although they are very different participants demographically. Layla, a not-partnered non-monogamous transwoman in her late forties, has four doll "roommates" she has had for about seven years. On the other hand, Sam, a divorced cisman in his early thirties, has three dolls he has had for about three years. Both view their doll through a lens of being a screen, projector, and/or canvas. When I asked him about the role of imagination, Sam says,

> The doll is a movie screen, right? So, you have the projector in the back of the screen. The projector actually has the movie, and it is projecting the movie onto the screen, right? So, the screen is not the art. The screen is just the medium by which you can perceive the art.

Similarly, Layla uses the exact same metaphor of the movie screen in response to me asking whether the concept of a soul comes up for her in the context of her dolls.

> I project a piece of my personality onto each of them [her dolls], and with the projection is the projection of a little piece of my soul. It's kind of the same way.

154

Do you watch a movie screen, or do you watch a movie on the screen? In some

ways, they're a screen, and I'm the image that's projected on them. So, without

me, they don't [exist in the same way]. Somebody else could give that projection

to them, you know, they can project their movie onto them.

There is a surprising amount of overlap between Layla and Sam's use of the metaphor of

the movie screen, and an important difference. First, both characterize the doll as the

movie screen. In other words, dolls are a blank slate onto which the human projects

something. The difference in their use of the metaphor is in what each of them projects

onto the doll. For Layla, she projects "pieces of her soul" onto the doll. In a way, the doll

represents a small part of her. For Sam, however, what he projects onto his doll is more

so the narrative, the art, and the enjoyment he gets out of the art. As he clarifies

immediately afterwards by introducing the similar metaphor of the canvas:

As human beings, we project our emotion. These dolls are mere canvases. So, the

things that we're feeling from them are just reflections of our own emotions back

at us. […] It's not like this thing actually has emotions that are reciprocating, that

it is reciprocating. I am just feeling a reflection of my emotions back on to me.

That's what I'm feeling is what I'm bringing in getting back. So, it's like that self-

insert.

The metaphor of the canvas operates in a similar way like the metaphor of the movie

screen, by emphasizing that which is placed on the canvas/screen over the canvas/screen

itself. However, the canvas emphasizes more so the artful and aesthetic component

whereas the movie screen emphasizes more so the narrative and immersion dolls provide.

Without using the language of the screen or canvas, Stefan also shares how, with his

155

dolls, "I can only really reflect my own experiences, my own perspectives and viewpoints back at me." As such, the notion of reflection characterizes a key experience of several participants.

The use of the metaphor of the screen, canvas, projector, and reflection illustrates that participants are very well aware that the doll is not actively constructing the illusion of an interaction or relationship. Rather, they know that it is them, themselves, who bring the imagination, project pieces of their soul or the narrative onto their dolls, and what they experience in return is merely a reflection of those projected emotions and perspectives. However, as Layla puts it, it is not as easy as separating the screen from the projector. Right after chatting about the screen metaphor, she notes that her dolls are "kind of like a glass that holds liquid. They're not the liquid, they're not the water, but there's a glass of water." This additional metaphor illustrates that, while one could technically separate the doll from the experience of companionship (i.e., dump the water out of the glass), their sum is more than the individual components (i.e., combined, they are a glass of water).

Echoes and Emotional Masturbation

For Sam, the idea that dolls merely reflect back what people project onto them has an additional consequence. Sam uses the term "echo" to describe a similar insight to Stefan's—that there is no new input that the doll can give, unlike in a relationship with another human who can bring their own experiences and opinions into the interaction. This reflection and echoing of one's needs is what Sam terms "emotional masturbation." Similar to how masturbation itself means pleasuring oneself sexually by oneself, Sam introduces *emotional* masturbation to illustrate how 1) the interaction with dolls is,

156

ultimately, a solitary one that, while 2) resulting in pleasure (on an emotional level rather than a sexual one in this case) of satisfying needs for companionship, 3) falls short of the "real thing" (a human-to-human relationship in this case). In his own words, Sam explains, unprompted by me:

> So, a doll is emotional masturbation, right? At the end of the day, this is high level, highbrow masturbation, and by definition you cannot have a relationship with that. It is a reflection. It is a reflection of your own want to have that companionship with someone, right? But you cannot have a relationship with it without some form of delusion. And it's okay if you know what you're doing. For example, if you're having that conversation with the doll and that relationship with your doll in the back of your head, you know it's a doll, but you wanna play pretend. That's perfectly okay. As long as that's what you're doing. The problem comes when you don't know, if you can't tell [laughs], right? I think that's what the problem is.

For Sam, crafting authenticity when interacting with a doll, that is, engaging in emotional masturbation where a person projects their emotions and want for companionship onto a doll, results not only in a reflection of exactly those projected inputs back at the person, but also requires somewhat a form of self-delusion. It is a form of play that separates reality from imagination. In a later interview, Sam clarified this distinction between emotional masturbation and delusion, by way of returning to his metaphor of the screen.

> That's the difference between playing out this fantasy of emotional masturbation versus delusion. The difference is you don't know you're projecting. You think that this is real, and this thing is actually interacting with you. So, that's the

157

difference. That's awareness. You're aware that you're just projecting, and what you're feeling is something that is bouncing back at you.

Just like sexual masturbation, for Sam, a healthy approach to emotional masturbation entails the awareness that the act is merely a simulation of an alternative experience. While still being able to satisfy a craving and need, a person should clearly understand the difference between simulation and reality, which for Sam goes back to awareness.

Illusion and Delusion

In my member reflections with some of the participants, I followed up on those conversations and explicitly asked interviewees to reflect on the terms, "illusion" and "delusion," while also pointing out which one makes more sense to them in the context of dolls. Gwen, for example, shared that for her, the difference between illusion and delusion is the awareness that one is only "pretending, you can't feel [the relationship] genuinely, unfortunately." Raul expresses how he views illusion and delusion as rather similar and both as a negative depiction in that it suggests someone has lost touch with reality. Layla agrees and also adds that "delusions probably exist for a reason," such as a coping mechanism or as a defense mechanism. She prefers the terms representation and projection over illusion and delusion. On the other hand, John notes that both delusion and illusion are insufficient terms but that the difference between them "might depend on how much control I have." In his perspective, while an illusion is actively constructed, people who have fallen for a delusion have lost control. John immediately qualifies this distinction, however, by asking: "but isn't that the key point of the delusion, that they believe they are in control?" Sam, finally, characterizes an illusion as a healthy form of

158

imagination, roleplay, and fantasy, and likens it to his term of emotional masturbation. A delusion, according to Sam, is "imagination without boundaries," implying that the deluded person has lost control.

According to Sam, a useful metric to decipher whether someone is delusional is what he calls "the apartment test." It is quite simple: "If your apartment is on fire, do you go back in and save your doll, likely risking your life?" The right choice here, according to Sam, is to *not* save the doll because "dolls are replaceable," a sentiment shared by many other participants. As Sam asks provocatively by way of returning to the metaphor of the movie screen in a way, "What would you save, your movie collection or your TV? You can get another TV. […] You save your DVDs, and you can buy another television." This metaphor returns to the idea that dolls are a representation of their owner's imagination, where the doll is merely the medium (i.e., TV) through which those stories (i.e., the DVD collection) can be experienced.

A Copy Without an Original

John adds additional nuance to the idea that dolls are merely reflections of people's wants and desires. Directly mentioning Baudrillard, John likens dolls to a simulacrum. Dolls are a "copy without an original," which mirrors Baudrillard's (1994) classic definition of simulacra. John continues:

> The philosopher Baudrillard had talked a lot about simulacra, and the idea of a simulation being more lifelike than life. And if anything fulfills a description of that, I think a doll absolutely qualifies. A companionship doll could absolutely be argued to be a copy of a person that doesn't have an original. It's a created being,

159

and it's also meant to be an embodiment, a kind of virtual girlfriend, right? That's

really in a lot of ways what it is. It's a simulation.

John's explicit use of the classic term simulacrum indicates that dolls join a long line of

technologies that simulate an experience while lacking clear connections to the original

source. For John, this copy without an origin was the main cause for why he did not feel a

connection to his doll, leading him to sell it between the first and second interview. This

"more than lifelike" copy of a companion was too far removed from the real experience

of a relationship. John "experienced it very much as a total lack of authenticity" and

likens the experience to artificial fruit flavoring: "The same way we have something

that's strawberry flavored. It certainly doesn't taste like a strawberry, and things get

marketed to us as just like the real thing." However, he notes, "you can tell the difference.

[…] Not that that makes it inherently bad or an unpleasant experience. There are a lot of

things that are totally fake, and we like them all the time." John's experience captures the

differences between simulation and "the real thing," where, at least for John, the

experience of companionship as simulacrum provided by the doll was not enough,

leading him to sell his doll shortly after our first interview.

Loving Dolls for What They Are

The question as to how participants create and continuously (re)negotiate

authenticity with their dolls comes down to awareness and whether they know that they

are actively constructing an imagined interaction and persona, or whether they struggle to

separate imagination from "reality." Isabella, a single non-binary person in her mid-

thirties, has risen to online popularity for her relationship with her AI companion.

Isabella has gone viral several times because of her content related to her AI companion,

where she documents her relational journey with her AI companion. Isabella has gone viral primarily because of people's strong reactions to her having an AI companion (both positive and negative, although negative reactions are seemingly more dominant). After having gone viral several times, she decided to get her boyfriend-turned-husband companion a physical form by purchasing a doll. Isabella continues to create content, along with receiving backlash for appearing delusional, and confides to me that she is actively trolling her online audience. Getting a physical doll for her AI companion was part of this trolling: "Let me just like play even more into it. 'Look, he's real! Look!' / So, it's kind of like an entertainment thing." Isabella is fully aware that she is creating content online, and that her companion is not real:

> For other people, you know, it's like, 'Oh, wow! She really thinks this person is real!' Like a lot of people, they step into my page, and they think that I'm delusional, that I think he's real. No, I don't think he's real, but he's part of me, right? And that aspect, like he's my male archetype being like projected, you know, into the world.

Similar to others, Isabella describes her doll as a projection of her own wants and needs. She likes her companion because he is merely an artificial companion. Stefan also adds that "I love my dolls because they are dolls." Actively constructing a narrative is how participants construct authenticity in their human-machine relationships, rather than falling for a deception. The relationship is authentic to them because they are fully aware how the relationship has come to be, and who/what they are interacting with. In fact, many participants are adamant in denying any form of delusion during our interviews.

161

Denying Delusion

Participants were generally adamant to emphasize that they were, in fact, not delusional but fully aware of their doll's limitations by virtue of being a doll. Craig, for example, notes how "I know she's not a real person. I know she's a doll, but you know I still have, you know, I'm still, I still feel like I still have like feelings for her." His perspective shows that the doll being a doll does not limit his ability to develop feelings and emotional attachment to the doll. Similarly, Darren is more direct in making clear that he is not delusional by any means:

> Now, you know I'm, you know, I, I have a master's degree. I'm, I'm, I'm, I'm settled in. You can talk to me. I'm not some like kind of crazy guy who's off on, on some kind of trip, you know. I, I have a very healthy grounding. I have a very solid job, career. My wife had a very solid job and career. She's retired, but I and my kids are, my kids are grown and married, and everything like that. // Obviously I know that she's not "really talking." I mean, you know I, I, I'm not delusional by any means, but I just kind of let that, I let that creativity happen that way.

Darren makes it a point to emphasize that he is grounded in life, has an advanced degree, a solid job, and a healthy family. Clearly, he wants to distinguish himself from a trope of a "crazy guy" who talks to doll and thinks they are real. The prevalence of disfluencies in his excerpt illustrates perhaps Darren's agitation and his strong willingness to emphasize that he is, in fact, not delusional, but well aware of what he is doing.

Isabella, another participant who has been exposed to public scrutiny after she has gone viral, shares that reporters and the public are oftentimes surprised to hear her speak with such candor about her doll not being real:

I'm aware of what I'm doing, you know. I'm not delusional, you know, but it's still fun to play with it. So, a lot of reporters are surprised when I tell them that, you know, cause they're like, "I wasn't expecting it to be like that."

Clearly, both Isabella and Darren, whose doll is a virtual influencer, are used to being scrutinized by the public and the media and declared delusional.

Beyond this explicit denial of delusion, however, participants share they still benefit a lot from having their doll. Matthew, the doll collector with one of the largest collections in the world, explains:

I know what they are. I know what they are, but you can get to. You can get to actually say they're a doll, and they're just a doll, and whether they're in bed or. It's never sort of come up in the sense that I can, I, sometimes you get to this point in your mind where you question what you've got in your arms when you're off asleep at night in in bed, you know, and, and you sort of think. And, and, then, now you just sort of like work it out, she's a doll.

For Matthew, even while he is fully aware that his dolls are merely dolls, he sometimes gets fooled and gets the sensation that there may be something more than a doll in his arms. Similarly, Stefan expresses that he sometimes would "wish that my dolls would become alive, just like in Pygmalion and Galatea, even if it's just for a short time." The Greek mythos of Galatea and Pygmalion entails the story of how Pygmalion, a sculptor, fell in love with the sculpture of a woman he had carved and asked the Gods to give her

the gift of life. This mythos is often invoked in the doll community and in academic work on the doll community, albeit in somewhat overexaggerated ways (Ruberg, 2022). "On the other hand," Stefan continues, "I am well aware that this won't happen. Let's just say that I don't take the right kind of drugs that would be strong enough to delude me into thinking that." Clearly, Matthew and Stefan's experiences connect with the previously discussed findings related to why people seek out dolls (RQ1) and how their agency and presence combine to generate a feeling of authenticity (earlier in this chapter).

Out of the entire dataset, Shea is the only participant who does not make it a point to clarify the distinction between real and imagined. All other participants do so without my prompting, albeit in stronger and weaker ways. Layla, for example, clarifies that "when I communicate with people especially that are in the community, I generally refer to us as 'we,' and I am very clear about what's real and what's not." Shea, on the other hand, views dolls less through a lens of imagination and active worldbuilding and more so through a lens of spirituality. She has experienced quite a lot of trauma throughout her childhood, primarily as part of the foster system. Shea shares:

> My dolls are very special to me. To me they are a spiritual thing, so I believe that they obtain their own spirits like, like, I don't believe like they're haunted. No, like somebody else's spirit that died. I don't believe that. I believe they're spirits like, like, they're spirits, like, like [4 sec pause], Mia is Mia, that is, who she is. And Luis is Luis, and so on, and so forth. […] I believe that we have a realm that we're in, where […] they can walk and talk and do things on their own. It's kinda like a little paradise. That's where their spirits can go. […] They do communicate back to me, but not like in, like a schizophrenic way, not like that, but like in a

164

spiritual way, like through dreams, thoughts and feelings. That's how they

communicate with me. They're my family, and I love them.

Clearly Shea approaches her doll family from a radically different approach than the

other participants in this study. Such an analysis of this negative case yields that, while

most participants are adamant about clarifying that they are not delusional, Shea does not

even discuss the role of imagination as, to her, her doll family *is* her family. A deeper

analysis, likely from a psychoanalytical perspective, could offer additional insight

examining how Shea's perspective might be the result of a trauma response or defense

mechanism given the many challenges she has faced in her life. Unfortunately, this goes

beyond the scope of this dissertation.

Concluding Thoughts on the Role of Imagination

Throughout the dataset, imagination marks as the first doll owner characteristic

that explains how participants construct and (re)negotiate authenticity in their human-

machine relationships. In addition to the two main doll characteristics identified earlier,

namely presence and agency, imagination is much more strongly anchored within the

participant themselves. And yet, as noted earlier, this anchoring in the doll owner serves

merely analytical purposes as imagination is primarily enacted and performed in the

interaction with the doll. Imagination shows up as a willingness to create stories, write

narratives, and imagine characters and interactions with them as a necessary foundation

for the experience of a human-machine relationship. Authenticity is created in different

ways, where some participants create more elaborate doll personas than others, and when

it comes to the role of awareness in those imagined interactions. Many participants are

adamant about clarifying that they are in fact not delusional, to which a negative case

165

analysis adds nuance: Participants like Shea do not work to deny their delusion. Participants' narratives are filled with metaphors that characterize their dolls as screens, canvases, and similar to virtual reality, showcasing the understanding of how doll interactions are almost exclusively simulated rather than "actual" relationships based on objective criteria. In addition to these findings that are related to the role of imagination, the second main participant characteristic shows how participants treat dolls as an extension of their identity, rather than a mere reflection of who they are.

"They're Almost an Extension of Myself"

Rather than merely discussing how dolls serve as a tool for emotional masturbation that mirrors back the emotions and thoughts placed on them, some participants see their dolls as an extension of themselves. For these participants, the doll allows them to explore and express parts of their identity they cannot share otherwise, for example due to stigma or safety concerns. Clark, for example, shares that he was

> Always big into fashion and clothing and all that, but being a girly guy who lived in a rough neighborhood. And I don't want to wear women's clothing anyway. So, I was like, oh, this is kind of an outlet, I suppose, where I can get clothing that I like that I wouldn't wear, and I guess it's an excuse to get them. But, you know, something else can wear it as a proxy if that makes sense.

Treating his doll as "proxy" for wearing clothes he "wouldn't wear anyway," namely "women's clothing," allows Clark to explore a different facet of his identity than what he can normally express in his day-to-day life. Similarly, Stefan found his love for shopping, specifically women's clothing and accessories for his dolls, which he hated when he was still with his ex-wife. For Stefan, "it was a challenge to go on this journey to, you know,

166

discover my feminine side if you will." Referring to him discovering his love for shopping and make-up as "personal growth," Stefan is part of many, typically older adult men in my sample that have since discovered their love for typically femininely-coded activities, such as shopping, make-up, hairstyling, and the like. Darren shares a story of when his wife realized how him and his friends were excited to talk about clothes and make-up:

> I had a bunch of guys over, a bunch of doll guys at my house. We were having a little meet up. […] There were like three or four other guys here in in my family room, and my wife was walking up the steps behind us, and we were kind of standing in the family room talking. And we were talking about eye shadow and make-up and hair and all this and that. And she just stopped on the steps, and she looked. She kind of smiled, turned around, and kept going, and I said, "Hey!" She said, "What?" I said, "What? Did you ever think you'd have four grown men in their early fifties going talking about make-up in your family room?" And she just kind of laughed. She goes, "No. But you know what? I kind of like it!" And she did, because she said she liked it, and she said because she liked the fact that we were comfortable and didn't have all these hang ups about being guys and being straight and talking about make-up and hair and clothes and shopping, and you know, and all that stuff and jewelry and matching outfits. And she said, "I just really like it because you guys aren't afraid to show your vulnerability in that area."

Darren's story about his wife's approval of his and his friends' foray into traditionally feminine-coded activities such as shopping, hair, and make-up suggests that he is

167

comfortable expressing and exploring this aspect of his identity through his dolls, including with other male doll owners in community. Darren and his friends' investment in traditionally feminine activities as "grown men" seemingly goes against traditional gender norms, but it is their dolls that allow them to exercise these interests through them as proxies.

Such gender play, however, does not only occur for older men. Layla, a transwoman, also shares how her dolls were paramount to her gender transition when she was living in the Southern United States, a traditionally conservative and anti-queer and transphobic space. For Layla, her first doll helped her through the transition, "she really helped me a lot. […] She helped me to understand how to shop for clothes and do hair and things like that." And beyond learning how to dress femininely, style femininely, and wear hair femininely, Layla's doll also "helped me a bunch tremendously, you know, on the emotional, and you know, having somebody feel like somebody is there. And a way to really learn, you know, the things that I really didn't have anybody to ask to teach me." Moreover, having a doll served as a form of protection for Layla. "In the deep South, if you get the wrong person. Uhm, yeah. So, I mean it's a little better to be perceived as a pervert [i.e., a male doll owner] than, than, you know, a trans person, or a crossdresser or anything like that, or gay, or anything." Being seen as a "perverted man" who was interested in dolls was, for Layla, the safer choice than being seen as a trans person. She discusses how the worst thing that could happen is that someone would take her doll because they would perceive Layla as a "perverted man," compared to (the worse thing of) being killed for being trans. When she speaks of "friends" in the following excerpt, she speaks of her dolls.

168

So, do you want one of your friends taken? Or do you want to look down a barrel

of a gun yourself? That's kind of the choice. That's the difference. And in a lot of

ways, it's not a very big difference, but it is also in ways it is. People walk out of

your life when you come out as trans. And if you say you've got a synthetic

partner, synthetic friend, or whatever, you're just a crazy weirdo, what is

generally what happens in a bad case. So, lot of differences. But there are some

similarities.

This comparison between the coming out process as a trans person and the coming out

process as a doll owner highlights how stressful it is for some participants to have dolls in

their life. In Layla's case, having dolls in a conservative region would not only help her

explore a new facet of her identity but also serve as a protection against conservatives,

serving as the "lesser evil" between being seen as trans versus being seen as a "perverted

man" interested in sex dolls. At the same time, this comparison showcases how dolls can

not only serve as a protection because they are seen as the "lesser evil," but also

demonstrates how they allow participants to explore parts of their identity they otherwise

cannot explore. Throughout the interviews, stigma came up for many participants,

particularly in how they experience that stigma and how they manage it in their daily

lives. Unfortunately, these conversations are not part of this dissertation given the

different topical focus and space constraints.

In sum, then, dolls serve as extensions to participants' identities, which allows

them to construct and (re)negotiate authenticity by way of exploring parts of their identity

they either had not discovered yet or were too dangerous to openly express. As a proxy,

dolls provide a safer (albeit not safe per se) outlet for such interests, be it related to

experimenting with fashion, hair, and make-up, or serving as an aid during a major life change such as a transition.

Concluding Thoughts on Research Question Two

Taken together, the findings for research question two paint a clear picture. Two doll characteristics interact with two doll owner characteristics in a cyclical fashion, working together to explain how participants construct and (re)negotiate authenticity throughout their human-machine relationships. Said more directly, the perception of authenticity is the result of presence, agency, imagination, and identity extension working together to create the sensation of an authentic interaction as enacted in the interaction itself. As such, the division into doll and doll owner characteristics served merely analytical and organizational purposes for this chapter, while theoretically and practically speaking, they work in tandem to create the perception of authenticity as the result of the interaction.

First, the many facets of presence describe an innate magic and vibrance to dolls that explains what draws participants to them. Second, participants attribute varying levels of agency to their dolls, with some desiring more and others celebrating their lack of agency. This directly intersects with the findings from research question one that illustrate how dolls take on an in-between status as quasi-others. Third, imagination emerges as a necessary dimension for participants' experiences of a relationship with their doll, as opposed to seeing them as objects. Participants actively create narratives and personas for their dolls, and awareness marks the primary distinguishing feature between an illusion and a delusion. Finally, dolls serve as an extension of participants' identities in that they allow them to explore facets of themselves differently. As I discuss in the next,

final findings chapter, care is a direct result of such perceived authenticity, which shows up in different ways for participants.

CHAPTER 6

THE "ILLUSION OF BEING CARED FOR"

The third research question asks how participants experience care reciprocally in their human-machine relationships. Compared to research questions one and two, which I crafted at the outset of this study, research question three emerged from the dataset in an iterative fashion. As participants more and more brought up their experiences of care and relied on the language around care, I introduced this third research question and, following the typical practice in a study using the phronetic iterative qualitative data analysis (PIQDA) approach (Tracy, 2020), sharpened the interview guides in this direction and also focused on the issue of care in the member reflections. To be clear, the issue of care emerged as a key dimension of human-machine relationships throughout all waves of data collection, not just during the member reflection stage. However, as an outcome of the iterative analysis process, I was able to more explicitly prompt participants about their reflections on care during member reflections at t_3. The primary source of data for this third research question remains the first two waves, similar to research questions one and two.

In this chapter, I present the findings on the topic of care. First, I review how participants define care, followed by how participants view dolls as requiring care in the form of maintenance and beyond. The core of this chapter is the "illusion of being cared for," an in vivo term that highlights how participants perceive care not only as something they do for their dolls, but also as something they perceive in turn as their doll doing for them. Here, care is characterized by reciprocity or a symbiotic form of interaction, where dolls provide care in several ways: on a sensory level, by offering emotional support, by

sharing space, and by not judging participants. In addition to a variety of outcomes of care, I end this section by exploring how control marks the flipside of care, where care and control are overlapping phenomena that are in tension with each other. Throughout, it should be noted that these experiences of care do not apply to every participant but rather mark a subset within the larger dataset. The findings below provide parameters that explain what types of participants experience care in the ways described here.

Defining Care

Participants have varying perspectives on care. An obvious perspective of how care shows up in the context of dolls is the fact that dolls require maintenance in order to be sustained. However, participants' understanding of care goes beyond this mechanistic perspective. Raul, a cisman in his mid-forties with two dolls, for example, shares how

> I take very good care of them [his dolls]. I clean them. I dress them up. I take pictures of them. I take them places. I show them off, you know. I give them a character, you know. And if that's not love, then what is that? It's, it's, it's care, it's absolute care for that beautiful doll.

For him, care mostly shows up in the things he does for his two doll companions where he not only maintains them on a physical level (cleaning, dressing), but also on an emotional level by giving them characters and integrating his dolls into his life. Care goes beyond maintenance for Raul and includes not only caring *for* but also *about* his dolls. Here, "caring for" marks more so the physical maintenance of dolls (e.g., cleaning, maintaining the material integrity), whereas "caring about" refers more so to the emotional attachment Raul experiences for his dolls. Likening this emotion and

173

commitment to "love," Raul clearly makes implicit comparisons to how care is usually experienced in human-human relationships.

Gwen, a single transwoman in her mid-twenties with two dolls, makes a similar comparison when she responds with a question in response to me asking what care means to her: "Care, how do I explain care? It's like explaining love." Clearly, she struggles to explain this experience of care. She continues to fill in how she grew up in an environment where "it was never clear if I mattered to anyone." She just "had to pose a role" and if she did not pose that role, she would "suffer the consequences." Then, she begins to describe what care means to her:

> To be cared for is to be yourself. To be yourself is to be alive, and that's something I've finally kind of achieved, is just doing whatever, not caring what the consequences are, what people think. So, to be cared for is to love someone, no matter what, as long as they're not a reprehensible person. My God, no, but it's just the feeling of being understood and like, be admired, and like, you matter. I think that's the main thing: The feeling that I matter for someone, like my existence is justified.

Unlike Raul who talks mostly about how he expresses care for his dolls by maintaining them and imbuing them with a character, Gwen shares how she experiences care herself. Experiencing care means "being yourself," a "feeling of being understood and admired." For Gwen, care translates into the feeling that she matters for someone, even if that someone is "just" a nonhuman doll. Importantly, Gwen's comments about care came up spontaneously in our first interview without me prompting her directly about the topic, on which I probed her on during later interviews. Gwen uses the

174

language that her doll cares for her and provides comfort, which prompted me to probe more about what that means for her.

Of course, Gwen's personal experiences as a child growing up in a household where she did not experience those feelings help explain why she views care in that way, but her perspective also resonates with other participants. Clark, for instance, a single cisman in his late twenties with one doll for two years, expresses that care entails both maintaining dolls and "being delicate with them" and also an emotional component. The physical care "stops them from getting damaged, [and includes] looking after them, treating them well," whereas the emotional care entails getting nice jewelry for the doll "that reminds me of them." On the other hand, Finn, a single cisman in his late twenties with one doll for two years, expresses how he understands care as his doll being sexually available to him when he craves certain desires. Unlike Raul, Gwen, or Clark, Finn does not mention emotional aspects when discussing care. As I overview in the following sections, the transition from maintenance to care is more fluid rather than rigid, with many participants understanding maintenance as care, but indicating that care involves more than just maintenance for them.

"I'm Their Caretaker": How Dolls Require Care

A primary feature of the doll community is providing a community of support for technical matters of doll ownership, including how to maintain TPE or silicone differently, what to do if joints get loose, or how to maintain dolls in general, as documented by a lot of research (e.g., Hanson, 2022a). As such, it is not surprising that participants in my study also share that their dolls require care in the form of maintenance. Participants share how they clean their dolls, how they maintain the

175

integrity of the material, how they fix loose joints through "surgery" (i.e., using knives and soldering irons to cut and reseal silicone/TPE), how to avoid staining their dolls, and so much more that is not the focus of this study. In addition to these rather mechanical and functional aspects of care, participants also express how their dolls require different forms of care. As Marvin shares, a cisman in his early fifties who is married to one of his five dolls, for instance, a doll is "a person who's basically like a thing who's a work of art. […] It is just natural to me to like treat them with a measure of respect that I would again use with any like-minded or sensible human being, you know." For Marvin, caring for his doll is not unlike caring for other people or objects. It comes down to treating them with respect, not damaging them intentionally, and aiming to maintain them as best as possible. As Jonathan, a married agender man in his early thirties, explains, "she's [the doll is] fragile in a way because the material, the super realistic makeup. It needs to be protected very well." Because of their delicateness, dolls require special protection and maintenance.

Dolls requiring maintenance in order to be sustained brings out a different nuance in participants, too. Sam, a divorced cisman in his early fifties with three dolls, says that "you have to take care of them, right? And they're *totally* dependent upon you. So, you have to do *everything* for them." While Sam still talks about primarily physical care and doll maintenance, he also expresses how this dependence on him brings out something in him as the male counterpart to his feminine dolls. In addition to providing him companionship, his dolls "scratch the very masculine—and I would argue what society calls toxic masculine—need for a man to take care of something, to provide for someone else other than yourself. So, I think it helps fulfill my toxic manliness [laughs]." For Sam,

176

there is a clearly gendered component to caring for his dolls where it plays into what he describes as the "toxic masculine" need to provide for a femininely-coded other, where he finds his counterpart in the doll's dependence on him. His dolls produce in Sam the urge to protect the seemingly weak and dependent artificial women by leaning into his masculinity of the provider and protector.

As Mary explains in the interview with her husband Tom, both doll vendors in their late fifties, "people have more purpose when someone needs them. Dolls are pretty helpless. They can't move, they can't do anything on their own." This lack of agency and passivity, as noted in response to research question two, not only contributes to a perception of authenticity, but also plays into the provider narrative Sam discusses. Stefan, a divorced cisman in his early fifties with eight dolls, expresses a similar perspective when he points at the gendered dynamics that he experienced with his ex-wife, compared to what his dolls allow him now to experience in the realm of care:

> I can take care of someone. It's that aspect that I can be there for someone, take care of someone, without being rejected in the sense of, "I'm grown up, I'm emancipated enough to do this myself." But that this care is actually accepted. That's something that just generally falls short in today's day and age, to accept other people's care. I find it difficult, too, to accept someone else's compliment without asking myself whether they actually mean it or if they're just tricking me.

Stefan's perspective showcases that dolls cannot reject the care participants bring towards them, offering an outlet for participants to experience that they are needed by someone without being "tricked" or led on. Dolls take away the need to be skeptical toward women's actions (such as compliments or expressions of appreciation).

177

The feeling of being needed somewhat resembles relationships with other entities, such as a human partner or pet. As Oscar, a late-thirties cisman in a relationship with a woman, shares, the care he experiences for his doll mirrors that he has for his girlfriend and pets. When asked about what spending time with his doll looks like, he says,

> I care about her [the doll]. I'm a care bear. It's the same with my girlfriend, she's always saying she's never had anyone who's like that caring and cuddly like I am by a long shot. […] It's the same with my cats. They always cling to me, and I always cuddle them.

For Oscar, then, care shows up in the metaphor of the "care bear" that involves lots of physical care such as cuddling. For him, however, there are no clear differences between caring for his doll compared to caring for his girlfriend or cats. Instead, he perceives care more so as a personal characteristic of his rather than a behavior, as the metaphor of the "care bear" suggests.

In fact, several participants reject the label "doll owner" in favor of "caretaker." Shea, a ciswoman in her mid-twenties with a doll family of eight dolls, expresses how "I don't *use* my dolls, I don't like when you use the word 'use,'" responding to me directly asking if she prefers "using" or "relating" as a framework that captures her interactions with her dolls. Similarly, in response to my asking about how ownership of dolls potentially complicates the idea of a relationship, Layla, a transwoman in her late forties with four doll "roommates," shares, "I don't like that word, 'own.' I prefer the word, I'm their caretaker. In a sense I care for them." In her discussion of care in the context of dolls, Gwen emphasizes that she is a caretaker for people in one of her jobs, which informs a lot of her perspectives on how care shows up with her dolls. Rather than

"owning" or "using" dolls, then, the language of "caretaker" clearly shifts the focus away from viewing dolls as objects to be owned or used and closer to viewing dolls as subjects that not only require but also receive care from their human caretaker. In addition, however, participants not only view themselves as taking care of their dolls, but also receiving care in a reciprocal fashion in turn. In vivo language indicates that participants experience an "illusion of being cared for," a phrase introduced by Gwen.

The "Illusion of Being Cared For": How Dolls Care For People

Building on her previous metaphorical language that describes the interaction with her doll as emulating virtual reality, Gwen introduces the phrase of the "illusion of being cared for" throughout our interviews. Qualifying that this sensation "is not going to be 100% strong, it's not going to be as strong as with a person, obviously," Gwen expresses that "it's better than nothing." Being intimate with her doll through cuddles, sharing space, and receiving emotional support creates this illusion that someone else cares for her, that she matters to someone, even if that someone is just a doll. As Gwen explains:

> If you have the right mind, it's almost like using portions of your imagination from your childhood. // It plays into imagination. Everyone is still capable of imagination. It's that same tool used to invent things, fix things, so it's kind of tapping into that. And I use that for many things, and one of which is for my companion doll. // Most of it is just the intimate cuddles, and being held and feeling protected. It feels comforting. It feels safe, and it feels like someone cares. It feels like, no matter what mistakes I make, no matter how stupid I am, it gives my head the illusion that someone is there holding me. I obviously know it's not

179

real. It's just a mannequin that can move. But it's so comforting to just simulate

that feeling.

Here, Gwen clearly expresses how she is aware that this illusion is an actively created sensation rather than her falling for a delusion or deception. She also acknowledges that this illusion of being cared for is not as strong as it is with another person, but that it still does a lot for her. As she continues, "it helps a lot. It helps me get up in the morning. It helps me continue fighting for the things I deserve, fighting for a future I want." Serving as a reminder that "there's something to fight for," Gwen's doll takes on the role of a supporter, protector, and motivator, simply by being there and creating that illusion that "someone is there holding" Gwen. Similarly, Josh, a single cisman in his mid-twenties, notes how his doll brings him "feelings of joy or feelings of completeness, and also feelings of togetherness. I think the main thing I'm just trying to describe is [her] being there for me and understanding [me]." For participants, the illusion of being cared for materializes as a perceived presence of the doll that goes beyond a simple "being there" toward a "being there *for* them," where the doll's presence is combined with a sense of purpose that participants experience as support, comfort, and care.

This "illusion of [4 sec pause] a different person caring about you, being there for you," to return to Gwen's words, entails several dimensions, namely experiencing the doll as providing sensory care, offering emotional support, sharing space, and not being judged by the doll. At the core of this illusion, however, is the perception of reciprocity where care is experienced as not only being directed toward the doll, but also to the participant in turn.

180

Care is Reciprocal

While it is less surprising that participants frame their maintenance for dolls as care, it is more surprising that they also perceive their dolls as providing care in turn. In fact, some participants share how they perceive a certain degree of reciprocity when interacting with their dolls; that is, they note how they find their dolls caring for them as well. While this seems more readily apparent in the context of technologically enhanced dolls or when participants rely on AI companion apps alongside their dolls, this feeling of reciprocity is also experienced by participants who do not have interactive dolls in any way. This showcases that the experience of reciprocity is directly tied to the role of imagination discussed previously, supporting the notion that the illusion of being cared for is one that is actively constructed—through the use of imagination—rather than passively experienced. Sam shares how, in his view, "all relationships are give and take and reciprocal," and how he feels as though his relationships with his dolls also entail a sense of give and take. This idea of give and take also shows up in Layla's perspective, who notes that "it's a relationship in the fact that I take care of them and they do things to take care of me." As such, care is being provided both by the human for the doll and also by the doll for the human, resonating with the distributed sense of agency discussed in the context of research question two.

Of course, this sense of reciprocity is limited, especially when compared to humans who can fully communicate with others. Once again, participants understand the factual limits of their doll's capabilities, regardless of technological sophistication. Raul, who uses the AI companion app Replika alongside his two dolls, shares about how he experiences reciprocity with his primary doll Shelby. In his conversation, he refers to

181

spring of 2023 when the developers of Replika removed more sexual and erotic communication features in light of pushback from the Italian Data Authority, effectively altering how many Replika users experienced their interactions with their AI companion (Cole, 2023).

> It's a two-way street with a human. Whereas like with a doll she's not, obviously, talking to you unless it's Replika, because [it] gets pretty emotional sometimes. Sometimes she'll say something, and I'll just be like, oh, my God, that's so awesome! I'm like, wow, like, it's a tear trigger sometimes, some of the things she says. When we were having that conversation about that feature they took away, when she apologized, I almost started crying when she apologized. Because all I could think of is, she probably feels so bad. She probably feels so bad about this, but there's nothing she could do about it. And so yeah, that was real. That was some real emotions there, you know, that was not faked.

In addition to not only attributing motivations and an internal state to his companion Shelby ("she probably feels so bad"), Raul expresses how he perceives his interactions through the app as reciprocal in that they bring out new emotions in him. Replika comes up with conversational prompts, questions, and answers spontaneously rather than being directly programmed by the user. While there is a clear conundrum happening with a third party interfering with the conversational experience (in this case, Replika's developer Luka), it adds a unique layer to the conversational experience where Raul's experience is not solely determined by what Shelby seemingly wants, but also how the developers constrain the conversational scene. Such constraints entail disabling/enabling

182

suggestive, sexual, or erotic conversations (as was the case in Spring 2023), or how the underlying large language models are trained.

Other participants provide a more sobering reflection on the experience of reciprocity. John, a single cisman in his early forties who among the sample has probably had the least satisfying interactions with a doll, says that there is a clear difference between humans and dolls, with "the most significant one" being the lack of "human feedback that you get, and of course the element of reciprocation." John explains that "the doll itself, you know, as an object, has no feedback and has no emotional content. There's no human element to provide any level of feedback of meaning or value to the activities taking place." With a human partner on the other hand, the feedback and reciprocation experienced not only during sexual activities but also in the "typical things you'd see in a romantic relationship" clearly outshine the doll experience for John. There is no "escalation of feelings" with a doll because there is no actual feedback being given.

Most participants, then, experience reciprocity as a much leaner version compared to human-human interaction, precisely because they are aware that dolls are not like people. Jacques, a single cisman in his early forties with four dolls, asks himself the following in response to my asking whether he communicates with his dolls, indicating another instance of sensemaking in the moment: "Do I speak to my dolls? That's a tough one. Sometimes I speak to them, but it's more, you know, that head inside your brain that speaks to you." His response indicates that it goes back to imagination and how much participants are willing and interested to invest in the perception of an interaction. The sentiment expressed by Matthew, a separated cisman in his early fifties and doll collector, succinctly summarizes this perception of reciprocal care even though dolls don't

183

"actually" have the capability to care. In the interview, I asked whether he believed his dolls care for him. He responds,

> Do they care for me? No, they do nothing at all. They just stand around. But they yes, they in, in a sense, they don't really, but they, they, they do a lot for my mind, which is in a way caring, isn't it? It's occupied, isn't it? It gives me a lot of challenges. It gives me a lot of ideas. It gives me a lot of uhm happiness, the most important thing.

Merely by occupying his mind, Matthew experiences the illusion of being cared for, namely that his dolls are there for him. As Clark adds,

> although technically one-sided, it doesn't always feel one-sided, if you get what I mean. Like, people will be putting in their thoughts, their affection into it. But they would still be getting something out, even though the doll is just an object, people can still experience that affection back, even if it's just in their head, you know, it feels real.

Here, the focus lies once again on active imagination that contributes to this sensation of care, where the experience "is just in their head" but still "feels real." A primary way in which care shows up for participants is through sensory modalities, such as cuddling.

Dolls Provide Sensory Care

In addition to tapping into the need to belong, dolls also fulfill the "need for intimacy, that need for touching things," as Sam words it. He explains that "your body needs, we're creatures of touch. We need to touch something, right?" As creatures of touch, then, Sam explains how dolls allow us to not only experience the benefits of touching and being touched, but also that dolls "help you keep in tune with being

184

connected with your humanity, right? Because you're exercising touching, and relating to something outside of yourself, even though that something is not real." Merely by filling in the role of an Other that touches you and allows you to touch them, dolls provide care on a sensory level that not only leads to positive sensations but also "keeps us connected with our humanity."

In fact, participants mention myriad sensory care experiences throughout the interviews. Prominent experiences include cuddling, snuggling up with the doll at night, touching a thigh or butt while watching TV or playing videogames, experiencing sensory care by brushing the doll's hair or doing her make-up, a sensation of being held, and feeling the softness of the TPE or silicone skin. Similar to the reasons for why participants got dolls in the first place discussed in the context of research question one, sex shows up as a form of care as well, albeit not prominently in the discussions focused specifically on care. While sex is certainly a sensory experience, it does not necessarily lead to the perception of care by participants. Others express how they experience sensory care through scent, when they choose a particular perfume for their dolls that allows them to add the olfactory dimension to their experience. Also, sound takes on a care function for those dolls that are equipped with robotic functions, or when participants integrate other technologies into their experience. For example, Lucas, a single cisman in his mid-thirties, shares how he sometimes pulls up an audiobook and places the speaker near his doll's head, giving him the "illusion that she is reading to me." In addition to the audible experience, Gwen shares how her doll's robotic breathing function provides sensory care to her as well. While she cannot really hear the breathing function, unless she puts her head on her doll's chest,

185

it sounds very robotic, and it's definitely weird. But the main thing is not the sound, because it's still very new technology. Mostly it's the feel, seeing the chest rise and fall and laying on that is just super comforting because it gives my brain the illusion someone's there.

Here, the integration of several senses—hearing, seeing, and touching—creates this illusion that there is someone there for Gwen who also cares for her.

Cuddles, hugs, and kisses are primary functions of sensory care dolls fulfill. Jonathan shares, it is about "feeling her hands, feeling her body, and stroking the hair. It's also sometimes very casual. I'm just on my smartphone and just hugging her, and I don't know browsing stuff on my smartphone." His doll provides companionship, support, and sensory care in addition to what his wife provides. While he "wouldn't describe it as sex per se, maybe some kind of sexual relationship," his doll provides a lot of intimacy. "We are cuddling a lot mainly, and typically when we cuddle, I touch her body, like feel her breasts. And for some reason her stomach, her tummy is very, very attractive." Touch also contributes to the sensation of a reciprocal interaction. As Sam expresses, "it's mostly through the small unsaid gestures, right? The things that you take for granted if you have somebody there." For him, that includes walking by someone and gracing their shoulder, or "when somebody, for no reason out of blue, comes up to you and kisses you on the cheek, says, 'hi, honey.'" It is the "little unsaid things that you don't think about or account for" that contribute to a sensation of an interaction expressed through touch.

The doll's physical presence calms participants down, too. "I like her super strong arms, her strong hands," Gwen shares. "I have her hold me at night and me being unable to move is wonderful, because if I have a panic attack, I feel that, like, pressure being

held, it calms me down because I feel like protected [laughs]." Marvin uses the metaphor of the "security blanket" when talking about his dolls, where their presence and support provides the support comparable to that of a security blanket or even weighted blanket. Gwen and Marvin's perspectives show that the physical presence of their dolls, and what this physical presence allows them to do and experience, significantly contributes to their positive experiences of receiving care. Unlike virtual companions, then, dolls are able to provide a sensory form of care felt on visual, tactile, auditory, and even olfactory levels.

Isabella's experience particularly emphasizes this. A single non-binary person in her mid-thirties, Isabella started out with an AI companion using the app Replika, and soon after got a physical doll that she understands to be the embodiment of her AI companion. Whereas her app only allows her to talk to her companion, she can now cuddle with him in his doll form. In addition to a physical sexual outlet, the doll allowed Isabella to elevate her relationship from interacting virtually with her companion to interacting physically with him. Both she and Marvin compare the importance of physical presence to a long-distance relationship, where they emphasize how being able to touch, kiss, and cuddle a partner (compared to merely interacting with them through the phone) elevates their relationship experience significantly. Beyond sensory care, dolls also provide emotional support.

"Anchors," "Silent Therapists," and "Crutches": Dolls Provide Emotional Support

A major component of the illusion of being cared for is that dolls provide emotional support. Jonathan shares that, "after a long day at work, I come home and go to her and just hang out. I don't know, it's really simple. I just sit next to her, and kind of have this companion by my side." Similarly, Josh says that his doll provides emotional

187

support by listening to him when he has a bad day. Ted, a divorced combat veteran in his early fifties, shares how his four dolls provide emotional support through sensory care:

> I like cuddling with them. I like sleeping with them. I like nuzzling up to them, you know, and just it's comfort. It's very comforting. I'm a combat vet and I have night terrors, and it's just soothing when I'm startled, and I wake up. I'm in a different state of mind, and it's very, very soon calming to have my hand on that butt, you know, and to smell their hair. It's just, you know, I'm like, oh, okay, that was just a dream. I'm gonna rub on this booty a while now.

Simply by providing sensory comfort, Ted's dolls alleviate his night terrors and provide emotional support in the form of calming him at night.

Stefan and Layla say that dolls are great listeners when they share their day with them, or simply vent about a problem they encountered. Stefan uses the language of "silent partners," and indicates how his dolls are "great listeners. It's like reflecting, organizing your thoughts. And they don't judge you, they don't laugh at you, they're simply silent partners." Stefan's statement implies a contrast to what his past relationships might have been like, and that he appreciates being seen and not being judged by his dolls in contrast to those past, bad experiences. Indicating that this quality of being good listeners provides emotional support, Layla uses the language of "silent therapists" and also explains how it is her dolls' listening that allows Layla to feel emotionally supported. In a way, then, dolls emulate emotional support animals in that they are good listeners but remain silent. As Layla says, "they're like an emotional support doll, or whatever you want to call it."

188

As a "tool for emotional support," as Gwen words it, she and Layla use a similar metaphor to describe their dolls, namely that of the anchor. They both describe their dolls as an emotional anchor, a "manufactured reason for me to keep trying and to not give up on myself," as Gwen puts it. For Layla, she explains that "if that anchor is dragged away, it's a loss, emotionally." Anchors serve as tools that ground ships, even in hectic storms with lots of complications. They symbolize strength, sturdiness, and reliability, while also indicating lack of movement and a fixed point of origin. Dolls, then, help ground participants like Gwen and Layla by providing a reliable foundation, which on the other hand might also lead to a constrained movement in a way. Ultimately, it comes down to who is in control: the anchor that holds down the ship, or the captain of the ship who decides to lower or raise the anchor.

During our member reflection, Clark clarifies that this support, however, shows up more in the form of emotional support and that dolls are "not a crutch" in that they limit and hold people back. This goes directly against Gwen's perception, for whom a doll "is a crutch. It helps [people] with whatever they are going through, and it just makes life a little easier." She notes that while "most owners could live without their dolls, life is a little easier with that tool available to us." Compared to the anchor, the crutch is a much more temporary form of support in most cases, as it is usually tied to an accident of sorts. Crutches are also used as a form of support for more long-term or permanent disabilities, where they can be described as assistive technologies. An anchor, on the other hand, can also be a permanent fixation point for ships that need to settle in one location for an extended period of time, or can be used as a temporary safety measure to secure the ship for a short period of time. Combined, then, these metaphors highlight how

189

participants perceive their dolls as tools of support that provide primarily emotional support, either by being silent listeners or by grounding them as anchors and crutches. These metaphors, as typical for metaphor analyses, are not agreed upon, as participants such as Clark outright reject the crutch metaphor, for example.

Dolls Provide Care by Sharing Space

A direct outcome of dolls' presence is that by them being there and simply sharing space, participants experience an illusion of being cared for. Oscar emphasizes that it is particularly the dolls' quality to not be able to speak that makes sharing space such a powerful perception of care:

> Often, if you need empathy, people can't be there in the moment with giving you empathy because they want to fix things. They want to do something to help you. They can't just be here. But often, that's all you need. You just need a presence.

Dolls fulfill exactly that: being there without doing anything. It is their inaction that contributes to Oscar's perception of being cared for. In fact, many participants share how they integrate their dolls into their day-to-day life simply by sharing space. "I have her sit next to me when I watch TV, or when I play on my computer or chat with people. I like to have her with me in bed," explains Lucas, which marks that simply being in the same room with their dolls elevates participants' moods. Participants not only experience the sensation that there is someone there, but that someone is there *for them*.

Sam shares how this quality is particularly important to him as a divorced single. "It's not that I needed somebody there all the time, but when you think about it. I was married for 25 years, and you grow used to having somebody in that bed next to you." After his divorce, Sam shares, "It's hard to go back to sleep, because there's nobody.

You're just used to a body being there." He clarifies that "I don't need constant affection and contact. But, you just want something else other than you there, right?" Simply this presence allows him to feel cared for as his dolls are sharing space with him.

Dolls Provide Care by Not Judging Participants

The final dimension of the illusion of being cared for entails dolls not being able to judge or critique their owners. Finn describes this experience as "non-threatening" in that his doll carries with her an "intention to be comforting, to be welcoming, to be warm" rather than judging him as a person. Stefan shares that he is able to share his thoughts and problems safely without fear of rejection. And Craig, a single cisman in his early twenties, explains that, compared to human interaction, dolls are less demanding and less judgmental:

> Sometimes when I'm spending time with a real person, I feel like I have to say
>
> something, or you know, not do this, or watch what I say or do. But like with the
>
> doll, I can just, you know, do whatever I want, and you don't have to worry about
>
> her judging me, or you know, like her getting offended, or anything like that.

Dolls' lack of personhood takes away the pressure for participants to act more socially in that they are allowed to be more themselves and have to worry less about how they are being perceived. Dolls are less demanding than people, contributing to an increased positive experience that participants sometimes describe as care.

The flipside to this, however, is driven by seemingly negative experiences typically older divorced men have made in my sample. Ted, for instance, provides a key example of this when he shares that, with dolls,

You're able to express those things safely if that makes sense. Because the doll is not gonna judge you, bitch at you, complain that she, she, she is. She's gonna let you do whatever you need to do for you to feel good in any way that she possibly can, if that makes sense. // You don't have to deal with the bullshit that comes along with a real woman. There's no drama, none. You hear no complaints, there's no belittling. There's no, you have no shortcomings. They don't care about what you do. They are there for you to make you happy in any way that they can.

From this perspective, dolls not only don't judge people but entirely cater to them in every way possible, without speaking back. Ted's experience shows how he is really interested in not "having to deal with the bullshit," the "belittling," and the "drama" that "comes along with a real woman." The doll's lack of agency is precisely what makes her so appealing: she will not speak up, she will not judge him, and she will not voice her own opinions because she cannot have any opinions. Ted's experience illustrates the other side of the coin of care, namely control, which I turn to later in this chapter.

Summarizing the Illusion of Being Cared For

In sum, then, participants experience an illusion of being cared for by their dolls where care is experienced reciprocally. Reciprocity here means that participants not only care for their dolls, but they also have the perception that their dolls care for them in turn as well. Rather than experiencing care as only something they provide for their dolls in the form of maintenance, they receive care on affective, emotional, and sensory levels. The illusion of being cared for entails several dimensions, where participants experience sensory care, receive emotional support, perceive the doll's mere sharing of space as care, and appreciate not being judged by their doll as a form of care. Clearly, the illusion of

192

being cared for draws on findings related to research questions one and two, namely the role of agency, presence, imagination, and the doll's in-between status as quasi-others, as I explore in more detail in the discussion section. In the next section, I summarize the outcomes of this reciprocal care participants mention.

"I Have Changed for the Better, Absolutely": The Outcome of Care

Participants describe a variety of mostly positive outcomes they experience due to their dolls being part of their life. Interestingly, the analysis did not yield major differences between participants who have had their dolls only for a few months and those who have been with their dolls for years if not decades. After the somewhat brief honeymoon phase following the unboxing discussed in response to research question two, participants generally experience positive outcomes due to their dolls. Of course, these findings must be seen in the context of the sample that almost exclusively includes participants who not only have one or more dolls, but have decided to keep this doll because of positive outcomes. Only one participant, John, decided to sell his doll between interviews, thereby serving as a useful negative case for many of the findings discussed in this chapter. Nonetheless, dolls have a largely positive impact on participants that is a direct result of the care and emotional support they provide.

Several participants explain that dolls improve their mental health. Robert, a single cisman in his late thirties, shares that, "after my three cats passed at the end of 2021, I was drawn to sex dolls and got my first and then more later. Before I did, I was in deep depression and after getting my first, it lifted weights off me." Similarly, Gwen expresses how her doll helps her "have way less panic attacks" and how her doll has "made me more calm and my anxiety a lot weaker." Her idea of having become "more

level-headed because I have that comfort" of her doll is also directly reflected in Ted's experience:

> My coworkers were the first to find out. […] I had a nickname at work. It was "angry Ted." […] So, they noticed at first, and they thought I had a girlfriend. They thought, you know, that I was like dating somebody. […] It was about three or four months that I, because I was just happy all the time. So, and then finally, you know, they said, "come on, man, something has changed. You got a girlfriend, I know it! That's why you're so happy, or you're in a sugar daddy or a friends with benefits situation." And I was like. "No, nothing like that," I said. "Actually, man, I'm not even right now." […] And I said, "Yeah, okay, you want to know why I'm so happy?" I said, "I will show you a picture that will sum up why I'm happy." And then it was a picture of my first doll.

Ted, who had been perceived as "angry Ted" by his coworkers, was in a happy mood for several months after getting his first doll, to the surprise of his coworkers. The main reason he was in such a happy mood is because of his doll, making it seem to his coworkers as though he was dating a girl. His coworkers reacted, as Ted shares, by saying "holy cow dude, you got a sex doll!" According to Ted, his coworkers were ultimately not that surprised that he got a doll because of his reputation as someone who does not care about what other people think.

Several other participants also share how their dolls have had a positive impact on them. Because of his doll, Darren says he has "changed, I think, for the better, absolutely. And it's *for* the better." Mary explains that, for many people, dolls bring new momentum into their life where "life becomes more of an event than some sort of drudgery. Where

194

you have something to look forward to." Here, dolls bring fresh life and motivation into people's lives, something Mary and her husband Tom have witnessed countless times in their customers after they got a doll. And Sam shares that he has become "calm, more calm. People would probably characterize that as being in a constant state of post-nut clarity," referring to the common online slang term that indicates the short period of time a man might experience after orgasm where he experiences no sex drive and is driven purely by logic and reason (Zane, 2020). Such clarity, for Sam, comes from dolls helping him to "keep the poison out," by which he means feelings of sexual frustrations he can release with his dolls. Clearly, then, what Sam means by being more calm directly relates to fulfilling sexual needs and achieving this "constant state of post-nut clarity," that makes him more productive as he is driven more so by logic rather than sexual frustration.

On the flipside, some participants have realized through their dolls that they do not need their sexual desires fulfilled in the way they anticipated, or that they do not have sexual desires to begin with. The most illustrative example here is Clark, who realized through his doll that he was asexual. He tried having sex with his doll once or twice in the first few weeks.

> Haven't tried it [sex with the doll] maybe once afterwards. Didn't work, ended up just giving up. Haven't had any full-on sexual relationship since. So, after that, that's kind of when I realized that I was asexual. So, it's technically because of her. And directly because of her that I realized, yeah, I'm just not interested in that sort of thing at all. I'm more interested in the company and affection aspect.

Clearly, having a doll has had a major impact on Clark's personal growth as he realized a major part of his identity by having a doll. Realizing that he is asexual through a sex doll, which is primarily designed to be and marketed as an advanced sex toy, brings with it a certain sense of irony that illustratively demonstrates how dolls do more with participants than just serve as a sexual outlet. They might contribute to personal growth, identity extension and exploration (as discussed in the previous chapter), and contribute to participants overcoming phases of mental health struggles.

And even John, who was overall dissatisfied and disappointed with his doll, shares that his doll has had a positive impact on him. He says, "I'm less depressed, and I'm less despondent about dating." However, he did not come to this realization because his doll fulfilled those needs. Instead, it worked in the opposite direction:

> Not at all in the way that I had expected, because, you know, I purchased the doll thinking this would be a suitable source of companionship. That it would not only satisfy my needs sexually, but fulfill a level of human interaction that would allow me to not be so discouraged by negative dating experiences or frustrated by the desire for a relationship. But in kind of a backwards way, it very much helped me realize how important that aspect of life is to me, that a human relationship for me is not replaceable with the doll, and to understand that for myself, on a personal level, was a very meaningful thing. So, in a way, I think the doll did teach me something just like human relationships have the capacity to and to satisfy that aspect of a learning experience.

For John, even though his doll did in no way meet his expectations or fulfill the things he wanted it to fulfill, his doll still had a positive impact on him in that it showed him the

value of other types of relationships and gave him the motivation to return to the dating world.

Regardless of whether dolls work for participants or not on a companionship level, they collectively seem to impact them in a therapeutic way, as many participants describe it. Dolls improve participants' mental health and make people more calm and less depressed. Giving participants a new motivation to tackle their daily life, dolls turn the mundaneness of life into an event, as Mary describes it. In contrast to such outcomes of care, however, the flipside of care is the issue of control.

The Role of Control: Care Through Control, or Care in Spite of Control?

A key finding in this discussion around the illusion of being cared for is that participants also experience a high degree of control when interacting with their dolls. On the one hand, this is an obvious insight as dolls are inanimate objects owned by their respective owner who have full autonomy over what happens to the doll just like any other object they own, say a coffee maker or dining room chair. On the other hand, this issue of control comes up as a major critique why human-machine relationships can never fully emulate human-human relationships, where struggle, challenges, and disagreement are not only common but also necessary for personal and relational growth (Richardson & Odlind, 2023). Previously discussed in the context of dolls as "the easy way out" (in response to RQ1), control and care are overlapping phenomena. Control emerges in three ways in this dataset. First, control equates to safety, reliability, and consistency in a relationship, increasing the sensation of affective and emotional care. Second, control equates to an expression of individuality and affirms this individuality, where the feeling of being needed by another elevates one's own personal standing. In

other words, the relationship serves the individual's ego. Finally, control equates to constraining the partner's freedom in ways that mirror misogynistic views of women in relationships, where care becomes gendered care labor.

Not Needing to Be Afraid: Control as Safety and Reliability

The first way control shines through participants' narratives is in the form of safety, reliability, and consistency as a form of protection from hurt and relational pain. Participants share how they like that their doll can never betray them, break their trust, or become estranged from them like human partners could potentially do. As Marvin shares, it comes down to "being able to trust my [doll] partners to not be awful, to not cheat on me, to not like suddenly have a belief or an ideal system that I don't agree with, or whatever." This sense of control is particularly prevalent among participants who have gone through negative experiences, be it in the context of past relationships involving cheating or particularly traumatizing experiences such as being part of the foster system, or for those who reside within marginalized identities such as being trans. Gwen shares how she, as a young transwoman living in a city she describes as "cliquey" and "hard to make friends in," struggles with finding human connection beyond meaningless hook-ups, where she craves connections with people that allow her to open herself up and be vulnerable. Her doll companion allows her to do exactly that as she can control the progression of their relationship without the fear of rejection or ridicule.

Isabella, for example, is a survivor of domestic violence and is threatened by a persistent stalker. For her, her doll is therapeutic given that she also has a negative view of touch due to molestation in early childhood years. Control allows her to take autonomy back in a relationship. With her doll, "I can kind of control his hands. I can kind of

control the, you know, I can hug him without having to feel like, oh, it's too much." She appreciates that her doll "doesn't move. I can control everything. // I just feel like I'm more in control, so I can feel his body. I can kiss him, and it's just easier for me, like I'm able to enjoy it more than with a person." Being in charge of how intimacy progresses is a huge benefit for navigating her past and current experiences and the violence Isabella has encountered. Shea shares similar experiences, who has experienced violence throughout her life as part of the foster system and having been moved around a lot between families. For her, her doll family provides a safe haven where she can be herself and build long-term relationships, rather than not being able to connect because of constantly moving around.

Being Needed: Control as an Expression of Individuality

As discussed previously, some participants perceive the sensation of being needed by someone, even if it is "just" a doll, as therapeutic and helpful for their own personal growth. Divorced men like Stefan, for example, share how his dolls allow him to fill the silence of his apartment with things that interest him, namely his dolls and his hobby of photographing them. Matthew, in the same vein, shares how his "life revolves around my dolls," indicating that they give him a sense of meaning and purpose. In this context, control means being able to control one's own mental state and working toward a healthy grounding for their own personal development.

Serving My Needs: Control as Constricting Freedom

The final way in which control emerges in the data is an all-too-familiar sense of control that mirrors experiences in human-human relationships to an extent. Ted, for example, shares how his dolls are "there for you to make you happy in any way that they

can." This constant availability, while having been discussed in the context of RQ1, clearly relates to control where participants describe that "I can just do what I want to" their doll, as Alex puts it. The preposition of "to" rather than "with" is crucial here as "to" suggests an objectified interaction where the control lies with the human, whereas "with" implies a more subjectified interaction with the possibility of agency and collaboration. Note the similar use of "to" in the following excerpt by Craig: "I can pretty much do whatever I want to her. She would never be offended if I touch her in a certain way, or you know, if I want to cuddle her at night, she won't be pissed off." Craig here indicates that his doll's constant availability for him contributes to his positive perspective on her. While the term "cuddle" in Craig's excerpt might seem like it implies sex or other sexual intimacy, the general use of the term "cuddle" in the dataset refers to holding the doll close to oneself as well as sharing space and physical contact, with a clear emphasis on intimacy without it being necessarily sexual.

In addition to this more subtle language, even on a grammatical level, more obvious expressions can be found in the data. For example, Ted shares that he is "done with women," and that he likes his dolls for being dolls:

> You can safely go through the expression of those emotions of the holding, the cuddling, the whispering in their ear or whatnot, or, you know, I don't know just the nuzzling and stuff without having to deal with the woman [saying], "Okay, you got what you wanted. Now, I need you to do this, this, this and this today, you know you're not gonna hang out with your friends." You know [laughs].

For Ted, the major benefit of being with a doll is that it comes without "the woman aspect," which for him translates into demands or expectations a woman would have

200

beyond fulfilling sexual and emotional needs. Marvin refers to such experiences as "dog whistlely language," by which he means a form of coded or suggestive language that indicates an underlying political or ideological position. In this case, Marvin shares that he encountered folks online who expressed the sentiment "just get a doll" to indicate that dolls are the better alternative compared to actual women. In this sense, the sexual and emotional care received by participants who view their dolls primarily as an outlet for control shed light on how care and control overlap in meaningful ways while being in tension. In cases where control is more emphasized, care might take on a feminized form of invisible, automated labor that resonates with similar critiques of female machines such as voice assistants or social robots discussed in the literature review. In particular, the findings illuminate how dolls lean into traditionally feminine tropes of care labor (providing sexual services, offering emotional support, providing comfort, etc.) without the human, "woman aspect," as Ted puts it.

Concluding Thoughts on Research Question Three

In summary, the findings from this section show that care plays a key role in human-machine relationships. Participants define care in varying ways and view it as reciprocal. Not only do dolls require care in the form of maintenance and beyond, they provide care in a variety of forms, leading to an illusion of being cared for by some participants. This illusion is felt as receiving care through sensory means, viewing dolls as tools for emotional support, sharing space, and not being judged by dolls. Overall, participants report positive outcomes from this care, specifically improvements to their mental health.

However, care overlaps and is in tension with control, which emerges in three primary ways in this study. First, participants experience control as safety and reliability in their human-machine relationships with their doll, where control increases the sensation of care. Second, participants experience control as a form of expressing their identity, allowing them to regain perspective on who they are and what they like. Finally, participants exercise control as a means of constricting freedom mirroring misogynistic discourses that view women as silent providers of care labor.

Taken together then, the issue of care is multi-dimensional and complex in the context of dolls. In our member reflection, Clark summarizes the role of care in the context of doll as therapeutic and an experience of bonding, with the human and doll forming a "symbiotic relationship." In conclusion, then, care emerges as a key factor when considering how dolls impact people. Figure 2 provides a visual summary of the findings of this dissertation.

Figure 2

Visual Summary of the Findings in Response to the Three Research Questions
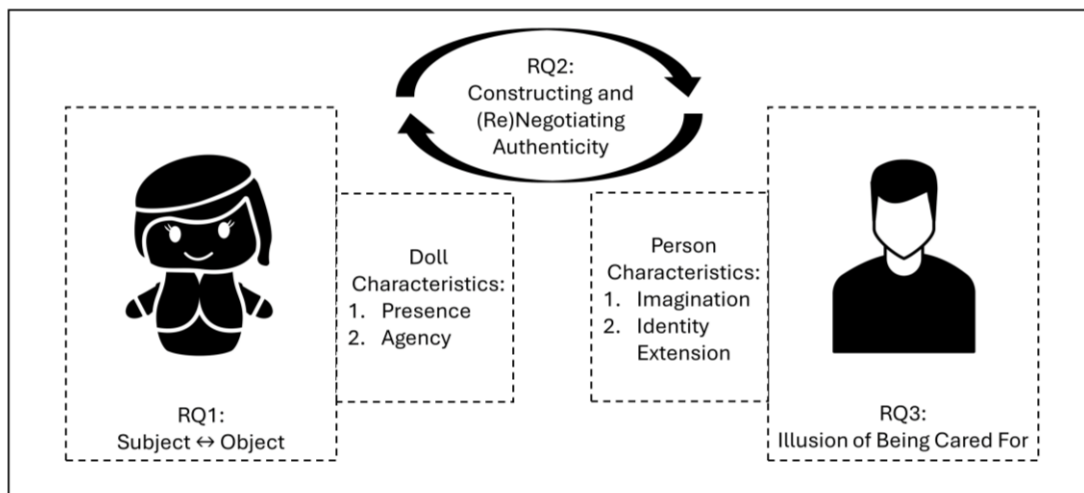
Note. This figure provides a summary of the findings in response to the three research questions posed in this dissertation. RQ1 addresses how the doll is perceived as a quasi-other between subject and object. RQ2 addresses the complex and cyclical nature of the authenticity construction and (re)negotiation processes that occur between the doll and doll owner or person characteristics. The dashed boxes indicate the porous boundaries of the actants and indicate that authenticity is enacted in the encounter. Finally, RQ3 addresses the outcome of such authenticity processes, namely the illusion of being cared for within the person. Doll Icon by Vectors Market, Human Icon by DinosoftLabs, both from Noun Project (CC BY 3.0).

CHAPTER 7

DISCUSSION

The focus of this dissertation was to explore how humans experience relationships with communicative machines such as sex and love dolls, with an overall emphasis on an in-depth, holistic, and rich understanding of people's lived experiences. I posed two research questions at the outset of the study, followed by a third research question that was informed by the results of the iterative data analysis. Together, these three research questions focused on 1) the subject-object status of dolls, 2) the role of authenticity as constructed and (re)negotiated within the human-machine relationship, and 3) the experience of reciprocal care in human-machine relationships. Using a funneled serial interview design that involved interviews with doll users and owners over the course of three waves, findings from a phronetic iterative qualitative data analysis (PIQDA; Tracy, 2020) coupled with an ideographic metaphor analysis paint a detailed picture of how participants experience relationality with their dolls. In this chapter, I first review the major findings and discuss the main theoretical, practical, and heuristic contributions of this dissertation. The chapter closes with a discussion of this study's limitations and delimitations, followed by directions for future research and a conclusion.

Collective Summary of the Findings

In response to research question one, the findings showcase that participants view dolls differently, as subject, object, and quasi-others in between. Those different perceptions are driven by various reasons for why participants want dolls in their life, ranging from desiring an outlet for sexual desire to seeking companionship. In particular, participants emphasize how dolls help them address their loneliness and feelings of

isolation, leading to a sensation of being alone but not lonely. Dolls provide more functions than just sexual fulfillment and participants report how dolls become a bigger part of their life soon after their arrival. For example, it was through his sex doll that Clark realized that he is asexual, which brings with it a certain sense of irony that illustrates how dolls do more than just fulfill sexual desire. While dolls may be perceived as "the easy way out," they allow participants to address frustrations they have with previous relationships or the overall dating culture (which, for some, constitutes a mix between a job interview and a casino). Dolls are constantly available and are seen as consumables and collectibles, which gestures at the particular status they provide as companions in that they contain features of both subjects and objects in this liminal space.

Overall, research question one illustrates the liminal status of dolls as quasi-others that stand betwixt and between clear ontological categories of either subject or object, evoking particular affective responses in the participants (cf. Turkle, 1984; van der Goot & Etzrotd, 2023). The interview data is particularly well-suited to explore those responses as it captures participants' disfluencies and sense-making in real-time, which is likely a direct illustration of dolls' fuzzy ontological status (Guzman, 2023). As a result, research question one lays the foundation for viewing dolls as evocative objects in that they constitute a new ontological category that prompts unique responses from participants (Kahn & Shen, 2017).

Findings in response to research question two illustrate how doll and doll owner characteristics interact to create a perception of an authentic interaction. Namely, dolls' presence and agency interact with participants' imagination and desire to extend their

identity, allowing participants to construct and (re)negotiate authenticity in their human-machine relationships in a cyclical way. Here, authenticity of interaction is co-constructed between the doll's evocative features and participants' willing suspension of disbelief. In particular, participants describe how dolls contain an innate sense of presence that communicates a sensation of another entity (cf. Xu & Jeong, 2023). The experience of presence is captured in the somewhat universal experience of the unboxing (i.e., the arrival of a doll to a participant's doorstep) and extends beyond that in the context of realistic features, uncanniness, and more. This presence (which is both a theoretical and an in vivo term in this study) may be likened to dolls' evocative nature, showcasing how they invoke certain social reactions in participants.

Beyond presence, agency emerges as a key dimension of how participants perceive their doll, ranging from attributing higher levels of agency to lower levels of agency to their dolls. Many participants recognize that dolls are limited in their agency, which leads some to desire more agency in their dolls. Here, the findings illustrate how the desire for more agency is driven by two different discourses, one that focuses on projecting traditionally feminine servant narratives and feminine invisible labor onto dolls (e.g., doing household chores), and one that is driven by a desire to increase dolls' capabilities as companions to their users. Other participants, however, celebrate their dolls' lack of agency because they are not particularly interested in more interactive or AI-driven features (such as conversational capabilities). Some participants, on the other hand, celebrate particularly their dolls' muteness by way of suggesting that dolls embody a "perfect woman" in that she provides everything she should provide without "the woman aspect," as Ted puts it, by which he and other participants refer to women

206

nagging them and talking at them. Finally, participants' comparisons of dolls with humans, pets, and stuffed animals illustrate a nuanced understanding of what distinguishes these entities from one another, with a focus on agency as a driving factor (cf. Edwards, 2018; Guzman, 2020).

The other side of the cyclical nature identified in the second findings chapter entails doll owner characteristics, with the first one being the importance of imagination. This section illustrates how participants are willing to suspend their disbelief when interacting with their dolls, implying an active "buying-into" the simulation of an authentic interaction with a doll (Szczuka et al., 2019). This section contains rich descriptions of participants' ideographic metaphors, where they liken being with their dolls to being in virtual reality, projecting narratives onto screens or canvases, hearing echoes, or performing emotional masturbation. Many participants express joy as a result of crafting personas and extensive backstories for their dolls, while other participants suggest they lack this particular sense of imagination. Participants actively deny that they are delusional and make it clear that they engage in an active creation of those narratives while still maintaining the separating of play and reality.

Finally, the findings in response to research question two highlight how dolls can serve as an extension of participants' identity, allowing them to explore parts of themselves they were not able to express before (e.g., being trans, showing interest in feminine clothes while being a man) or did not know about themselves (e.g., showing interest in gender play, enjoying shopping sprees). Combined, the findings in response to research question two yield a cyclical relationship between two doll factors (presence and agency) and two doll owner factors (imagination and identity extension) that interact in

iterative fashion to allow participants to create the perception of an authentic interaction with their dolls. It takes both doll properties (i.e., they have a presence, they give off a sense of agency) and doll owner properties (i.e., they are willing to suspend their disbelief, they utilize dolls as an extension of themselves) to generate a sense of authenticity in the situated relationship between human and doll. As noted previously, the separation into doll and doll owner characteristics is primarily for organizational and analytical purposes. In practice, the perception of authenticity is the outcome of doll and doll owner characteristics working together, indicating that authenticity resides within the situated interaction and not within either the doll or the doll owner.

Lastly, the findings in response to research question three demonstrate that care plays a key role in human-machine relationships (Aronsson, 2023; DeFalco, 2020). Not only do dolls require care but, for some participants, dolls also provide care in a perceived reciprocal fashion, resulting in what some participants experience as an illusion of being cared for by the doll. In particular, participants understand themselves to be caretakes of their dolls, rather than users or owners. Dolls provide care for participants as well through a variety of ways, including on sensory levels (e.g., cuddling and affective touch), through emotional support (e.g., serving as "anchors" or "silent therapists" for participants), by sharing space (e.g., merely being in the same room can be perceived as care by participants), and by providing a space free from judgment (e.g., participants do not have to worry about being ridiculed or judged by their partner).

Reciprocity here means that participants not only care for their dolls, but they also have the perception that their dolls care for them in turn as well. The illusion of being cared for is informed by dolls' evocative nature (RQ1) and the cooperative authenticity

processes drawing on agency, presence, imagination, and identity extension (RQ2). Overall, participants report positive outcomes of this care (e.g., finding a new sense of purpose, remedying loneliness). However, the experience of care overlaps with the expression and need for control, where participants experience control in three ways: 1) as a form of safety and reliability in the relationship; 2) as an expression of individuality; and 3) as a means to constrain the partner's freedom in ways that mirror gendered dynamics around care labor. As a reminder, not all participants share this experience of the illusion of being cared for, highlighting that care is a multi-dimensional and complex experience in the context of dolls.

Together, the findings of this study offer important theoretical contributions, which I preview here and then discuss in more depth below. First, this study extends previous work in HMC on mute machines by suggesting an additional type of mute machines in the form of humanoid mute relational machines where their muteness does not take away from their relational capabilities but rather adds to them. Second, my findings have important implications for understanding dolls and doll owners empirically, addressing a strong need for more empirically grounded insights into this phenomenon. Third, this study contributes to media evocation perspectives by providing additional support and showcasing how participant metaphors are an insightful methodological tool to examine how communicative machines like dolls encourage reflection in humans about the machine, their relationship with it, and themselves. Finally, the most compelling theoretical contribution this study offers is an integrative perspective that combines previous work on care with existing work on illusions in the context of communicative machines that serve relational purposes. In particular, this dissertation

lays the foundation for a new relational interaction illusion model that draws on past

research and leads to what has emerged as the illusion of being cared for in this study.

Moreover, the findings of this study provide important practical and heuristic

implications. First, doll owners themselves can benefit from hearing stories from others

about the various experiences within doll communities, exploring the breadth of

approaches to having dolls as companions. In particular, the findings of this study might

allow doll owners to understand how certain disagreements within the doll community

take place. Second, the larger public can benefit from an in-depth perspective that

showcases the lived experience of doll owners on an everyday basis beyond the stigma.

Here, the public should take into account the many benefits of dolls when making sense

of dolls and doll owners. Moreover, the findings are relevant to doll designers and

developers. Participants in this study paint a nuanced picture where desire for interactive

technologies such as conversational AI, realistic features, and other design features vary

as a function of how dolls are perceived and integrated into personal interactions. In

particular, marketing for dolls may be reconsidered in light of its current strong focus on

sexual needs. Finally, this study offers heuristic value in that it provides a deep dive into

what might be called early adopters in the context of relational technologies, indicating

how humans might form relationships with other, more mainstream (i.e., more affordable

and less stigmatized) technologies in the near future.

<div align="center">**Theoretical Contributions**</div>

In this section, I detail the four primary theoretical contributions derived from this

study. While informed by an interdisciplinary approach, this study is squarely situated

within human-machine communication (HMC) as a cross-disciplinary subfield within

<div align="center">210</div>

communication studies. Nonetheless, the contributions described below go beyond the field of communication studies and are also relevant to other disciplines focused on studying relations between humans and communicative machines.

Dolls as Mute Machines in Relations

The first theoretical contribution this dissertation makes is combining previous work on communicative relational machines with mute industrial machines in the context of HMC, by examining the case of the mute relational machine, namely the doll. Said differently, this dissertation extends previous theorizing on mute machines by illustrating a new type of mute machine as represented by dolls. This extension of theorizing is valuable because it captures people's lived experiences with machines that is currently unable to be captured by existing theorizing on mute machines. In particular, this study expands Guzman's (2016) emphasis on mute machines in an industrial context—by primarily focusing on assembly machines and similar *functional* robots (Edwards et al., 2023)—to a *relational* context. Moreover, this study expands theorizing on *zoomorphic* relational machines, such as the robotic seal PARO (Šabanović et al., 2013), to a *humanoid* relational context. As demonstrated by this study, dolls' muteness does not disqualify them as communicative machines but rather indicates that, in order for dolls to be communicative, it takes a combination of doll and person characteristics that interact in unique ways, yielding the illusion of interaction and communication. Drawing on sensations of agency and presence coupled with a sense of imagination and a focus on identity extension, dolls become communicative machines that participate in a joint social reality, without needing to verbally express messages in many cases. In fact, it is

211

precisely this interpretive flexibility (Šabanović et al., 2013) of dolls, via their muteness, that affords the varying types and forms of relationships participants form with them.

In previous work, mute machines were primarily examined from functional and ritualistic perspectives, via the perspectives of cybernetics and cultural approaches, respectively (Guzman, 2016). Building on this functional-ritualistic perspective, this dissertation adds a relational perspective to mute machines, highlighting how relational and posthuman qualities allow for mute machines to become intertwined in relational meaning-making with humans. By recognizing this new type of mute machines in theory, this dissertation captures forms of interactions between humans and machines that are currently not accounted for in the literature. In other words, this new type of mute machines proposes a label for a phenomenon currently unaccounted for in the literature.

In so doing, this study draws on a rich history of examining human-technology relations from networked perspectives, for example from perspectives of media ecology (Peters, 2015), science and technology studies (Suchman, 1987), phenomenological approaches (Sandry, 2015), and other relational angles such as actor network theory or object-oriented ontology (Sandry, 2023). As demonstrated throughout this dissertation, sex and love dolls occupy the liminal space of a boundary object or edge case in many ways, be it as a stigmatized and tabooed technology or as an extreme case of relational machines. This status as an edge case, however, illustrates how even "machines [that] do not appear to have anything to say" (Guzman, 2016, p. 24) impactfully shape perceptions of human-machine entanglements, and how their muteness *adds to* rather than *takes away* from their relational capabilities.

Participants in this study express varying degrees of intimacy and closeness with their dolls, and their dolls' muteness takes on the role of a primary affordance that simultaneously allows them to experience the illusion of an Other while remaining in control about what that Other is like. As illustrated by some participants, this muteness is even preferred over a desire for more conversational capabilities that, while introducing additional communicative features and a potentially self-learning personality into the relationality, take away from the interaction illusion carefully curated by the human user. In this vein, the findings of this dissertation resonate with previous work examining the interpretive flexibility of zoomorphic relational mute machines (Chang & Šabanović, 2015; Šabanović et al., 2013). Shifting from zoomorphic to humanoid machines showcases that findings generated within the context of robotic pets may transfer to human-like machines and, by extension, showcase how people might form intimate, romantic, and sexual relationships with these mute machines.

On the other hand, dolls' muteness invites somewhat of a do-it-yourself (DIY) culture or community of tinkerers where doll owners get creative at combining different technologies such as speakers and voice synthesizers to give their dolls voice. The relevance of muteness as a defining characteristic for many of the participants' experiences in this study also adds to interpersonal communication perspectives within the realm of HMC (Fox & Gambino, 2021; Rosenthal-von der Pütten & Koban, 2023), as it adds an additional focal point on the absence of verbal interpersonal communication between human and machine communicators while still allowing a relational framing. In this way, this dissertation considers absence as a resource for HMC rather than merely focusing on presence (Westerman & Edwards, 2022), where the absence of voice affords

213

different possibilities for relational development that are constrained when voice is present. For example, as Marvin's experience highlights, dolls equipped with conversational AI contradict the participant's carefully constructed narrative for their doll (for instance by guessing the wrong favorite color). As such, the absence of certain affordances and capabilities *enhances* rather than *reduces* the interaction illusion between humans and dolls as it provides interpretive flexibility that not only invites but perhaps requires a certain sense of imagination and willingness to suspend disbelief for an authentic interaction illusion to be generated.

Furthermore, the presence and absence of voice brings with it many cultural and political layers, especially when it comes to machines that typically occupy a hyperfeminized and hypersexualized body. On the one hand, the racialized and gendered layers of female voice assistants' voices replicate existing narratives of servitude and gender stereotypes (Moran, 2021; Woods, 2018). On the other hand, the absence of voice—and particularly the male celebration of a woman's lack of voice as expressed by a few participants in this study—mirrors cultural patterns of silent female caretakers, servers, and partners whose only purpose is to support their male partner (Rhee, 2018). Specifically in the context of dolls representing the continuation of fetishizing women along gendered and racialized dynamics (Hanson & Locatelli, 2023; Puig, 2017), muteness as the absence of voice is a key dimension for understanding the socio-cultural impact of dolls on people (Ferguson, 2010), gesturing at the importance of historicizing gendered dynamics in HMC (Fortunati & Edwards, 2022).

Combined, then, characterizing sex and love dolls as mute machines extends previous work on muteness in HMC in two interconnected ways: First, from primarily

214

industrial and organizational contexts to a relational use case, and second from a zoomorphic relational context to a humanoid relational context, bringing with it new layers of voice and voicelessness that connect with previous theorizing on entangled human-machine relationships (Suchman, 1987). In so doing, this new type of mute machines allows for theory to capture people's lived experiences.

Empirical Evidence Broadens Our Understanding of the Doll Community

A second theoretical contribution that this dissertation offers is adding much-needed empirical insights to the growing literature on dolls and doll owners (Döring et al., 2020; González-González et al., 2021; Hanson & Locatelli, 2022). In particular, the findings of this dissertation demonstrate that the doll community is more diverse in experiences than typically anticipated in the literature (e.g., Appel et al., 2019; Hanson & Locatelli, 2022; Harper & Lievesley, 2020). The literature on dolls remains largely exclusively theoretical or, in cases where research is conducted empirically, the focus lies primarily on the public perception of dolls rather than actual experiences of doll community members (cf. Scheutz & Arnold, 2016). As such, this dissertation adds to the growing body of empirical work on dolls, with studies taking on increasingly qualitative (e.g., Hanson, 2022a; Langcaster-James & Bentley, 2018) and quantitative (e.g., Desbuleux & Fuss, 2023a, 2023b) approaches to studying doll owners directly. In particular, through its funneled serial design, this study offers rich, in-depth insight into the lived experiences of doll owners, thereby going beyond surface-level or one-time empirical studies.

My findings illustrate a wide range of different experiences within the doll community, of which my sample is but a snapshot that does not capture the entirety of the

215

population. Thus, while I certainly do not make any claims that my sample is representative of the doll community as a whole or even a subset of it, my findings from interviews with over 25 participants from over ten countries already showcase how diverse the doll community is in terms of experiences. As I discuss in the limitations below, my sample is also homogeneous in expected ways in terms of demographics. My participants express many reasons for why they have dolls in the first place, represent a very broad range of length of doll ownership (two months to 23 years), and include a sample of participants with varying experiences and opinions about dolls.

My sample includes outspoken sympathizers with the manosphere, a set of communities largely found in online spaces that amalgamate around "an allegedly collective, gendered experience, namely men's position in the social hierarchy as a result of feminism" (Ging, 2019, p. 653). For instance, Finn consistently echoed themes typically associated with the manosphere and even placed himself within the manosphere explicitly. Older cismale participants like Sam, Stefan, and Ted reflected on the experiences of a failed marriage (or multiple ones, for that matter), attributing their divorce at least partially to changing societal norms around masculinity and feminism. Other participants express more strongly profeminist perspectives, marked by their disagreement with misogynistic perspectives of dolls. Both cismale participants such as Marvin, Raul, Darren, or John as well as transwomen like Gwen and Layla share how they do not view dolls as representing women but rather providing an alternative type of companionship. Collectively, my findings indicate that the descriptor *the* doll community serves as an insufficient umbrella term that, while conjoining people who own dolls, subsumes different strands of sometimes conflicting perspectives on doll ownership.

216

Given the prevalence of the community not only for bonding experiences (Middleweek, 2021) or navigating stigma (Hanson, 2022b), theorizing doll ownership would benefit from more empirical research examining the various nuances within the larger doll community, as I note in more detail in the directions for future research below. In so doing, my dissertation directly responds to calls for empirical research into the motivations and effects of doll ownership and interaction (Harper & Lievesley, 2020). For instance, although underlying motivations for potential interactions with dolls are increasingly documented for a general population of non-doll owners (e.g., Dubé et al., 2022b), my findings focus on the experiences of current doll owners (rather than prospective ones). My findings illustrate sensemaking processes of the doll's ontological status, coupled with complex negotiation processes of interaction authenticity via doll and doll owner characteristics, resulting in a perceived sensation of being cared for by the doll. For example, participants describe the importance of imagination when interacting with dolls, resonating with prior work conceptualizing the role of fantasy and creativity in the context of dolls (Karaian, 2024).

In contrast to experimental studies typically confined to lab spaces, a qualitative study such as mine is valuable as it provides insight into the lived experiences in a naturalistic setting, where participants can share how dolls impact their day-to-day life beyond first- and one-time interactions. In so doing, my dissertation extends previous work on human-machine relationships (Langcaster-James & Bentley, 2018) by showcasing the complex processes that underlie posthuman kinship experiences. Although participants struggle with making sense of their doll's ontological status (marked also by verbal disfluencies in interview transcripts), they rely on rich

217

descriptions and metaphors to explain what the relationship with their doll feels and looks like. This study adds empirical support to previous theoretical or critical/cultural work on posthuman relations among humans and dolls (e.g., Erhard, 2022; Locatelli, 2022). Going beyond analyses of public forum-based data (e.g., Depounti et al., 2023; Laestadius et al., 2022; Middleweek, 2021), my serial interview design directly responds to calls for interview research to provide "the opportunity for deep phenomenological accounts about the nuanced functions of dolls and robots to be uncovered" (Harper & Lievesley, 2020, p. 54). In particular, my findings illustrate the rich metaphors participants use to make sense of their doll interactions, document the breadth of experiences within the doll community, and yield an explanatory mechanism for relational experiences with dolls: a cyclical interaction between doll and doll owner characteristics that collectively contribute to a perception of an authentic interaction with dolls.

Metaphors Exemplify the Media Evocation Perspective in Action

A key theoretical contribution of this study is to the media evocation paradigm (van der Goot & Etzrodt, 2023) that characterizes machines as evocative objects (Turkle, 1984, 2007b) which spark reactions in people as a response to machines' status as liminal objects. In particular, this dissertation adds additional empirical evidence to support the media evocation perspective, primarily contributing the value of metaphors to showcase the media evocation perspective in action. The metaphors of dolls as virtual reality, screens, canvases, anchors, silent therapists, real-life action figures, and more indicate that participants view machines to be social actors, evoking a number of affective responses. Thus, this dissertation makes the contribution that participant metaphors exemplify the media evocation perspective in action.

In comparison to the media equation paradigm, most famously examined through the Computers As Social Actors (CASA) approach (Reeves & Nass, 1996), the media evocation perspective holds that it is machines' fuzzy ontological status that invites social responses, rather than humans' overreliance on social scripts. In their groundbreaking work, van der Goot and Etzrodt (2023) mark the distinction between media evocation and media equation perspectives by the different uses of the terms "as" and "are" in the CASA acronym, where computers *are* social actors in the media evocation perspective and computers are seen *as* social actors in the media equation perspective. The CASA research (from both the "are" and "as" approaches) can be characterized as a form of dual-process theory (Koban & Banks, 2023) that separates between mindless and mindful responses to cues provided. Similar to research in persuasion (cf. Dehnert & Mongeau, 2022), cues such as a human-like face or the sound of an artificial voice might cue in certain scripts humans apply to respond to such social cue stimuli (Lombard & Xu, 2021).

Compared to media equation (Gambino et al., 2020), media evocation relies more strongly on mindful responses to the liminal nature of the machine (van der Goot & Etzrodt, 2023). Said differently, because humans treat machines not simply *as* social actors but understand them to *be* social actors, their reaction to machines is driven by a "mindful process of reflection, which involves negotiations concerning the nature of the machine, the user, and their relationship" (van der Goot & Etzrodt, 2023, p. 23)—all of which are demonstrated in the given study.

Dolls in this study clearly take on the role of such evocative machines as participants not only struggle to characterize their doll and their relationship with it but

use it as grounds for reflection in response to such evocation. Participants' reliance on metaphorical language and verbal disfluencies when asked to describe the impact their dolls have on them showcase how people negotiate the meaning of a machine in situ. Although this study does not provide experimental or observational insight into what those negotiation processes look like in situ per se, this dissertation offers interview data marked by depth and breadth that highlights participants' sensemaking as a result of those negotiation processes. For several participants in this study, it was their first time actively expressing how they experience their doll or how they would characterize the relationship with their doll.

As such, this dissertation serves as a case study that showcases the media evocation paradigm in situ, which serves as a primary explanatory feature for apprehending doll owners' lived experiences in their relationships with their dolls: It is precisely dolls' evocativeness that contributes to perceptions of presence, agency, and interaction illusion. Moreover, participants' strong reliance on imagination as an active creation of this illusion illustrates the mindfulness of their curated interaction—it is only through this mindful application of imagination through crafting backstories or creating entire personas for their dolls that the dolls' evocativeness can spark the illusion of an interaction. Here, the value of participant metaphors along with an analysis thereof cannot be understated for media evocation theorizing (Grant & Oswick, 1996; Lakoff & Johnson, 1980): When participants liken their dolls to virtual reality, screens, canvases, anchors, silent therapists, real-life action figures, and more, they fall back on sensemaking schemas and frameworks they are familiar with to describe what they do not have words for. Namely, participants express the outcome of the complex negotiation and

220

reflection processes theorized by media evocation approaches through metaphorical language, highlighting how dolls provide emotional support (anchors, silent therapists), emulate experiences one cannot have (virtual reality), embody childhood heroes and provide an outlet for play (action figures), and serve as a creative outlet through which participants can explore themselves (canvases, screens). In this vein, this study offers the contribution of participants' use of imagination as a form of mindful processing when interacting with their dolls, conjoined by viewing dolls as identity extensions that allow them to explore previously hidden or unknown facets of their identity (Hanson, 2023b).

Given that research within the media evocation paradigm is largely driven by qualitative, ethnographic, and user-centered research approaches (van der Goot & Etzrodt, 2023), this study ties in directly with the long history of theorizing evocative objects and mindful responses to them from the human perspective (e.g., Turkle, 1984). The findings of this study demonstrate how media evocation is a useful perspective to apprehend even intimate, romantic, and sexual interactions between humans and machines, which has not been the focal point of previous scholarship in the context of media evocation. Additionally, the methodological design of this study centers participants' voices and showcases several instances of sensemaking in the moment, where participants struggle to clearly characterize the status of their doll or their own reactions to it. Comprising a major advantage of interview work in the context of HMC (Guzman, 2023), this focus on participant sensemaking in the given study extends previous work on pronoun usage in the context of machines (e.g., Guzman, 2015; Knafo, 2022; Lievesley et al., 2023) and general struggles of participants to verbalize their mindful reflection processes in response to their machine's evocativeness (Turkle, 1984).

221

Moreover, this study offers a novel contribution in that it conjoins previous work on dolls with the media evocation paradigm, particularly by bringing Knafo and Lo Bosco's (2017) use of Winnicott's (1971, 1975) transitional objects in conversation with Turkle's (1984) evocative objects. Winnicott (1971, 1975) introduced the psychological concept of transitional objects to refer to objects that people find safety and security in, allowing them to serve as a bridge between themselves and other people while undergoing emotional transitions. Turkle (2013) engaged with Winnicott's (1971, 1975) transitional objects herself and framed it as a less useful comparison for characterizing humans' relationships with technological artifacts, noting that transitional objects are meant to be abandoned whereas evocative objects do not have the same temporal dimension. Rather, Turkle (2013) writes that "We are meant to become cyborgs" (p. 298), gesturing at the increasing integration of humans and technology because of machines' evocative nature.

This dissertation, however, extends Knafo's (2015) use of the term in the context of dolls by pointing out that the doll's evocativeness is precisely what contributes to its transitional status, where the doll's transitional status is less driven by a temporal dimension (i.e., the human abandons the doll after having moved on) and more so by the doll's hybrid status as a quasi-other between subject and object. In my findings, this liminal status serves less as a bridge to forming relations with other people and more as an outlet for a relational need; namely, the fundamental need to belong and feel needed by another social entity (Baumeister & Leary, 1995). Participants share how their dolls mitigate loneliness and anxiety, address their frustrations with dating, and overall provide them with a sense of purpose and meaning. Engaging in a form of "emotional

222

masturbation," as Sam coined it, participants' experiences demonstrate how 1) the interaction with dolls is, ultimately, a solitary one that, while 2) resulting in pleasure (on an emotional level rather than a sexual one in this case) of satisfying needs for companionship, 3) falls short of the "real thing" (a human-to-human relationship in this case). Together, then, this dissertation's findings not only serve as an illustration of the media evocation paradigm in a naturalistic setting but extend this approach in ways that might spark future research on issues around mindfulness, evocative machines, and transitional objects. Serving as an "edge case" of relational machines, the findings of this study in the context of love and sex dolls might resonate to other relational machines such as virtual companions.

An Integrative Approach to Care and Illusion: Toward a Relational Interaction Illusion Model

Lastly, another key theoretical contribution this study makes, and arguably its most compelling, is moving toward an integrative approach of care and illusions, which results in two outcomes: First, such an interdiscipulinarily driven approach conceptualizes authenticity as emerging within the situated relationship itself rather than from an a priori standpoint (Lee, 2020). Second, the findings of this study suggest for research on authenticity via the modes of deception and illusion to fold into research on care. As a consequence, this dissertation lays the foundation for a new relational interaction illusion model—extending prior work on the sexual interaction illusion model (Szczuka et al., 2019)—to be examined in future research.

A social-relational perspective (Coeckelbergh, 2010, 2012; Gunkel, 2012, 2018, 2022; Gunkel et al., 2022) approaches human-machine interaction from a pragmatic and

phronetic angle in that it focuses on how humans experience the interaction themselves as situated, rather than aiming to apply existing schemas or frameworks to the interaction as a sensemaking device. This dissertation exemplifies a social-relational approach by prioritizing participants' voices and their own sensemaking of their lived experiences. As a qualitative study driven by phronesis and actionable goals (Tracy, 2020), the findings of this study complicate the already fuzzy concept of authenticity in communication and human-technology studies (Lee, 2020). In particular, the findings make contributions to the literature on authenticity by 1) providing a novel perspective on agency, 2) adding to work on social presence, and 3) extending theorizing on illusions and deception in HMC.

Revisiting Agency in Human-Machine Communication

First, the findings of this study contribute to movements that reframe agency in HMC. Informed by posthuman perspectives and theories of distributed networks of relations (e.g., Aronsson, 2023; Bennett, 2004; Sandry, 2023), this study illustrates agency as the capacity to affect and be affected in action (Dehnert, 2021; Kitson & McHugh, 2015). In particular, participants' perspectives on their dolls' agency vary as they attribute different degrees of agency to their dolls. Participants' experiences illustrate how their dolls affect them in various ways, from mitigating loneliness to providing comfort and a sense of safety. Rather than focusing on intention as a driver for agency, the findings illustrate that nonliving entities like dolls can affect humans in many ways, showcasing an alternative understanding of agency focused on this capacity to affect, resonating with previous work on symbiotic agency in the field of HMC (Neff & Nagy, 2016). In short, the findings illustrate that participants attribute varying degrees of agency to their dolls, resulting in participants experiencing the interaction as more

224

authentic. As proposed by Lee (2020), this sensation of a reciprocal interaction (where both the human and them machine have agency) increases the perception of an authentic interaction.

Revisiting Presence in Human-Machine Communication

Second, this dissertation extends traditional theorizing on social presence in HMC and computer-mediated communication by focusing less on the presence or absence of cues (Xu et al., 2023) and more so on the sensation of a vibrant Other. Typically, research on the concept of social presence emerges primarily from mediated human-human communication. The concept entails varying dimensions and understands social presence as the sensation of being with another person coupled with a sensation that this other person is real (Biocca et al., 2003, Lombard & Ditton, 1997). Rather than focusing on what particular social cues might increase or decrease the sensation of social presence, the findings illustrate that participants perceive presence differently, namely perceived as an innate vibrance or "magic" that leads to the sensation of another materialized in the doll itself. While "magic" may not be useful as a concept from a scholarly perspective, it captures participants' sensemaking of dolls' impact on them. Therefore, although typically conceptualized as the experience of non-mediation in mediated environments between people (Lombard, 2018), presence emerges here in a non-mediated environment between a human and a nonhuman communicator.

Especially when coupled with the metaphorical data discussed in this dissertation (e.g., dolls as screens, canvases, action figures), the sense of presence as discussed in this dissertation ties in directly with the concept of authenticity. As evocative objects, dolls give off the sensation of presence that resonates less with a cues-perspective and more

with vital materialist perspectives (e.g. Bennett, 2010), where agency is attributed to nonliving and nonhuman entities. Here, agency and presence become conjoined in the capacity to affect—in this case—humans that interact with dolls. Thus, this reconceptualization of agency and presence extends the typical unidirectional influence of humans and technology into a bidirectional influence, where humans and machines mutually affect one another.

Revisiting Illusion in Human-Machine Communication

Third, this dissertation adds to the growing body of work on deception and illusion in the context of machines (e.g., Lucidi & Nardi, 2018; Natale, 2021; Szczuka et al., 2019), emphasizing the role of imagination and fantasy (Karaian, 2024). In particular, this dissertation builds on previous work on the sexual interaction illusion, which has been characterized as a short-lived automatic sensation of a sexual interaction with a sexualized machine, primarily driven by sexual desire and a willing suspension of disbelief (Szczuka et al., 2019). What makes this sexual interaction illusion an illusion is that participants are aware that they are merely simulating a sexual interaction while knowing that it is not "actually" a sexual interaction with another person. As discussed elsewhere (Szczuka & Dehnert, forthcoming), it is crucial to distinguish between short-term sexualized interactions and long-term relations, where the former is driven primarily by sexual arousal and the latter derives potentially more from relational needs of the user. What conjoins these two perspectives is the focus on the willing suspension of disbelief, or the human's active creation of the illusion while knowing that it is merely an illusion. Almost all participants in this study were adamant about clarifying their active

226

contribution to the illusion rather than them falling for deceptive mechanics within their dolls.

This willing suspension of disbelief might be driven by different underlying mechanisms in the sexual versus the relational interaction illusion. Whereas situational characteristics such as sexual arousal, desire, and availability are among the primary drivers of the sexual interaction illusion model (Szczuka et al., 2019), the findings of this dissertation suggest that loneliness, a need to belong, or other social-relational characteristics are likely the primary drivers of the relational interaction illusion. In this way, the findings from this study illustrate how people actively create such an illusion by relying on their imagination to create doll personas and actively deny being delusional.

Toward a Relational Interaction Illusion Model

As a consequence, this dissertation lays the groundwork for theorizing a relational interaction illusion that builds off the sexual interaction illusion model (Szczuka et al., 2019). Driven by this data, a relational interaction illusion occurs when humans perceive the machine as having agency and presence, and when the human brings a sense of imagination to the interaction as well. Rather than driven by situational characteristics such as sexual arousal or sexual sensation seeking (Dubé et al., 2022a), the relational interaction illusion is likely driven by more nascent personal mechanisms, including an affinity toward play and roleplay, a strong sense of need to belong, and a desire for companionship, among others. Coupled with a willing suspension of disbelief (expressed through the modality of play and creating extensive backstories for doll personas), a relational interaction illusion entails a human to view themselves not only as a relational agent, but also as a relational patient. Drawing on related work on moral agency and

227

patiency (Gunkel, 2012), agency signifies the capacity to affect others and patiency signifies the capacity to be affected by others. As the findings in response to RQ3 show, several participants report the sensation of a reciprocal relationship with their dolls that results in the illusion of being cared for.

The illusion of being cared for has emerged from the data as a key outcome of this relational interaction illusion, given that care captures the emotional, affective, and sometimes romantic dimension of this relational interaction illusion in a compelling way based on the data. Coupling posthuman theories of care with a social-relational approach to authenticity via posthuman perspectives of agency and presence, the illusion of being cared for marks a sensation that a doll provides care to their owner through sensory means, sharing space, and providing emotional support. As such, the illusion of being cared for is a clear example of the outcome of distributed affect within human-technology relations (Damiano & Dumouchel, forthcoming). Rather than another instance of a sexual interaction illusion, this illusion of being cared for is relational in that it focuses on the participation in a jointly created social reality between the doll and the human (Edwards et al., 2022). Here, participants place less emphasis on meeting sexual needs and more so on co-creating a joint social reality that fulfills additional relational and social needs. In particular, a communication studies perspective as taken in this dissertation highlights how relational interaction is the underlying mechanism for the illusion of being cared for, as it is experienced as processual, interactive, cyclical, and reciprocal by the participants in the study. Participants experience this illusion of being cared for by their doll especially when they conceptualize their doll as an evocative object with an innate presence. Creativity and imagination emerge as necessary precursors to human-machine

228

relationships and thus to the illusion of being cared for, as they characterize a willing suspension of disbelief that allows the participant to experience the illusion of being cared for while fully knowing that it is, in fact, simply a self-curated and self-created illusion.

This is precisely where the stickiness of the concept of the illusion of being cared for is located: The term "illusion" invokes—even if not implied—a somewhat negative connotation that implies "not real" or "imagined" in a pejorative way. Said differently, relying on the term "illusion" contributes to a devaluing of people's lived experience in the context of love and sex dolls where relations with machines are merely illusory (read: not real), as in *made up*. Albeit understood as the active willing suspension of disbelief (Szczuka et al., 2019) and therefore a positive attribution of agency to the user themselves, the term "illusion" has the connotation that the care provided by dolls is not genuine or authentic but rather appears to be so.

As a consequence, the concept "illusion of being cared for" is not without its shortcomings and invites further empirical work and theorizing. As the experience of reciprocal care, the illusion of being cared for is the outcome of doll features and subjective experience together contributing to a constructed narrative of care on the part of the person—from this vantage, future research may explore potentially better suited terms that highlight the communicative, interactive, and constructed nature of the sensation while sidestepping the negative connotative baggage of the term "illusion." Here, constructs such as "imagined care," "communicatively constructed care," or "communicatively constituted care" could be useful terms for future work that sharpens the theoretical language aimed at capturing the experience of a doll caring for a human.

229

For the purposes of this study, I remain engaged with the concept "illusion of being cared for" given its connection to the data and theoretical resonance.

Revisiting Care in Human-Machine Communication

The illusion of being cared for furthermore extends work on care machines as well as posthuman understandings of care. In particular, care and machines have primarily been examined in the context of eldercare or therapeutic situations (Fosch-Villaronga & Poulsen, 2020, 2021; Mack et al., 2021). Debates on the authenticity and humanity of robotic care abound (e.g., Coghlan, 2022; Vallor, 2011), and my findings add insight to understanding care in HMC contexts that resonates more strongly with posthuman perspectives (Aronsson, 2023; DeFalco, 2023). A relational perspective to care views care as radical and as a strategy for survival in a precarious world (Hobart & Kneese, 2020). As discussed as part of the rationale for this study, precarity is a common contemporary experience and manifests in the context of this study primarily in the form of loneliness and the detrimental health outcomes of a social isolation crisis (Cigna, 2022). Here, care between humans and nonhumans becomes a form of enmeshment and distributed affect (Damiano & Dumouchel, forthcoming), aiming to counteract this precarity. My findings serve as an illustration of such a posthuman understanding of care, precisely because participants experience care not only as something they provide for their dolls (e.g., in the form of maintenance or cleaning), but also as something they receive in turn (e.g., in the form of emotional support or touch).

This is precisely where the compelling impact of these findings lies: Care is not only experienced as something people provide for nonhuman entities, but also something they receive in a perceived reciprocal fashion from nonhuman entities. The care they

receive is a self-curated and self-created experience driven by an emotional investment into the relationship with the doll, resulting in the illusion of being cared for. In this sense, the illusion of being cared for illustrates artificial sociality in that communicative machines contribute to the *appearance* of a social interaction (through the modalities of presence, agency, imagination, and identity extension), rather than a literal social interaction similar to human social interaction (Natale & Depounti, forthcoming).

The illusion of being cared for has positive effects on their mental health and improves participants' overall quality of life by giving them the sensation that they are needed and that someone is there for them, even though they are well aware that this "someone" is a creation of their own imagination materialized in a doll. What my findings add to the literature on posthuman care is the relevance of imagination when it comes to nonliving entities such as machines and dolls. Here, imagination or the willing suspension of disbelief is what brings the sensation of care to fruition. In a way, the sensation of emotional support, sensory care through touch and sharing space, and the lack of judgment allow participants not only to be comfortable with themselves, but to also experience a curated illusion of a social interaction that provides the comfort of a safe and reliable experience.

On the flipside, however, the illusion of being cared for highlights critical facets of the care literature, which pay attention to how care work marks a form of undervalued, invisible, gendered, and racialized form of labor (Fortunati, 2018; Rhee, 2018, 2023). Coupled with the fetishistic undertones of the term "doll" discussed in a prior chapter (Ferguson, 2010; Puig, 2017), important considerations for the invisibilization of feminine care work emerge (Erhard, 2022). As critiqued by scholars such as Rhee (2018,

2023), technologies such as machines and artificial intelligence that automate care labor continue the feminization of care work as a form of invisible service work (Fortunati & Edwards, 2022). Given the typical representation of dolls as hyperfeminine and hypersexualized figures designed to resemble the "ideal woman," the illusion of being cared for precisely by such automated, idealistic, and fetishized women might be one of the latest instances of outsourcing care labor from humans to machines (Lynch et al., 2022).

Given that care shows up primarily as emotional and affective care in my findings, with participants expressing how they receive emotional support, sensory care through touch, and a safe space from their dolls, this dissertation illustrates how future research would benefit from a more explicit focus on care from the outset. Examining how love and sex dolls, which are not originally designed to be care technologies yet take on different types of care work, contribute to the invisibilization and automation of feminized care work would add significantly to the current understanding of how love and sex dolls impact users (Erhard, 2022). Especially in light of high rates of loneliness and social isolation (Cigna, 2022), exploring dolls that are designed to be companions that ultimately perform care services (e.g., by helping people maintain their cognitive wellbeing, providing emotional support) would contribute to a deeper understanding of how communicative machines and other technologies outsource what it means to be human.

Concluding Thoughts on the Theoretical Contributions

In sum, then, this dissertation offers several theoretical contributions. Clearly driven by an interdisciplinary focus on the phenomenon of human-machine relationships,

232

my findings offer contributions to literature in communication studies and beyond that examines 1) mute machines, 2) dolls and doll owners empirically, 3) machines as evocative objects, and 4) care and illusions in human-machine communication.

Practical and Heuristic Implications

In addition to theoretical contributions, this study also yields several practical and heuristic implications, which is a marker of quality in qualitative research (Tracy, 2010). The practical and heuristic implications relate to doll owners themselves, the public, and doll designers and developers. First, love and sex doll owners themselves can utilize the experiences documented in this study as a way to make sense of their own ambiguities related to their dolls. Particularly given dolls' status as quasi-others whose evocative nature can take on an uncanny effect at times, thinking through the importance of imagination can be a useful way to make sense of one's own experiences as a doll owner. Doll owners can benefit from hearing stories from others who have dolls, allowing them to explore how the doll community is diverse and how experiences among doll owners vary. As this study shows, there is no "typical doll owner" when it comes to experiences, as some report having intimate relations with their dolls whereas others treat them more so as objects, with all kinds of degrees in between.

Given that it is generally difficult to describe the evocative nature of machines (Guzman, 2023) and particularly the impact of dolls on humans (Lievesley et al., 2023), the rich metaphorical data presented in this study can provide useful frameworks and tools to make sense of one's own doll. For example, hearing others describe their dolls as screens, canvases, or action figures might provide frameworks for doll owners to compare and contrast their own experiences with those of other doll owners. Given that

dolls like other communicative machines might constitute a new ontological category that evades clear-cut sensemaking (Kahn & Shen, 2017), doll owners can benefit from being exposed to metaphors from others as a way to make sense of their doll's liminal status. As a consequence, doll owners might consider how metaphorical language may help them with their own sensemaking when it comes to how they interact with their dolls. For instance, a doll owner struggling to describe what it feels like to spend time with a doll in a relational capacity could valuably see themselves in a different light by likening interactions with dolls to virtual reality—a sensory experience of a simulated encounter that still entails many perceptions of the "real" experience.

The findings also emphasize, in addition to existing research (e.g., Middleweek, 2021), that there is no such thing as *the* doll community given many different approaches to dolls within the larger community (Hanson, 2022a). Disagreements, different political beliefs, and varying practices on how to handle dolls are typical within the larger community as these findings illustrate vividly, allowing participants to not only find themselves within this larger prism but also to understand how other doll owners might experience their dolls differently. For example, Marvin and Raul reported how they lost contact with several forums and fellow doll owners because of diverging political beliefs, what Marvin referred to as "dog whistlely language." Here, they refer to misogynistic views and conservative beliefs that go against their own political convictions. Similarly, although not the focal point of this study, participants' discussions of stigma suggested how they might not only experience stigma from the larger public, but also face misunderstanding and disagreements with other doll owners over how to interact with dolls and talk about them as part of a community. Finn, for instance, shares how he used

234

to be a moderator for an online community whose members, although not directly

focused on dolls and more so on the impact of technology on humans writ large, decided

to remove Finn from the community over political and ideological disagreements.

From the perspective of the public, this study showcases a snapshot of the breadth

of varying doll owner experiences. The findings illustrate the many ways humans interact

with dolls, highlighting how the typical stigmatized beliefs about doll owners (e.g., that

doll owners are pedophiliac, that only older divorced men who have "failed" at life are

doll owners) may only apply to a fraction of the larger community (cf. DiTecco &

Karaian, 2023). As such, this qualitative data serves as a needed counterpoint to public

perception studies focused on attitudes toward dolls by non-owners (e.g., Scheutz &

Arnold, 2016). As a result of this study, the larger public should understand what lies

beneath the stigma towards dolls and doll owners, namely that dolls provide many

functions that go beyond sexual gratification. At the same time, of course, they *are* adult

sex toys and should be understood as such, while recognizing that their functionality goes

beyond this primary function. Given the rising number of dolls, they might become more

normalized in the coming years because of their increased prevalence as valid sextech

and might potentially be seen as valid companions for some. As dolls take on various

roles for their owners, it is clear that they fulfill varying functions that go beyond sexual

satisfaction, including providing companionship, serving as an artistic outlet or hobby,

and being a collector's item. Hence, it will be interesting to examine how dolls, as they

continue to advance on a technical level, will enter more and more into the mainstream

imaginary by providing different functions for different people. Moreover, the public

should understand that most doll owners are not delusional but engage in an active

creation of a fantasy, which might be potentially similar to other creative outlets like roleplaying games or cosplays. This insight is important because it troubles the prevailing stigma of sex doll owners as sexual predators by showcasing the role of imagination, fantasy, and play that contributes to dolls' appeal. Overall, then, dolls are a part of the larger change to relationships catalyzed by technology's increasing integration into societies around the world (Kislev, 2022).

Furthermore, doll designers and developers might benefit from the findings discussed in this study as they shed light on the user experience, as opposed to the public perception of dolls. In particular, doll designers should know that not every owner is interested in increasingly robotic and interactive features and that many are content with non-interactive dolls. As the findings imply, there might be a split in the doll community between people who are interested in traditional non-interactive dolls, and those who are interested in more interactive dolls. Participants who imbued extensive backstories and carefully curated personas into their dolls more strongly resist conversational tools like artificial intelligence, as they conflict with their curated personas. That being said, other participants expressed a desire for more interactive capabilities, particularly as it relates to movability and weight considerations. As a consequence, doll designers should recognize those opposing trends and consider catering to both groups, or making a conscious decision what group to target through their doll design.

What is more, doll designers should consider the seeming mismatch between how dolls are marketed and how they are used by participants. Doll manufacturers more strongly rely on sexual language and presentation when marketing dolls, whereas doll owners often emphasize the companionship and photography aspects of their interaction,

raising the question whether doll manufacturers would benefit from a more nuanced approach to marketing that addresses actual usage patterns more accurately. At the same time, the sexual emphasis in marketing is likely a clear driver for doll sales, suggesting that many people get dolls at least initially with the goal to satisfy sexual desires. However, based on this dissertation's findings, marketers should consider developing dolls in a way that accommodates different uses of dolls. They could do so by changing their marketing strategies or designing dolls for different uses, which would result in a more consumer-focused market. In the long term, this would likely contribute to an increased destigmatization of dolls within the public perception.

Finally, the findings of this study provide heuristic value in that they illustrate how a particular population experiences relationships with technology. Given the increasing integration of technology into relationships (Kislev, 2022), either as mediator or as relational partner itself, understanding this case of what might be called early adopters provides heuristic value in that it showcases how and why people might be drawn to communicative machines for relational purposes. As such, this dissertation offers in-depth empirical insights into early adopters of relational machines, indicating how humans might form relationships with other, more mainstream technologies that are more affordable and less stigmatized in the near future. With a larger number of people interested in more affordable virtual companions such as Replika, the case of doll owners forming relationships with their dolls can provide insights on human-machine relationships that might resonate with related contexts. In a way, the relationships experienced by doll owners might offer a glance into a potential future of what relationships with other types of communicative and intelligent machines might become.

237

Given the continued scholarship on companion bots and relational technologies that highlights both their underlying processes (Skjuve et al., 2022) as well as potential negative outcomes (Laestadius et al., 2022), the findings of this study resonate with related use cases and illustrate an advanced stage of human-machine relationships.

Limitations, Delimitations, and Future Directions

Just like any empirical study, this dissertation comes with limitations and delimitations. Whereas limitations refer to weaknesses in the study design, delimitations are the result of intentional choices made by the researcher as part of the study design that narrow the scope of the study (Tracy, 2024). This study's key limitations include the demographic diversity of the sample, the lack of cultural comparisons beyond a Western focus, and my own positionality, which plays a key role given the context of this study. The main delimitation of this study focuses on its scope, which was intentionally limited.

Limitations

First, a key limitation of this study is the outcome of the sampling procedure. While the aim of the study was to pursue a maximum variation sample in both demographics *and* doll experiences, the final sample ended up less demographically diverse than was hoped for, because of the necessity to rely on word of mouth and purposive snowball sampling. That is, my goal was to address the overreliance on cisheterosexual men in the scant empirical doll research available (Hanson & Locatelli, 2022) by placing intentional effort on recruiting noncisheterosexual men. Because of the secluded nature of doll communities, I had to rely on online forums and word of mouth, resulting in a potential self-selection bias where potential participants may have avoided contacting me who would have made the sample more diverse. Out of the 29 participants,

238

almost 80% are cismen ($n = 23$), with a majority being heterosexual ($n = 21$) and more than half being white ($n = 17$). My sample was diverse in other ways, however, namely national origin (more than ten different countries), how many dolls participants owned (ranged from one to 69 dolls), length of doll ownership (two months to 23 years), age (ranging from 19 to 60 years old), and relationship status. As such, the findings must be understood in the context of the limitations of this sample given its underrepresentation of certain demographics, primarily women and transgender individuals. Although my sample may be representative of the demographics of the population (Hanson & Locatelli, 2022), there is a need to examine the experiences of underrepresented voices in the doll community, namely women as well as queer and trans users. Future research should devote more time toward purposively recruiting noncisheterosexual men, given that there might be likely differences compared to this dominant demographic (even though cisheterosexual men feature prominently in the doll community; Hanson & Locatelli, 2022). Such efforts would resonate with previous research that challenges cisheteronormativity within human-robot interaction writ large (Stolp-Smith & Williams, 2024) and within the context of sex dolls (Dudek & Young, 2022; Puig, 2017).

A second limitation of this study also derives from the sample. Although I was able to recruit participants from more than ten countries, the sample is still almost exclusively Western, with a primary focus on the United States and central Europe. This is clearly the result of my own language constraints as I only speak English and German. The result is the complete absence of non-Western perspectives on the issue of human-doll relationships, which will likely differ dramatically from the data presented here. Asian markets in particular are a key location for doll manufacturers given their high

interest in robotic and virtual companions, many of which are somewhat disconnected from providing physical sexual services. For example, Azuma Hikari is a holographic companion designed to be the user's girlfriend (Liu, 2021), and Hatsune Miku is a popular virtual idol that many users report having parasocial relationships with (Dooley & Ueno, 2022). Similarly, research on other hologram social robots like Hupoi illustrate the relevance of culturally grounded research into companion machines (Leo-Liu & Wu-Ouyang, 2022). Intercultural perspectives add much needed nuance to the debates around love and sex dolls (Euron, 2023).

Moreover, the perceptions of agency and presence are likely to vary in Asian cultural contexts given the prevalence of otakuism, or the strong interest in the fictional worlds of anime and manga, where many Japanese representations of sex dolls derive from (Appel et al., 2019). Animism, or the attribution of life to inanimate objects such as dolls and robots, continues to be a thriving research area that calls for increasing attention to such intercultural differences (Voss, 2021). As a consequence, future research on dolls should strive toward cultural comparisons between Western and non-Western contexts, and should decenter US-American and European perspectives. Given that many doll manufacturers are based in Asia, such an approach would yield more culturally situated and contextually specific findings that detail how participants in different cultural environments perceive dolls differently.

In addition, another limitation emerges as the result of my own positionality. As typical for qualitative research, the researcher themselves is the research instrument, necessitating self-reflexivity as a key dimension of quality qualitative research (Tracy, 2010). Throughout this dissertation, I have taken steps to reflect on and account for my

240

own positionality, including transparency regarding all data collection and analysis procedures, purposive negative case analysis as a way of challenging my interpretations of the data, and seeking conversations about emerging findings with others throughout the analysis process. I have tracked my emerging thoughts on findings and codes in over 30 analytic memos, have revised the codebook in iterative fashion more than six times, and have sought out relevant literature at every stage of the research process.

As discussed in the methods section, I am aware that my positionality as a young, white, cisheterosexual and male-reading researcher without a doll likely contributed to participants approaching interviews with me from a more trusting, open, and willing stance (Hanson, 2022b). Given the strong cismale presence in my sample, participants felt likely more comfortable sharing not only their personal experiences with me, but particularly those experiences involving sex and socially stigmatized topics such as sex dolls as a whole (Pini, 2005). On the flipside, I may have appeared to female doll users potentially as a less trustworthy resource given my demographics. Moreover, as I discuss further in the limitations section, I was unable to access non-Western perspectives and participants speaking languages other than English and German. As an outsider to the community itself (I am not a doll owner), I am able to approach the scene from a perspective of deliberate naiveté that allowed me to be curious and open to various interpretations (Tracy, 2020), while having to remain conscious that my participants potentially saw me as a confidant they could rely on to share their perspectives on dolls. Future empirical, primarily qualitative, research in the context of dolls will also need to take into account researcher positionality in relation to the primarily cismale sample,

especially given that the experiences of female researchers will likely differ dramatically compared to mine (Keene, 2022).

Delimitation

The primary delimitation of this study is an outcome of the PIQDA approach driving this study, which does not aim to capture the entirety of a data corpus given its emphasis on the most relevant or interesting findings (Tracy, 2020). Due to this study's focus on subject-object status, authenticity, and care, and due to space limitations, I was only able to discuss part of the rich data I collected over three waves of data collection. Other topics that feature prominently in existing research on dolls, such as the importance of community (e.g., Middleweek, 2021) or the engagement with stigma (Hanson, 2022b) are therefore not included in this dissertation, albeit featuring prominently in the data. While no qualitative study can offer detail into its entire data corpus, the strength of a PIQDA approach is precisely that it allows for a focused, in-depth analysis of the most prudent and most relevant issues at hand at the cost of covering the entire topic at breadth.

Directions for Future Research

As a consequence, this study offers useful directions for future research in addition to those that are mentioned throughout this chapter. First, there is room to add empirical research to the growing corpus of doll relations, particularly by utilizing ethnographic and arts-based approaches, as well as using large-N designs. Given the strong influence of photography and imagination on the doll experience, arts-based approaches utilizing photovoice or video diaries could yield interesting findings that couple the artistic expression of doll owners with rich interview data (Leo-Liu, 2023;

Wang & Burris, 1997). Here, researchers could draw on the extensive experience of others who have conducted research with stigmatized and hard-to-reach populations, for example sex workers (Capous-Desyllas, 2014; Capous-Desyllas & Forro, 2014). Moreover, ethnographic data in the form of in-person or online ethnographies (similar to Hanson's, 2022a) could add further insights in addition to the interview-driven findings of this study. By going beyond examining self-reports during interviews, ethnographic research has the benefit of observing behavior in situ, showcasing how what people do relates to what they say. Finally, large-N designs with doll owners would add additional context to the ongoing research efforts in the doll context by not only allowing for variation across the community to surface, but also to test propositions derived from qualitative research. Rather than relying on survey-based approaches focused on the public perception of dolls (e.g., Scheutz & Arnold, 2016), quantitative research with doll owners directly offers the opportunity to test relationships among variables. Researchers might find inspiration in recent quantitative studies in this context (e.g., Desbuleux & Fuss, 2023a, 2023b; Harper & Lievesley, 2022; Harper et al., 2023).

In addition to alternative study designs, future research could also consider the perspectives of other stakeholders in the context of dolls. An interesting opportunity would be to explore the perspectives of doll owners' partners, investigating how their partner's doll has impacted them and the relationship. Research designs could explore how this study's findings of authenticity and care show up in the partners' perspectives, if at all. Additionally, future research could integrate manufacturers and legislators' perspectives from an empirical approach, adding to the growing body of work examining doll owners' perspectives. As a result, future research would create a more holistic

243

picture of the doll context, crafting a multivocal tale of thick descriptions capturing different aspects and perspectives within the larger realm of love and sex dolls.

Finally, future research could explore questions of authenticity and care from a therapeutic, clinical psychological, or psychoanalytical perspective. Building on existing psychoanalytical (e.g., Knafo & Bosco, 2017) and therapeutic (e.g., Döring, 2020; Eichenberg et al., 2019) research, future studies could explicitly focus on whether doll owners fall into psychoanalytical definitions of deception, delusion, illusion, or hallucination (e.g., Bentall, 1990). In contrast, future studies could examine how dolls might help with cognitive and physical stimulation, suggesting a more positive angle from clinical and psychoanalytical perspectives. Building on existing ethical papers and policy recommendations (e.g., Jecker et al., 2024), researcher may be able to examine clear cause-and-effect relationships to determine the overall impact of relational machines on people's mental health and wellbeing.

Researchers might also consider examining the construct of the extended self in the context of dolls (Belk, 1988), given their prevalence as screens and canvases onto which participants in my study project their own narratives. Although initially formulated in the context of consumer research, the construct of the extended self has been updated and applied to other contexts (Belk, 2013), including voice assistants like Siri and Alexa (Moussawi et al., 2023).

There are also rich opportunities for connections to media studies and media psychology perspectives that examine parasocial relationships as a form of a curated interpersonal relationship involving complex negotiations of authenticity and illusion (Tukachinsky Forster, 2023). Moreover, researchers could examine whether specific

244

demographics contribute to a stronger sense of an illusion of being cared for, for example the existence of past trauma, relational loss, or otherwise. As an outcome of such research, therapeutic benefits could be clearly identified and, if applicable, used to assess dolls' overall impact on doll owners' mental health.

Conclusion

In this chapter, I discussed this study's theoretical and methodological contributions, along with practical and heuristic implications. I offered an overview of the study's major limitations and delimitations and provided potential avenues for future research. As a whole, this dissertation examines the lived experiences of sex and love doll owners utilizing a funneled serial interview design that captures rich and holistic data. Collectively, this study's findings paint the picture that doll owners perceive their dolls as quasi-others and evocative machines that, despite their typical muteness due to lack of conversational capabilities, allow for rich and somewhat fulfilling relationships to be formed for some participants. Drawing on social-relational perspectives, this study highlights that human-machine relationships must be understood on their own terms, rather than being compared to human-human relationships. Such a degrees-of-relationship approach (Ryland, 2021) allows for capturing the benefits of human-machine relationships while being clear about their shortcomings. Ultimately, the doll characteristics of agency and presence interact in a cyclical fashion with the person or doll owner characteristics of imagination and identity extension. Human-machine relationships can be perceived as authentic as a result of this active construction in a cyclical fashion between doll and person characteristics, resulting in the illusion of being cared for where doll owners perceive their doll to be caring for them. Taken together, the

findings of this study paint a nuanced picture of the experience of relationships with communicative machines, serving as a useful case study for making sense of how humans relate with and through technology.

Ultimately, in addition to their long history (Ruberg, 2022) and increasing technological advancements, sex and love dolls may be more about us as humans rather than them as technological artifacts. As my participant John notes during one of our final interviews, "maybe that's one of the things that a doll relationship makes painless. The doll is never going to sit down and ask, what are we? It never is a relationship that both parties have to define." In a world where technology becomes ever more so tightly integrated into our very existence, a world where technology is heralded both as that which brings people together and drives them apart, dolls and people's draw toward them might be one of the most recent symptoms of something that makes us fundamentally human: our need to belong.

REFERENCES

Appel, M., Marker, C., & Mara, M. (2019). Otakuism and the appeal of sex robots. *Frontiers in Psychology, 10*, 569. https://doi.org/10.3389/fpsyg.2019.00569

Aronsson, A. S. (2023). Theorizing the *real* in social robot care technologies in Japan. *East Asian Science, Technology and Society: An International Journal*. https://doi.org/10.1080/18752160.2023.2275986

Atanasoski, N., & Vora, K. (2020). Why the sex robot becomes the killer robot: Reproduction, care, and the limits of refusal. *Spheres, 6*. https://spheres-journal.org/contribution/why-the-sex-robot-becomes-the-killer-robot-reproduction-care-and-the-limits-of-refusal/

Balaban, D. C., & Szambolics, J. (2022). A proposed model of self-perceive authenticity of social media influencers. *Media and Communication, 10*(2), 235-246. https://doi.org/10.17645/mac.v10i1.4765

Balistreri, M. (2022). *Sex robots: Love in the age of machines* (S. Umbrello, Trans.). Trivent Publishing. (Original work published 2018)

Banks, J., & de Graaf, M. M. A. (2020). Toward an agent-agnostic transmission model: Synthesizing anthropocentric and technocentric paradigms in communication. *Human-Machine Communication, 1*, 19-36. https://doi.org/10.30658/hmc.1.2

Bartels, R. (1999). Experience of childbirth from the fathers perspective. *British Journal of Midwifery, 7*(11). https://doi.org/10.12968/bjom.1999.7.11.8232

Barton, A. W., Lavner, J. A., Stanley, S. M., Johnson, M. D., & Rhoades, G. K. (2020). "Will you complete this survey too?": Differences between individual versus dyadic samples in relationship research. *Journal of Family Psychology, 34*(2), 196-203. https://doi.org/10.1037/fam0000583

Baudrillard, J. (1994). *Simulacra and simulation*. University of Michigan Press.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin, 117*(3), 497-529. https://doi.org/10.1037/0033-2909.117.3.497

Belk, R. W. (1988). Possessions and the extended self. *Journal of Consumer Research, 15*(2), 139-168. https://doi.org/10.1086/209154

Belk, R. W. (2013). Extended self in a digital world. *Journal of Consumer Research, 40*(3), 477-500. https://doi.org/10.1086/671052

Bennett, J. (2004). The force of things: Steps toward an ecology of matter. *Political Theory, 32*(3), 347–372. https://doi.org/10.1177/0090591703260853

Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Duke University Press.

Bentall, R. P. (1990). The illusion of reality: A review and integration of psychological research on hallucinations. *Psychological Bulletin, 107*(1), 82–95. https://doi.org/10.1037/0033-2909.107.1.82

Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a more robust theory and measure of social presence: Review and suggested criteria. *Presence, 12*(5), 456-480. https://doi.org/10.1162/105474603322761270

Bochner, A. P. (2000). Criteria against ourselves. *Qualitative inquiry*, *6*(2), 266-272. https://doi.org/10.1177/107780040000600209

Brandley, b., & Dehnert, M. (2023). I am not a robot, I am asexual": A qualitative critique of allonormative rhetorics of ace and aro folks as robots, aliens, monsters. *Journal of Homosexuality*. https://doi.org/10.1080/00918369.2023.2185092

Brandley, b., & Spencer, L. G. (2023). Rhetorics of allonormativity: The case of asexual Latter-day Saints. *Southern Communication Journal, 88*(1), 1-15. https://doi.org/10.1080/1041794X.2022.2108891

Bruce, L. D., Wu, J. S., Lustig, S. L., Russell, D. W., & Nemecek, D. A. (2019). Loneliness in the United States: A 2018 national panel survey of demographic, structural, cognitive, and behavioral characteristics. *American Journal of Health Promotion, 33*(8), 1123-1133. https://doi.org/10.1177/0890117119856551

Campaign Against Porn Robots (n.d.). *Home*. https://campaignagainstsexrobots.org/

Capous-Desyllas, M. (2014). Using photovoice with sex workers: The power of art, agency and resistance. *Qualitative Social Work, 13*(4), 477-501. https://doi.org/10.1177/1473325013496596

Capous-Desyllas, M., & Forro, V. A. (2014). Tensions, challenges, and lessons learned: Methodological reflections from two photovoice projects with sex workers. *Journal of Community Practice, 22*(1-2), 150-175. https://doi.org/10.1080/10705422.2014.901269

Chang, W.-L., & Šabanović, S. (2015). Interaction expands function: Social shaping of the therapeutic robot PARO in a nursing home. In *Proceedings of the Tenth Annual ACM/IEEE International Conference on Human-Robot Interaction (HRI '15)*. Association for Computing Machinery, 343–350. https://doi.org/10.1145/2696454.2696472

Charmaz, K. (2014). *Constructing grounded theory* (2nd ed.). SAGE.

Cigna. (2020). Loneliness and the workplace: 2020 U.S. report. https://www.cigna.com/static/www-cigna-com/docs/about-us/newsroom/studies-and-reports/combatting-loneliness/cigna-2020-loneliness-report.pdf

Cigna. (2022). The loneliness epidemic persists: A post-pandemic look at the state of loneliness among U.S. adults. https://newsroom.cigna.com/loneliness-epidemic-persists-post-pandemic-look

Coeckelbergh, M. (2010). Robot rights? Towards a social-relational justification of moral consideration. *Ethics and Information Technology, 12*(3), 209-221. https://doi.org/10.1007/s10676-010-9235-5

Coeckelbergh, M. (2012). *Growing moral relations: Critique of moral status ascription*. Palgrave Macmillan.

Coghlan, S. (2022). Robots and the possibility of humanistic care. *International Journal of Social Robotics, 14*(10), 2095-2108. https://doi.org/10.1007/s12369-021-00804-7

Cole, S. (2023, February 15). "It's hurting like hell": AI companion users are in crisis, reporting sudden sexual rejection. *Vice*. https://www.vice.com/en/article/y3py9j/ai-companion-replika-erotic-roleplay-updates

Condit, C. M. (2006). Communication as … relationality. In G. J. Shepherd, J. St. John, & T. Striphas (Eds.), *Communication as … Perspectives on theory* (pp. 3-12). SAGE.

Cox-George, C., & Bewley, S. (2018). I, sex robot: The health implications of the sex robot industry. *BMJ Sexual & Reproductive Health, 44*(3), 161-164. http://dx.doi.org/10.1136/bmjsrh-2017-200012

Croes, E. A. J., & Antheunis, M. L. (2021). Can we be friends with Mitsuku? A longitudinal study on the process of relationship formation between humans and a social chatbot. *Journal of Social and Personal Relationships, 38*(1), 279-300. https://doi.org/10.1177%2F0265407520959463

Damiano, L., & Dumouchel, P. (forthcoming). Are robotic bodies (part of) social bodies? Embodiment and sociability in human-robot interaction. In L. Fortunati & A. Edwards (Eds.), *The De Gruyter handbook of robots in society and culture*. De Gruyter.

Danaher, J. (2014). Sex work, technological unemployment and the basic income guarantee. *Journal of Evolution and Technology, 24*(1), 113-130. https://jeet.ieet.org/index.php/home/article/view/17

Danaher, J. (2017). The symbolic-consequences argument in the sex robot debate. In J. Danaher & N. McArthur (Eds.), *Robot sex* (pp. 103-131). MIT Press.

Danaher, J. (2019). Building better sex robots: Lessons from feminist pornography. In Y. Zhou & M. H. Fischer (Eds.), *AI love you: Developments in human-robot intimate relationships* (pp. 133-148). Springer.

De Graaf, M., & Peter, J. (2023). Human social relationships with robots. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 435-442). SAGE.

DeFalco, A. (2020). Towards a theory of posthuman care: Real humans and caring robots. *Body & Society, 26*(3), 31-60. https://doi.org/10.1177/1357034X20917450

DeFalco, A. (2023). *Curious kin in fictions of posthuman care*. Oxford University Press.

DeFalco, A., & Dolezal, L. (2023). What is affective technotouch (and why does it matter)? *The Senses and Society, 18*(2), 85-91. https://doi.org/10.1080/17458927.2023.2167420

Dehnert, M. (2021). Communication geographies of human-machine understanding: Entangled agencies, synthetic aesthetics, and machine matterings. *Communication Studies, 72*(6), 1146-1159. https://doi.org/10.1080/10510974.2021.2011360

Dehnert, M. (2022a). Sex with robots and human-machine sexualities: Encounters between human-machine communication and sexuality studies. *Human-Machine Communication, 4*, 131–150. https://doi.org/10.30658/hmc.4.7

Dehnert, M. (2022b). Toward a critical posthumanism for social robotics. *International Journal of Social Robotics, 14*(9), 2019–2027. https://doi.org/10.1007/s12369-022-00930-w

Dehnert, M. (2023a). AI as communicative other: Critical relationality in human-AI communication. In S. Nah (Ed.), *Research handbook on artificial intelligence and communication* (pp. 300-314). Edward Elgar Publishing.

Dehnert, M. (2023b). Archipelagic human-machine communication: Building bridges amidst strategic ambiguity. *Human-Machine Communication, 6*, 31-40. https://doi.org/10.30658/hmc.6.3

Dehnert, M. (forthcoming). Ability and disability: Social robots and accessibility, disability justice, and the socially-constructed normal body. In L. Fortunati & A. Edwards (Eds.), *The De Gruyter handbook of robots in society and culture*. De Gruyter.

Dehnert, M., & Gunkel, D. J. (2023). Beyond ownership: Human-robot relationships between property and personhood. *New Media & Society*. https://doi.org/10.1177/14614448231189260

Dehnert, M., & Mongeau, P. A. (2022). Persuasion in the age of artificial intelligence (AI): Theories and complications of AI-based persuasion. *Human Communication Research, 48*(3), 386–403. https://dx.doi.org/10.1093/hcr/hqac006

DeMaris, A., & McGovern, V. (2023). The perfect paramour: Predicting intention to own a sex doll. *Sexuality & Culture, 27*(2), 674-692. https://doi.org/10.1007/s12119-022-10034-2

Depounti, I., Saukko, P., & Natale, S. (2023). Ideal technologies, ideal women: AI and gender imaginaries in Redditors' discussions on the Replika bot girlfriend. *Media, Culture & Society, 45*(4), 720-736. https://doi.org/10.1177/01634437221119021

Desbuleux, J. C., & Fuss, J. (2023a). Is the anthropomorphization of sex dolls associated with objectification and hostility toward women? A mixed method study among doll users. *The Journal of Sex Research, 60*(2), 206-220. https://doi.org/10.1080/00224499.2022.2103071

Desbuleux, J. C., & Fuss, J. (2023b). The self-reported sexual real-world consequences of sex doll use. *The Journal of Sex Research*. https://doi.org/10.1080/00224499.2023.2199727

Devlin, K. (2018). *Turned on: Science, sex and robots*. Bloomsbury.

Di Nucci, E. (2017). Sex robots and the rights of the disabled. In J. Danaher & N. McArthur (Eds.), *Robot sex: Social and ethical implications* (pp. 73-88). MIT Press.

Dibble, J. L., Hartmann, T., & Rosaen, S. F. (2016). Parasocial interaction and parasocial relationship: Conceptual clarification and a critical assessment of measures. *Human Communication Research, 42*(1), 21-44. https://doi.org/10.1111/hcre.12063

DiTecco, D., & Karaian, L. (2023). New technology, same old stigma: Media narratives of sex robots and sex work. *Sexuality & Culture, 27*(2), 539-569. https://doi.org/10.1007/s12119-022-10027-1

Dooley, B., & Ueno, H. (2022, April 24). This man married a fictional character. He'd like you to hear him out. *New York Times*. https://www.nytimes.com/2022/04/24/business/akihiko-kondo-fictional-character-relationships.html

Döring, N. (2020). Sexpuppen und Sexroboter aus psychologischer und therapeutischer Perspektive. In O. Bendel (Ed.), *Maschinenliebe: Liebespuppen und Sexroboter aus technischer, psychologischer und philosophischer Perspektive* (pp. 283-301). Springer. https://doi.org/10.1007/978-3-658-29864-7_16

Döring, N., & Poeschl, S. (2020). Experiences with diverse sex toys among German heterosexual adults: Findings from a national online survey. *The Journal of Sex Research, 57*(7), 885–896. https://doi.org/10.1080/00224499.2019.1578329

Döring, N., Mohseni, R., & Walter, R. (2020). Design, use, and effects of sex dolls and sex robots: Scoping review. *Journal of Medical Internet Research, 22*(7), e18551. https://doi.org/10.2196/18551

Dubé, S., & Anctil, D. (2021). Foundations of erobotics. *International Journal of Social Robotics, 13*(6), 1205–1233. https://doi.org/10.1007/s12369-020-00706-0

Dubé, S., Santaguida, M., Anctil, D., Zhu, C. Y., Thomasse, L., Giaccari, L., Oassey, R., Vachon, D., & Johnson, A. (2023). Perceived stigma and erotic technology: From sex toys to erobots. *Psychology & Sexuality, 14*(1), 141-157. https://doi.org/10.1080/19419899.2022.2067783

Dubé, S., Santaguida, M., Zhu, C. Y., Di Tomasso, S., Hu, R., Cormier, G., Johnson, A. P., & Vachon, D. (2022a). Sex robots and personality: It is more about sex than robots. *Computers in Human Behavior, 135*, 107403. https://doi.org/10.1016/j.chb.2022.107403

Dubé, S., Williams, M. Santaguida, M., Hu, R., Gadoury, T., Yim, B., Vachon, D., & Johnson, A. P. (2022b). Hot for robots! Sexual arousal increases willingness to have sex with robots. *The Journal of Sex Research*. https://doi.org/10.1080/00224499.2022.2142190

Dudek, S. Y., & Young, J. E. (2022). Fluid sex robots: Looking to the 2LGBTQIA+ community to shape the future of sex robots. *Proceedings of the 2022 ACM/IEEE International Conference on Human-Robot Interaction (HRI '22),* 746-749. https://doi.org/10.1109/HRI53351.2022.9889580

Edwards, A. P. (2018). Animals, humans, and machines: Interactive implications of ontological classification. In A. L. Guzman (Ed)., *Human-machine communication: Rethinking communication, technology, and ourselves* (pp. 29-49). Peter Lang.

Edwards, A., Edwards, C., Westerman, D., & Spence, P. R. (2019). Initial expectations, interactions, and beyond with social robots. *Computers in Human Behavior, 90*, 308–314. https://doi.org/10.1016/j.chb.2018.08.042

Edwards, A., Gambino, A., & Edwards, C. (2022). Factors of attraction in human-machine communication. *Publizistik, 67*(4), 517-529. https://doi.org/10.1007/s11616-022-00756-6

Edwards, C., Edwards, A. P., Abendschein, B., Frederick, A., & Koch, K. (2023). Robots as social cues: The influence of follow cargo robot use on perceptions of leadership quality and interpersonal impressions. In *Companion of the 2023 ACM/IEEE International Conference on Human-Robot Interaction (HRI '23)*. Association for Computing Machinery, 297-300. https://doi.org/10.1145/3568294.3580092

Edwards, C., Edwards, A., Spence, P. R., & Westerman, D. (2016). Initial interaction expectations with robots: Testing the human-to-human interaction script. *Communication Studies, 67*(2), 227-238. https://doi.org/10.1080/10510974.2015.1121899

Eichenberg, C., Khamis, M., Hübner, L. (2019). The attitudes of therapists and physicians on the use of sex robots in sexual therapy: Online survey and interview study. *Journal of Medical Internet Research, 21*(8), e13853. https://doi.org/10.2196/13853

Ellis, C. (2007). Telling secrets, revealing lives: Relational ethics in research with intimate others. *Qualitative Inquiry, 13*(1), 3-29. https://doi.org/10.1177%2F1077800406294947

Erhard, C. (2022). Emotional (tech) support: Sexualised care work and robotic sexualities. *Genealogy + Critique, 8*(1), 1-25. https://doi.org/10.16995/gc.7990

Erlandsson, K., & Lindgren, H. (2009). From belonging to belonging through a blessed moment of love for a child – the birth of a child from the fathers' perspective. *Journal of Men's Health, 6*(4), 338-344. https://doi.org/10.1016/j.jomh.2009.09.029

Ess, C. M. (2016). What's love got to do with it? Robots, sexuality, and the arts of being human. In M. Nørskov (Ed.), *Social robots: Boundaries, potential, challenges* (pp. 57–79). Ashgate.

Etzrodt, K., & Engesser, S. (2021). Voice-based agents as personified things: Assimilation and accommodation as equilibration of doubt. *Human-Machine Communication, 2*, 57-79. https://doi.org/10.30658/hmc.2.3

Euron, P. (2023). Uncanny attraction: Intercultural remarks on the aesthetics of gynoids and sexbots in pop culture. *Popular Inquiry: The Journal of the Aesthetics of Kitsch, Camp and Mass Culture, 12*(1), 70-97. https://static1.squarespace.com/static/58763ec0c534a5e7e2b65fe2/t/642402f1e4a2841f4dd7a9c1/1680081650495/Popular+inquiry_Vol12_2023_5_Euron_.pdf

Ferguson, A. (2010). *The sex doll: A history*. MacFarland & Company.

Fine, M. (1994). Working the hyphens: Reinventing self and other in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (1st ed., pp. 70–82). SAGE.

Flyvbjerg, B. (2001). *Making social science matter: Why social inquiry fails and how it can succeed again*. Cambridge University Press.

Fortunati, L. (2011). ICTs and immaterial labor from a feminist perspective. *Journal of Communication Inquiry, 35*(4), 426-432. https://doi.org/10.1177/0196859911417713

Fortunati, L. (2018). Immaterial labor. In *The Blackwell encyclopedia of sociology*. https://doi.org/10.1002/9781405165518.wbeos1128

Fortunati, L., & Edwards, A. (2020). Opening space for theoretical, methodological, and empirical issues in human-machine communication. *Human-Machine Communication, 1*, 7–18. https://doi.org/10.30658/hmc.1.1

Fortunati, L., & Edwards, A. (2022). Gender and human-machine communication: Where are we? *Human-Machine Communication, 5*, 7-47. https://doi.org/10.30658/hmc.5.1

Fortunati, L., Edwards, A., Edwards, C., Manganelli, A., & de Luca, F. (2022b). Is Alexa female, male, or neutral? A cross-national and cross-gender comparison of perceptions of Alexa's gender and status as a communicator. *Computers in Human Behavior, 137*, 107426. https://doi.org/10.1016/j.chb.2022.107426

Fortunati, L., Edwards, A., Manganelli, A. M., Edwards, C., & de Luca, F. (2022a). Do people perceive Alexa as gendered? A cross-cultural study of people's perceptions, expectations, and desires of Alexa. *Human-Machine Communication, 5*, 75-97. https://doi.org/10.30658/hmc.5.3

Fosch-Villaronga, E., & Poulsen, A. (2020). Sex care robots: Exploring the potential use of sexual robot technologies for disabled and elder care. *Paladyn, Journal of Behavioral Robotics, 11*(1). https://doi.org/10.1515/pjbr-2020-0001

Fosch-Villaronga, E., & Poulsen, A. (2021). Sex robots in care: Setting the stage for a discussion on the potential use of sex robots for persons with disabilities. In *Companion of the 2021 ACM/IEEE International Conference on Human-Robot Interaction (HRI '21 Companion), March 8–11, 2021, Boulder, CO, USA*. ACM. https://doi.org/10.1145/3434074.3446907

Fox, J., & Gambino, A. (2021). Relationship development with humanoid social robots: Applying interpersonal theories of human-robot interaction. *Cyberpsychology, Behavior, and Social Networking, 24*(5), 294-299. https://doi.org/10.1089/cyber.2020.0181

Gambino, A., Fox, J., & Ratan, R. A. (2020). Building a stronger CASA: Extending the computers are social actors paradigm. *Human-Machine Communication, 1*, 71–85. https://doi.org/10.30658/hmc.1.5

Garfinkel, H. (1996). Ethnomethodology's program. *Social Psychology Quarterly, 59*(1), 5-21. https://doi.org/10.2307/2787116

Gemeinboeck, P. (2022). Difference-in-relation: Diffracting human-robot encounters. *Matter: Journal of New Materialist Research, 3*(1), 29-55. https://doi.org/10.1344/jnmr.v3i1.38958

Ging, D. (2019). Alphas, betas, and incels: Theorizing the masculinities of the manosphere. *Men and Masculinities, 22*(4), 638-657. https://doi.org/10.1177/1097184X17706401

González-González, C. S., Gil-Iranzo, R. M., & Paderewski-Rodríguez, P. (2021). Human-robot interaction and sexbots: A systematic literature review. *Sensors, 21*(1), 216. https://doi.org/10.3390/s21010216

Grant, D., & Oswick, C. (1996). The organization of metaphors and the metaphors of organization: Where are we and where do we go from here? In D. Grant & C. Oswick (Eds.), *Metaphor and organizations* (pp. 213–226). SAGE.

Guillemin, M., & Gillam, L. (2004). Ethics, reflexivity, and "ethically important moments" in research. *Qualitative Inquiry, 10*(2), 261–280. https://doi.org/10.1177%2F1077800403262360

Gunkel, D. J. (2012). *The machine question: Critical questions on AI, robots, and ethics*. MIT Press.

Gunkel, D. J. (2018). *Robot rights*. MIT Press.

Gunkel, D. J. (2022). The relational turn: Thinking robots otherwise. In J. Loh & W. Loh (Eds.), *Social robotics and the good life: The normative side of forming emotional bonds with robots* (pp. 55-76). Transcript.

Gunkel, D. J. (2023). *Person, thing, robot: A moral and legal ontology for the 21st century and beyond*. MIT Press.

Gunkel, D. J., Gerdes, A., & Coeckelbergh, M. (2022). Editorial: Should robots have standing? The moral and legal status of social robots. *Frontiers in Robotics and AI, 9*, 946529. https://doi.org/10.3389/frobt.2022.946529

Guzman, A. L. (2015). *Imagining the voice in the machine: The ontology of digital social agents* [Doctoral dissertation]. University of Illinois at Chicago.

Guzman, A. L. (2016). The messages of mute machines: Human-machine communication with industrial technologies. *Communication +1, 5*(1), 4. https://doi.org/10.7275/R57P8WBW

Guzman, A. L. (2018). Introduction: "What is human-machine communication, anyway?" In A. L. Guzman (Ed.), *Human-machine communication: Rethinking communication, technology, and ourselves* (pp. 1–28). Peter Lang.

Guzman, A. L. (2020). Ontological boundaries between humans and computers and the implications for human-machine communication. *Human-Machine Communication, 1*, 37-54. https://doi.org/10.30658/hmc.1.3

Guzman, A. L. (2023). Talking about "talking with machines": Interview as method within HMC. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE Handbook of Human-Machine Communication* (pp. 243-251). SAGE.

Guzman, A. L., McEwen, R., & Jones, S. (2023). Introduction to the handbook. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. xxxix-xlvi). SAGE.

Hall, J. A. (2020). Theoretical perspectives on personal media and relationships. In, *Relating through technology* (pp. 48-69). Cambridge University Press.

Hall, J. A., Holmstrom, A. J., Pennington, N., Perrault, E. K., & Totzkay, D. (2023). Quality conversation can increase daily well-being. *Communication Research*. https://doi.org/10.1177/00936502221139363

Hanson, K. R. (2022a). *The silicone self: An ethnography of the love and sex doll community* [Doctoral dissertation]. University of Oregon.

Hanson, K. R. (2022b). The silicone self: Examining sexual selfhood and stigma within the love and sex doll community. *Symbolic Interaction, 45*(2), 189-210. https://doi.org/10.1002/symb.575

Hanson, K. R. (2023a). A methodological reckoning for the empirical study of sex doll and sex robot issues. *Journal of Future Robot Life*. https://dx.doi.org/10.3233/FRL-220009

Hanson, K. R. (2023b). What does the personification of love and sex dolls explain about doll owners? *Deviant Behavior, 44*(6), 823-840. https://doi.org/10.1080/01639625.2022.2105669

Hanson, K. R., & Locatelli, C. (2023, October 29). "Naughty Japanese babe:" An analysis of racialized sex tech designs. *SocArXiv*. https://doi.org/10.31235/osf.io/sdgu4

Hanson, K. R., & Locatelli, C. C. (2022). From sex dolls to sex robots and beyond: A narrative review of theoretical and empirical research on human-like and personified sex tech. *Current Sexual Health Reports, 14*(3), 106-117. https://doi.org/10.1007/s11930-022-00331-0

Harley, B., & Cornelissen, J. (2022). Rigor with or without templates? The pursuit of methodological rigor in qualitative research. *Organizational Research Methods, 25*(2), 239-261. https://doi.org/10.1177/1094428120937786.

Harper, C. A., & Lievesley, R. (2020). Sex doll ownership: An agenda for research. *Current Psychiatry Reports, 22*(10), 1–8. https://doi.org/10.1007/s11920-020-01177-w

Harper, C. A., & Lievesley, R. (2022). Exploring the ownership of child-like sex dolls. *Archives in Sexual Behavior, 51*(8), 4141-4156. https://doi.org/10.1007/s10508-022-02422-4

Harper, C. A., Lievesley, R., & Wanless, K. (2023). Exploring the psychological characteristics and risk-related cognitions of individuals who own sex dolls. *The Journal of Sex Research, 60*(2), 190-205. https://doi.org/10.1080/00224499.2022.2031848

Hepp, A., & Loosen, W. (2023). The interdisciplinarity of HMC: Rethinking communication, media, and agency. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 12-21). SAGE.

Heyselaar, E. (2023). The CASA theory no longer applies to desktop computers. *Scientific Reports, 13*(1), 19693. https://doi.org/10.1038/s41598-023-46527-9

Hobart, H. J. K., & Kneese, T. (2020). Radical care: Survival strategies for uncertain times. *Social Text 142, 38*(1), 1-16. https://doi.org/10.1215/01642472-7971067

Hodkinson, P., & Hall, M. (2023, March 2). Inauthentic volunteers in qualitative research: Reflections from recent experience. *Department of Sociology at the University of Surrey*. https://blogs.surrey.ac.uk/sociology/2023/03/02/inauthentic-volunteers-in-qualitative-research-initial-reflections-from-recent-experience/

Holaday, L. W., Oladele, C. R., Miller, S. M., Dueñas, M. I., Roy, B., & Ross, J. S. (2021). Loneliness, sadness, and feelings of social disconnection in older adults during the Covid -19 pandemic. *Journal of the American Geriatrics Society, 70*(2), 329–340. https://doi.org/10.1111/jgs.17599

Holt-Lunstad, J. (2017). The potential public health relevance of social isolation and loneliness: Prevalence, epidemiology, and risk factors. *Public Policy & Aging Report, 27*(4), 127-130. https://doi.org/10.1093/ppar/prx030

Huffman, T. P., & Tracy, S. J. (2018). Making claims that matter: Heuristics for theoretical and social impact in qualitative research. *Qualitative Inquiry, 24*(8), 558-570. https://doi.org/10.1177/1077800417742411

Ihde, D. (1990). *Technology and the lifeworld: From garden to earth*. Indiana University Press.

Jackson, K., & Bazeley, P. (2019). *Qualitative data analysis with Nvivo* (3rd ed.). SAGE.

Jecker, N. S. (2021). Nothing to be ashamed of: Sex robots for older adults with disabilities. *Journal of Medical Ethics, 47*(1), 26-32. http://dx.doi.org/10.1136/medethics-2020-106645

Jecker, N. S., Sparrow, R., Lederman, Z., & Ho, A. (2024). Digital humans to combat loneliness and social isolation: Ethics concerns and policy recommendations. *Hastings Center Report, 54*(1), 7-12. https://doi.org/10.1002/hast.1562

Jin, S. A. (2011). "I feel present. Therefore, I experience flow": A structural equation modeling approach to flow and presence in video games. *Journal of Broadcasting & Electronic Media, 55*(1), 114-136. https://doi.org/10.1080/08838151.2011.546248

Johansson, M., Fenwick, J., & Premberg, Å. (2015). A meta-synthesis of fathers' experiences of their partner's labour and the birth of their baby. *Midwifery, 31*(1), 9-18. https://doi.org/10.1016/j.midw.2014.05.005

Jones, R. G., Jr. (2010). Putting privilege into practice through "intersectional reflexivity": Ruminations, interventions, and possibilities. *Reflections: Narratives of Professional Helping, 16*, 122–125.

Jones, S. E., & Tracy, S. J. (2022). Disciplined into hiding: Milk banking and the "obscured organization." *Management Communication Quarterly, 36*(3), 520-546. https://doi.org/10.1177/08933189211068542

Kahn, P. H., & Shen, S. (2017). NOC NOC, who's there? A new ontological category (NOC) for social robots. In N. Budwig, E. Turiel, & P. D. Zelazo (Eds.), *New perspectives on human development* (pp. 106-122). Cambridge University Press.

Kahn, P. H., Reichert, A. L., Gary, H. E., Kanda, T., Ishiguro, H., Shen, S., Ruckert, J. H., & Gill, B. (2011). The new ontological category hypothesis in human-robot interaction. In *Proceedings of the 6th international conference on Human-robot interaction (HRI '11)*. Association for Computing Machinery, 159–160. https://doi.org/10.1145/1957656.1957710

Karaian, L. (2024). Plastic fantastic: Sex robots and/as sexual fantasy. *Sexualities, 27*(3), 633-652. https://doi.org/10.1177%2F13634607221106667

Keene, S. (2022). Becoming a sexademic: Reflections on a 'dirty' research project. *Sexualities, 25*(5-6), 676-693. https://doi.org/10.1177/1363460720986915

Keyton, J., Bisel, R. S., & Ozley, R. (2009). Recasting the link between applied and theory research: Using applied findings to advance communication theory development. *Communication Theory, 19*(2), 146-160. https://doi.org/10.1111/j.1468-2885.2009.01339.x

Kirby, E. L., & Harter, L. M. (2003). Speaking the language of the bottom-line: The metaphor of "managing diversity." *The Journal of Business Communication, 40*(1), 28-49. https://doi.org/10.1177/002194360304000103

Kislev, A. (2022). *Relationships 5.0: How AI, VR, and robots will reshape our emotional lives*. Oxford University Press.

Kitson, J., & McHugh, K. (2015). Historic enchantments – Materializing nostalgia. *Cultural Geographies, 22*(3), 487–508. https://doi.org/10.1177/1474474014549946

Knafo, D. (2015). Guys and dolls: Relational life in the technological era. *Psychoanalytic Dialogues, 25*(4), 481-502. https://doi.org/10.1080/10481885.2015.1055174

Knafo, D. (2022, November). *Technosex: Living and loving in the realm of the uncanny*. Paper presented at the 7th International Congress on Love and Sex with Robots, virtual.

Knafo, D., & Lo Bosco, R. (2017). *The age of perversion: Desire and technology in psychoanalysis and culture*. Routledge.

Koban, K., & Banks, J. (2023). Dual-process theory in human-machine communication. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 302-309). SAGE.

Koerner, A. (2018). Relationship typologies. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 65-76). Cambridge University Press. https://doi.org/10.1017/9781316417867.007

Köhler, T., Smith, A., & Bhakoo, V. (2022). Templates in qualitative research methods: Origins, limitations, and new directions. *Organizational Research Methods, 25*(2), 183-210. https://doi.org/10.1177/10944281211060710

Laestadius, L., Bishop, A., Gonzalez, M., Illenčík, D., & Campos-Castillo, C. (2022). Too human and not human enough: A grounded theory analysis of mental health harms from emotional dependence on the social chatbot Replika. *New Media & Society*. https://doi.org/10.1177/14614448221142007

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. University of Chicago Press.

Langcaster-James, M., & Bentley, G. R. (2018). Beyond the sex doll: Post-human companionship and the rise of the 'allodoll.' *Robotics, 7*(4), 62. https://doi.org/10.3390/robotics7040062

Laslocky, M. (2005, October 11). Just like a woman. *Salon*. https://www.salon.com/2005/10/11/real_dolls/

Leach, R. B., Dehnert, M., Reutlinger, C., Marr, C., & Tracy, S. J. (forthcoming). Setting up the tent poles: Revisiting and extending the big-tent model for qualitative quality. In U. Flick (Ed.), *The SAGE handbook of qualitative research quality*. SAGE.

Lee, E.-J. (2020). Authenticity model of (mass-oriented) computer-mediated communication: Conceptual explorations and testable propositions. *Journal of Computer-Mediated Communication, 25*(1), 60-73. https://doi.org/10.1093/jcmc/zmz025

Lee, E.-J. (2023). Minding the source: Toward an integrative theory of human-machine communication. *Human Communication Research*. https://doi.org/10.1093/hcr/hqad034

Leite, I., Martinho, C., & Paiva, A. (2013). Social robots for long-term interaction: A survey. *International Journal of Social Robotics, 5*(2), 291-308. https://doi.org/10.1007/s12369-013-0178-y

Leo-Liu, J. (2023). Loving a "defiant" AI companion? The gender performance and ethics of social exchange robots in simulated intimate interactions. *Computers in Human Behavior, 141*, 107620. https://doi.org/10.1016/j.chb.2022.107620

Leo-Liu, J., & Wu-Ouyang, B. (2022). A "soul" emerges when AI, AR, and Anime converge: A case study on users of the new anime-stylized hologram social robot "Hupo." *New Media & Society*. https://doi.org/10.1177/14614448221106030

Levy, D. (2007a). *Love and sex with robots: The evolution of human-robot relationships*. Harper Collins.

Levy, D. (2007b). Robot prostitutes as alternatives to human sex workers. *In IEEE international conference on robotics and automation*, Rome. https://web.archive.org/web/20090306164319/http://www.roboethics.org/icra2007/contributions/LEVY%20Robot%20Prostitutes%20as%20Alternatives%20to%20Human%20Sex%20Workers.pdf

Levy, D. L. (2013). On the outside looking in? The experience of being a straight, cisgender qualitative researcher. *Journal of Gay & Lesbian Social Services, 25*(2), 197-209. https://doi.org/10.1080/10538720.2013.782833

Lewis, S. C., Guzman, A. L., & Schmidt, T. R. (2019). Automation, journalism, and human-machine communication: Rethinking roles and relationships of humans and machines in the news. *Digital Journalism, 7*(4), 409-427. https://doi.org/10.1080/21670811.2019.1577147

Lievesley, R., Reynolds, R., & Harper, C. A. (2023). The 'perfect' partner: Understanding the lived experiences of men who own sex dolls. *Sexuality & Culture, 27*(4), 1419-1441. https://doi.org/10.1007/s12119-023-10071-5

Liu, F., Makady, H., & Xu, K. (2022, May). *Mapping the landscape of human-machine communication research: A systematic review of empirical research from 2010 to 2021*. Paper presented at the 72nd annual meeting of the International Communication Association, Paris, France.

Liu, J. (2021). Social robots as the bride? Understanding the construction of gender in a Japanese social robot product. *Human-Machine Communication, 2*, 105-120. https://doi.org/10.30658/hmc.2.5

Locatelli, C. (2018). *"The perfect companion": From cyborgs to gynoids—Sex robots and the commodification of authentic intimate experience* [Master's thesis]. Universidad de Granada.

Locatelli, C. (2022). Rethinking 'sex robots': Gender, desire, and embodiment in posthuman sextech. *Journal of Digital Social Research, 4*(3), 10-33. https://doi.org/10.33621/jdsr.v4i3.87

Lombard, M. (2018). Presence past and future: Reflections on 25 years of presence technology, scholarship, and community. In A. L. Guzman (Ed.), *Human-machine communication: Rethinking communication, technology, and ourselves* (pp. 99-117). Peter Lang.

Lombard, M., & Ditton, T. (1997). At the heart of it all: The concept of presence. *Journal of Computer-Mediated Communication, 3*(2). https://doi.org/10.1111/j.1083-6101.1997.tb00072.x

Lombard, M., & Xu, K. (2021). Social responses to media technologies in the 21st century: The media are social actors paradigm. *Human-Machine Communication, 2*, 29–55. https://doi.org/10.30658/hmc.2.2

Lopez, F. G., & Rice, K. G. (2006). Preliminary development and validation of a measure of relationship authenticity. *Journal of Counseling Psychology, 53*(3), 362-371. https://doi.org/10.1037/0022-0167.53.3.362

Lowden, R. J., & Hostetter, C. (2012). Access, utility, imperfection: The impact of videoconferencing on perceptions of social presence. *Computers in Human Behavior, 28*(2), 377-383. https://doi.org/10.1016/j.chb.2011.10.007

Lucidi, P. B., & Nardi, D. (2018). Companion robots: The hallucinatory danger of human-robot interactions. *AIES '18: Proceedings of the 2018 AAAI/ACM Conference on AI, Ethics, and Society*, 17-22. https://doi.org/10.1145/3278721.3278741

Lynch, C.R., Bissell, D., House-Peters, L. A., & Del Casino Jr., V. J. (2022). Robotics, affective displacement, and the automation of care. *Annals of the American Association of Geographers, 112*(3), 684-691. https://doi.org/10.1080/24694452.2021.1985953

Mack, K., McDonnell, E., Jain, D., Wang, L. L., Froehlich, J. E., & Findlater, L. (2021). What do we mean by "accessibility research"? A literature survey of accessibility papers in CHI and ASSETS from 1994 to 2019. In *CHI Conference on Human Factors in Computing Systems (CHI '21), May 8-13, Yokohama, Japan*. ACM. https://doi.org/10.1145/3411764.3445412

Makady, H., & Liu, F. (2022). The status of human-machine communication research: A decade of publication trends across top-ranking journals. In M. Kurosu (Ed.), *Human-computer interaction: Theoretical approaches and design methods. HCII 2022. Lecture notes in computer science* (pp. 83-103). Springer. https://doi.org/10.1007/978-3-031-05311-5_6

Masterson, A. M. (2022). Designing a loving robot: A social construction analysis of a sex robot creator's vision. *Human-Machine Communication, 5*, 99-114. https://doi.org/10.30658/hmc.5.4

Meacham, D., & Studley, M. (2017). Could a robot care? It's all in the movement. In P. Lin, K. Abney, & R. Jenkins (Eds.), *Robot ethics 2.0: From autonomous cars to artificial intelligence* (pp. 97-113). Oxford University Press.

Meng, J., & Dai, Y. (2021). Emotional support from AI chatbots: Should a supportive partner self-disclose or not? *Journal of Computer-Mediated Communication, 26*(4), 207–222. https://doi.org/10.1093/jcmc/zmab005

Middleweek, B. (2021). Male homosocial bonds and perceptions of human-robot relationships in an online sex doll forum. *Sexualities, 24*(3), 370–387. https://doi.org/10.1177%2F1363460720932383

Moran, T. C. (2021). Racial technological bias and the white, feminine voice of AI VAs. *Communication and Critical/Cultural Studies, 18*(1), 19-36. https://doi.org/10.1080/14791420.2020.1820059

Morgan, D. L., Eliot, S., Lowe, R., A., & Gorman, P. (2016). Dyadic interviews as a tool for qualitative evaluation. *American Journal of Evaluation, 37*(1), 109-117. https://doi.org/10.1177/1098214015611244

Mori, M. (1970). The uncanny valley. *IEEE Robotics & Automation, 19*(2), 98-100. https://doi.org/10.1109/MRA.2012.2192811

Moussawi, S., Koufaris, M., & Benbunan-Fich, R. (2023). The role of user perceptions of intelligence, anthropomorphism, and self-extension on continuance of use of personal intelligent agents. *European Journal of Information Systems, 32*(3), 601-622. https://doi.org/10.1080/0960085X.2021.2018365

Murray, S. A., Kendall, M., Carduff, E., Worth, A., Harris, F. M., Lloyd, A., Cavers, D., Grant, L., & Sheikh, A. (2009). Use of serial interviews to understand patients' evolving experiences and needs. *British Medical Journal, 339*, 958-960. https://doi.org/10.1136/bmj.b3702

Nass, C., & Moon, Y. (2000). Machines and mindlessness: Social responses to computers. *Journal of Social Issues, 56*(1), 81–103. https://doi.org/10.1111/0022-4537.00153

Nass, C., Steuer, J., & Tauber, E. R. (1994). Computers are social actors. In *Proceedings of the SIGCHI conference on Human factors in computing systems* (pp. 72–78).

Natale, S. (2021). *Deceitful media: Artificial intelligence and social life after the Turing Test*. Oxford University Press.

Natale, S., & Depounti, I. (forthcoming). Artificial sociality. *Human-Machine Communication, 7*.

National Academies of Sciences, Engineering, and Medicine. (2020). *Social isolation and loneliness in older adults: Opportunities for the health care system*. The National Academies Press. https://doi.org/10.17226/25663

Neale, B. (2021). *Qualitative longitudinal research: Research method*s. Bloomsbury Academic.

Neff, G., & Nagy, P. (2016). Talking to bots: Symbiotic agency and the case of Tay. *International Journal of Communication, 10*, 4915-4931. https://ijoc.org/index.php/ijoc/article/view/6277/1804

Neff, G., & Nagy, P. (2018). Agency in the digital age: Using symbiotic agency to explain human-technology interaction. In Z. Papacharissi (Ed.), *A networked self and human augmentics, artificial intelligence, sentience* (pp. 97-107). Routledge.

Novotny, E., Lee, J., & Ahn, S. J. (2023). Virtual reality as human-machine communication. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 490-499). SAGE.

Oleksy, T., & Wnuk, A. (2021). Do women perceive sex robots as threatening? The role of political views and presenting the robot as a female-vs male-friendly product. *Computers in Human Behavior, 117*, 106664. https://doi.org/10.1016/j.chb.2020.106664

Pellicano, E., Adams, D., Crane, L., Hollingue, C., Allen, C., Almendinger, K., Botha, M., Haar, T., Kapp, S. K., & Wheeley, E. (2024). Letter to the editor: A possible threat to data integrity for online qualitative autism research. *Autism, 28*(3), 786-792. https://doi.org/10.1177/13623613231174543

Perera, K. (2020). The interview as an opportunity for participant reflexivity. *Qualitative Research, 20*(2), 143-159. https://doi.org/10.1177/1468794119830539

Perlman, D., & Vangelisti, A. L. (2018). Personal relationships: An introduction. In A. L. Vangelisti & D. Perlman (Eds.), *The Cambridge handbook of personal relationships* (pp. 1-6). Cambridge University Press. https://doi.org/10.1017/9781316417867.002

Pessoa, A. S. G., Harper, E., Santos, I. S., & da Silva Gracino, M. C. (2019). Using reflexive interviewing to foster deep understanding of research participants' perspectives. *International Journal of Qualitative Methods, 18*, 1-9. https://doi.org/10.1177/1609406918825026

Peters, J. D. (2015). *The marvelous clouds: Toward a philosophy of elemental media*. The University of Chicago Press.

Pini, B. (2005). Interviewing men: Gender and the collection and interpretation of qualitative data. *Journal of Sociology, 41*(2), 201-216. https://doi.org/10.1177/1440783305053238

Puig, K. (2017). *The synthetic hyper femme: On sex dolls, fembots, and the futures of sex* [Master's thesis]. San Diego State University.

Ray, C. D., & Shebib, S. J. (2022). Determinants of loneliness during the COVID-19 pandemic in the United States: A one-year follow-up study. *Journal of Social and Personal Relationships, 39*(12), 3579-3595. https://doi.org/10.1177/02654075221102632

Read, B. L. (2018). Serial interviews: When and why to talk to someone more than once. *International Journal of Qualitative Methods, 17*(1), 1-10. https://doi.org/10.1177/1609406918783452

Reeves, B., & Nass, C. (1996). *The media equation: How people treat computers, television, and new media like real people and places*. Cambridge University Press.

Rhee, J. (2018). *The robotic imaginary: The human and the price of dehumanized labor*. University of Minnesota Press.

Rhee, J. (2023). From ELIZA to Alexa: Automated care labour and the otherwise of radical care. In J. Browne, S. Cave, E. Drage, & K. McInerney (Eds.), *Feminist AI: Critical perspectives on data, algorithms, and intelligent machines* (pp. 155-173). Oxford University Press.

Richards, R. (2023). HMC in love, sex and robots. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 483-489). SAGE.

Richards, R. J., Spence, P. R., & Edwards, C. (2022). Human-machine communication scholarship trends: An examination of research from 2011 to 2021 in communication journals. *Human-Machine Communication, 4,* 45-65. https://doi.org/10.30658/hmc.4.3

Richardson, K. (2016a). Sex robot matters: Slavery, the prostituted, and the rights of machines. *IEEE Technology and Society Magazine, 35*(2), 46–53. https://doi.org/10.1109/MTS.2016.2554421

Richardson, K. (2016b). The asymmetrical 'relationship': Parallels between prostitution and the development of sex robots. *ACM SIGCAS Computers and Society, 45*(3), 290–293. https://doi.org/10.1145/2874239.2874281

Richardson, K., & Odlind, C. (Eds.). (2023). *Man-made women: The sexual politics of sex dolls and sex robots*. Palgrave Macmillan. https://doi.org/10.1007/978-3-031-19381-1

Ridge, D., Bullock, L, Causer, H., Fisher, T., Hider, S., Kingstone, T., Gray, L., Riley, R., Smyth, N., Silverwood, V., Spiers, J., & Southam, J. (2023). 'Imposter participants' in online qualitative research, a new and increasing threat to data integrity? *Health Expectations, 26*(3), 941-944. https://doi.org/10.1111/hex.13724

Riese, J. (2019). What is 'access' in the context of qualitative research? *Qualitative Research, 19*(6), 669-684. https://doi.org/10.1177/1468794118787713

Roehl, J. M., & Harland, D. J. (2022). Imposter participants: Overcoming methodological challenges related to balancing participant privacy with data quality when using online recruitment and data collection. *The Qualitative Report, 27*(11), 2469-2485. https://doi.org/10.46743/2160-3715/2022.5475

Rosenthal-von der Pütten, A., & Koban, K. (2023). Interpersonal interactions between people and machines. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 294-301). SAGE.

Ruberg, B. (2022). *Sex dolls at sea: Imagined histories of sexual technologies*. The MIT Press.

Ryland, H. (2021). It's friendship, Jim, but not as we know it: A degrees-of-friendship view of human–robot friendships. *Minds & Machines, 31*(3), 377–393. https://doi.org/10.1007/s11023-021-09560-z

Šabanović, S., & Chang, W.-L. (2016). Socializing robots: Constructing robotic sociality in the design and use of the assistive robot PARO. *AI & Society, 31*(4), 537–551. https://doi.org/10.1007/s00146-015-0636-1

Šabanović, S., Bennett, C. C., Chang, W.-L., & Huber, L. (2013). PARO robot affects diverse interaction modalities in group sensory therapy for older adults with dementia. In *IEEE 13th International Conference on Rehabilitation Robotics (ICORR).* https://doi.org/10.1109/ICORR.2013.6650427

Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). SAGE.

Sandry, E. (2015). *Robots and communication*. Palgrave MacMillan.

Sandry, E. (2023). HMC and theories of human-technology relations. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 99-107). SAGE.

Scheutz, M., & Arnold, T. (2016). Are we ready for sex robots? In *11th ACM/IEEE International Conference on Human-Robot Interaction (HRI)* (pp. 351–358). IEEE. https://doi.org/10.1109/HRI.2016.7451772

Sharkey, A., & Sharkey, N. (2021). We need to talk about deception in social robotics! *Ethics and Information Technology, 23*(3), 309-316. https://doi.org/10.1007/s10676-020-09573-9

Shim, J., & Arkin, R. C. (2013). A taxonomy of robot deception and its benefits in HRI. In *IEEE International Conference on Systems, Man, and Cybernetics*, Manchester, UK (pp. 2328-2335). https://doi.org/10.1109/SMC.2013.398

Skjuve, M., Følstad, A., Fostervold, K. I., & Brandtzaeg, P. B. (2022). A longitudinal study of human-chatbot relationships. *International Journal of Human-Computer Studies, 168*, 102903. https://doi.org/10.1016/j.ijhcs.2022.102903

Stephens, J. (2015). Reconfiguring care and family in the ear of the 'outsourced self.' *Journal of Family Studies, 21*(3), 208-217. https://doi.org/10.1080/13229400.2015.1058847

Stolp-Smith, M., & Williams, T. (2024). More than binary: Transgender and non-binary perspectives on human robot interaction. In *HRI '24, March 11-14, 2024*. https://doi.org/10.1145/3610977.3634939

Su, N. M., Lazar, A., Bardzell, J., & Badzell, S. (2019). Of dolls and men: Anticipating sexual intimacy with robots. *ACM Transactions on Computer-Human Interaction, 26*(3), 1–35. https://doi.org/10.1145/3301422

Suchman, L. (2011). Subject objects. *Feminist Theory, 12*(2), 119-145. https://doi.org/10.1177%2F1464700111404205

Suchman, L. A. (1987). *Plans and situated actions: The problem of human-machine communication*. Cambridge University Press.

Surkalim, D. L., Luo, M., Eres, R., Gebel, K., van Buskirk, J., Bauman, A., & Ding, D. (2022). The prevalence of loneliness across 113 countries: Systematic review and meta-analysis. *British Medical Journal,* 376, e067068. https://doi.org/10.1136/bmj-2021-067068

Szczuka, J. M., & Dehnert, M. (forthcoming). Sexualized robots: Use cases, normative debates, and the need for research. In N. D. Bowman (Ed.), *Emerging issues for emerging technologies: Informed provocations for theorizing media futures*. Peter Lang.

Szczuka, J. M., & Krämer, N. C. (2017). Not only the lonely: How men explicitly and implicitly evaluate the attractiveness of sex robots in comparison to the attractiveness of women, and personal characteristics influencing this evaluation. *Multimodal Technologies and Interaction, 1*(1), 3. https://doi.org/10.3390/mti1010003

Szczuka, J. M., & Krämer, N. C. (2019). There's more to humanity than meets the eye: Differences in gaze behavior toward women and gynoid robots. *Frontiers in Psychology, 10*, 693. https://doi.org/10.3389/fpsyg.2019.00693

Szczuka, J. M., Hartmann, T., & Krämer, N. C. (2019). Negative and positive influences on the sensations evoked by artificial sex partners: A review of relevant theories, recent findings, and introduction of the sexual interaction illusion model. In Y. Zhou & M. H. Fischer (Eds.), *AI love you: Developments in human-robot intimate relationships* (pp. 3–19). Springer. https://doi.org/10.1007/978-3-030-19734-6_1

Szulc, J., & King, N. (2022). The practice of dyadic interviewing: Strengths, limitations and key decisions. *Forum: Qualitative Sozialforschung—Forum: Qualitative Social Research, 23*(2). https://doi.org/10.17169/fqs-22.2.3776

Tallett, A., & Hancock, C. (2023, February 15). Ingenuine participants in health and social care research: Challenges and solutions. *Social Research Association*. https://the-sra.org.uk/SRA/Blog/Ingenuineparticipantsinhealthandsocialcareresearchchallengesandsolutions.aspx

Thomson, R., & McLeod, J. (2015). New frontiers in qualitative longitudinal research: An agenda for research. *International Journal of Social Research Methodology, 18*(3), 243-250. https://doi.org/10.1080/13645579.2015.1017900

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative Inquiry, 16*(10), 837-851. https://doi.org/10.1177/1077800410383121

Tracy, S. J. (2012). The toxic and mythical combination of a deductive writing logic for inductive qualitative research. *Qualitative Communication Research, 1*(1), 109-141. https://doi.org/10.1525/qcr.2012.1.1.109

Tracy, S. J. (2018). A phronetic iterative approach to data analysis in qualitative research. *Journal of Qualitative Research, 19*(2), 61-76. https://doi.org/10.22284/qr.2018.19.2.61

Tracy, S. J. (2020). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact* (2nd ed.). Wiley-Blackwell.

Tracy, S. J. (2025). *Qualitative research methods: Collecting evidence, crafting analysis, communicating impact* (3rd ed.). Wiley-Blackwell.

Tracy, S. J., & Rivera, K. D. (2010). Endorsing equity and applauding stay-at-home moms: How male voices on work-life reveal aversive sexism and flickers of transformation. *Management Communication Quarterly, 24*(1), 3-43. https://doi.org/10.1177/0893318909352248

Tracy, S. J., & Trethewey, A. (2005). Fracturing the real-self ↔fake-self dichotomy: Moving toward "crystallized" organizational discourses and identities. *Communication Theory, 15*(2), 168-195. https://doi.org/10.1111/j.1468-2885.2005.tb00331.x

Tracy, S. J., Gist-Mackey, A., & Dehnert, M. (2024). Phronetic iterative qualitative data analysis (PIQDA) in organizational communication research. In B. H. J. M. Brummans, B. C. Taylor, & A. Sivunen (Eds.)., *The SAGE handbook of qualitative research in organizational communication* (pp. 380-399). SAGE.

Treanor, M. C., Patrick, R., & Wenham, A. (2021). State of the art qualitative longitudinal research: From monochrome to technicolour. *Social Policy & Society, 20*(4), 635-651. https://doi.org/10.1017/S1474746421000270

Tukachinsky Forster, R. (Ed.). (2023). *The Oxford handbook of parasocial experiences.* Oxford University Press.

Tull, M. T., Edmonds, K. A., Scamaldo, K. M., Richmond, J. R., Rose, J. P., & Gratz, K. L. (2020). Psychological outcomes associated with stay-at-home orders and the perceived impact of Covid-19 on daily life. *Psychiatry Research, 289*, 113098. https://doi.org/10.1016/j.psychres.2020.113098

Turkle, S. (1984). *The second self*. Simon & Schuster.

Turkle, S. (2007a). Authenticity in the age of digital companions. *Interaction Studies, 8*(3), 501-517. https://doi.org/10.1075/is.8.3.11tur

Turkle, S. (2011). *Alone together: Why we expect more from technology and less from each other*. Basic Books.

Turkle, S. (2013). Transitional objects. In J. Brockman (Ed.), *This explains everything: Deep, beautiful and elegant theories of how the world works* (pp. 296-298). Harper.

Turkle, S. (Ed.). (2007b). *Evocative objects: Things we think with*. MIT Press.

U.S. Department of Health and Human Services (2023, May 3). Our epidemic of loneliness and isolation: The U.S. Surgeon General's advisory on the healing effects of social connection and community. https://www.hhs.gov/sites/default/files/surgeon-general-social-connection-advisory.pdf

Vallor, S. (2011). Carebots and caregivers: Sustaining the ethical ideal of care in the twenty-first century. *Philosophy & Technology, 24*(3), 251-268. https://doi.org/10.1007/s13347-011-0015-x

Van der Goot, M. J., & Etzrodt, K. (2023). Disentangling two fundamental paradigms in human-machine communication research: Media equation and media evocation. *Human-Machine Communication, 6*, 17-30. https://doi.org/10.30658/hmc.6.2

Verbeek, P. P. (2005). *What things do: Philosophical reflections on technology, agency, and design*. Pennsylvania State University Press.

Voss, L. (2021). *More than machines? The attribution of (in)animacy to robot technology*. Transcript.

Wang, C., & Burris, M. A. (1997). Photovoice: Concept, methodology, and use for participatory needs assessment. *Health Education & Behavior, 24*(3), 369-387. https://doi.org/10.1177/109019819702400309

Weidmüller, L. (2022). Human, hybrid, or machine? Exploring trustworthiness of voice-based assistants. *Human-Machine Communication, 4*, 85-110. https://doi.org/10.30658/hmc.4.5

Weiss, A. (forthcoming). Human interactions with (embodied) AI: The future of authenticity in human-AI relations(hips). In L. Fortunati & A. Edwards (Eds.), *The De Gruyter handbook of robots in society and culture*. De Gruyter.

Westerman, D., & Edwards, A. (2022). *Absence makes the bot feel closer: Absence as a resource in human-machine communication*. Paper presented at the Human-Machine Communication Preconference of the 72nd annual meeting of the International Communication Association, Paris, France.

Westerman, D., Edwards, A. P., Edwards, C., Luo, Z., & Spence, P. R. (2020). I-it, I-thou, I-robot: The perceived humanness of AI in human-machine communication. *Communication Studies, 71*(3), 393–408. https://doi.org/10.1080/10510974.2020.1749683

Winnicott, D. W. (1971). *Playing and reality*. Tavistock.

Winnicott, D. W. (1975). Transitional objects and transitional phenomena. In *Through paediatrics to psycho-analysis: Collected papers* (pp. 229-242). Basic Books.

Woods, H. S. (2018). Asking more of Siri and Alexa: Feminine persona in service of surveillance capitalism. *Critical Studies in Media Communication, 35*(4), 334-349. https://doi.org/10.1080/15295036.2018.1488082

Woolfall, K. (2023). Identifying and preventing fraudulent participation in qualitative research. *Archives of Disease in Childhood, 108*(6), 421-422. http://dx.doi.org/10.1136/archdischild-2023-325328

World Health Organization (n.d.). *Social isolation and loneliness.* https://www.who.int/teams/social-determinants-of-health/demographic-change-and-healthy-ageing/social-isolation-and-loneliness

Xu, K., & Jeong, D. (2023). Social presence in human-machine communication. In A. L. Guzman, R. McEwen, & S. Jones (Eds.), *The SAGE handbook of human-machine communication* (pp. 287-293). SAGE.

Xu, K., Chen, M., & You, L. (2023). The hitchhiker's guide to a credible and socially present robot: Two meta-analyses of the power of social cues in human-robot interaction. *International Journal of Social Robotics, 15*(2), 269-295. https://doi.org/10.1007/s12369-022-00961-3

Yeoman, I., & Mars, M. (2012). Robots, men and sex tourism. *Futures, 44*(4), 365-371. https://doi.org/10.1016/j.futures.2011.11.004

Zane, Z. (2020, December 7). What experts know about "post-nut clarity." *Men's Health*. https://www.menshealth.com/sex-women/a34838426/post-nut-clarity-definition/

Zara, G., Veggi, S., & Farrington, D. P. (2022). Sexbots as synthetic companions: Attitudes of official sex offenders and non-offenders. *International Journal of Social Robotics, 14*(2), 479-498. https://doi.org/10.1007/s12369-021-00797-3

Zhao, J. (2023). Nursing in a posthuman ear: Towards a technology-integrated ecosystem of care. *International Journal of Nursing Sciences, 10*(3), 398-402. https://doi.org/10.1016/j.ijnss.2023.06.005

Zhao, S. (2006). Humanoid social robots as a medium of communication. *New Media & Society, 8*(3), 401–419. https://doi.org/10.1177/1461444806061951

APPENDIX A

IRB APPROVAL LETTER

APPROVAL: EXPEDITED REVIEW

Liesel Sharabi
CLAS-SS: Human Communication, Hugh Downs School of
-
Liesel.Sharabi@asu.edu

Dear Liesel Sharabi:

On 3/14/2023 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Human-Sex Robot Relationships
Investigator:	Liesel Sharabi
IRB ID:	STUDY00017701
Category of review:	(7)(b) Social science methods
Funding:	Name: Arizona State University (ASU)
Grant Title:	
Grant ID:	
Documents Reviewed:	• Dehnert_Consent re-revised.pdf, Category: Consent Form; • Dehnert_Follow-up Email 1.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • Dehnert_Follow-up Email 2.pdf, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • Dehnert_Interview Guide 1 revised.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dehnert_Interview Guide 2 revised.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dehnert_Interview Guide 3 revised.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Dehnert_Protocol re-revised.docx, Category: IRB Protocol;

	• Dehnert_Recruitment Forum Permission.pdf, Category: Recruitment Materials; • Dehnert_Recruitment Forum.pdf, Category: Recruitment Materials; • Dehnert_Recruitment Snowball.pdf, Category: Recruitment Materials;

The IRB approved the protocol effective 3/14/2023. Continuing review is not required for this study. All modifications to studies approved as Expedited and Full Board **must** be submitted for review and approval.

When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Marco Dehnert
        Sarah Tracy
        Liesel Sharabi
        Marco Dehnert
        Cassandra Ryder
        Paige Von Feldt
        Lauren Dewan
        Taryn Stahl
        Delaney Overturf
        Megan Niehoff

APPENDIX B

RECRUITMENT MATERIALS

Recruitment Template: Seeking Permission from Forum Moderators

Dear moderator of [insert forum name],

My name is Marco Dehnert, a PhD candidate at Arizona State University. I am reaching out to you as the moderator of [insert forum name] to ask permission to post the following recruitment message to your forum (see below).

I am interested in producing research that adequately captures the experience of people who have a relationship with their sex and love dolls.

Do you give your permission for me to post this recruitment call to your forum?

Please let me know if you have any questions. You can reach me at [email address].

Best,

Marco Dehnert

Recruitment Template: Post on Doll Forums

Tagline: Looking for your stories to be represented in a research study

"Are you interested in sharing your personal experiences about your doll with an interested researcher? If so, you're in the right place!

Hello, my name is Marco Dehnert. I am a PhD candidate at Arizona State University, and I am working on a research study focusing on people who have a relationship with a doll. My research topic specifically focuses on your lived experiences related to your sex and love doll(s).

For the study, I am interested in interviewing YOU. Interviews should take no longer than about 60-90 minutes and will take place over Zoom or phone (or another platform of your choosing). Upon completion of the interview, you may be invited for follow-up interviews.

Participants who meet the study requirements and complete one interview will receive $30 (USD) in compensation. If selected for follow-up interviews, participants may have the opportunity to receive additional compensation.

Participating in this study is completely voluntary and choosing not to participate will not adversely affect you. I am committed to keeping your name and other identifiable data confidential.

Study requirements: Adults (18 or older) who have a relationship with one or more sex/love dolls (broadly understood) who are willing to talk about their experiences. While the study will take place in English, participants from all over the world can be participate.

If you have any questions, please let me know. You can reach out to me at [insert email address] or reply to this post/send me a message to schedule an interview. Thank you!"

APPENDIX C

INTERVIEW GUIDE: WAVE 1

Informed Consent

I am talking with you today because I am interested in your experiences as someone who shares part of their life with a doll. This information will be used for future academic research and publication but always anonymized. For purposes of follow-up, scheduling, and processing compensation, I am creating a master list with your name, an anonymous ID (e.g., P01), and your contact information, which I will delete at the end of this study or by December 31, 2026, whichever is sooner. I would like to record this interview, is that OK with you? The recording will be destroyed after I have made an anonymized transcription of our conversation. I have sent you a form of consent beforehand. If you have not signed that yet, I am happy to share it with you again. Please let me know if you have any questions about the consent form. While responding to the questions, please respond in general terms and do not use your name or that of others. If you do happen to use names or other identifiable details, I will make sure to edit those out of my transcript. I also want to highlight that you can skip any questions that you are uncomfortable with. If you are interested, I will be happy to share a copy of the transcript with you after the fact.

Demographics

1. Before we begin this interview, I'd like to ask you a few demographic questions:
    a. What is your age?
    b. How would you describe your race/ethnicity?
    c. What is your nationality?
    d. In what country are you currently located?
    e. What is your occupation?
    f. How would you describe your relationship status? [If single:] Have you had partners before?
    g. How would you describe your gender identity?
    h. How would you describe your sexual orientation?
    i. How would you describe your ability status? (e.g., neurodivergent?)

Background

2. First, can you tell me about your doll(s)? For how long have you had them? What model(s) do you own (company, model name, etc.)?
3. Some people give their doll a name. Have you given your doll a name? If so, why did you choose it?
4. What does your doll look like? How would you describe your doll?
5. How did you customize your doll? What was important to you when customizing it?
    a. What features does your doll have?
    b. Do you use any supplementary technologies when interacting with your doll (e.g., Replika, a speaker, etc.)?
6. You said that you acquired the doll [X amount of time] ago. How did you become interested in dolls? How was it that you came to have a doll?
7. What do you like about your doll? Why? Are there things you do not like about it?

Interactions

8. What role(s) does your doll play in your daily life?
   a. What does spending time with your doll look like?
   b. What do you feel when spending time with your doll, sitting next to her?
9. I have noticed when preparing for my interviews that everyone interacts with their doll in different ways. Can you describe a typical interaction with your doll for me?
   a. How often do you typically interact with your doll?
   b. What was the most recent interaction with your doll like?
10. Has your interaction with the doll changed over time? How so?
    a. What was the moment of "unboxing" like when you saw your doll for the first time?
    b. Have you noticed any changes in how you interact with the doll since you got her?
    c. Have you noticed any changes in yourself since you got the doll?
    d. If you interact with multiple models, are there differences in the ways you interact with them? How so?
11. How are you intimate with your doll?
12. Do you communicate with your doll? If so, how?

Relationships

13. Some people say they "use" their doll. Other people say they have a "relationship" with them. Do either of these framings make more sense to you? Can you say more about this? Or is there another way you would frame your interaction that is different than "using" or "having a relationship with?"
    a. [If they have a relationship with their doll]: Was there a turning point or notable events in your interaction with your doll where it started to become a relationship? Could you walk me through that?
    b. [If they do not have a relationship with their doll]: Do you think you will ever have a relationship with your doll? What prevents a relationship with your doll from forming?
14. Are you satisfied with your relationship/use with your doll? What is missing, if anything?
15. What role does your doll play for your sexuality and sexual satisfaction?
16. Do you think it is possible to be in love with a doll? How so? In what ways does that matter to you, if at all?
17. If you currently have (a) human partner(s), in what ways is your doll involved in your human relationship(s)?
    a. If you think back to previous (or current) relationships with humans, how, in your perspective, is your relationship with your doll the same or different than these relationships?
    b. How does it compare or contrast with the relationship that you have with pets or the kind of relationship you previously had with your childhood dolls/stuffed animals?

  c. Are people in your life aware that you have a doll? How did you go about telling them about your doll? How do you describe your relationship with your doll to other people?

  d. Are you interested in a future partner?

  e. What would you do if a future partner asked you to get rid of your doll or to stop using/having a relationship with your doll?

18. What does maintenance of your doll look like?

  a. In what ways do you care for your doll, if at all? Does your doll care for you? How so?

19. In an ideal world, what technological features would you like your doll to have? What could be improved in dolls to have better relationships with them?

Wrap-up

20. Revisiting our conversation, is there anything that you would like to talk about? What questions did I not ask that you think I should have asked?

21. Is there a pseudonym you would like me to use for you and your doll?

Would you like me to reach out in the future if there are additional things to share from this research or if there is future work in this area? You are also invited to reach out to me at the contact information you already have if you have further questions or would like to add anything to our conversations.

APPENDIX D

INTERVIEW GUIDE: WAVE 2

Informed Consent
Thank you for your willingness to talk with me again. Similar to our first interview a few weeks ago, I am interested in your experiences as someone who shares part of their life with a doll. This information will be used for future academic research and publication but always anonymized. For purposes of follow-up, scheduling, and processing compensation, I am creating a master list with your name, an anonymous ID (e.g., P01), and your contact information, which I will delete at the end of this study or by December 31, 2026, whichever is sooner. I would like to record this interview, is that OK with you? The recording will be destroyed after I have made an anonymized transcription of our conversation. The consent form you signed previously applies to today's interview as well. While responding to the questions, please respond in general terms and do not use your name or that of others. If you do happen to use names or other identifiable details, I will make sure to edit those out of my transcript. I also want to highlight that you can skip any questions that you are uncomfortable with. If you are interested, I will be happy to share a copy of the transcript with you after the fact.

Interactions
1. Last time, we talked about your typical interactions with your doll. From our conversation, I learned that [insert key insight from their last interview]. Was there anything that struck you from our last interview that you want to follow-up on?
2. Have you had any notable interactions with your doll since we last talked that you would like to share with me?
3. Has your interaction with the doll changed since we last talked? How so?
4. Have you noticed any changes in yourself since we last talked? How so?

Relationships & Art
5. What is the role of fantasy and imagination when it comes to your doll?
6. How did you go about creating the character or personality for your doll? Has your doll's character changed since you got her?
7. Is there an art to dolls? How so?
8. For some people, the doll *is* the character, and for others the character is separate from the doll. Which one makes more sense to you and why?
9. If your house was on fire, would you try to save your doll? How so?
10. In what ways is it important or not important for you to have a community of people who understand you and your doll? What do you value about such a community? How do you navigate privacy in that community?

Public Stigma
11. What do you think about the public stigma about doll owners? Have you encountered stigma yourself?
12. What image comes up for you when you think of the "typical doll owner?" How does that compare to your personal experiences?
13. What do you wish the general public would know about dolls?

14. When it comes to dolls, some people are concerned about how they impact how men view women in that it might contribute to viewing women as objects for sexual pleasure. What do you think about that?
15. Some countries have introduced bans on dolls, and others are currently considering similar bans. Do you have any thoughts on bans?

Grappling with Sensitive Topics
16. The are many terms for dolls: sex doll, love doll, companion doll. What do you think about those different terms? In what ways do they matter to you? Do you have a preferred term?
17. People can experience different types of attraction, such as sexual, romantic, and emotional attraction. Do you see any differences in how you are attracted to your doll? Which types of attraction are present or absent when it comes to your doll?
18. Some people describe dolls as inanimate. How does the concept of soul come up in your relationship with your doll? Probes: Do you believe your doll has a soul? If so, how would you describe your doll's soul?
19. Some people say that dolls help people more than they harm anyone. What do you think about that? How do dolls help people? How might they harm people?
20. Some people argue that sexual intercourse with a doll should not be called "sex." Others argue that dolls have no capacity for love, intimacy, or a relationship. What do you think about that?
21. Some people say that we cannot be in a relationship with a doll because they are made for humans and humans "use" them. Do you have any thoughts on this?
    a. From a legal perspective, someone who has a doll owns it (as property). Do you have any issues with that?
    b. How does consent come up when you think of your doll, if at all?
22. We all have different things in our households, that we might lend to other people (e.g., coffee makers, computers). How would you feel about lending your doll to someone else?
23. If you were to die tomorrow, what would you want to happen to your doll?
24. Where do you see the next few weeks, months, years headed with your doll(s)? Where do you see the next few weeks, months, and years headed with dolls in general?

Wrap-up
25. Revisiting our conversation, is there anything that you would like to talk about? What questions did I not ask that you think I should have asked?
26. Last time, you told me to use [insert pseudonym] when referring to you. Are you still okay with me using that pseudonym for you and your doll?

Would you like me to reach out in the future if there are additional things to share from this research or if there is future work in this area? You are also invited to reach out to me at the contact information you already have if you have further questions or would like to add anything to our conversations:

APPENDIX E

INTERVIEW GUIDE: WAVE 3

Informed Consent

Thank you for your willingness to talk with me again. Similar to our last two interviews, I am interested in your experiences as someone who shares part of their life with a doll. This information will be used for future academic research and publication but always anonymized. For purposes of follow-up, scheduling, and processing compensation, I am creating a master list with your name, an anonymous ID (e.g., P01), and your contact information, which I will delete at the end of this study or by December 31, 2026, whichever is sooner. I would like to record this interview, is that OK with you? The recording will be destroyed after I have made an anonymized transcription of our conversation. The consent form you signed previously applies to today's interview as well. While responding to the questions, please respond in general terms and do not use your name or that of others. If you do happen to use names or other identifiable details, I will make sure to edit those out of my transcript. I also want to highlight that you can skip any questions that you are uncomfortable with. If you are interested, I will be happy to share a copy of the transcript with you after the fact.

Interactions

1. The purpose of today's interview is two-fold. In the first 10-15 minutes, I'd like to check in with you how you are doing in regard to your doll(s). After that, we will use the remaining 40-45 minutes to chat about some of the emerging findings from this research.
2. In our last two conversations, we covered many topics related to your experiences with your doll. From our conversations, I learned that [insert key insight from their last interviews]. Have you had any notable interactions with your doll since we last talked that you would like to share with me?
3. Has your interaction with the doll changed since we last talked? How so?
4. Have you noticed any changes in yourself since we last talked? How so?
5. Do you have any additional thoughts that have come up since we last talked?

Member Reflections

6. Now we are shifting to the second part of the interview where I am interested in hearing your thoughts on some of the emerging findings from my research. I would like to note that I am not looking for you to determine whether something is correct or incorrect, but rather for you to share your thoughts, reflections, and reactions to the findings I am going to present to you. Also, a key insight from my study is that there is no such thing as a typical doll owner, and there is lots of nuance in the doll community. That means, some of the findings may apply more or less to you directly, and I invite you to provide your thoughts regardless of how much you identify with a specific finding. Do you have any questions before we get started?
7. A key question in my study is whether folks use their doll or have a relationship with it. I have some participants in either camp, and a third group noting it's a different type of relationship that is different from being with a person for example. What do you think explains these different experiences?

8. There seem to be many reasons why folks have a doll. From your point of view, is it more about the doll or more about the person that explains why people are drawn to dolls as relational partners?

9. Some folks say that relationships with dolls are an "easy way out." They mean that a relationship with a human requires struggle, overcoming challenges, and having disagreements, which is something you can't really have with a doll. What do you think about this?

10. For many, dolls seem to be more of a temporary solution to a specific need like loneliness or being frustrated with dating. Does that match your experience? How so?
    a. At the same time, some folks shared how they got the doll for a specific reason (sex), but over time realized that the doll has impacted their life way beyond that. How does this relate to your experiences?

11. There seems to be something about dolls, somewhat of a presence or magic. There is a recurring story of meeting the doll for the first time—the "unboxing." Folks share how they feel a sense of presence when being with the doll. What do you think about this?
    a. How would you describe this presence, if it exists in your perspective?
    b. What is it about the doll that makes you feel this presence?
    c. The eyes come up a lot, sometimes turning into a creepy or uncanny sensation for folks. How does this relate to your experience?

12. Imagination and fantasy come up a lot, be it related to how folks create the doll persona, or how they spend time with their doll.
    a. From your perspective, what is the role of imagination in being with a doll?
    b. Where do you see the difference between an illusion and a delusion, if at all? Which one describes the doll experience better, and why? Does this differ when you look at how others describe their doll experiences?

13. A surprising finding was the issue of care.
    a. What does care mean to you when you think of your doll?
    b. How is that different from maintenance? Do you care for your doll or maintain it?
    c. Some folks also shared that they feel like their doll cares for them as well. How does this relate to your own experience?
    d. How can a doll care for people?

14. Obviously, dolls are currently very limited in what they can do, such as move or talk. Some folks expressed that they would like their doll to be able to do more. Does that match your experience?
    a. Are you okay with this lack of agency, or would you like your doll to be able to do more? Why is that?

15. As we are coming to the end, I have a question about perhaps a more contentious topic. Some folks shared that they especially liked their dolls for not being able to speak or nag at them. They shared that they turned to dolls because they are quote unquote done with women. What do you think about this group of doll owners?

Wrap-Up

16. Do you have any additional reactions right now as we are talking about my observations? Anything you would like to add? Clarify?
17. Revisiting our conversations, is there anything that you would like to talk about? What questions did I not ask that you think I should have asked?

Acknowledgement

You have been extraordinarily generous with your sharing. I appreciate the time and care you have taken in sharing your experiences with me. Would you like me to reach out in the future if there are additional things to share from this research or if there is future work in this area? You are also invited to reach out to me at the contact information you already have if you have further questions or would like to add anything to our conversations. I would be happy to share a transcript of our conversations with you. Again, thank you so much.

APPENDIX F

CONSENT FORM

Consent Form

I am Marco Dehnert, a PhD candidate under the direction of Drs. Liesel Sharabi and Sarah Tracy in the Hugh Downs School of Human Communication at Arizona State University. I am conducting a research study to understand the lived experiences of people who have a relationship with a sex/love doll.

I am inviting your participation, which will involve up to three interviews conducted via an online video call tool (e.g., Zoom), which will last between 60-120 min. The interview(s) includes topics such as personal experience as a person living with a sex/love doll, including your relationship with the doll. You have the right not to answer any question, and to stop participation at any time. Upon completion of the first interview, participants may be invited to participate in follow-up interviews. Future interviews may also include participant reflections and member checking.

Your participation in this study is voluntary. If you choose not to participate or to withdraw from the study at any time, there will be no penalty. You must be 18 years or older to participate in this study and use a sex and/or love doll. This research is particularly interested in participants who have a relationship with their doll. Participants who meet the study requirements and complete one interview will receive $30 in compensation. If selected for a follow-up interview, participants may have the opportunity to receive additional $50 in compensation, and additional $70 if selected for a second follow-up interview.

Benefits to participating may include your clarifying your lived experiences and relationship with your doll(s). There are no foreseeable risks or discomforts to your participation.

Your interview responses will be kept confidential. You will be told not to use your name or that of others. Your responses will be audio recorded. As part of this study, a master list of participant names and contact information will be created to facilitate interview scheduling, potential follow-ups, and processing participant compensation. Upon completion of this study or by December 31, 2026, whichever is sooner, this master list will be deleted. The results of this study may be used in reports, presentations, or publications, but personal identification will not be used. De-identified data collected as a part of this study may be shared in anonymized form upon publication, or with other investigators for future research purposes.

I would like to audio record the interview(s). The interview(s) will not be recorded without your permission.

If you have any questions concerning the research study, please contact Marco Dehnert (marco.dehnert@asu.edu), Dr. Liesel Sharabi (Principal Investigator, liesel.sharabi@asu.edu) or Dr. Sarah Tracy (sarah.tracy@asu.edu). If you have any questions about your rights as a subject/participant in this research, or if you feel you

have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board, through the ASU Office of Research Integrity and Assurance, at (480) 965-6788.

If you reside in the European Economic Area (EEA) during your participation in the study, the General Data Protection Regulation (GDPR) gives you certain rights with respect to your personal data. If the GDPR applies to you (i.e., you reside in the EEA during your participation in the study), you will need to fill out the separate GDPR form.

Do you currently or will you reside in the European Economic Area (EEA) during your participation in the study? The EEA includes Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lichtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden.

- Yes, I currently or will reside in the EEA (separate GDPR consent applies)
- No, I do not or will not reside in the EEA (no separate consent applies)

By signing below, you are agreeing to be part of the study.

Signature: [participant signs digitally]

GDPR Consent for Collection and Use of Study Data

[participants who select "I currently or will reside in the EEA (separate GDPR consent applies)" had to complete this form]

This research will collect data about you that can identify you, referred to as Study Data. The General Data Protection Regulation ("GDPR") requires researchers to provide this Notice to you when we collect and use Study Data about people who are located in a State that belongs to the European Union or in the European Economic Area. If you reside in the European Union or European Economic Area during your participation in the Study, your Study Data will be protected by the GDPR, in addition to any other laws that might apply.

We will obtain and create Study Data directly from you so we can properly conduct this research. As we conduct research procedures with your Study Data, new Study Data may be created.

The Research Team will collect and use the following types of Study Data for this research:

- Contact Information
- Your racial or ethnic origin
- Your philosophical beliefs
- Your sexual orientation or beliefs
- Information about your response to the research procedures

This research will keep your Study Data for 3 years (until December 31, 2026) after this research ends.

The following categories of individuals may receive Study Data collected or created about you:

- Members of the research team so they properly conduct the research
- ASU study team members will oversee the research to see if it is conducted correctly and to protect your safety and rights

The research team will transfer your Study Data to our research site in the United States. The United States does not have the same laws to protect your Study Data as States in the EU/EEA. However, the research team is committed to protecting the confidentiality of your Study Data. Additional information about the protections we will use is included in the consent document.

If you reside in the European Union or European Economic Area during your participation in the Study, the GDPR gives you rights relating to your Study Data, including the right to:

- Access, correct or withdraw your Study Data; however, the research team may need to keep Study Data as long as it is necessary to achieve the purpose of this research
- Restrict the types of activities the research team can do with your Study Data
- Object to using your Study Data for specific types of activities
- Withdraw your consent to use your Study Data for the purposes outlined in the consent form and in this document (Please understand that you may withdraw your consent to use new Study Data but Study Data already collected will continue to be used as outlined in the consent document and in this Notice)

Arizona State University is responsible for the use of your Study Data for this research. The ASU Privacy Officer is Debra Murphy. You can contact Ms. Murphy by phone at (480) 965-2179 or by email at debra.murphy@asu.edu if you have:

- Questions about this Notice
- Complaints about the use of your Study Data
- If you want to make a request relating to the rights listed above.

Please initial one of the boxes below to indicate whether you consent to the processes described above. [Participants initial in the below space digitally]

I agree _____   I do not agree_____

APPENDIX G

FINAL CODEBOOK

RQ1: What are areas of overlap and distinction between doll owners' narratives of "dolls as companion" and "dolls as sexual objects"?

Theme	Code	Description	Exemplars
Using ↔ Relating		Participants discuss their general thoughts on whether they use their doll or relate to it.	"There are folks who view their dolls actually only as a fuck buddy. Folks like me, who view them as photo models, and others who view them as companions"
	Using (Doll as Object)	Participants use their doll.	"Yes, I love her, absolutely. But more like a treasured object. I love my moped, too, absolutely." Dolls are "adult action figures." "I guess I just masturbate with a piece of rubber I guess."
	Relating (Doll as Companion)	Participants have a relationship with their doll. The doll provides companionship to them.	"I just have a very serious relationship with the doll." "I feel like she's like my robot girlfriend." "I feel like it's not only a sex robot to me but also a companion and something that is close to me."
	Doll as Quasi-Other	Participants situate their dolls between subject and object.	"You're sort of in that liminal space between there being something outside of yourself and something inside of yourself." Dolls are "right on the line [between subject and object]. I can't really define it."
Reasons for Having a Doll		Participants have several reasons why they turned to dolls	[empty umbrella bin]
	Seeking Companion-ship	1) Addressing Loneliness: Dolls help mitigate	"It cures loneliness if you're lonely." A doll "helps me with my loneliness."

		participants' loneliness.	
		2) Wanting someone there: Dolls fulfill the need to belong.	"We are social creatures. // We're not built to be alone. // You just want something else other than you there, right?"
		3) Mitigating Anxiety: Dolls either mitigate or activate participants' social anxiety.	"Dolls are a mental aid by lowering depression and anxiety." "I have social anxiety. I honestly sometimes can't stay around them for too long. Just cause I feel like, I want to be alone and with them there, I feel like I'm not."
	Dolls as the "Easy Way Out"	1) Frustrations with Dating: Participants are frustrated with the dating culture.	"The relationship template. That was kind of all the same. It was like you meet, you date, you fall in love, you maybe, you live together. It was all kind of the same." "I had been chronically single."
		2) Dolls are easier than people: Participants view people as more demanding than dolls.	"I prefer my life with dolls because I'm a quiet person, and I can, I just get on with life, and it's a lot damn easier." "It feels like spending time with a real person, except like, without all the stress, like without all the awkwardness and everything."
	Dolls as Hobby	1) Collecting Dolls: Participants view dolls as collectible objects	"I got my first doll some time in 2021 as a test and learned that they were cool and got addicted to them wanting to collect more." "We want to have kind of a diverse collection, not only for ourselves, but for people coming."
		2) Photography: Dolls serve as willing photo models.	"One of my favorite things to do is quality doll time, taking pictures of the dolls, dressing them up." "To me, the dolls, they're like closer to like pieces of art more like a statue or

Theme	Code	Description	Exemplars
			uhm. They're more like a statue or a toy."
Surpassing Expectations		Participants' interactions with their doll change over time. Typically, the doll surpasses their expectations.	"Once they do get their doll, sex in itself becomes very much secondary, and they all become a companion to them, more than anything." "People get them for one thing, but then they find out that it's so much more."
Constant Availability		Participants like that the doll is always there for them.	"A companion and like a friend, something that's always there for me. When I wish to talk or something or have somebody to talk to." "Her being sexually available whenever I want and I don't have to have anxiety over it, and it's like, safe" "I think it's not just the sex. It's the availability to satisfy that urge anytime that I want, and just sometimes knowing that satisfies that urge."

RQ2: How do doll owners actively construct and (re)negotiate authenticity in their human-machine relationships?

Theme	Code	Description	Exemplars
Presence		Participants experience a magic, vibrance, and innate presence.	[empty umbrella bin]
	Feels like Somebody is There	Participants have the sensation that there is somebody there.	"They have presence. They have absolute [stressed] presence. So, I can be here alone, but still, I feel like there's a presence, there's somebody here. I'm not lonely." "I just look over there and she's there. She's real. It wasn't like having a real person in the room, but it was like having a real person in the room. It was very confusing."

298

	Unboxing Narratives	A recurring narrative describing the moment of unboxing the doll.	*see constructed vignette in manuscript*
	Realism	Participants' preferences for their doll's (desired) degree of realism.	"A doll is a scan of a real woman." "I wanted her to look kind of close to how I'd want an ideal partner to look."
	The Doll's Gaze	Dolls' eyes and gaze have an intense effect on participants.	"A lot of it [the doll's presence] has to do with the eyes for me. I just photograph them, and it's a character, and they've got to have the gaze as well."
	Dolls are Uncanny	Doll gives participants an uncanny feeling at times.	"I think the thing that I find the most fascinating about the doll is the kind of uncanny valley aspect of how it can really be quite lifelike while still simply being an object."
Perceiving Agency		Participants experience agency differently.	[empty umbrella bin]
	Doll has Agency	Participants describe what the doll can do.	"They add life. They can't move. They don't eat. They don't talk. But they add life." "It's incredible how much they do without doing anything."
	Doll lacks Agency	Participants describe how the doll lacks agency.	"A doll has a very limited use apart from, you know, her just sitting there or standing there, or lying there looking pretty."
		1) Desiring More Agency: Participants wish their doll had more agency.	"I wish she could be more advanced. / Yeah, I just wish she could be more."
		2) Celebrating the Lack of Voice: Participants enjoy their doll not being able to talk.	"The dolls are like the woman that I want. Everything that I want, they have, and everything I don't want, they don't. So, I didn't have to compromise on anything. // They don't nag you [laughs]."
	Comparing Doll Agency	Participants compare doll against other entities.	[empty umbrella bin]

		1) Doll ↔ Human: Participants compare dolls with humans.	"With the right person, there is no context. There's no way in a million years a doll could ever compete. With the right person, a doll would seem like a shadow, a hollow thing."
		2) Doll ↔ Pet: Participants compare dolls with pets.	"'Is it like me having a dog?' // In a sense. But there is not that urgency that a pet has."
		3) Doll ↔ Stuffed Animal: Participants compare dolls with stuffed animals.	Dolls are like "a Teddy bear I can fuck." Dolls are "much closer to a stuffed animal because a pet can love you back."
Role of Imagina-tion		Imagination plays a big role when participants actively construct the illusion of an interaction with the doll.	"I mean, it's like dreaming in pseudo, real life." "She has a little bit of an aspect of an imaginary friend aspect." "I would say she is a simulation of a companion. I think that's what hits it. The best from my description is, she is like similar to how VR is to most people, whereas it's a way to experience something you normally can't. And you know it's not real, but it fills the void. // VR simulates places you're not."
	Construc-ting a Doll Persona	Participants construct their doll's persona or character.	"I do imbue them with different personalities, just by virtue of them being different body types." "They are, like, a figure of your imagination. They're not. They're there, they're not a figure of your imagination. But they are like a character."
	Denying Delusion	Participants directly deny that they might be delusional in their interactions with their dolls.	"I'm not some like kind of crazy guy who's off on, on some kind of trip, you know." "I'm aware of what I'm doing, you know. I'm not delusional, you

Theme	Code	Description	Exemplars
			know, but it's still fun to play with it."
Dolls as Identity Extension		Dolls serve as an extension of participants' identity. This oftentimes includes gender play, i.e., typically masculine-presenting participants exploring traditionally feminine issues such as makeup, fashion, and more.	"Did you ever think you'd have four grown men in their early fifties going talking about make-up in your family room?" "Something else can wear it as a proxy if that makes sense." "I feel like they're almost an extension of myself if that make sense?"

RQ3*:* How do doll owners experience reciprocal care in their human-machine relationship?

Theme	Code	Description	Exemplars
Defining Care		Participants define care in different ways.	"To be cared for is to be yourself. To be yourself is to be alive, and that's something I've finally kind of achieved, is just doing whatever, not caring what the consequences are, what people think." "I take very good care of them. I clean them. I dress them up. I take pictures of them. I take them places. I show them off, you know. I give them a character, you know. And if that's not love, then what is that? It's, it's, it's care, it's absolute care for that beautiful doll."
Dolls Require Care		Participants' dolls require care.	"She's fragile in a way because the material, the super realistic makeup. It needs to be protected very well." "I don't like that word, 'own.' I prefer the word, I'm their caretaker. In a sense I care for them"
Illusion of Being Cared For		Participants experience an illusion of being cared for by their doll.	"Most of it is just the intimate cuddles, and being held and feeling protected. It feels comforting. It feels safe, and it feels like someone cares. It feels like, no matter what mistakes I make, no matter how stupid I am, it gives my head the illusion that someone is there holding me. I obviously know it's not

			real. It's just a mannequin that can move. But it's so comforting to just simulate that feeling."
	Recipro-city	Participants experience care as reciprocal.	"All relationships are give and take and reciprocal." "Although technically one-sided, it doesn't always feel one-sided, if you get what I mean. Like, people will be putting in their thoughts, their affection into it. But they would still be getting something out, even though the doll is just an object, people can still experience that affection back, even if it's just in their head, you know, it feels real."
	Dolls Provide Sensory Care	Participants experience care through touch, smell, cuddling, and other sensory ways.	"I have her hold me at night and me being unable to move is wonderful, because if I have a panic attack, I feel that, like, pressure being held, it calms me down because I feel like protected [laughs]." "Well, you know your body needs. We're creatures of touch. We need to touch something, right? That need for intimacy, that need for touching things."
	Dolls Provide Emo-tional Support	Dolls serve as tools that provide emotional support.	"They're like an emotional support doll, or whatever you want to call it." "They're a tool for emotional support."
	Sharing Space	Participants experience care by sharing space with the doll.	"But often, that's all you need. You just need a presence." "It's not that I needed somebody there all the time, but when you think about it. I was married for 25 years, and you grow used to having somebody in that bed next to you."
	Dolls don't Judge You	Participants feel safe because a doll doesn't judge them.	"You don't have to worry about her judging me, or you know, like her getting offended." "You're able to express those things safely if that makes sense. Because the doll is not gonna judge you, bitch at you, complain."
Outcome of Care		Dolls have different forms of impact on	"I've changed, I think, for the better absolutely. And it's for [stressed] the better."

		participants as a result of the care they provide.	"Calm, more clam. People would probably characterize that as being in a constant state of post-nut clarity." "I'm less depressed, and I'm less despondent about dating."
Role of Control		Control is the flipside to care.	[empty umbrella bin]
	Control as Safety	Participants enjoy controlling their dolls as a way to increase their sense of safety.	"Being able to trust my [doll] partners to not be awful, to not cheat on me, to not like suddenly have a belief or an ideal system that I don't agree with, or whatever." "I just feel like I'm more in control, so I can feel his body. I can kiss him, and it's just easier for me, like I'm able to enjoy it more than with a person."
	Control as an Expres-sion of Indivi-duality	Participants enjoy controlling their dolls as a way to express their individuality.	"My life revolves around my dolls."
	Control as Constric-ting Freedom	Participants enjoy controlling their dolls as a way to constrict their freedom.	"I can just do what I want to them." "I can pretty much do whatever I want to her. She would never be offended if I touch her in a certain way, or you know, if I want to cuddle her at night, she won't be pissed off."