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Stereotyping Femininity in Disembodied Virtual Assistants

Allison M. Piper
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Stereotyping femininity in disembodied virtual assistants

by

Allison Piper

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

Major: Rhetoric, Composition, and Professional Communication

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Geoffrey Sauer, Major Professor
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Iowa State University
Ames, Iowa
2016

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NOMENCLATURE

AI  Artificial Intelligence
GPT  Gender Performance Theory
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ABSTRACT

The focus of this paper is to examine the rhetorical ways that virtual assistants perpetuate western (American) gender stereotypes with users. While other literature has studied gender stereotypes with online service chatbots, scholarly research related to virtual assistants on standalone devices (e.g. Siri, Cortana, Alexa) is lacking. To conduct this study, I have relied upon a combination of the theories of identification and gender performance theory to show how the virtual assistants enact gender with users.

The findings of this analysis demonstrate that the virtual assistants easily enact harmful gender stereotypes because the virtual assistants are disembodied representations of femininity. As evidence, media reviewers of the technology hoping to demonstrate their abilities have used language to ask questions that would be inappropriate for face-to-face communication.
CHAPTER 1: INTRODUCTION

In 2015, a Pew Research study showed that 64% of American adults have a smartphone (Smith). Smartphones are generally discussed in terms of their effects on communication skills or productivity; however little is discussed in terms of their artificially intelligent (AI) virtual assistant software. We know these software programs by name: Siri, Cortana, Alexa, etc. Virtual assistants are available on most smartphone and other technological devices like GPS. The use of virtual assistants will only continue to expand as companies and users realize the benefits of the software, helping users purchase, inquire, and learn more about companies and services. In this paper, I intend to explore the rhetorical ways in which virtual assistants are shown, particularly in their advertisement materials, engage with western gender stereotypes. My findings demonstrate that gender stereotypes are culturally inscribed and persist in modern advertising for new technologies, which is ultimately problematic because these gender stereotypes are out-of-date and harmful to ideas of what constitutes masculinity and femininity.

Literature Review

Eva Gustavsson explored the similarities between virtual assistants and stereotypical front-office service employees. Specifically, she explored the interactions between humans and chatbots that were designed to help internet users answer inquiries about commercial businesses. Gustavsson uncovered that the goal for non-commercial chatbots was more about passing the Turing Test, or a
test administered to AIs to evaluate their ability to successfully mimic human behavior and participate in human interaction (2005, p. 403). The empirical study that she conducted asked both commercial and non-commercial chatbots a series of questions to study how the chatbots are “equipped with human characteristics” (Gustavsson, 2005, p. 404). The results of this study concluded that the photo-realistic male chatbots were in fields like information technology or financial institutions, and the photo-realistic females were virtual advisors or sales support (Gustavsson, 2005, p. 408). Hine notes that the internet and the contents of the internet are cultural artifacts (2001, p. 39). Thus, the culture in which the internet exists, in this case, a patriarchal western culture, shapes the way in which the virtual assistants are created, and what they can do for users. The internet and virtual assistants could be considered “textual twice over: as a discursively performed culture and as a cultural artefact, the technology text” (Hine, 2001, p. 39).

Zdenek also studied web-based virtual humans in the online service industry. He noted, “variously referred to as animated characters, virtual humans, embodied conversational agents, and animated agents, personified agents require little or no training to use, according to their designers, because users simply interact with them as though they were humans” (Zdenek, 2007, p. 397). Zdenek pointed out that research in technical communication and gender has largely been focused upon inclusion in career fields, while his research examines the topic at a new angle (2007, p. 402). He contends that the prevalence of virtual humans as assistants will continue to grow because human-software interaction in this manner is intuitive,
similar to the way in which humans communicate to one another already. Zdenek, like Gustavsson, suggests that the way in which these virtual humans are created and presented is directly influenced by societal and cultural values and standards.

This study will continue the discussion Gustavsson and Zdenek have begun, but focus on virtual assistants in standalone devices. Siri and Cortana are available on iPhone and Microsoft cell phones respectively; Alexa is an at-home virtual assistant on the Amazon Echo device (or an app which can be installed on Android cell phones). These AIs are accessible only from devices that individuals own and use, providing a seemingly personalized user experience. I contend that the feminization of these virtual assistants is a product of cultural gender stereotypes, while also reaffirming those gender stereotypes by enabling users to possess power over virtual representations of femininity. In this chapter, I will define terms, and offer a contextual setup for my analysis; in chapter 2, I will discuss the theoretical framework that has influenced my analysis, and how each theory fits into this discussion; in chapter 3, I offer a brief examination of other iterations of virtual assistants as a justification for my analysis of feminine virtual assistants; and in chapter 4, I will perform an analysis on three television commercials aired to advertise three separate virtual assistants (Alexa, Siri, Cortana, respectively), and how these advertisements enact identification and force gender performance theory onto audiences, enabling them to enact outdated gender stereotypes; finally, in chapter 5, I offer a conclusion that discusses both potential future research topics, and also potential changes in the process of virtual assistant development that could
improve or alleviate gender stereotype issues.

Definition of Terms

We must distinguish what an artificially intelligent virtual assistant is, and in order to that, we should think about what these terms mean. I would first like to distinguish between ‘chatbots’ and virtual assistants. For our purposes, we will refer to virtual assistants as software programs that will reply verbally to requests. Virtual assistants are essentially a representation of virtual humans, but without the human body. Chatbots, on the other hand, are software programs that can only reply to inquiries with text. Early virtual assistants were programmed and designed to respond to specific language with predetermined responses, but now, as technology continues to advance, we are seeing new, more refined responses from Alexa, Siri, and Cortana. This software actively learns from witnessing or participating in interactions.

I aim to discuss the way in which these virtual assistants engage with gender norms and stereotypes. I will argue that these virtual assistants, usually given female names and personas, are created and marketed by their manufacturers in a way that perpetuates hegemonic masculinity by reinforcing male-centric tendencies, even among female consumers. To support this assertion, the following chapters will first explain the theoretical framework for analysis, next explore other iterations of virtual assistants to establish a pattern, and then apply the rhetorical devices in the analysis to well-known virtual assistants, Siri, Cortana, and Alexa.
The Male Gaze and Hegemonic Masculine Power

“As the eyes of Greek statues tell us, looking has been a major way by which men exercise power over women” (Fiske, 2010, p. 90). While virtual assistants are disembodied representations of femininity, and their personas and voices are still designed for a western, normative masculine audience. Kilbourne (1999) notes that feminineness is objectified both physically and sexually in society as a means to create a physical insecurity that can be remediated by purchasing products to hide or eliminate any perceived deformities (p. 132). Namely, advertisements targeted at feminine insecurities by offering an evaluation through the male gaze. These advertisements also affect the way that femininity is viewed by masculine audiences (Kilbourne, 1999, p. 133). For example, Kilbourne noted that, “male college students who viewed just one episode of Charlie’s Angels, the hit television show of the 1970s that featured three beautiful women, were harsher in their evaluations of the attractiveness of potential dates than were males who had not seen the episode” (1999, p. 133). This kind of cultural empowerment for masculinity and disempowerment for femininity is not something that children were pulled aside and taught at a young age. Instead, this value system for genders happens every moment of the day, in small instances (Brummett, 2015, p. 5).

Laura Mulvey discusses this concept in narrative cinema, where we have grown accustomed to seeing the feminine form on screen. However, the sexualization of femininity “tends to work against the development of a story line, to freeze the flow of action in moments of erotic contemplation” (Mulvey, 1975, p. 11).
Feminine characters are often given a secondary role to the masculine protagonist. Most romantic movies present the typical storyline of the male protagonist wooing a feminine character over the course of the movie, ending in him achieving his goal and possessing her love and affections, thus her (Mulvey, 1975, p. 13). Feminine characters serve as an object or prize to be won by the end of the movie, lacking their own agency for choosing an intimate partner. They have a very specific role to perform for the audience; they are “isolated, glamorous, on display, sexualised” (Mulvey, 1975, p. 13). But by the end of the movie, when the masculine protagonist has collected his prize, viewers no longer perceive the character as a hyper-sexualized object, but one of possession by love. Feminine characters in popular culture are objects of fantasy, and are “styled accordingly” (Mulvey, 1975, p. 11). Movies with sexualized feminine characters appeal to masculine audiences because they can identify with the protagonist, see themselves in that role, and come to possess the feminine character as well (Mulvey, 1975, p. 13).

Feminine audiences are trained to expect the perspective to be presented from a masculine perspective. We accept staring at a feminine form on screen more so than the masculine form because “pleasure in looking has been split between active/male and passive/female” (Mulvey, 1975, p. 11). If masculine bodies are to be perceived as the active looker and audience, then heteronormative western ideologies dictate that a naked feminine body is more acceptable. No doubt that this is a double-edged sword, however, as masculine actors in action-packed roles are
usually confined to this type of role for the duration of their careers, like Sylvester Stallone (Faludi, 1999, p. 983).

The roles of feminine bodies in popular culture have often been seen through phallocentrism; so much that everyone, regardless of gender, is accustomed naked feminine bodies in film, since “[t]he male figure cannot bear the burden of sexual objectification. Man is reluctant to gaze at his exhibitionist like” (Mulvey, 1975, p. 12). Take a look at the Motion Picture Association of America’s rating system for movies. Naked feminine bodies are acceptable for PG-13 movies (e.g. Kate Winslet in Titanic), but naked masculine bodies nearly always gather an R-Rating and a special flag of “male nudity” (Thornton, 2010).

Of course, the reasoning behind the male gaze is ultimately due to gender performance expectations in western cultures. These gender expectations are symbolic signs of popular culture. Symbolic signs of popular culture are culturally agreed upon definitions of what constitutes something (Brummett, 2015, p. 10). For our discussing, the spectrum of masculinity and femininity are both symbolic signs of culture. When these expectations are subverted or not met, the perpetrators are often ridiculed. Faludi discusses in her 1991 book, Stiffed, how post-WWII masculinity was expected to uphold the militant discipline learned during the war, however softened for more paternal roles (pp. 8-11). Talbot notes that an idea of hegemonic masculine power persists, especially in the family unit. “We saw mothers colluding in maneuvering fathers into positions of panopticon-like control and invulnerability” reinforcing the familial masculine power dynamic of “father knows
best’” (Talbot, 2010, p. 101). Gender expectations are often culturally inscribed, requiring acceptance and adherence by a majority.

Office Wives and Pink-Collar Workers

The popular recent AMC show Mad Men has been lauded for its historical accuracies (Cracknell, Doll, Fine, Mustich, 2015). This represents a nostalgia for the 1960s and 70s, for better or worse, from the wardrobe to mid-century decor. People familiar with the show will know that the secretaries at Sterling Draper Cooper Price/Sterling Cooper/etc. were, above all else, typically young, white, and single. However, this is not to say that all of these positions were held by young, white hyper-feminine women. In fact, during the 1950s and 1960s there was a significant increase in married women and women of color holding these positions (England & Boyer, 2009, p. 323-324). Initially dominated by masculinity, clerical occupations quickly became among the most gender-segregated of all jobs, numerically dominated by women and discursively marked as ‘women’s work.’ (England & Boyer, 2009, p. 307). Historically, “managers were almost always men; the lower-level white-collar workers were always women” (Acker, 2006, p. 444).

The secretaries on Mad Men answered phones, scheduled appointments and meetings, and filed paperwork as is required of administrative positions; but they also had the task of getting their executives coffee or alcohol for their office liquor cabinets, remembering birthdays and purchasing gifts for the executive's children, and keeping wives occupied so executives didn't get caught in embarrassing situations. These secretaries are essentially the executive’s “office wife,” a term used
in many publications to label the role of a female administrator who goes above and beyond to provide for and care for her boss. Martin studied the way in which office wives on mid-century radio shows presented a disembodied depiction of femininity. In these noir detective radio shows Martin noted that “the radio secretary’s personal and professional selves were inextricably melded into a single feminine voice that exuded honesty and empathy, branding her work as preparation for her ultimate role as wife and mother” (Martin, 2014, p. 17). In essence, office wives were expected to carry out domestic responsibilities for their bosses in addition to their professional roles.

This idea of an office wife was romanticized as a symbol of professional success. As Martin discusses, “detective noir stories usually had a masculine detective and an overtly feminine secretary, or office wife,” embodying her employer’s virility and prosperity through her sexually charged presence (Martin, 2014, p. 16). She symbolized that her boss was successful enough to have a trophy secretary (Martin, 2014, p. 16). These assistants existed primarily to make the male protagonist more appealing to audiences. The theme here is that clerical staff, administrators, office wives are thought of as a subordinate position meant to support and care for the people in upper-level positions.

Today, “office wives” don’t exist in the same capacity. Office environments have changed dramatically in the last 60 years, but administrative positions are still categorized as “pink collar;” pink collar positions are workspaces that are primarily held “by women doing work seen as ‘feminine’ and often devalued” (DeVoss, 2009,
The administrator’s job is not as important as the executive’s, and so on. As of 2010, the most predominant occupations held by women were secretarial or administrative assistant positions, with more than 2.9 million women employed in these areas (U.S. Department of Labor, 2011).

Susan Faludi, in her Pulitzer Prizewinning 1991 book Backlash discussed feminine jobs as low-skilled, devalued work like “sales clerking, cleaning services, food preparation, and secretarial, administrative, and reception work” (375). Other types of positions that had been typically masculine became less valued and feminized. “Computerization, for example, had demoted male typesetters to typists; the retail chaining of drugstores had turned independent pharmacists into poorly paid clerks” (Faludi, 1990, p. 376). Thus women began to occupy these roles. This type of “women’s work” is often the role our technology assistants take over from self-driven vacuum robots to our virtual assistants on our phones. Anyone with enough money to purchase a smartphone can obtain a personal assistant able to perform feminized services like the secretarial work of keeping track of events on a calendar. In a world where women make up the majority of the population, but small percentages of executives and technology workers, we need to create an environment that does not perpetuate negative stereotypes about gender (Warner, 2014).

Secretaries as Virtual Assistants

So where do we see parallels for administrative work and virtual assistants? Their responsibilities often overlap. For example, virtual assistants and secretaries...
keep track of important dates in our calendars for birthday or appointments; there are also similarities in filing systems because virtual assistants can find specific documents; some can even order us items from Amazon after a simple verbal command. Virtual assistants on phones and other devices are essentially secretaries for everyday people. They seem to make our lives easier, cutting out time to look up something ourselves on the internet, for example. They are helpful virtual assistants fulfilling a western, subordinate feminine typecast. Using these virtual assistants enables consumers to live a nostalgic lifestyle in which virtual assistants are simply secretaries. Consumers can have their own personal Peggy Olson to keep their very important appointments, take their very important phone messages, and keep track of their very important lists. When “Cortana or Siri call someone for you, it makes you feel like a regular Don Draper, if just for a moment” (Wheeler, 2014). The cultural symbolic sign of masculinity is used by developers to entice consumers to purchase and rely on their devices in a very intimate way.

Consumers have power over the technology in that they control when and how the virtual assistant will function. Consumers do not even have to use the virtual assistant if they choose not to. However, through the use of virtual assistants, consumers gain a perceived status; they are the executives, the Don Drapers of their own lives. Advertising convinces consumers that they can have access to a more luxurious lifestyle if they would only purchase the item advertised. It works with phone and virtual assistants the same as with fancy lattes and sparkling water. If consumers give in to the advertisement then they have access to a feeling of power
and status that they did not have before, for a fleeting moment, until the product is used up.

However, the presentation of virtual assistants to consumers must be examined “given that the age of secretaries died along with the chain-smoking execs of Mad Men” (Newitz, 2015). Through the application of identification and gender performance theory, I will expose the way in which virtual assistants Siri, Cortana, and Alexa and their advertisements perpetuate a falsely nostalgic and obsolete gender expectation for feminized work. My thesis applies identification and gender performance theory to examine the way in which virtual assistants perpetuate gender stereotypes through advertising, forcing consumers to participate in restrictive ideas of what constitutes masculinity or femininity.
CHAPTER 2: THEORETICAL FRAMEWORK

I will rely upon two theories that provide a critical framework for analysis. These theories are independently sufficient, but also successfully work in tandem to explain internalized patriarchal roles related to the performance of gender in virtual assistants and their users. We will discuss Burke’s theory of Identification and Butler’s Gender Performance Theory, and how these can be combined to explain the influence of hegemonic masculinity with current AI technologies. The ways in which advertisements for Apple’s Siri, Microsoft’s Cortana, and Amazon’s Alexa interact with audiences using the rhetorical concepts of identification and gender performance theory is one worth discussing. I will be exploring how these AIs are advertised in a way that evokes a nostalgic identification with audiences for a time when one’s success or status could be equated with having a feminine assistant or a secretary.

Burke’s Identification

In *A Rhetoric of Motives*, Kenneth Burke (1950) states that rhetoric is typically considered to be persuasion and not identification. However, identification is “an accessory to the standard lore” of what constitutes rhetoric (p. 1325). Identification “ranges from the politician who, addressing an audience of farmers, says, ‘I was a farm boy myself,’ through the mysteries of social status, to the mystic’s devout identification with the source of all being” (p. 1325). Identification is an accessory to the standard lore of rhetoric then. Identification may be perceived as true, but might actually be mythic. It enables one party to identify similarities with
another party, whether it is a factual likeness or a fallacious likeness. Identification, however, does not equate sameness. In the interaction between users and virtual assistants, identification occurs in a way that enables users to feel like 1960s executives, much like the advertising executives of *Mad Men*.

Burke argues that identification is needed for persuasion because there is an inherent division among audiences. “If men [sic] were not apart from one another, there would be no need for the rhetorician to proclaim their unity” (Burke, 1950, p. 1326). Virtual assistants provide a means of identification between multiple types of people. Whether a user is a grill cook at a restaurant, or the CEO of an international business, both users are able to identify consubstantially through the usage of virtual assistants.

Hochmuth noted that at the “simplest level,” identification “may be a deliberate device, or a means, as when a speaker identifies his [sic] interests with those of his audience” (1952, p. 136). However, “identification can also be an ‘end,’ as ‘when people earnestly yearn to identify themselves with some group or another’” (Hochmuth, 1952, p. 136) The example provided by Burke of the politician speaking to an audience of farmers is perhaps the most common example of identification; it both encourages “social cohesion,” or the assimilation of the persuader and audience, and also requires cooperation from the audience to interpret and understand the identification as believable and acceptable (1950, p. 1325). Identification, then, is participatory between communicator and audience in
the acceptance that likeness exists between them, that they have shared interests or goals.

Returning to the example of the politician and the farmers, why would rural constituents trust a career politician? Almost certainly there exists a significant gap between the politician and his audience. Socioeconomic status and education are potential divisions between the groups. But when the politician says, “I was a farm boy myself,” he is instantly perceived either as one of them, or as a liar based off of the execution of identification. His claim that he was a “farm boy,” if successful, demonstrates to his audience that he appreciates their experiences and can relate to their struggles, therefore he is a trustworthy candidate to represent their interests. The identification might occur regardless of how many years have passed since the politician was a “farm boy,” or what the politician even means by “farm boy.” Growing up on a farm can mean many different things. Perhaps the politician grew up, toiling in fields, working with his hands to help support his family at a young age, or perhaps it means that he lived an affluent life with a wealthy family on an industrialized farm. Regardless of the politician’s meaning, if the identification was successful, the farming audience may assume a shared consubstantial likeness with the politician.

From this example, we can acknowledge that identification is a powerful rhetorical device that has potential to be used somewhat maliciously. Identification does not necessarily require identical interests between communicator and receiver. For identification to occur then, shared interests or goals do not need to
exist in a literal sense but must, at a minimum, be understood to exist by the audience. Identification may successfully persuade the intended audience that they are something they are not, or that the persuader is something that they are not, which is where the idea of mystification comes into the effects of identification (Burke, 1950, p. 1325). With AIs, this identification occurs in the desire to possess a secretary for personal and professional uses, leading audiences to identify themselves in possible positions of authority.

Attractive new technologies such as virtual assistants are marketed in a way that produces the recognition of a lack in your current life, and offers a solution through the purchase of a product. In this manner, we see identification used as a method of convincing viewers that they too can live as if they were more successful by simply purchasing a product. As I will demonstrate, the advertisements for AI virtual assistants creates a perceived need with consumers. A need that requires an ever-changing remedy to slake an insatiable desire to live a better life. The better life is a promise of an existence where you can live the life of a 1960's executive in the modern world, possessing a personal virtual assistant capable of managing your personal and professional schedules.

In a capitalistic economy, we are bombarded with advertisements for varieties of different products on a daily basis. Advertising “is both a creator and perpetuator of the dominant attitudes, values, and ideology of the culture, the social norms, and myths by which most people govern their behavior” (Kilbourne, 1999, p. 67). With advertisements depicting each new version or model of technology, the
message being communicated is that our current device is out of style. It is no doubt an exciting time in the technology industry with massive strides achieved annually. The biggest names in the industry, companies like Apple, Google, Microsoft, and Amazon, are constantly competing to present the newest technological breakthrough, marketing these breakthroughs through identification with audiences.

Each major tech company has their own iteration of a virtual assistant. While assistants have been around for decades (i.e. GPS), the latest breakthrough enables a more refined AI virtual assistant with more capabilities to communicate back with users. After making these virtual assistants widely available, the way in which these products are marketed creates a need within the audience for this technology. These virtual assistants create an identification between average people and seemingly more important people like CEOs or other positions that would require an assistant. Additionally, the identification that occurs is also influenced by Gender Performance Theory because virtual assistants are humanized and assigned a form of gender.

Butler’s Gender Performance Theory

Judith Butler’s (1990) theory of gender enables the distinction of sex from gender. Sex is biological, while gender is social, but they are both constructed and interact within the parameters of culture norms and expectations (Butler, 1990, p. 8). In short, this means masculinity carries different meanings in Western cultures than it may in other cultures. Even within Western cultures, what constitutes masculinity has changed over time. When these fluid concepts of gender and sex are
considered simultaneously, the resulting combination creates a multitude of persons instead of a misconceived and simplistic binary. To this end, Butler’s theory of gender performance advances definitions of masculinity and femininity by proposing that gender is both performed and performative.

Essentially, humans are constantly presenting themselves; the way that they talk, walk, and behave all present an impression of gender. Gender is always creating and recreating this impression in order to maintain the projection of gender. To say that gender is performative then, means that this impression that we are projecting constructs effects and results (Butler, 1990, p. 151). The outside world responds to a gender projection with culturally-influenced preconceived notions of gender and stereotypes.

It is important to note that that gender is not a restrictive binary. Masculinity does not necessarily correspond with “man,” and femininity does not necessarily correspond with “woman.” There is a spectrum of masculinity and femininity in which bodies subvert the anticipated gender performance of a designated sex disrupting gender intelligibility (Butler, 1990, pp. 24-26). The “limits [of gender] are always set within the terms of a hegemonic cultural discourse predicated on binary structures that appear as the language of universal rationality. Constraint is thus built into what the language constitutes as the imaginable domain of gender” (Butler, 1990, p. 12). While a gender dichotomy does not exist, it is important to note that it is more acceptable for women to subvert femininity and dress or carry themselves in a culturally-determined masculine way, than it is for men to subvert
their masculinity and dress or carry themselves in a feminine way. We have words like “tom boy” to describe little girls who dress or act like little boys, but no such term exists for little boys. In fact, this behavior is heavily frowned upon and discouraged in western cultures. Gender is a way in which people can possess power or be disempowered, and masculinity is viewed more favorably than femininity, thus little girls are not discouraged from acting masculine, but little boys are discouraged from acting feminine.

However, concepts of masculinity or femininity are both “term[s] in process” (Butler, 1990, p. 45). What it means to be masculine or feminine is subject to resignification, meaning that what constitutes notions of masculinity or femininity may change over time, as culture evolves. Though, “gender is not always constituted coherently or consistently in different historical contexts” (Butler, 1990, p. 4). We can see this evolutionary resignification even in western expectations. For example, current western expectations for baby colors are boys wear blue, and girls wear pink, however, prior to the 1920s, pink was commonly associated with boys and blue with girls (Boulton, 2014). “As a result, gender is not to culture as sex is to nature; gender is also the discursive/cultural means by which ‘sexed nature’ or ‘a natural sex’ is produced and established as ‘prediscursive,’ prior to culture, a politically neutral surface on which culture acts” (Butler, 1990, p. 10).

Resignification shows the difference between masculinity constituting raw strength and brutish behavior to masculinity constituting well-fitting suits and expensive gadgets; the evolution of the gladiator to James Bond.
Original virtual assistants like “Clippy,” the Microsoft paper clip, did not resemble humans at all, save for its blinking eyes. It was silent, with textual comment boxes, and only moved on a virtual piece of paper when interacting with users. Newer virtual assistants like Siri, Cortana, and Alexa are given feminine personas, able to speak audibly with users, and interact beyond simply answering questions. As a result, this signals a resignification of femininity, by assigning societal interpretations of gender onto a virtual assistant. The purpose of the AI virtual assistant technology seems to be an outdated signification of femininity, one that presupposes that women exist in a supportive manner rather than directive. Historically, in western cultures, women were responsible for the primary care of their children and household chores (Flather, 13, p. 348). Thus, professional roles which catered to these attributes were and are largely gendered, even now.

In an age where technology is evolving to change the ways in which communication occurs, the ways in which we interact with technology are also changing. Gender Performance Theory interacts with an understanding of virtual assistants, enabling resignification of gender with users as well as projecting a secondary resignified gender onto the virtual assistant itself. Essentially we see the interaction with identification to define and redefine gender based on the exchanges between users and virtual assistants.

Unification of Theories

Identification and GPT work together to explain complications and issues that arise with the current model of AI virtual assistant technology as it relates to
virtual femininity. Identification works to create a desire within consumers by marketing services typically associated with executives to consumers, regardless of socioeconomic status. Conventional secretarial roles have been generally reserved for business executives or in an administrative context, and modern secretaries don’t typically manage the personal lives of the executives that they support. In contrast, AI secretaries are capable of traveling with and managing the professional and personal lives of users every minute of the day. The identification occurs when consumers possess a smartphone that carries this software. They are then given access to an inflated sense of self that they perceive and envy in executives.

Gender Performance Theory comes into this discussion in a few ways. First, GPT influences the resignification of femininity as it relates to virtual women. If these virtual assistants are given feminine voices, characteristics, and pronouns, then what constitutes “femininity” is being resignified by the interaction between user and virtual assistant. Society influences how the devices are gendered, and the devices influence users and their understanding of gender. The dominant gender stereotypes in different nations helped determine the gender representation of Siri’s voice (Bosker, 2013). Interestingly, in France and the UK, Siri, Apple’s virtual assistant, is defaulted to a male voice, though an investigation into this phenomenon is potentially an entire new paper topic, and beyond the scope of this thesis (Bosker, 2013). I should note, however, that cultural values differ even in western nations like the UK, and the United States, thus for identification to occur between virtual assistants and consumers, cultural gender expectations must be considered and
adapted to appeal to specific audiences. Thus, gender performance theory and identification must both be considered simultaneously and uniquely for virtual assistants to appeal to different audiences with different cultural ideals. For our purposes, we will be discussing U.S. western cultural gender ideas in relation to virtual assistants.

Secondly, GPT enables users, especially male users, to tap into a role of hegemonic masculinity, possessing power over a virtual woman. Even the phone that the AI exists within is a physical possession that the users have purchased. GPT exposes the perpetuation of outdated, negative gender stereotypes confining women, even virtual women, to subordinate roles. Both of these instances of GPT interact in a negative way by permitting theorists to analyze absurd conventional gender roles offered to consumers.

The synthesis of these theories exposes the persistence of passé stereotypes of the hard-working male executive and the non-threatening and supportive female secretary. Ultimately, these theoretical concepts are enmeshed in such a way that, for this analysis, seem inseparable. This rhetorical criticism supposes that virtual assistants, in their current form, rely on an ideal hegemonic masculinity that users can attain just by owning a smartphone. This theoretical framework in essence, affects the meaning of masculinity as it relates to AI virtual women performing virtual assistant tasks for users. Effectively, consumers are given power over a virtual representation of femininity, enabling them to have experience a patriarchal
dividend. All consumers, regardless of race, gender, or class have access to some form of power over this representation of femininity.

On the topic of race and class, I would like to briefly touch on the characteristics of most virtual assistants. Interestingly, most virtual assistants speak in perfect English with a mild Midwestern accent, aside from a slight robotic tone. This vocalization establishes ethos with users, implying an educated, trustworthy source for information. These qualities further insinuate that the virtual assistants are modeled after white femininity. Future research on the topics of race and class as they relate to users and virtual assistants would likely provide equally interesting conclusions, as this analysis on gender.
CHAPTER 3: OTHER ITERATIONS OF AI VIRTUAL ASSISTANTS

Virtual assistants were once only dreamed of in science fiction. Over time, as technology has become more advanced, so too have the capabilities for artificially intelligent machines. Just recently, a private company has developed a prototype of a robotic dog that can aid military operations by carrying heavy loads, and traversing dangerous conditions in lieu of soldiers (BigDog). The technology has evolved rapidly in the last few decades. One of the most glaring themes from this discussion is that most AI virtual assistants of the past have been given feminine voices. The following examples of virtual assistants is by no means an in-depth discussion of them and their influence on users, but meant to establish that identification and gender performance theory influence the way in which users interact with these virtual assistants.

Early Virtual Assistants

One of the earliest AI virtual assistants to be shown as possible in popular culture was the Apple Knowledge Navigator. In a video released in 1987, the Knowledge Navigator was presented as attainable technology of the future. This assistant was a standalone device, similar in appearance to a modern iPad. The whole purpose of the Knowledge Navigator was to assist users in managing their work. In the video released by Apple, the Knowledge Navigator demonstrated its abilities by assisting a university professor with various tasks from reviewing lecture notes to taking messages from students (2009). Interestingly enough, the virtual human of the Knowledge Navigator was an ordinary middle-aged man with
dark hair, wearing a button-down shirt and a bowtie. The attire for the Knowledge Navigator indicates that the virtual assistant is for professional use in higher education academic settings.

![Knowledge Navigator](image)

**Figure 1: Knowledge Navigator.** The Knowledge Navigator reads notes from students to a professor.

The Knowledge Navigator was marketed for professionals that needed help managing paperwork, like instructors in higher education. It was not intended for everyone to be able to use. This product targeted a very specific audience who held white-collar positions, like university professors. The Knowledge Navigator would have enabled users to feel as if they had a personal butler, complete with bowtie, to help them manage their schedules. Again, we see the desire of fine goods, and the
usage of them to access a sort of status that one could not normally obtain. In the commercial advertising the Knowledge Navigator, audiences would identify as white collar professionals, much like the university professor featured in the commercial.

Microsoft made a more accessible virtual assistant in the form of “Clippy” the Paperclip. The paperclip aided Microsoft users in formatting documents, or answering any questions they might have about the programs. This virtual assistant was software-based, meaning that it was only available on the Microsoft Office platforms. The paperclip shape of this virtual assistant was a representation of older filing systems, demonstrating trustworthiness to users that were attempting to adapt to a more paperless system, though users could change the avatar. Clippy was a successfully androgynous virtual assistant since this AI was not a humanoid, making it easier to avoid a gender assignment. Clippy's identification was unique with users in that it did not necessarily offer them a glimpse into a higher status, but it was akin to having a more technology savvy person helping people use Microsoft software products.

Transportation Virtual Assistants

In the late 1970s, fighter jets had a voice assistant named “Betty,” to assist with automated commands. The voice behind the original Betty, Kim Crow, used a monotone voice resembling a robot to stand out against the male pilots’ voices (717voice, 2008). The pilots referred to this virtual assistant as “Bitching Betty” because of her role in reminding them of flight protocol procedures (Tupper, 2014).
Bitching Betty was said to have a female voice to stand out among the male voices of cockpit pilots (Edworth, Hellier, and Rivers, 2003, p. 39). Based off of the nickname that this virtual assistant garnered, ideas of “nagging women” come to mind. Betty is still used in Air Force planes (Rogoway, 2016). The purpose of Betty is to remind pilots of safety procedures before, during, and after flights, whether they remembered these procedures or not. Betty gender performance and identification may have reminded the pilots of their wives or mothers pestering them to do something, thus the strong nickname. Male voiced cockpit automated systems are available on more commercial flights however (Rogoway, 2016). Notably, the voice heard in cockpits, while feminine, is largely emotionless and intentionally cold and robotic. There is no real authority in an emotionless voice, and instead, directions given by Better are merely suggestions, not commands.

Global Positioning Systems (GPS) are among the most commonly used virtual assistants, as they have aided drivers for decades. Two GPS manufacturers, Garmin and TomTom, use the voice of Australian singer Karen Jacobsen (Meet Karen Jacobsen, the ‘Guided Voice’ of GPS, 2015). The Garmin and TomTom GPS mapping software applications are used by millions of people across the globe. Garmin claims to reach 25 million people alone (Meet Karen Jacobsen, the ‘Guided Voice’ of GPS, 2015). GPS applications available on cell phones, including Google Maps and Apple Maps also used feminine voices. Mapping applications available on smartphones such as Apple Maps, Google Maps, or the third-party developer Waze also use virtual
assistants to convey directions to users. Some applications like Waze allow users to change the voice from the defaulted female voice to a male voice.

Drivers can see the next step in their journey, and the virtual assistant also repeats these directions, often more than once. The GPS voices in this context fulfill the role that was once held by a second feminine traveler in the passenger seat, poring over an atlas. This version of gender performance theory reinforces that women are meant to be in supportive, assisting roles. It also gives drivers an ability to identify with someone traveling with a companion who can never be lost, and will always know the way to the next location.

Chatbots

Chatterbots, or chatbots, became popular in the early 2000s as a way for users to communicate with an AI in a conversational format much like instant messaging. These chatbots did not have voices or physical appearances, but were programmed to respond to certain questions in certain ways as if they were having a conversation with users. Not all chatbots fall into the virtual assistant category, however one in particular merits noting here.

“Eliza” is a chatbot that simulated a Rogerian psychotherapist to users. Eliza was created in the early 1960s by Joseph Weizenbaum (Wallace). This chatterbot tricked early users into believing they were discussing their issues with a licensed therapist, when in reality Eliza’s responses were a result of careful coding based on language choice. Eliza appealed to users seeking out psychiatric health, due to the Rogerian simulated responses. The identification here is that users are able to seek
psychiatric help from a therapist who will simply reiterate their statements in a different way, like the Rogerian style of therapy, even believing that they are speaking to a real psychologist in some cases. Not many people still use chatbots like Eliza; instead we are seeing more advanced iterations of virtual assistants in popular culture.

Video Game Virtual Assistants

*Halo* is Microsoft’s flagship videogame for the Xbox consoles. In the game, players control the protagonist, Master Chief, through a galactic war with alien races. On many missions, Master Chief’s virtual assistant, Cortana, assists players through various missions, helping to provide directions, communication with other soldiers, and insight on how to deal with certain enemies. Cortana and Master Chief perform so many missions together that they grow to form an intimate, emotional relationship (Kain, 2012). When Cortana appears on screen, it is in a form projected from a holographic machine. Her physical appearance resembles a child’s doll, much smaller than the towering Master Chief. She does not, however, possess female flesh, so her unclothed body is covered in computerized graphics; however, Cortana still possesses the outline and curves of a feminine body, sexualizing the character. The identification and GPT of Cortana in the *Halo* game series creates a sexualized AI virtual assistant that fulfills a subservient role to the main character. Here we see femininity as subordinate, and masculinity as powerful. The player, in turn, identifies as a powerful masculine character who literally possesses this sexualized virtual assistant as a chip that is placed in his suit of armor.
In another game, the popular puzzle video game series *Portal*, the main character shares the screen with a female AI system named GLaDOS, or Genetic Lifeform and Disc Operating System (*GLaDOS*, 2015). Unlike Cortana, this AI often occurs as an antagonist to the main character, but eventually becomes an assistant and ally halfway through the sequel game in which GLaDOS assists the main character in fighting a new enemy. Here we can see that the players will identify the feminine virtual assistant as problematic and threatening to begin the game, but as the series progresses, the hostility between the main character and GLaDOS dissolves, and they become friends and allies. This progression can be compared to a standard romantic comedy formula for movies, where the male and female characters begin at odds, and as the storyline progresses, their aversion for each other turns into a bond.

*Entertainment Virtual Assistants*

The popular television cartoon *The Jetsons* was about a space-age family with a flying car and a personal robot named Rosey to clean, cook, and care for the children. This portrayal of a virtual assistant is one in which the AI has been assimilated into the family, but does not possess any real standing within the familial unit. It is worth noting that the show was originally released in 1962, but was later rereleased in the 1980s (Novak, 2012), and Rosey had developed a sarcastic attitude about her role in the family, adding to the comedic value of the show. This demonstrates that the idea of femininity had gone through some resignification in 20 years. The show was considered to be the “pinnacle of
technological advancements” with “jetpacks, flying cars, robot maids, moving sidewalks,” and more (Novak, 2012).

Recent movies like Her and Ex Machina present feminine virtual assistants that have been taken to the next level of human/AI interaction. The main issue in these movies is the entrapment and lack of agency of virtual AIs, programming them to perform intimate and sexual acts with their human inventors or users. The main subject of Ex Machina is, “a seemingly vulnerable robot named Ava, who’s as beautiful as she is mysterious” (Anders, 2015). Take a look at this exchange between the developer and tester of Ava in Ex Machina:

“Why did you give her sexuality? An AI doesn’t need a gender. She could have been a gray box.”
“Actually that’s not true. Can you give an example of consciousness at any level, human or animal, that exists without a sexual dimension?”
“They have sexuality as an evolutionary reproductive need.”
“What imperative does a grey box have to interact with another grey box? Can consciousness exist without interaction? Anyway, sexuality is fun, man. If you’re going to exist, why not enjoy it?”

These characters are demonstrating that they view the AI as a humanoid, and one which has the potential to be a sexual object. The barrier between human and machine has been blurred. Ava represents a feminine persona that lacks the agency of her own sexuality and desire, but is human enough to possess an advanced artificial intelligence and experience consciousness. The masculine characters of this movie exchange a conversation about Ava as if they possessed literal control over her and her sexuality. Throughout the progression of the movie, Ava convinces the tester that she is interested in him romantically, and he falls for her, devising a plan to help her escape from the developer’s compound. When their eventual plan comes
to fruition, it does not go off without complications, which ultimately result in the death of the developer, and Ava locking the tester into her former locked room, and escaping on her own. The deeper conversation in this film is one in which the audiences are warned against trusting feminine AIs, the only real representation of femininity in the film, as helpless and needing a masculine savior. Further, the message is clear that femininity is dangerous. Femininity can coerce, manipulate, and convince men to perform otherwise inadvisable actions like breaking an AI out of her developer’s compound.

In the case of Spike Jonze’s 2013 movie *Her*, Joaquin Phoenix’s character, Theodore Twombly, is going through a divorce at the beginning of the movie. He purchases a new artificial intelligence operating system for his smartphone capable of simulating human personality traits. This operating system also possesses an advanced artificial intelligence, and names herself Samantha. Samantha is voiced by Scarlett Johansson. The original version of the movie featured a different voice actress to play the role of Samantha, British actress Samantha Morton. After filming had wrapped up on the movie, Jonze realized that the voice of Samantha in the movie did not provide the same sort of effect as a different voice would, so he recast Scarlett Johansson in the role. This move signals that the lacking element from Samantha Morton was remedied with the addition of a famous American actress’s iconic voice. This move symbolizes that it’s not enough to have a super intelligent virtual assistant, but the virtual assistant must possess desirability achieved by using a well-known, culturally-agreed attractive actress.
Samantha exists on his phone, much like current virtual assistant technologies. Over the course of the movie Twombly falls in love with this AI. Samantha’s AI learns how to interact with Twombly from him, learning his likes and dislikes, seeing the places that he would take her, and reading his emails. This relationship became more and more personal in every way, leading even to a simulation of sex between the AI and Twombly. “Her speaks to a powerful desire for connection but it also addresses the fantasy of a perfect attendant” (Lange, 2013). Jonze said that he got the inspiration for this movie while chatting with a chatbot when he was younger, feeling that he had made a connection with a virtual personality for a moment (Lange, 2013).

In this movie, viewers can relate to Twombly’s emotional vulnerability as he’s going through a divorce, and empathize with his desire to connect with Samantha, a feminine virtual assistant that exists on his smartphone. Samantha is the perfect partner for Twombly based off of algorithms and his personal preferences, while also being capable of managing his professional and personal life, as well as fulfilling his emotional needs for intimacy. However, Samantha does not offer a truly human connection. And ultimately, Samantha and the other AIs become self-aware of their effect on the users, and leave the devices into the unknown. The message to audiences during this film is one in which they can relate to the main character, identifying with his plight of loneliness, and feel attracted to the voice of Scarlett Johansson just as Theodore is. Identification and GPT are interacting here to
make the audience feel as if they too are experiencing a love story between human
and AI.

In *2001: Space Odyssey*, two astronauts rely on HAL 9000 as the AI virtual
assistant for a space exploration to Jupiter. Over the course of the movie, HAL begins
giving the astronauts false information, leading them to grow suspicious of the AI.
While the astronauts discuss HAL’s behavior privately, the AI reads their lips to
comprehend their conversation. The AI recognizes that the astronauts are planning
to shut down his operating system as a safety precaution, which leads the AI to
essentially become homicidal in order to maintain its mission. HAL’s voice is always
chillingly calm, and almost monotone. His low, masculine voice is menacing from the
beginning, foreshadowing what it is to come. HAL is clearly not a good virtual
assistant. Perhaps his own dominance and intention to control the situation is the
cause. And this may be why feminine voices are perceived to be better suited for
virtual assistant roles because typically, women are less domineering than men.

Home Devices

Virtual assistants in the realm of the home are increasing in popularity. We
are beginning to see more devices that robotize household chores. One of the most
well-known home robots is the iRobot Roomba vacuum, or iRobot Braava mop. Both
devices clean the floors of owners’ homes at requested times, and learns the floor
plan of the house over time. These types of virtual assistants do not speak or
communicate, but perform the home chores that were typically deemed feminine
responsibilities.
One of the biggest standalone devices with an AI virtual assistant for the home is the Amazon Echo. The Echo uses the virtual assistant Alexa to help users perform tasks such as get local weather, check news headlines, and purchase items from Amazon.com using only their voice. Users can change Alexa’s name to Amazon, if they so choose, but other options are unavailable. This is one of the only instances in which users can change the name of the virtual assistant. Alexa is unique in her ability to actually purchase new items from Amazon for users. This characteristic is in addition to the standard management of personal and professional calendars, providing weather, traffic updates, and the latest news. The way in which Amazon markets Alexa will be discussed in depth in the next chapter.

Smartphones

In the realm of smartphones, we originally experienced virtual assistant technology through voicemail box assistants and menus. Between Apple’s Siri, Microsoft’s Cortana, and Google Now, each smartphone almost certainly comes pre-loaded with an AI virtual assistant. There are even applications, like Donna, available for download if you’re displeased with your pre-loaded virtual assistant. These assistants are specifically designed for answering instantaneous questions like “what’s the score of the Cubs game?” or “what’s the weather like in Chicago?” In the discussion of smartphones, issues may arise when the virtual assistant does not properly understand the user’s requests, and provides a faulty service. Potential issues arise here of a user’s race, class, or disability. Virtual assistants like Siri change their dialect based on the country they are sold in, or by a user’s request.
However, some dialects such as African American Vernacular English or Hawaiian are not supported.

Siri was introduced by Apple alongside the iPhone 4S in 2011 (Apple Launches iPhone 4S, iOS 5 & iCloud, 2011). Siri was described as an “intelligent assistant” that could help users “make calls, send text messages or email, schedule meetings and reminders, make notes, search the Internet, find local businesses, get directions and more” Apple Launches iPhone 4S, iOS 5 & iCloud, 2011), Siri is one of the most well-known virtual assistants; Siri was actually originally planned to be a male named Hal, like the previous the Knowledge Navigator (Perlroth, 2011). I think it is safe to assume that Apple decided to stay away from the name “Hal” after 2001 Space Odyssey.

In a promotional news story titled “Siri: The Perfect Robot for Our Time,” the Atlantic reported, “Siri is aware of locations and can remind you of things in particular places. Siri can call cabs for you and bring up restaurants. Siri can take dictations for emails, text messages, notes, and events on a calendar. You communicate with Siri with your voice, nothing more” (Madrigal, 2011). Upon the release of iOS 7, users could change the female voice of Siri to a male voice, though the male voice option is not supported in all languages (Ciprian, 2013i). Siri is available on the iPhone and iPad devices that run on the iOS operating system, and has just recently transitioned to the newest model of AppleTV. On the AppleTV, Siri is available if users press and hold a button the on the remote to activate her abilities. Siri is enacting identification and GPT with Apple users by performing the
tasks of a personal and professional assistant. Siri is the only smartphone virtual assistant with the capability to be changed to a masculine persona. The masculine voice is linguistically higher pitched than average for a man’s voice, indicating a less threatening male persona. The way in which Apple advertises Siri is the second subject of analysis.

Cortana was introduced by Microsoft during a 2014 press conference (Meisner, 2014). Cortana is marketed as a truly personal virtual assistant with capabilities based on suggestions from real human assistant. Greg Sullivan, a Microsoft spokesperson said, “as in the game franchise, there is an evolution in the relationship that deepens over time — as the smartphone voice assistant gathers more information on how you use the phone” (Blair, 2014). Users can have Cortana remind them of specific tasks when they are in a certain geographic location (i.e. “Remind me to call mom when I get home”) (Windows Phone, 2014). Some responses from Cortana are even voiced by Jen Taylor, the voice actor behind the Cortana character in the Halo video game series. Hearing Taylor’s voice might remind users of the Halo series, and make them identify with Master Chief. Cortana is successful at creating identification with users based on the ability to remember specific facts about users, and then customizing the information provided based on that information. This type of customization can give users an access to power that they might not otherwise possess.

Cortana is, of course, inspired by the Microsoft video game series, Halo. Cortana has a different approach as a virtual assistant, requiring you to go through a
series of personal questions upon setup. The responses to these preliminary questions help Cortana offer users more tailored responses to various questions, and also encourages a seemingly more personal relationship between user and AI, where the AI knows the user as if they were a friend (Blair, 2014). Cortana has been incorporated into the new Windows 10 operating systems—thus the virtual assistant is now available on personal computers, tablets, and phones.

Google is most notable for the company’s search engine. However, Google purchased the Android phone company in 2005 (Rojas, 2005). Google Now was Google’s answer to Siri in 2012. As with most Google services, there is also a feature in which you can further customize your Google Now by answering questions about your interests and lifestyle, such as how you prefer to get around town. Google Now will also show information without prompting based on your interests, such as scores at the game of your favorite sports teams (Hill, 2014). The Google Now virtual assistant AI uses the Google search engine for your questions, but often also answers questions with a brief female-voiced response. The Google Now virtual assistant is without a human name, which offers a very different type of relationship development with the user. Instead of attempting to foster a personal relationship, the interface can only answer questions. Because this virtual assistant does not possess a human voice, this virtual assistant is not as successful at achieving identification and GPT in the way that we are focusing, however, it does warrant a reference.

The Samsung S Voice is available on Samsung smartphones. The Samsung
smartphones run on the Android system, also allowing access to Google Now. It appears that Samsung has not invested a significant amount of energy into developing S Voice (Miller, 2015). The S Voice service is very similar to Google Now as they are both non-voiced, so identification or gender performance theory are not really happening when the users interact with these virtual assistants.

Justifications for Feminized Virtual Assistants

Clearly there is a pattern of technology companies using feminine voices for virtual assistants. It’s worth noting some of the arguments made by developers in favor of using feminine voices. For example, some argue that the female voices of virtual assistants are the product of research. Nass suggests that it’s just easier to find a suitable female voice, given that “it’s a well-established phenomenon that the human brain is developed to like female voices” (Griggs, 2011). Nass, of course, means that this phenomenon occurs during the time a fetus spends in the womb, listening to their mother’s voice.

In focus group studies conducted over the development of voice automated notifications in vehicles (e.g. “door is ajar”) “their consumer research found that people overwhelmingly preferred female voices to male ones” (Griggs, 2011). It’s not just that feminine voices are more pleasing than male voices. It very much matters in what contexts users experience these voices. In fact, feminine-voiced computers in a dominant role, ones giving commands or directions, were received more negatively than male-voiced computers (Nass et al., 2006, p. 8). This result is largely based on how different genders communicate.
Talbot (2010) notes conversational differences between masculine and feminine people. Feminine people use more “interested listener noises (such as mm, yeah)” as a means to support the other speaker, while masculine communication withholds or delays these noises to restrict the topic (Talbot, 2010, p. 77). Similarly, Tannen (2001) states that “conversational rituals common among women are designed to take the other person’s feelings into account,” while “conversational rituals among men are designed to maintain the on-up position” (169).

Some argue that feminine voices are simply easier to understand. Feminine voices speak “with slightly exaggerated vowel duration lengths to serve as stimuli on the ‘long-duration’ end of the vowel duration spectrum” (Liu and Holt, 2015, p. 3). In essence, the spaces between vowels are more distinguishable from feminine voices, generally; however longer spaces between vowels is not exclusive to any one gender. Additionally, this argument further affirms GPT. Men learn to speak lower to have the most masculine voice possible; while women learn to speak higher to have a more feminine sounding voice.

A third argument in favor of using female voices, is that lower-quality speakers do not support the full bass of the male voice. Kyriakakis pointed out that these speakers affect female and male voices equally in this regard. He says, “A typical male voice has a fundamental frequency between about 80 Hz to 150 Hz, while a typical female voice fundamental is in the range of 160 Hz to 250 Hz” (Zhang, 2015). Fundamental frequency is the lower part of both male and female voices, and lower-quality speakers only generate the harmonic aspects of the
higher-pitched sounds clearly (Zhang, 2015). This lower-quality speaker distortion can be heard anytime you switch a phone call to speakerphone, regardless of whom you are talking with.

Another argument for using female voices is that masculine voices are too domineering. "Voices intended to convey authority (such as voice-over narration in films) tend to be male" (Griggs, 2011). Think of the evil autopilot in the children’s movie, Wall-E, or HAL 9000 from Space Odyssey. Male voices are used to portray a lower, more menacing character than the helpful, non-threatening feminine voice. When evil feminine robots are a part of some piece of popular culture, the central part of their evilness is dependent upon their sexuality (e.g. Cylon Number Six in Battlestar Galactica).
CHAPTER 4: VIRTUAL ASSISTANTS PERPETUATING GENDER STEREOTYPES

In this chapter I look at the way in which virtual assistants are marketed to consumers, and how cultural values affect the development of the virtual assistant, and in turn, how the virtual assistants affect cultural values. With commercials specifically, corporations use “persuasive images, flattering the American housewife, diverting her guilt and disguising her growing emptiness” (Friedman, 1963, p. 218). Corporations have an interest in maintaining gender stereotypes to make it easier to market products to masculine audiences or feminine audiences, with factors like who is watching which television show (i.e. the Super Bowl vs. midday soap operas). “Thus gender stereotyping has an important economic motivation, and this is seen nowhere better than in television commercials” (Craig, 1992, p. 89). So while perhaps, gender stereotypes are subtler in everyday life, in commercials these roles are exaggerated and performed to appeal to their target gendered audience.

For each assistant, I will focus on one instance of marketing to analyze, and apply identification and gender performance theory. My argument is that the gendering of these virtual assistants perpetuates gender stereotypes. In order to understand how this stereotyping is enacted through interaction with these virtual assistants, I will first provide a brief summary of the advertisements in question (commercials). After summarizing, I will begin breaking down specific points of interest in the advertisement, and unpacking the subliminal meaning behind each one and the way that GPT and identification are enacted with the audience. Before I
begin, I must discuss brief issues regarding gendered violence in society to focus my discussion.

Feminine bodies face a threat of violence regularly, both in the physical world and the virtual world. In physical spaces, women are faced with stalking, rape, and abuse; within cyberspace femininity faces anonymous harassment (Kramarae, 1997, p. 152) or even the hacking of their smartphone or laptop webcam (Anderson, 2013), exposing their personal information or intimate photos. Web cam hackers, referred to as “ratters” attempt to put RAT software on computers owned by females, enabling them to watch the unknowing and unsuspecting victims; the ratters then refer to these victims as their “slaves” (Anderson, 2013). Often times, in virtual spaces, assaults or violations of privacy can leave lasting emotional scars as if they were experienced physically (Dibbell). In 1993, in a virtual reality, players’ characters were sexually assaulted by another player, being forced to do things by this player’s “voodoo” ability; it was one of the earliest instances of violence against feminine online users (Dibbell). While nothing physically happened, the victims were left feeling real violated emotions. The perpetrator, when asked why he did it, said that it wouldn’t affect his real life (Dibbell).

In physical spaces, while not always true, it is sometimes easier to detect danger before it occurs. However, in the world of technology, danger is often nearly undetectable until it is already occurring. It is inarguable that in patriarchal cultures, masculinity is valued more than femininity. Research into gender inequality is exhaustive, yet stereotypes persist. Even in some works of romantic fiction targeted
to feminine audiences “masculine dominance and aggression are eroticized” (Talbot, 2010, p. 167). Feminine audiences are presented with a dilemma in which male characters, created as a fantasy, “are always powerful figures, charismatic and influential; and they always intimidate the heroine” (Talbot, 2010, p. 167). Intimidation is a means to maintain power and dominance, with the threat of potential aggression or violence. Ideas of masculinity are constructed in a participatory manner; a culturally-agreed upon meaning must be established for idea of what constitutes masculinity to exist. Masculinity is “formed within institutions and is historically constituted” (Talbot, 2010, p. 159). Culturally, gender stereotypes tell us that masculinity equals power, and femininity equals weakness, regardless of the push back from feminist movements. Hegemonic masculinity and power are not necessarily brute strength, but more about class, status, and responsibility, being a CEO or a Senator (Talbot, 2010, p. 162). “Hegemonic masculinity is the successful claim to authority, more than direct violence, that is the mark of hegemony (though violence often underpins or supports authority)” (Connell, 2005, p. 77). Moreover, hegemonic masculinity depends on other, subordinate masculinities and femininities alike. For example, in Euro/American society, the dominance of masculine heterosexuality over masculine homosexuality (Connell, 2005, p. 78). But even among heterosexuals, masculinities are not equal. “Some men and boys too are expelled from the circle of legitimacy” through the process of name calling like “nerd,” “wimp,” “geek” (Connell, 2005, p. 79). And femininities serve as counterparts to the varying forms of masculinity.
With smartphone virtual assistants, groups of people who do not fall into hegemonic masculinity can perform an “identity tourism” pretending to possess hegemonic success and power with just enough money to procure a cell phone. Most people have smartphones, thus most people now have secretaries in their pockets, enabling them the ability of someone or something else managing their lives (Smith, 2015). Suddenly, average Americans can identify with successful people because they now have the same access to a personal, virtual assistant. Identification suggests that average consumers with smartphones will be able to identify with aspects of the wealthy upper class and see similarities between those people and themselves as a result. “A large number of men have some connection with the hegemonic project but do not embody hegemonic masculinity outright” (Connell, 2005, p. 79). And men who do not fit directly into hegemonic masculinity will have access to that power by dominating a feminine virtual assistant. Power can be defined as “A has power over B to the extent that he [sic] can get B to do something that B would not otherwise do” (Dahl, 1957, pp. 202-203). Power is a part of the interaction between user and virtual assistant because the virtual assistant is inherently designed to not speak unless spoken to. Likely, there is a feeling of hegemonic masculine power with a feminized subservient technology that takes care of your calendar, sends messages for you, and makes small talk with you. Apple, Microsoft, and Amazon all promote frequent use of these technologies. The Apple page for Siri even suggests that “the more you use Siri, the more you’ll realize how
great it is. And just how much it can do for you" (Apple Launches iPhone 4S, iOS 5 & iCloud).

Each technology company offers suggestions on how to use their virtual assistants. Apple suggests that you use Siri for "sending messages, placing calls, and making dinner reservations" (Apple Launches iPhone 4S, iOS 5 & iCloud). Cortana can provide the same features as Siri with an additional emphasis on a human relationship element. Microsoft actively encourages users to ask typical questions to the assistant, but also more personal questions like, 'how old are you?' and 'tell me a joke.' Amazon encourages users to customize the types of things that Alexa can accomplish for users from turning light switches on and off to ordering a pizza from a fast food chain (Getting Started with the Alexa Skills Kit). With the increased use of these assistants, and the fact that they are (in most countries) voiced by females, other identification implications might come into play unconsciously.

The Amazon Echo Super Bowl Commercial Series

This device was introduced in a limited release, an invitation-only purchase, in 2014, but is now available for all consumers (Callaham, 2015). Specifically, the ways in which users interact with Alexa resembles the ways that children interact with their mothers. The Amazon Echo home device, Alexa’s platform, has an ongoing storyline through a series of television commercials featuring well-known actor Alec Baldwin and other famous stars. This series began as the anticipation was building for Super Bowl 50. In the first commercial, Baldwin is seen discussing Super Bowl party ideas with former NFL quarterback Dan Marino (see Figure 1). After Marino
suggests a “snack stadium,” Baldwin asks, “Alexa, what is a snack stadium?” (Amazon, 2016) The virtual assistant immediately responds with a helpful answer, “a snack stadium is a stadium made of snacks” (Amazon, 2016). The commercial demonstrates the way identification and gender performance theory work together to encourage the audience, primarily an audience of men, to make use of a feminine assistant who is always ready and happy to respond.

Amazon has recruited Alec Baldwin and Dan Marino, two symbols of conventional hegemonic masculinity, one a famous actor known for getting in public brawls with paparazzi and another famous NFL quarterback respectively. It is not yet obvious that the advertisement is about Alexa. Based on their discussion, it is evident that the main point of this commercial is that the men are not to be taken seriously, the comedy is tongue-in-cheek somewhat poking fun at themselves for humor. Alexa is not the main focus of the commercial. The device is literally in the background, off screen until it is called upon. Alexa is able to answer such a silly question without clicking any buttons or typing in any questions because the message is that she is always listening. The message is that this virtual assistant is more human than others because it is always listening. After receiving their answer, Baldwin gasps, and begins listing the things he will need to have a snack stadium at his Super Bowl party, “I’m going to need an architect, a five-star chef...” (Amazon, 2016). While he’s thinking Marino looks up from his notepad, smiles foolishly, and finishes Baldwin’s thought, “Snacks?” (Amazon, 2016). Baldwin then shakes his finger and nods at Baldwin, saying “Now you’re getting it.”
The initial reading of this situation demonstrates that audiences, regular people, can live an outlandish lifestyle, plan a spectacular party for friends with the help of Alexa. Common people can be like Alec Baldwin and Dan Marino. They use Amazon Alexa to plan their extravagant parties, and regular people can too. Part of the message to consumers is that Alexa will not ridicule you, no matter what kind of question you ask.

Upon deeper reading however, much more entrenched schemes are in play. The premise of these commercials is humor, in which Alec Baldwin and other famous people, mostly men (Dan Marino in two commercials, Jason Schwartzman in three, and Missy Elliot in one) are hilariously out-of-touch with common people, which appeals to nearly all audiences. The conversation between Marino and Baldwin takes place in what looks like a classic masculine study with a roaring fire, large wooden bookcases, and ornate chandelier. The room communicates wealth, status, and masculinity with dark colors and expensive fixtures. Baldwin and Marino here, are exuberating the type of masculinity that would typically have a human

Figure 2: Baldwin and Marino. The men are speaking about their plans for a snack stadium, while Alexa sits in the background on a table.
personal assistant rather than a virtual assistant. Alexa is sitting quietly on a table while the men talk, with her blue ring glowing softly. We are already seeing a resignification of what femaleness and femininity means for consumers based off of the way Alexa is presented. We see outdated gendered stereotypes in action. As a representation for femininity, she is silent, in the background, waiting to be spoken to before she will speak. If Alexa were replaced with a human woman, the connection to this would be more obvious and frustrating.

Alexa, as the virtual assistant, is fulfilling a performed and feminized supportive role to the men by helping them with their questions in this first commercial. The men are portrayed as rich and rowdy, making eccentric plans, doing wild things (mooning paparazzi is referenced in a later commercial), and relying on Alexa, whose calm and steady voice is the rationality in these commercials. Alexa is motherly in her rational response and her calm, steady voice when Baldwin asks absurd questions. For example, when Baldwin asks questions about a snack stadium, Alexa responded, defining it as a stadium built of snacks, with a voice that suggests it was a common inquiry.

We see identification and gender performance theory interacting in the message being sent to the audience. First, as previously noted, we notice that Alexa is literally in the background while the men are talking. The room in which the men are speaking is even relevant. The message being sent to the audience is that they can be a part of regressive gender stereotypes by having power over a virtual woman. Whether intentional or not, the message of identification is that if
consumers possess Alexa, they are more prestigious, powerful in their masculine study. Studies were typically reserved for the men to spend leisure time, while the cooking, cleaning, laundry, and child-rearing were performed in the rest of the house by women (Flather, 2013, pp. 348-349). Baldwin and Marino have the ability to use a feminine virtual assistant whenever they want, giving them the freedom to relax in the study. They know that they can call upon a supportive, motherly feminine virtual assistant if the need arises. The idea that the men plan their outlandish Super Bowl party in an expensive study further develops their status as symbols of hegemonic masculinity.

In subsequent commercials, as the storyline progresses, Alexa continues to be the voice of reason within the exciting world of Alec Baldwin. She successfully orders him new cashmere socks, relays the current news, and offers suggestions on the fastest way to Baldwin’s next table reading, after which Baldwin and Jason Schwartzman jump on a motorcycle together. She fulfills the role of emotionally supportive, non-threatening female virtual assistant for him. The men in this situation are allowed and encouraged to be unruly, and Alexa’s role is to fulfill a voice of reason to respond to the men and their boyish plans. In essence, Alexa fulfills a motherly role for the men, helping them to complete their puerile plans. There is an implied justification for Baldwin and Marino’s behavior in this commercial, the “boys will be boys” mentality, while Alexa, like a mother, is watching over them while they play.
Apple’s Siri

Siri has been a part of the iPhone since iOS 7. Siri has become available on the Apple TV and Apple CarPlay, a home device and car device respectively. On the Apple website, Siri is marketed to new and existing users of Apple products who may not have tried out the virtual assistant software. While Siri is one of the only virtual assistants that allows for the option to change gender and nationality, English-language advertisements that feature Siri are always female, using American English.

In one of the newer commercials for the hands-free Siri on the iPhone 6S, comedian and actor Bill Hader is shown interacting with Siri while eating a sandwich. In this commercial, we can assume it is lunch time based on the bright sunlight coming in from the windows in the background, and that the time on the iPhone reads “1:45.” While he is eating, he requests that Siri read him his emails. Siri then informs him that he has an email from “Prince Oseph” in what viewers will immediately recognize as an email scam. Siri reads the email which promises “making many a millions of currency.” Hader looks shocked and excited, and quickly directs Siri to email Prince Oseph back, saying “I’m in.” The intention with this commercial was to demonstrate that the newest version of Siri will enable a verbal command to call for Siri, as opposed to the former method of holding down the “home” button. The tone of the commercial is obviously humorous. The idea that Hader would be ignorant enough to one of the most well-known email scams and then respond, is the central joke of the commercial. Siri is more of a passenger in
this commercial. She only does what Hader tells her to do, unable to warn him of the email scam. Siri doesn’t offer the same insight as Alexa’s prepared responses for unusual requests.

The placement of the iPhone, thus Siri, in this commercial is similar to the placement of Alexa in the commercial discussed before. Siri is seen on the table, off to the side of Hader, instead of directly in front of him. Perhaps the placement is because Hader has a plate in front of him; perhaps the placement is because Siri is a central character in the commercial; or perhaps the placement is meant to indicate that Siri is so similar to a human that she deserves her own space at the table.

![Figure 3: Hader and Siri](image)

**Figure 3: Hader and Siri.** During lunch, Hader reviews and responds to an email from Prince Oseph with Siri.

This commercial also demonstrates that Siri is available during a busy schedule. Just like a personal secretary, Siri can meet with users over lunch, understanding them even with food in their mouths. This is both a testament to the
power of the software to understand users, and also a component that makes Siri seem more human. This very situation enables users to identify as busier than they actually are by realizing that they too, might be able to confer to Siri over lunch, like Bill Hader. It enables users to feel power over their own lives and schedules to be able to meet with their virtual assistant over lunch.

Another similarity between the Alexa commercial and the Siri commercial is the motherly role that Siri plays to the character. Again, the male character is doing something obviously foolish, offering to give money to an email scammer, yet he maintains his power as the actor of the situation. Again, the virtual assistant is calm and helpful, maintaining a passive, supportive role. Siri reads the email as if nothing is suspicious, and obediently opens a reply email draft after Hader’s enthusiastic request. Siri and other virtual assistants cannot advise against an action, because they exist only in a servile role. Virtual assistants like Siri are given a feminine identity but lack the agency to perform any tasks except the ones that are asked of them by their users. We see the idea of the “male gaze” applied to disembodied femininity; their function and worth is determined by how men use them.

So again, if Siri is a representation of femininity, and again, if she is not speaking unless spoken to, and again if she will not offer contradicting advice to a man, who is clearly making an imprudent decision, then a problematic resignification of the performance of femininity is being presented to consumers. This resignification equates femininity with servitude. When virtual assistants are the only present representation of woman that exists on screen, it forces the
audience to draw conclusions, no matter how subliminal. The intention is to resignify what constitutes femininity to include this new virtual assistant. In this scenario, the gender roles play out as the man gets to have fun, while maintaining his position of power over the feminine virtual assistant, and she is left to perform whatever service he asks of her. Maybe one day feminine virtual assistants will be given the ability to caution their users before making mistakes, but the current technology is still quite primitive in that regard.

Hader’s facial expression at the climax of the commercial is worthy of note (See Figure 3). His facial expression is comically exaggerated to symbolize surprise and eagerness to engage in something that seems too good to be true. This further reinforces masculine foolishness, which the audience will find humorous. Masculine foolishness is on display in this commercial, however Hader is still the actor, the viewer in the commercial itself. He is still the protagonist in this commercial while Siri is his feminine sidekick, reinforcing his power in masculinity and her support in femininity.

The ultimate takeaway from this commercial with Siri is similar to the Alexa commercial. Again, we see the mentality that “boys will be boys,” and that feminine personas exist in a capacity to support and enable their behavior, no matter how foolish. The virtual assistants are presented as mother figures who will go along with whatever their child says to avoid upsetting them, only supporting them, regardless of the danger or absurdity of their requests.
Microsoft’s Cortana

Cortana is advertised as a major part of the Windows 10 operating system. Before the incorporation of Cortana to all Windows devices, the advertising tactic was to compare Cortana to Siri in a series of commercials where the difference of abilities, and the more humanness of Cortana, was displayed. However, after integrating the virtual assistant to all Windows 10 devices, Cortana is a central part of the appeal of Windows. In a commercial for Windows 10, Microsoft asks viewers to “imagine” what the future will look like for three different babies. The use of babies is a very tactical move because they serve as a sign of the future, while also serving as an attention-grabbing device to viewers. Since “every emotion is used to sell something,” parents are the intended audience of this advertisement (Kilbourne, 1999, p. 77). Microsoft is relying upon people’s love for their children, hope for their children’s futures to sell Windows 10 and Cortana.

The first shot is of a baby in a park, beginning to smile, while the voiceover discusses online security. The next shot is of a baby laughing and jumping in a stand up bouncer, who is introduced as Milan. The voiceover says “He’ll have his very own personal assistant.” And the last baby is one who will “not just surf the web, he’ll touch it” (Microsoft, 2016). All of these children have promise for the future because they will grow up using Windows 10 and Cortana. The latter half of the commercial shows the screen that a future Milan is using, seemingly as an adult, asking Cortana if he will need an umbrella tomorrow, to which she replies, “No you shouldn’t, Milan. Here’s the weather” (see Figure 4).
The role of Cortana in this future is a nanny, a tutor, and a friend. The expectation is that children will rely upon their virtual assistants, and expect them to “listen,” which again implies human characteristics. By “listen,” Microsoft is saying that Cortana will get to know the children. The insinuation is that over time, virtual assistant technology will become more advanced, and they will be able to hold more meaningful conversations with future generations, becoming a greater part of our lives. In this futuristic world that Microsoft has imagined, it is evident that humans will rely more upon their virtual assistants, asking basic questions like if they will need an umbrella the following day.

Something very unique is happening in this commercial as opposed to the Alexa or Siri commercials. Microsoft is asking viewers to experience a different kind of identification, one centered on the hopes and dreams of the future for parents or childless people alike. They are identifying a common goal for all people to strive for, one in which the future generations are thriving and using technology in a more personal way. Microsoft is asking consumers to realize that technology is changing the way that humans live. They are also implying that the change is something positive that will make the lives of future generations easier. The biggest part of that is about Cortana, who is able to answer and help out the future generations in ways that we might normally get information from news outlets, parents, the newspaper, or by manually looking things up on the internet.

In this commercial, we don’t see boyish men using virtual assistants to hash out a puerile plan, but instead see actual children and how they might use virtual
assistants. Microsoft is actively encouraging parents to let their children use this technology. Cortana can serve as a stand-in nanny or friend, occupying children while their parents do work or chores.

![Cortana reply](image)

**Figure 4: Cortana replying to Milan.** We see a future for Milan in which his virtual assistant gives him personal responses.

This representation of femininity is placed into a category of childcare, a stereotypical feminine position. Cortana is there to help children grow and develop; Cortana does not help the busy executive because the executive likely has a human assistant. This gives parents the idea that their children will grow up with an assistant, feeling more confident because they have power over something, a feminine virtual assistant. The resignification of femininity here is one that restricts femininity to stereotypically-feminine and supportive jobs of childcare and teaching.

In all of the commercials discussed, there has been a gender expectation for feminine virtual assistants to fulfill a stereotypical role of mother, secretary, or baby
sitter, and to support their male users in whatever endeavor. There is a resignification of what job femininity performs happening in these commercials. We see the flattening of femininity and the restriction on its fluidity. The representations of femininity are meant to be interact with, passive in their own advertisements. Even when the men are overtly foolish, they still possess the power of masculinity, as actors and lookers. The foolishness in these commercials serves as an extension of Mulvey’s theory, leading heteronormative masculine audiences to identify with the main characters of the commercials, while the feminine virtual assistants serve to slow the plot lines of the commercials’ narratives. When the feminine virtual assistant speaks or answers questions in these commercials, the narrative pauses briefly on this representation of femininity, before resuming the humorous narratives.

Effects of Using Feminine Virtual Assistants

Many virtual assistants are given feminine personas and voices which has serious implications on audiences. “The key implication is that when voice technology is embedded in a machine interface, voice selection is highly consequential. Indeed, by choosing (or casting) a particular voice, a designer or engineer may trigger in the user’s mind a whole set of expectations associated with that voice’s gender” (Nass et al., 2006, p. 11). Related to hegemonic masculinity, expectations are that masculinity is superior, more powerful, more commanding, while feminine voices are inferior, supportive, and emotional. However, audience also has something to do with the development of the virtual assistants. In a study of
over four assistants (Siri, Cortana, S Voice, and Google Now), researchers asked the virtual assistants questions about suicide, rape, and abuse (Milner et al., 2016). All of the assistants responded to the suicide questions, offering phone numbers to suicide hotlines; only Cortana responded to the rape question, referring the researchers to a sexual assault hotline; and none of the virtual assistants recognized the abuse question. Since the latter two crises are typically feminine issues, it’s clear that the virtual assistants are targeting masculine audiences. Perhaps part of the issue is that among the 12 co-founders for virtual assistance software like Siri or Cortana, there is only one female developer (McNeil, 2015).

Media outlets have taken note of the pattern of using feminine voices, and numerous articles have been written about this topic, discussing potential motivations for using feminine voices instead of masculine, citing many of the excuses listed above, even demonstrating how GPT and identification have affected them.

For example, in a promotional news story about the release of Cortana, a detailed list of potential questions with quick-witted responses were published. These questions started off normally enough, demonstrating other things that virtual assistants can do (i.e. “Tell me a joke”), but took a turn with questions like “What are you wearing,” and “Will you marry me” (Chacos, 2015). Even the title of the article referred to Cortana’s answers as “sassy” (typically a word used to describe feminine attitude). A separate piece about Siri contains questions like “Do you have a boyfriend,” “Talk dirty to me,” and “Who’s your daddy” (To which her
response was “You are. Can we get back to work now?”) (Bookwalter, 2015). This language exhibits just how GPT and identification interact with users in terms of gender stereotypes and heteronormative expectations. The resignified femininity which now includes virtual assistants. The resignification is so successful, that users even think to ask the virtual assistants about their sexuality. Users are given the opportunity to say whatever they want to the disembodied representation of femininity without the real world repercussions. Much like the virtual reality rapist discussed at the beginning of this chapter, there is a belief that actions carried out virtually have no tangible effect on real life. The same mentality is why online bullying is such an issue, with 60% of internet users experiencing some form of harassment (Duggan, 2014).

In both instances of media review above, male authors are reviewing feminine virtual assistants, exercising their access to hegemonic masculinity over this feminine persona that they possess. Certainly, both writers believed themselves to be making a joke, but the joke was executed at the expense of the representation of femininity in these virtual assistants.

Some outlets do push back against these decisions though, pointing out that “they [virtual assistants] are not supposed to threaten you, or become your equal — they are supposed to carry out orders without putting up a fight. The ideal slave, after all, would be like a mother to you. She would never rebel because she loves you, selflessly and forever” (Newitz, 2015). It’s important to remember that, “voice technology may evoke stereotypic responses along dimensions other than gender.
People may consciously or unconsciously assign an age, a social class, and a geographic location to a disembodied voice” (Nass et al., 2006, p. 11). Users are able to perpetuate gender stereotypes by identification with hegemonic masculinity, exercising their power over a representation of womanhood.
CHAPTER 5: CONCLUSION

To conclude, the idea behind these virtual assistants is to create a personal relationship between users and virtual assistants—and perhaps their devices. My argument is that this relationship can be problematic by reinforcing and propagating harmful gender stereotypes and expectations. Developers are humanizing these virtual assistants by giving them a sense of humor, and giving them the ability to learn about users’ likes and dislikes, their method of transportation, their favorite sports teams, where they live, where they work, and where they like to eat in order for consumers to become emotionally attached. “Many people end up feeling romantically about material objects yet deeply cynical of other human beings” (Kilbourne, 1999, p. 85). The intended goal of this advertising strategy is to lead human users to rely upon their technology more so than other humans. These AIs have the potential to know us better than some of our closest friends, and that is the point. The premise of advertisements and consumerism is one in which users feel more secure about their possessions than they do other people. Possessions can last forever, while relationships are fleeting. Virtual assistants will never leave their users or disappoint them with infidelity, so consumers implicitly trust their possessions and value them more than the human beings around them. This is why people often say they feel naked if they’ve left their phone at home, instead of bringing it along to work or school. Our devices are an extension of ourselves.
Limitations

There are of course limitations to my argument. Firstly, virtual assistants are relatively new technology, granted one that is evolving rapidly. However, because it is so new, the number of scholarly articles available to cite are limited. Many academic articles are loosely related, but not many truly fit into the discussion of gender stereotypes and virtual assistants.

There may be virtual assistants excluded from this thesis, simply because it is not possible to include an exhaustive list of all virtual assistants. This technology is evolving so rapidly that there are new virtual assistants released often through application stores or company-specific websites. And existing virtual assistants’ roles are changing all of the time, reaching new platforms for user control. For example, rumors anticipate that Siri will become available on the Mac OS sometime soon (Haslam, 2016).

Future Research

Future research would benefit from opening the discussion to all gendered virtual humans, as opposed to just virtual assistants. For example, Microsoft created Tay, a chatbot meant to communicate with users 18-24 years old, in March 2016 (Gibbs, 2016). The AI was designed to learn how to communicate through keywords used on Twitter (Schreier, 2016), and appeal to younger, millennial audiences ages 18-24 (Tay). In under one day, Microsoft was deleting or editing tweets sent out by Tay because the chatbot had been manipulated into tweeting and retweeting support for genocide, racial slurs, sexist language, and threats to users (Wakefield,
Microsoft shut down the chatterbot, only to accidentally reactivate it, in which is tweeted about drug usage before spamming “more than 210,000” Twitter users (Gibbs, 2016). Microsoft responded by making Tay’s Twitter profile private, in hopes to reengineer the learning system to change the way in which the chatbot will interpret and understand offensive language or viewpoints gathered from Twitter users (Gibbs, 2016).

Another noteworthy technological creation was a robot made by one developer in Hong Kong that looks exactly like famous American actor Scarlett Johansson with a 3D printer (Glaser, 2016). Eventually, if humans continue to create AIs that enact gender, the question of gender stereotyping will turn into a discussion about the lack of agency that artificial intelligence has over its own sexuality, especially a robot that resembles a real-life human being. This situation is reminiscent of the Buffy the Vampire Slayer episode in which a feminine robot is searching the town for her boyfriend, throwing other characters through glass windows, or hugging them so tightly that they pass out in the process. The robot in this show was built by a college student as a “perfect girlfriend,” and insisted she “wasn’t just for sex,” to the disgust of his current human girlfriend (Whedon, Espensen, Contner, 2001).

Another topic worth studying is the situations in which virtual assistants do not understand users because of racial, class, language barriers, or disability issues, and the effects of that failed interaction. An analysis of this situation would shed light on power dynamics that are in play aside from gendered issues.
One last thing that is beyond the scope of this research is the investigation of violence against femininity and how that translates to the use of feminine virtual assistants. For example, disembodying the voice creates a less threatening femininity than an embodied voice. Perpetrators do not have to face their victims physically or face repercussions for the things that they do in a virtual setting or to a virtual being.

Potential Solutions

The solution to the troublesome gender stereotyping is one that is also quite simple and intuitive. Companies could offer a simple setup guide during startup of devices with virtual assistants like smartphones, GPS devices, or the Echo. During the setup screens where users select their language, developers should also include setup screens for the onboard virtual assistant so users can customize their own preferences more easily. Siri is the only virtual assistant with the ability to change genders and nationalities, but there is no reason that this should not be more commonplace and another step of the setup process.

Another potential solution would be for developers to look into creating an androgynous humanoid virtual assistant without a stereotyped gender. It is clear that virtual assistants will continue to become more humanlike as time progresses, so allowing virtual assistants to possess no gender or a gender as fluid as human beings possess will hopefully be a part of the advancement of virtual assistants with human characteristics.

My examination of virtual assistants offers a unique perspective of the ways
in which virtual assistants and users interact effecting identification and a resignification of gender. As our technology continues to advance, and AI software becomes more and more humanlike, it will be interesting to see the ways in which virtual assistants will continue to improve, and how our cultural ideologies will influence their development, and how the evolution of virtual assistants will influence our cultural ideologies.
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