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GIFTING CONSUMPTION IN SOCIAL RELATIONSHIPS

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Gifting Consumption in Social Relationships

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for the Degree of Doctor of Philosophy

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CERTIFICATE OF ORIGINALITY

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ABSTRACT

Gifting is prevalent in our daily life. Consumers send gifts in multiple sociocultural contexts. For example, consumers send birthday gifts to their friends, holiday gifts to family members, or housewarming gifts to a new neighbor. A unique difference distinguishing a gift from a normal product is the social value embedded in it. Gifts have extensive social values and they help givers establish and maintain social relationships, and serve as a symbolic communication of giver's thoughts and feelings toward the recipient. Despite the growing attention to gifting, relatively little research has explored what kinds of gifts can help gift-givers initiate a romantic relationship or maintain the current social relationship with older adults.

To address these two issues, in the current thesis, I first review the existing literature on gifting research and product gender. Following that, in Chapter 3, I explore how the presence of the romantic motive influences consumers' gift choices. Fourteen studies demonstrate that the presence of the romantic motive triggers consumers' intention to signal attraction, which in turn leads to a higher intention to choose gender-specific products as gifts to recipients. Consistent with this mechanism, this effect attenuates or diminishes when gift-givers do not want to disclose their romantic feelings or when gift-givers are in the relationship maintenance stage with gift recipients. Moreover, this effect appears, even at the cost of forgoing another identity-consistent gift; whereas gift recipients indeed perceive that givers have more romantic feelings toward them when they receive a gender-specific (vs. gender-neutral) gift. In Chapter 4, I investigate how the recipients' age influences consumers' preferences for gender-neutral products. Two studies indicate that consumers are more likely to choose gender-neutral products as gifts for older adults (vs. younger adults). Taken together, these findings contribute to gifting literature, romantic motive literature, aging

literature, and product gender literature. These findings also provide significant insights to marketers about how to better position and promote their products for those looking for gifts for romantic targets or older adults.

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CHAPTER 1. INTRODUCTION

Gift-giving is prevalent in our daily life (Ferguson, Megehee, and Woodside 2017) and occurs in multiple sociocultural contexts (Belk 1979; Givi et al. 2022; Park 1998). A significant difference distinguishing a gift from a typical product is the embedded social value. Therefore, gifts play a significant role in consumers' social lives (Larsen and Watson 2001). Gifts help givers establish and maintain social relationships (Ruth et al. 1999) and serve as a symbolic communication of the giver's thoughts and feelings toward the recipient (Belk 1979; Zhang and Epley 2012).

People often send gifts to initiate or maintain different social relationships, such as a birthday gift to friends, a holiday gift to family members, or a housewarming gift to a new neighbor (Belk 1979; Givi et al. 2022). Due to its prevalence and importance, gift consumption has become a tremendous market all over the world (Ferguson, Megehee, and Woodside 2017; Park 1998). The global gift retailing market is expected to grow by USD 13491.69 million from 2022 to 2027 (Technavio 2022). It has been estimated that an average American spends around \$998 during the holidays (Pusateri 2021), and approximately 10% of the total retail market in the United States derives from consumers' gift purchases (Unity Marketing Gifting Report 2015).

In this thesis, I'm interested in investigating how consumers build or maintain important social relationships using gifts. First, gifts can facilitate the formation of social relationships (e.g., Cheal 1988; Larson and Watson 2001), and one of the social relationships in which gift-giving plays a major role is the romantic relationship. However, relatively little research has explored what kinds of gifts can effectively transfer gift-givers' attractions and help givers successfully build romantic relationships with significant others. The limited research on this topic has suggested that gifts with long-term accumulated value (Chen et al.

2015) and congruent with the recipient's self-image (Luo et al. 2019) may be more appropriate in those situations.

Also, gifts are significant in maintaining the current relationship. As the population aging becomes faster, consumption among older adults has become a tremendous market all over the world. However, previous research did not pay much attention to this area, especially what kinds of products are suitable as gifts for older adults. The limited research mainly investigates the consumptions made by older adults *for themselves*. For example, some research indicates the consequences of older adults' food consumption (e.g., alcohol, coffee, vegetables, etc.; Armstrong-Moore et al. 2018; Johnson-Kozlow et al. 2002; Kim et al. 2015), and some research tests older adults' responses toward emotional advertisements (Williams and Drolet 2005).

This thesis aims to investigate two research questions: (1) whether and why romantic motives influence consumers' preferences for gender-specific gifts, and (2) whether and why recipients' age affects consumers' preferences for gender-neutral gifts. In the following part of this thesis, Chapter 2 reviews literature about gifting research and product gender. Following that, Chapter 3 provides the literature support and empirical results about how and why romantic motives influence consumers' preferences for gender-specific gifts. Then, Chapter 4 investigates the effect of recipients' age on consumers' preference for gender-neutral gifts.

CHAPTER 2. CONSUMER BEHAVIORS ABOUT GIFTING AND PRODUCT GENDER

2.1 CONSUMERS' GIFTING RESEARCH

A gift is a product or a service that is provided by the giver to the recipient (Belk 1979; Belk and Coon 1993), and gift-giving refers to the exchange process between givers and recipients (Chakrabarti and Berthon 2012; Cohn and Schiffman 1996). Gifting is prevalent in our daily life (Ferguson, Megehee, and Woodside 2017) and occurs in multiple sociocultural contexts (Belk 1979; Givi et al. 2022; Park 1998). Past research on gifting has explored different aspects of gift-giving (see a comprehensive review by Givi et al. 2022). One stream of research focuses on pre-gift exchange (e.g., Givi and Galak 2022; Klein, Lowrey, and Otnes 2015; Zhang and Epley 2012). For example, some of the literature examines different types of motives that drive givers to send gifts and the impact of different motives on givers' gift selections. Gifting motives that are well-studied include altruism (e.g., Belk 1979), egoistic benefits (e.g., Belk and Coon 1993), social norms (e.g., Givi 2021), and relationship enhancement motivation (e.g., Klein, Lowrey, and Otnes 2015). Some of the literature investigates what resources givers input in gifts, especially the input of money (e.g., Flynn and Adams 2009; Givi and Galak 2022) and thoughtfulness (e.g., Givi, Galak, and Olivola 2021; Zhang and Epley 2012).

The second stream of research focuses on preference mismatches between givers and recipients. For instance, givers tend to follow the gifting norms rather than recipients' actual preferences, but recipients may appreciate gifts based on their actual preferences (Givi et al. 2022). Another research shows that givers prefer gifts that dazzle when recipients open it,

while recipients prefer gifts that provide maximized long-term value (Galak, Givi, and Williams 2016).

The third stream of research examined the impact of contextual factors, such as how culture influences consumers' gift decisions and preferences (Beatty, Kahle, and Homer 1991; Giesler 2006; Wu, Steffel, and Shavitt 2021), and gifting occasions on givers' gifting choices, such as how formal the gifting occasion is, how important the occasion is, and how familiar between the gift givers and gift recipients (Wooten 2000).

Lastly, the stream of research I interest in mainly focuses on investigating different types of value embedded in gifts (e.g., Antón, Camarero, and Gil 2014; Waknis and Gaikwad 2017). Some research shows that gifts have economic value (a reflection of monetary price), functional value (perceived utility of as a functional product), social value (serve as a social symbol, convey social meanings, initiate or maintain social relationships), and expressive value (expression of the givers' self-identity; Larsen and Watson 2001); whereas Givi et al. (2022) categorize gifts' value in a more general way, they indicate that gifts' value can be divided into economic value and social value. Although different researchers hold different opinions about the categorization of gift values, all of them agree that social value plays a significant role in distinguishing a gift from a normal product.

Since gifts have extensive social values (Larsen and Watson 2001), they can help gift-givers establish and maintain social relationships (Ruth et al. 1999) and serve as a symbolic communication of the giver's thoughts and feelings toward the recipient (Belk 1979; Zhang and Epley 2012). In the current paper, I focus on investigating what types of gifts can effectively initiate a romantic relationship or are suitable to send to older adults. Chapter 3 and Chapter 4 will discuss these two projects in detail.

2.2 PRODUCT GENDER: GENDER-SPECIFIC PRODUCT AND GENDER-NEUTRAL PRODUCT

Gender represents the socially constructed meanings of one's biological sex (Krijnen and Van Bauwel 2021). Compared to biological sex, gender is socially constituted and reflects the extent to which a person identifies with masculine and feminine personality traits (Avery 2012; Deaux 1985; Fugate and Phillips 2010). Gender is one of the most central characteristics of humans (Avery 2012) and is also widely incorporated in products, brands, and even services (Iyer and Debevec 1986; Milner et al. 1990; Milner and Fodness 1996; Stern et al. 1993). Prior research finds that gendered cues used in product design can induce consumers' positive responses and are widely accepted by the market (Fischer and Gainer 1994).

Previous research defines gender-specific products from multiple perspectives. For example, Fugate and Phillips (2010) describe a gender-specific product as a product that embeds the traits of masculinity and femininity as one of the primary dimensions. Similarly, McGinley (2019) views the gender-specific product as a product that materializes and performs either a masculine or a feminine identity meaning. Another conclusion given by Van Tilburg (2015) indicates that the product gender is determined by the promotor's gender and the general consumption group. Combining these definitions, in the current paper, I define **gender-specific products as products commonly used by consumers of a particular gender, either because of their fit with gender-specific biological needs or the signaling of gender identity.** Likewise, **gender-neutral products are defined as products commonly used by consumers of all genders.**

Based on Bem's (1981) Gender Schema theory, I divide gender-specific products into "male-specific products" and "female-specific products" based on two principles. First, male and female products can be classified by product function. For example, some gender-

specific products are created to serve people's biological needs, such as men's shavers and feminine hygiene products (Ehrnberger, Räsänen, and Ilstedt 2012; Gainer 1993). Thus, these products are naturally manufactured as male or female products.

Second, male-specific and female-specific products can be sorted by product design. For example, manufacturers highlight and embed gendered cues using different product designs (Ehrnberger, Räsänen, and Ilstedt 2012; Hyde 2005). Specifically, pink and red colors, lighter tones, and shiny surfaces are perceived as feminine; whereas blue and green, darker tones, and dim surfaces are perceived as masculine (Ehrnberger et al. 2012; Van Tilburg et al. 2015). Shape is another commonly used element in gender-specific design. A round shape and curved polygons, and round type fonts are associated with femininity; while angular polygons and straight, sharp type fonts are perceived as masculine (Juwaheer et al. 2020; Lieven et al. 2015; Palumbo, Ruta, and Bertamini 2015; Van Tilburg et al. 2015). Materials can also help signal the product's gender. For example, smooth texture, clean layout, and soft surface are commonly perceived as feminine and rough texture, complex layout; while hard and rough surface is seen as masculine (Ehrnberger, Räsänen, and Ilstedt 2012; Van Tilburg et al. 2015). In addition, some specific patterns and decorations can also serve as signals of gender, such as flowers, butterflies are regarded as feminine; while lions, weapons, and fierce animals are perceived as masculine. Thus, product design can also classify male-specific products and female-specific products.

Previous research in the gendered area primarily revolves around how individuals project gendered meanings to different objects or behaviors. For example, Brough et al. (2016) find that people hold a green-feminine stereotype, which in turn, leads to a lower intention to engage in green products among male consumers; Kim and Maglio (2021) investigate an association between letter case and perceived masculinity/femininity. Specifically, people believe that lowercase is perceived as feminine and uppercase is

perceived as masculine. Thus, feminine objects (vs. masculine objects) are more favorable if their names are presented in lowercase (vs. uppercase); Yan (2016) indicates that there is a precision-masculinity intuition that round number is perceived as feminine and precise number is perceived as masculine. Thus, marketing communications are more effective if the marketers can match the precise (vs. round) number with the product's masculinity (vs. femininity).

In the current paper, two projects were accomplished to investigate what incentives can motivate consumers' preferences to choose gender-specific products or gender-neutral products as gifts for recipients. Chapter 3 and Chapter 4 will discuss these two projects in detail.

CHAPTER 3. THE GIFT OF LOVE: GENDERED GIFTING AS A ROMANTIC SIGNAL

Gifts have extensive social values, and they play a significant role in consumers' social lives (Larsen and Watson 2001). Gifts help givers establish and maintain social relationships (Ruth et al. 1999) and serve as a symbolic communication of the giver's thoughts and feelings toward the recipient (Belk 1979; Zhang and Epley 2012). People often send gifts to initiate or maintain different social relationships, such as a birthday gift to friends, a holiday gift to family members, or a housewarming gift to a new neighbor (Belk 1979; Givi et al. 2022). Due to its prevalence and importance, gift consumption has become a tremendous market all over the world (Ferguson, Megehee, and Woodside 2017; Park 1998). The global gift retailing market size is expected to grow by USD 13491.69 million from 2022 to 2027 (Technavio 2022). It has been estimated that an average American spends around \$998 during the holidays (Pusateri 2021), and approximately 10% of the total retail market in the United States derives from consumers' gift purchases (Unity Marketing Gifting Report 2015).

Gifts are frequently used in building and maintaining romantic relationships. During the formation stage of romantic relationships, consumers often use gifts to express their romantic feelings and attractions to the recipient (Belk 1988; Belk and Coon 1993; Caplow 1982; Huang and Yu 2000). An appropriate gift makes givers' love tangible and is crucial to successfully form romantic relationships with significant others (Belk and Coon 1993), while an inappropriate gift may kill the unstable relationship in its cradle. Therefore, an important question is what type of gifts givers should use to convey their romantic feelings and attractions effectively to the recipients in forming the romantic relationship. The limited research on this topic has suggested that gifts that have long-term accumulated value (Chen et

al. 2015) and are congruent with the recipient's self-image (Luo et al. 2019) may be more appropriate in those situations.

Adding to this stream of research, in the present research, I investigate the influence of romantic motive on the selection of one specific type of gift: gender-specific products, defined as products commonly used by consumers of a particular gender, either because of their fit with gender-specific biological needs or the signaling of gender identity. (adapted from Fugate and Phillips 2010; McGinley 2019; Van Tilburg 2015). Drawing from the literature on gifting, romantic relationships, and gender-specific products, I propose and find that the presence of a romantic motive influences consumers' preference for gender-specific gifts due to the gift-givers' heightened intention to signal their attraction to the recipient. I further find that this effect attenuates or diminishes when gift-givers do not want to disclose their romantic feelings. Moreover, gift recipients indeed perceive that givers have more romantic feelings toward them when they receive a gender-specific (vs. gender-neutral) gift, suggesting that this is an effective strategy in building romantic relationships.

Our findings contribute to a better understanding of consumers' gift selection (e.g., Belk 1979; Belk and Coon 1993; Liu, Dallas, and Fitzsimons 2019; Polman and Maglio 2017) by investigating an underexplored gifting occasion - romantic gifting. In so doing, the present research also adds to the romantic motive literature (e.g., Griskevicius and Kenrick 2013; Janssens et al. 2011; Jones and Barlow 1990; Sundie et al. 2011) by demonstrating how romantic motive influences consumers' gift-giving behavior. Moreover, I also contribute to the existing research on gender-specific products (e.g., Avery 2012; Deaux 1985; Fugate and Phillips 2010; Van Tilburg et al. 2015) by revealing the important role of gender-specific gifts in building romantic relationships. Moreover, the present research contributes to social signaling literature (e.g., Berger and Heath 2007; Chen, Wang, and Ordabayeva 2022; Wang and Griskevicius 2014) by showing what kinds of products can be used to signal

interpersonal attraction. Practically, this research provides important insights to marketers about how to better position and promote their products for romantic occasions and in gifting seasons.

3.1 LITERATURE REVIEW

3.1.1 Gifting and Social Relationships

Gifting is prevalent in our daily life (Ferguson, Megehee, and Woodside 2017) and occurs in multiple sociocultural contexts (Belk 1979; Givi et al. 2022; Park 1998). Previous work suggests that gift plays an important role in our social life (Mauss 1924) by facilitating social communications between gift-givers and gift recipients (Belk 1979; Schiffman and Cohn 2009; Sherry 1983). A gift can serve as a means through which gift-givers can communicate the information they wish to deliver to the recipient. The information could be personal values, personalities, and feelings that people feel shy or inappropriate to express in person (e.g., Belk and Coon 1993; Cheal 1987; Larsen and Watson 2001). For instance, people send nutritious food to signal that they wish patients to recover very soon, send exquisite decorations to express that they wish their friends to live happily in a new house, and send books and stationery to indicate that they wish children to work hard in the coming semester.

Gifting facilitates the formation and maintenance of social relationships (e.g., Cheal 1988; Larson and Watson 2001), and one of the social relationships in which gifting plays a major role is a romantic relationship. Romantic relationship refers to a mutually acknowledged, ongoing voluntary interaction between two partners, accompanied by a distinctive expression of intimacy, passion, and commitment (adapted from Collins, Welsh, and Furman 2009; Sternberg 1986). Romantic relationship is one of the core social relationships that is uniquely and significantly related to people's subjective well-being

(Campbell et al. 2005; Dush and Amato 2005). Gifting is common in romantic relationships. For example, a boy or a girl sends gifts to express romantic feelings to his or her romantic target, a boy sends expensive gifts to his girlfriend to show his commitment to the relationship, and a husband may send gifts to his wife on special occasions like birthdays and anniversaries to maintain their romantic relationship. In the current research, I theorize that the presence of the romantic motive triggers consumers' intention to signal interpersonal attraction, which in turn leads to a higher intention to choose gender-specific products as gifts to recipients.

3.1.2 Romantic Motive and Interpersonal Attraction

Romantic motive refers to a goal to form a romantic relationship with a specific target (Griskevicius et al. 2007; Griskevicius and Kenrick 2013; Janssens et al. 2011; Kim 2020; Sundie et al. 2011). Prior literature about the romantic motive primarily focused on examining the impact of romantic motive on individuals' judgments and behaviors. For example, romantic motive can increase people's creativity (Griskevicius, Cialdini, and Kenrick 2006), lead people to prefer the number "2" and other associated numbers (Kim 2020), activate men's risk-taking behaviors (Greitemeyer, Kastenmüller, and Fischer 2013) and increase the acceptance of commercial rejection (Chen, Shen, and Yang 2021). The limited research in marketing suggests that romantic motive can affect consumers' attitudes and consumption behaviors, such as increasing consumers' acceptance of brand extensions (Monga and Gürhan-Canli 2012), inducing men's interest in sexual advertisements (Kim and Kim 2016), increasing women's variety seeking tendency (Durante and Arsena 2015), boosting women's consumption of products that enhance appearance (Durante et al. 2011; Ko and Suh 2019).

When a romantic motive is present, people are usually eager to signal their interpersonal attractions to the person they feel attracted to (e.g., Fisher et al. 2002; Givens 1978; Regan 2004). Attraction is an individual's tendency or inclination to evaluate another person in a positive (or negative) way (Berscheid and Hatfield 1969). In the relationship formation stage, one important action people usually take is to express their attractions to the romantic target since expressing romantic feelings can increase the opportunity to form a romantic relationship (Baumeister and Leary 1995; Joel, Plaks, and MacDonald 2019; Myers and Diener 1995), helps people detect the target's reaction, and decreases the possibility of missing the opportunity.

However, what is an effective way to express attractions? One way people usually take is expressing attractions directly. For example, people can directly say "I love you" or send a love letter to the romantic target. Expressing attractions explicitly requires low effort but brings a higher risk that the romantic target may reject pursuer's affections directly and ruins the current relationship (e.g., friendship). In addition to direct expression, the pursuer can also express their attractions implicitly. In this way, the romantic target can express their rejection by giving no feedback, the pursuer may avoid feeling embarrassed and painful face to face. For instance, they can signal their attractions toward the romantic target.

As I argued before, many consumers use gifts to complete the signaling process since gifts can carry symbolic meanings and communicate their feelings to recipients (Beatty, Kahle, and Homer 1991; Belk and Coon 1993; Schiffman and Cohn 2009). Likewise, when consumers have romantic motives toward others, gifts are widely considered as a tool to signal their attractions (Huang and Yu 2000). In this research, I argue that a specific product category—the gender-specific product—can serve as a container of attractions and can help signal the gift-giver's attractions to the gift recipient.

3.1.3 Gender-specific Gifting and the Signaling of Attraction

As I mentioned before, I define gender-specific products as products commonly used by consumers of a particular gender, either because of their fit with gender-specific biological needs or the signaling of gender identity. In the current research, I propose that gender-specific gifts (vs. gender-neutral gifts) signal the giver's interpersonal attractions toward the recipient. This prediction is backed up by several streams of literature.

First, gender-specific gifts highlight the gender identity of the gift recipient, suggesting that the gift-giver has paid great attention to the gender of the recipient. Past research in romantic relationships has shown that a prerequisite for generating a romantic motive is noticing the target's gender. For example, people's romantic motive was stimulated after viewing photos of opposite-sex individuals with salient gender-related traits (Griskevicius et al. 2006; Roney 2003). Moreover, if givers do not have romantic motives toward the gift recipients, they are not expected to pay great attention or highlight gender identity in their interactions with the gift recipients. For example, friends who adhere to a platonic relationship, which requires people to downgrade sexual intentions and behaviors (Monsour, Betty, and Kurzweil 1993), can maintain their friendship for a longer time (Messman, Canary, and Hause 2020). Thus, paying attention to gender identity releases the information that the giver has been attracted by the gift recipient, and the gender-specific gift can help giver send that signal out to the recipient.

Second, gender-related characteristics (e.g., facial features, voice pitch, hips, breasts, muscularity) can affect perceived physical attractiveness (Perrett et al. 1998), which is an important component of interpersonal attractions. Existing research found that women who have gracile facial features, high voice pitch, round hips, and breasts are perceived as more attractive, and men with robust faces, low voice pitch, and salient muscularity are perceived

as attractive (Borau and Bonnefon 2020; Rhodes 2006). In this case, a gender-specific gift is a subtle compliment that the giver believes that the recipient is attractive.

Third, research in evolutionary psychology has shown that the presentation and perception of gender-related cues are crucial to the success of mating and reproduction (e.g., Birnbaum et al. 2014; Nummenmaa et al. 2012). For instance, most feminine traits (e.g., high voice pitch, the shape of hips and breasts) are stimulated by estrogen, and most masculine traits (e.g., low voice pitch, facial hair, and muscularity) are stimulated by testosterone. The salience of these gender-related traits is highly associated with reproductive success (Borau and Bonnefon 2020; Puts 2010). Thus, highlighting gender-related information can help signal interpersonal attractions, which is a crucial step toward mating and reproduction (e.g., Cornwell et al. 2006; Fisher 1998, 2000). Putting the above streams of evidence together, I posit that sending a gender-specific gift serves as an intermediary to signal interpersonal attractions to the receiver.

3.2 THE CURRENT RESEARCH

I have argued above that gift-givers who have a romantic motive (vs. not) to the gift recipient have a heightened intention to signal interpersonal attraction to the gift recipients. I also noted that gifting a gender-specific product signals the gift-givers' attraction to the gift recipients. Putting them together, I predict that the presence of a romantic motive triggers consumers' intention to signal interpersonal attraction, which in turn leads to a higher intention to choose gender-specific products as gifts to recipients. Stating these hypotheses formally:

H1: Consumers have a higher preference for a gender-specific (vs. gender-neutral) product as a gift for the gift recipient when they have a romantic motive toward the recipient (vs. not).

***H2:** The effect of romantic motive on consumers' preference for gender-specific gifts is mediated by the intention to signal interpersonal attraction to the gift recipient.*

I have argued that consumers with a romantic motive toward a gift recipient prefer gifting gender-specific products to the recipient because they are motivated to signal interpersonal attraction to the recipient. If this is true, then the effect of romantic motive on the preference for gifting gender-specific products should be attenuated or dismissed if consumers do not want to disclose their romantic feelings to the gift recipient.

There are many reasons why gift-givers hesitate to do so. For instance, a secret crush refers to the romantic feelings and love that people hesitate to disclose or are afraid of expressing (e.g., Harrison 2010; Yadav 2020). People having a secret crush for someone are usually unwilling to disclose their feelings because they are worried about being rejected or they are afraid of ruining the current relationship (e.g., the friendship between themselves and gift recipients). Given the concerns about disclosing romantic feelings, people with a secret crush tend to be careful in gift selection since a gift can serve as a means of symbolic communication in relationships and communicate information about the givers' feelings or preferences (Belk 1979).

In addition, social or cultural norms may prohibit or inhibit people from disclosing their romantic feelings toward others. One situation could be that the giver or the recipient is already in a committed relationship with another person. When a gift-giver already has a committed relationship with someone else, he/she is expected to keep a polite distance from the recipient even if he/she has romantic feelings toward this person; otherwise, it will hurt their current partner and destroy the established relationships and their social images (Carter et al. 2016; Johnson 1991; Lydon and Karremans 2015). Likewise, when the gift recipient already has a committed relationship with someone else, the gift-giver is also expected to

keep a polite distance from him/her (Messman, Canary, and Hause 2000). Thus, when the giver or the recipient is already in a committed relationship with another person, they may feel that they should not disclose their romantic feelings toward the recipient to avoid potential negative consequences.

Putting these predictions together, I predict that:

H3: The effect of romantic motive on consumers' preference for gender-specific gifts attenuates when consumers do not want to disclose their romantic feelings.

I have argued that in the *relationship formation* stage, people usually have a strong desire to express their romantic feelings in order to successfully start a relationship with significant others, and gender-specific gifts can help gift-givers signal their attractions and express their feelings subtly to the gift recipients. However, when gift-givers and gift recipients are in the *relationship maintenance* stage, gift-givers' intentions to signal attraction may attenuate since gift recipients have already known gift-givers' attractions and have built a romantic relationship with givers. Stating this hypothesis formally:

H4: The effect of romantic motive on consumers' preference for gender-specific gifts weakens when consumers are in the relationship maintenance stage with the gift recipient.

I have argued that the presence of a romantic motive leads to a higher intention to choose gender-specific products as gifts for recipients since consumers believe that gender-specific gifts can effectively convey their interpersonal attractions. However, can recipients successfully decode the romantic attractions embedded in the gender-specific gift (vs. gender-neutral gift)? Past research shows that gifts can transfer symbolic meanings from givers to recipients (Beatty, Kahle, and Homer 1991; Belk and Coon 1993; Schiffman and Cohn 2009). Gradually, some gifts represent a specific symbolic meaning and are well-

recognized by consumers from different cultures. For example, flowers and chocolates are a signal of “I love you,” and rings are a declaration of “marry me.” I argued that gender-specific gifts convey unique messages to the gift recipient since they remind the gift recipient that the gift-giver has paid great attention to his/her gender. If this perception is well-recognized by different consumers, recipients should be able to understand the symbolic meaning embedded in gender-specific gifts (vs. gender-neutral gifts).

Putting these hypotheses together, I predict:

***H5:** Recipients infer a gift-giver to have a higher level of romantic motive toward themselves when they receive a gender-specific (vs. gender-neutral) gift from the giver.*

3.3 OVERVIEW OF STUDIES

Fourteen studies (twelve pre-registered) explore how romantic motive influences consumers’ gift choices. Specifically, studies 1a and 1b provide initial evidence that romantic motive increases consumers’ likelihood to choose gender-specific (vs. gender-neutral) products as gifts for recipients. Studies 2a and 2b reveal that romantic motive increases gift-givers’ tendency to send gender-specific gifts but does not decrease their tendency to send gender-neutral gifts. Studies 3a and 3b show that this effect appears regardless of gift-givers’ sexual orientation - it appears among both heterosexual and homosexual participants. Studies 4a and 4b support our proposed underlying mechanism by demonstrating the mediational role of attraction-signaling. Consistent with this signaling mechanism, I further find that the observed effect is weakened or dismissed when gift-givers do not want to disclose their romantic feelings, either because it is a secret crush (study 5) or because it is inappropriate to do so (e.g., when the giver or the recipient is in a committed relationship with another person; study 6). Moreover, I find that the predicted effect can also be weakened when givers and

recipients are in the relationship maintenance stage (study 7). In addition, study 8 shows that the proposed effect appears, even at the cost of forgoing another identity-consistent gift (e.g., a gift matches one of the recipient's personal or social identities). Finally, studies 9a and 9b demonstrate the interpersonal consequences of our effect: gift recipients indeed perceive that givers have more romantic feelings toward them when they receive a gender-specific (vs. gender-neutral) gift.

The gender-specific products I used were either based on the biological needs of different genders (study 5) or on design (studies 1, 2, 3, 4, 6, 7, 8, and 9). Given that gender-specific product varies significantly across gender (e.g., Ehrnberger, Räsänen, and Ilstedt 2012; Fugate and Phillips 2010; McGinley 2019), in most studies, I only recruit participants from a specific gender. The target sample size in these studies was conservatively selected based on previous research on gift-giving and motivations (e.g., Ding and Zhang 2020; Roberts, Shaddy, and Fishbach 2021). In all studies, I include all collected data in the final analyses and do not exclude any participants. All manipulations and all measurements were reported. I measured participants' age at the end of each study, and I also measured participants' sexual orientation except for study 1a. Because these demographic variables did not have significant impacts on our findings, they are not discussed further in this paper (I examined sexual orientation separately in studies 3a and 3b). Detailed information about prescreening questions (Appendix A), stimuli (Appendix B to Appendix J), pretest results (Appendix L), and additional analyses (Appendix K) can be found in the Appendix.

3.4 STUDY 1: THE MAIN EFFECT OF ROMANTIC MOTIVE ON CONSUMERS' PREFERENCE FOR GENDER-SPECIFIC GIFT

Study 1 provides initial evidence for our basic hypothesis that the presence of a romantic motive increases consumers' likelihood to gift a gender-specific (vs. gender-neutral)

product to the recipient. Studies 1a and 1b test this effect among female and male participants, respectively. In study 1a, participants were shown an imagined scenario, then made a gift decision between a gender-specific product and a gender-neutral product. To further investigate the predicted effect in real life, in study 1b, participants were asked to make an incentive-compatible product choice. In study 1b, to make sure the later gifting behavior is meaningful and consequential, I prescreened participants before data collection to make sure that they were single and had a specific romantic target (see Appendix A for details of this prescreening procedure).

3.4.1 Study 1A

Two hundred and ninety-eight female UK adults ($M_{\text{age}} = 43.04$) participated in this study via Prolific for a nominal payment. They were randomly assigned to conditions of a two-cell (motive: romantic motive vs. control) between-subjects design.

In the *romantic motive* condition, participants imagined that they were going to buy a holiday gift for a male friend with whom they had an intention to pursue a romantic relationship; in the *control* condition, participants simply imagined that they were going to buy a holiday gift for a male friend. Then all participants were presented with two products: a pair of men's leather shoes and a pair of gender-neutral sneakers (see Appendix B). A pretest confirmed that the men's leather shoes were indeed perceived as more gender-specific than the gender-neutral sneakers (see Appendix L). Participants picked a product they would like to send as a gift for the male friend.

A binary logistic regression revealed a significant effect of motive ($B = .74$, $SE = .24$; Wald $\chi^2 = 9.73$, $p = .002$; Exp (B) = 2.09). Consistent with our expectation, female participants in the romantic condition were more likely to choose the gender-specific product (56.7%) as a gift for the recipient than were those in the control condition (38.5%).

3.4.2 Study 1B

Two hundred and twenty-eight male Chinese adults ($M_{\text{age}} = 24.47$) participated in this study via Credamo (a crowdsourcing platform that is similar to mTurk and Prolific) for a nominal payment. Participants were randomly assigned to conditions of a two-cell (motive: romantic motive vs. control) between-subjects design.

I prescreened participants and only allowed those who were single but have a clear romantic target to participate in the following parts of the study. At first, these qualified participants were asked to complete a short filler survey. Then, they were invited to a lucky draw in which they had a chance to win a gift for a female friend of theirs (see Appendix A for detailed instructions). In the *romantic motive* condition, participants were asked to indicate a female friend with whom they had the intention to pursue a romantic relationship. In the *control* condition, participants were asked to indicate a female friend with whom they had a pure friendship. All participants were then presented with two products (i.e., wireless cellphone chargers) that only differ in visual design: one with a feminine design (e.g., a female-specific gift) and one with a gender-neutral design (e.g., a gender-neutral gift; see Appendix B). A pretest confirmed that the feminine product was indeed perceived as more gender-specific than the gender-neutral product (see Appendix L for details). Finally, participants picked a product they would like to send as a gift for the friend they indicated. After the study, I randomly picked a winner from the participants and sent the chosen gift to the winner's indicated friend.

A binary logistic regression revealed a significant effect of romantic motive ($B = .71$, $SE = .27$; Wald $\chi^2 = 6.93$, $p = .008$; Exp (B) = 2.03). Consistent with our expectation, male participants in the romantic motive condition were more likely to choose the gender-specific product (60.9%) as a gift for the recipient than those in the control condition (43.4%).

3.4.3 Discussion

Studies 1a and 1b supported our basic prediction that consumers prefer choosing a gender-specific product as a gift for a recipient toward whom they have a romantic motive (vs. not). Moreover, this effect occurred for both male and female participants. In addition, I found that this prediction can be supported with incentive-compatible behavioral data and existed even when the gift itself was not romantic in nature (i.e., study 1b, wireless cellphone chargers).

3.5 STUDY 2: THE DRIVEN MOTIVE OF THE MAIN EFFECT

Study 1 showed that participants were more likely to choose a gender-specific product as a gift for a recipient when they had a romantic motive toward the recipient (vs. not). However, given that I used participants' gift choices as the dependent variable in study 1, I cannot conclude whether the result occurs because romantic motive increases gift-givers' preference for gender-specific gifts, or because romantic motive decreases gift-givers' preference for gender-neutral gifts. To address this concern, in studies 2a and 2b, I look at the impact of romantic motive on gift-givers' likelihood to purchase either a gender-specific gift or a gender-neutral gift, independently. Similar to study 1, study 2a and study 2b were conducted among female participants and male participants, respectively.

3.5.1 Study 2A

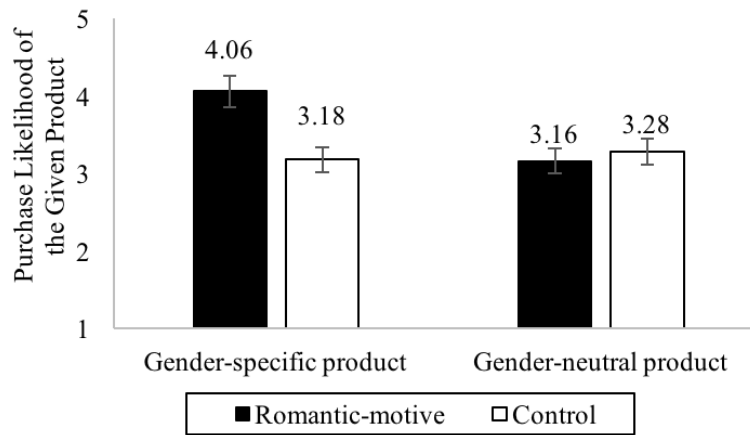
Five hundred and ninety-eight female UK adults ($M_{\text{age}} = 40.78$) participated in this study via Prolific for a nominal payment. Participants were randomly assigned to one of the four conditions of a 2 (motive: romantic motive vs. control) \times 2 (product type: gender-specific vs. gender-neutral) between-subjects design.

In the *romantic motive* condition, participants first imagined that they were going to buy a holiday gift for a male friend with whom they had an intention to pursue a romantic relationship; whereas in the *control* condition, participants simply imagined that they were going to buy a holiday gift for a male friend. Then, all participants were presented with either a perfume for men (in the *gender-specific* condition) or a gender-neutral perfume (in the *gender-neutral* condition; see Appendix C). A pretest confirmed that the perfume for men was indeed perceived as more gender-specific than the gender-neutral perfume, but the two options did not differ in overall attractiveness (see Appendix L for details). Finally, participants reported their likelihood to purchase the presented product as a holiday gift for their friend on three nine-point scales: (1 = “very unlikely/unwilling/uninclined to buy this product,” 9 = “very likely/willing/inclined to buy this product”; $\alpha = .96$; White et al. 2016).

A 2 (motive: romantic motive vs. control) \times 2 (product type: gender-specific vs. gender-neutral) between-subjects ANOVA revealed significant main effects of motive ($F(1, 594) = 5.36, p = .021; \eta_p^2 = .01$) and product type ($F(1, 594) = 6.05, p = .014; \eta_p^2 = .01$), qualified by a significant interaction effect ($F(1, 594) = 9.48, p = .002; \eta_p^2 = .02$). As expected, planned contrasts showed that female participants in the romantic motive condition reported higher likelihood to purchase the gender-specific gift ($M = 4.06, SD = 2.09$) than those in the control condition ($M = 3.18, SD = 1.86; F(1, 594) = 14.51, p < .001; \eta_p^2 = .02$). However, participants’ likelihood to purchase the gender-neutral gift did not differ across conditions ($M_{\text{romantic-motive}} = 3.16, SD = 1.97$ vs. $M_{\text{control}} = 3.28, SD = 2.04; F(1, 594) = .29, p = .589; \eta_p^2 < .001$; see Figure 1).

Figure 1

PURCHASE LIKELIHOOD AS A FUNCTION OF MOTIVE AND PRODUCT TYPE—
STUDIES 2A



3.5.2 Study 2B

A total of 600 male UK adults ($M_{\text{age}} = 43.24$) participated in this study via Prolific for a nominal payment. Participants were randomly assigned to one of the four conditions of a 2 (motive: romantic motive vs. control) \times 2 (product type: gender-specific vs. gender-neutral) between-subjects design.

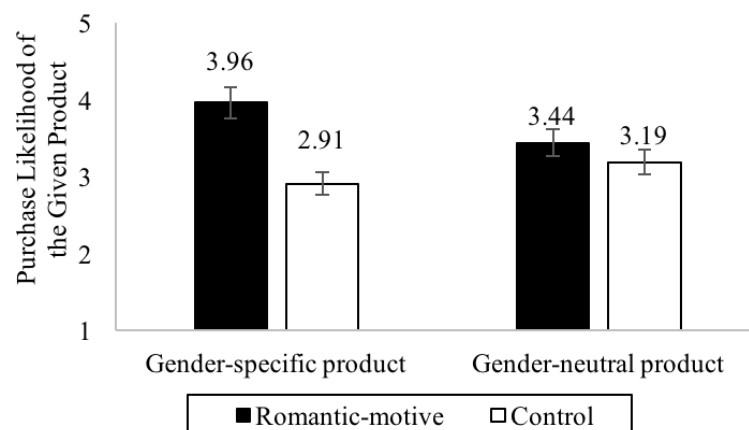
Similar to study 2a, in the *romantic motive* condition, participants first imagined that they were going to buy a holiday gift for a female friend with whom they had an intention to pursue a romantic relationship; whereas in the *control* condition, participants simply imagined that they were going to buy a holiday gift for a female friend. Then, all participants were presented with either a perfume for women (in the *gender-specific* condition) or a gender-neutral perfume (in the *gender-neutral* condition; see Appendix C). A pretest confirmed that the perfume for women was indeed perceived as more gender-specific than the gender-neutral perfume, but the two options did not differ in overall attractiveness (see Appendix L for details). Finally, participants reported their likelihood to purchase the

presented product as a holiday gift for their female friends on the same three nine-point scales as I used in Study 2a ($\alpha = .96$).

Consistent with our expectation, a 2 (motive: romantic motive vs. control) \times 2 (product type: gender-specific vs. gender-neutral) between-subjects ANOVA revealed a significant main effect of motive ($F(1, 596) = 14.94, p < .001; \eta_p^2 = .02$), qualified by a significant interaction ($F(1, 596) = 5.67, p = .018; \eta_p^2 = .01$). The main effect of product type ($F(1, 596) = .55, p = .458; \eta_p^2 = .001$) was not significant. Planned contrasts showed that male participants in the romantic motive condition reported a higher likelihood to purchase the gender-specific gift ($M = 3.96, SD = 2.33$), than those in the control condition ($M = 2.91, SD = 1.88; F(1, 596) = 19.51, p < .001; \eta_p^2 = .03$). However, participants' likelihood to purchase the gender-neutral gift did not differ across conditions ($M_{\text{romantic-motive}} = 3.44, SD = 2.04$ vs. $M_{\text{control}} = 3.19, SD = 1.94; F(1, 596) = 1.10, p = .295; \eta_p^2 = .002$; see Figure 2).

Figure 2

PURCHASE LIKELIHOOD AS A FUNCTION OF MOTIVE AND PRODUCT TYPE—
STUDIES 2B



3.5.3 Discussion

With between-subject designs, studies 2a and 2b showed that the effect of romantic motive on gift-givers' preference for gender-specific (vs. gender-neutral) gifts was primarily driven by their heightened intention to send gender-specific gifts instead of decreased interest in gender-neutral gifts, not because romantic motive decreases gift-givers' preference for gender-neutral gifts. The results I got from these two studies suggested that our predicted effect has a high practical implication since marketers can promote gender-specific products as gifts to those who are searching for romantic gifts, or label the gender-specific product as a romantic tool.

3.6 STUDY 3: THE MAIN EFFECT AMONG HOMOSEXUAL PARTICIPANTS

I predicted that participants were more likely to choose a gender-specific product as a gift for a recipient when they had a romantic motive toward the recipient (vs. not). Given this hypothesis is highly related to one's gender and romantic motive, one may wonder whether the gift-giver's sexual orientation may alter the effect I observed. In previous studies, I measured participants' sexual orientation (on average around 3.5% of our participants were homosexual), but I did not find a significant difference in data pattern after only including heterosexual participants (see Appendix K). I test the role of sexual orientation in our effect more formally in studies 3a and 3b by recruiting a roughly equal number of homosexual and heterosexual participants. I expect that gift-givers' sexual orientation should not influence the effect I observed because a gender-specific gift could also serve as a romantic signal in a homosexual relationship.

3.6.1 Study 3A

Four hundred and thirty-six heterosexual female adults and 401 homosexual male adults ($M_{\text{age}} = 36.57$) participated in this study via Prolific for a nominal payment. This study adopted a 2 (motive: romantic motive vs. control) \times 2 (sexual orientation: heterosexual vs. homosexual) between-subjects design.

Similar to study 2a, in the *romantic motive* condition, participants first imagined that they were going to buy a holiday gift for a male friend with whom they had an intention to pursue a romantic relationship; whereas in the *control* condition, participants simply imagined that they were going to buy a holiday gift for a male friend. In addition, I told *homosexual* participants that the recipient's sexual orientation was homosexual as well. All participants were then presented with three products (e.g., shoes) that only differ in visual design: men's leather shoes (e.g., a male-specific gift), gender-neutral sneakers (e.g., a gender-neutral gift), and women's high heels (e.g., a female-specific gift; see Appendix D). A pretest confirmed that the masculine product was perceived as male-specific, the feminine product was perceived as female-specific, and the gender-neutral product was perceived as gender-neutral both in the heterosexual and homosexual groups (see Appendix L for details). Finally, participants picked a product they would like to send as a gift to their friend. In addition, I measured the traditional gender role (adapted from Kachel, Steffens, and Niedlich 2016) in the homosexual condition, with a 9-point scale ("do you have a traditional gender role in your romantic relationship with a same-sex partner"; 1 = "very masculine role," 5 = "no clear gender role," 9 = "very feminine role").

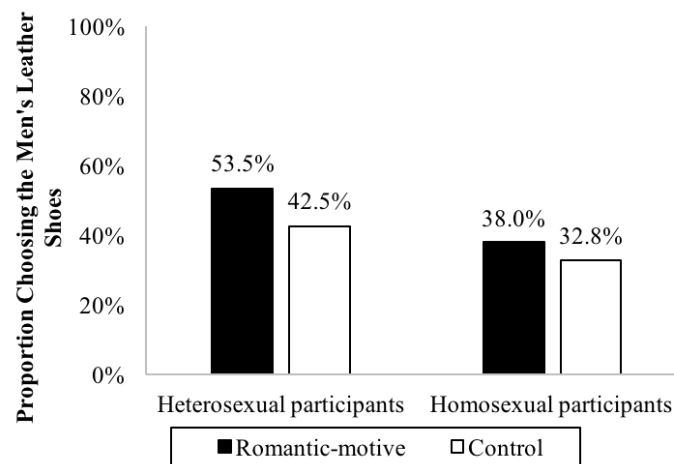
I recoded participants' gift choices into either "1" (if they chose the male-specific product) or "0" (if they chose either the gender-neutral or the female-specific product). A binary logistic regression showed a significant main effect of romantic motive ($B = .34$, $SE = .14$; Wald $\chi^2 = 5.74$, $p = .017$; $\text{Exp}(B) = 1.40$), but no significant motive \times sexual

orientation interaction ($B = -.22$, $SE = .29$; Wald $\chi^2 = .58$, $p = .448$; $\text{Exp}(B) = .81$; see Figure 2). I also found a main effect of sexual orientation ($B = .52$, $SE = .14$; Wald $\chi^2 = 13.37$, $p < .001$; $\text{Exp}(B) = 1.68$). Specifically, homosexual participants showed a lower likelihood of picking the male-specific product (35.4%) compared to heterosexual participants (47.9%). Replicating results in our previous studies, heterosexual females in the romantic motive condition were more likely to choose the gender-specific product ($M = 53.5\%$) as a gift for the recipient than those in the control condition ($M = 42.5\%$; $B = .44$, $SE = .19$; Wald $\chi^2 = 5.25$, $p = .022$; $\text{Exp}(B) = 1.56$). Similarly, although I didn't find a significant difference, homosexual males in the romantic motive condition still showed a higher preference for the gender-specific product ($M = 38.0\%$) as a gift for the recipient than their peers in the control condition ($M = 32.8\%$; $B = .23$, $SE = .21$; Wald $\chi^2 = 1.17$, $p = .280$; $\text{Exp}(B) = 1.25$; see Figure 3).

In addition, in the homosexual condition, I ran an ad-hoc test with the measured traditional gender role as a moderator. I found a significant motive \times traditional gender role interaction effect ($B = .43$, $SE = .13$; Wald $\chi^2 = 10.23$, $p = .001$; $\text{Exp}(B) = 1.54$). To probe the nature of the interaction, I used the Johnson-Neyman technique (i.e., floodlight analysis) to examine where along the continuum of traditional gender role participants' gift choices differed significantly between the romantic motive and control condition. Results of 5,000 bootstrap resamples (Johnson and Neyman 1936; Spiller et al. 2013) revealed that male homosexual participants with a traditional feminine role ($M_{\text{gender role}} > 4.77$; the proportion of these participants: 59.1%) were more likely to choose a male-specific product (e.g., men's leather shoe) as a gift for a male homosexual recipient when they have the romantic motive (vs. not). This data pattern was consistent with our finding in previous studies that participants were more likely to choose gender-specific gifts for opposite-sex (biological) recipients when they have a romantic motive (vs. not).

Figure 3

PROPORTION CHOOSING THE GENDER-SPECIFIC PRODUCT AS A FUNCTION OF
ROMANTIC MOTIVE AND SEXUAL ORIENTATION—STUDIES 3A



3.6.2 Study 3B

Four hundred and three heterosexual male adults and 358 homosexual female adults ($M_{\text{age}} = 34.77$) participated in this study via Prolific for a nominal payment. This study adopted a 2 (motive: romantic motive vs. control) \times 2 (sexual orientation: heterosexual vs. homosexual) between-subjects design.

Similar to study 2b, in the *romantic motive* condition, participants first imagined that they were going to buy a holiday gift for a female friend with whom they had an intention to pursue a romantic relationship; whereas in the *control* condition, participants simply imagined that they were going to buy a holiday gift for a female friend. In addition, I told *homosexual* participants that the recipient's sexual orientation was homosexual as well. All participants were then presented with three products (e.g., watches) that only differ in visual design: one with a feminine design (e.g., a female-specific gift), one with a masculine design (e.g., a male-specific gift), and one with a gender-neutral design (e.g., a gender-neutral gift;

see Appendix D). A pretest confirmed that the feminine product was perceived as female-specific, the masculine product was perceived as male-specific, and the gender-neutral product was perceived as gender-neutral both in the heterosexual and homosexual groups (see Appendix L for details). Finally, participants picked a product they would like to send as a gift to their friend. In addition, I measured the traditional gender role (adapted from Kachel, Steffens, and Niedlich 2016) in the homosexual condition with the same measurement I used in study 3a.

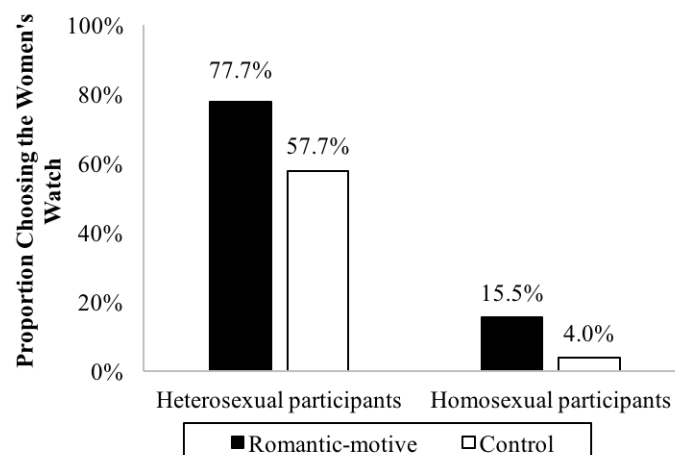
I recoded participants' gift choices into either "1" (if they chose the female-specific product) or "0" (if they chose either the gender-neutral or the male-specific product). As expected, a binary logistic regression showed a significant main effect of motive ($B = .66$, $SE = .15$; Wald $\chi^2 = 19.42$, $p < .001$; $\text{Exp}(B) = 1.94$), but no significant motive \times sexual orientation interaction ($B = -.55$, $SE = .49$; Wald $\chi^2 = 1.27$, $p = .259$; $\text{Exp}(B) = .58$; see Figure 4). There was also a significant main effect of sexual orientation ($B = 2.96$, $SE = .21$; Wald $\chi^2 = 204.24$, $p < .001$; $\text{Exp}(B) = 19.38$). Specifically, I found that homosexual participants showed a lower likelihood to choose the female-specific product (9.8%) compared with heterosexual participants (67.7%). Replicating results in our previous studies, heterosexual males in the romantic motive condition were more likely to choose the gender-specific product ($M = 77.7\%$) as a gift for the recipient than those in the control condition ($M = 57.7\%$; $B = 1.49$, $SE = .44$; Wald $\chi^2 = 11.65$, $p = .001$; $\text{Exp}(B) = 4.44$). Similarly, homosexual females in the romantic motive condition were also more likely to choose the gender-specific product ($M = 15.5\%$) as a gift for the recipient than their peers in the control condition ($M = 4.0\%$; $B = .94$, $SE = .22$; Wald $\chi^2 = 17.99$, $p < .001$; $\text{Exp}(B) = 2.56$).

In addition, in the homosexual condition, I ran an ad-hoc test with the measured traditional gender role as a moderator. I found a significant interaction of the motive \times traditional gender role ($B = -.93$, $SE = .31$; Wald $\chi^2 = 8.79$, $p = .003$; $\text{Exp}(B) = .40$).

Specifically, results of floodlight analysis (Johnson and Neyman 1936; Spiller et al. 2013) showed that female homosexual participants with a traditional masculine role ($M_{\text{gender role}} < 6.35$, the proportion of these participants: 87.2%) were more likely to choose a female-specific product (e.g., women's watch) as a gift for a female homosexual recipient when they have the romantic motive (vs. not). This data pattern was consistent with our finding in previous studies that participants were more likely to choose gender-specific gifts for opposite-sex (biological) recipients when they have a romantic motive toward the recipients (vs. not).

Figure 4

PROPORTION CHOOSING THE GENDER-SPECIFIC PRODUCT AS A FUNCTION OF ROMANTIC MOTIVE AND SEXUAL ORIENTATION—STUDIES 3B



3.6.3 Discussion

Results of study 3 showed that both heterosexual and homosexual participants were more likely to choose the gender-specific (vs. gender-neutral) product as a gift for the recipient when they have a romantic motive toward the gift recipient, though the pattern was not significant among male homosexual participants (i.e., study 3a). I speculate that the non-

significant pattern happens because homosexual males (vs. homosexual females) are less willing to violate the traditional gender norm since such violations may induce more prejudices toward them (Herek 1988, 2000; Wellman and McCoy 2014). In our daily life, homosexual males sometimes even adjust their behaviors to conform to the traditional gender norm (Blashill and Wal 2010).

I also found significant main effects of sexual orientation in both studies 3a and 3b. Specifically, homosexual participants were more likely to choose gender-neutral gifts (vs. gender-specific/gender-incongruent gifts; see the detailed results in Appendix M) compared to heterosexual participants. I speculate this happens because homosexual people show strong objections to binary gender division (Broussard, Warner, and Pope 2018). For example, more and more LGBT groups advocate for gender neutrality, which emphasizes removing gender labels (Saguy and Williams 2019). Given that gender-specific gifts highlight binary gender identities and can signal gift-givers' conformity to the gender stereotype, homosexual participants are less willing to choose gender-specific gifts for homosexual recipients.

Furthermore, in studies 3a and 3b, I found significant interaction effects of the romantic motive and the traditional gender role among homosexual participants. The results showed that our proposed effect occurred when participants' traditional gender role and recipients' gender were opposite (e.g., when female homosexual participants with a *masculine* role chose a gift for *female* recipients, or when male homosexual participants with a *feminine* role chose a gift for *male* recipients). However, the effect disappeared among participants whose traditional gender roles are highly identical to recipients' gender (e.g., when female homosexual participants with a feminine role choose a gift for female recipients, or when male homosexual participants with a masculine role choose a gift for male recipients). The findings are consistent with our theory that consumers with high

romantic motives are willing to choose gender-specific gifts for recipients of the opposite gender.

3.7 STUDY 4: THE MEDIATING ROLE OF INTENTION TO SIGNAL ATTRACTION

Study 4 tests the underlying mechanism of our basic effect (H_2). I argued that gift-givers' romantic motive toward the gift recipient leads to a higher intention to signal interpersonal attraction through gifting, which in turn increases their preference for a gender-specific gift. To test this mechanism, I explored the mediating role of attraction-signaling in both female (study 4a) and male participants (study 4b).

3.7.1 Study 4A

Two hundred and ninety-nine female UK adults ($M_{\text{age}} = 37.63$) participated in this study via Prolific for a nominal payment. Participants were randomly assigned to conditions of a two-cell (motive: romantic motive vs. control) between-subjects design.

Similar to study 2a, in the *romantic motive* condition, participants first imagined that they were going to buy a holiday gift for a male friend with whom they had an intention to pursue a romantic relationship; whereas in the *control* condition, participants simply imagined that they were going to buy a holiday gift for a male friend. Then, all participants were presented with a perfume for men (e.g., a male-specific gift, the same as I used in study 2a; see Appendix E). Participants then reported their likelihood to purchase the presented product using the same 3-item I used in previous studies ($\alpha = .98$). I also measured participants' intention to signal interpersonal attraction on a three-item scale: "I want to demonstrate to the gift recipient that I'm attracted by him," "I want to signal to the recipient that I'm romantically interested in him," and "I want to express my romantic feelings to the

gift recipient.” (1 = “strongly disagree”, and 9 = “strongly agree”; $\alpha = .98$; adapted from Croes et al. 2020).

As expected, female participants in the romantic motive condition reported a higher likelihood to purchase the gender-specific gift ($M = 4.29$, $SD = 2.12$) than those in the control condition ($M = 3.47$, $SD = 1.95$; $F(1, 297) = 12.14$, $p = .001$; $\eta_p^2 = .04$). Participants in the romantic motive condition also reported a higher intention to signal their attractions to the gift recipient ($M = 6.36$, $SD = 1.79$) than those in the control condition ($M = 3.54$, $SD = 2.37$; $F(1, 297) = 135.27$, $p < .001$; $\eta_p^2 = .31$). Bootstrapping analyses (PROCESS Model 4 with 5,000 bootstrapping samples; Hayes 2013) with romantic motive as the independent variable, attraction-signaling intention as the mediator, and purchase likelihood as the dependent variable confirmed that attraction-signaling intention mediated the effect of romantic motive on participants’ purchase intention of the gender-specific gift (95% CI: [.8332, 1.5573]).

3.7.2 Study 4B

Two hundred and ninety-nine male UK adults ($M_{age} = 42.63$) participated in this study via Prolific for a nominal payment. Participants were randomly assigned to conditions of a two-cell (motive: romantic motive vs. control) between-subjects design.

Similar to study 2b, in the *romantic motive* condition, participants first imagined that they were going to buy a holiday gift for a female friend with whom they had an intention to pursue a romantic relationship; whereas in the *control* condition, participants simply imagined that they were going to buy a holiday gift for a female friend. Then, all participants were presented with a perfume for women (e.g., a female-specific gift, the same as I used in study 2b; see Appendix E). Participants then reported their likelihood to purchase the presented product using the same 3-item I used in previous studies ($\alpha = .96$). I also measured

participants' intention to signal interpersonal attraction on the three-item scale as I used in study 4a ($\alpha = .99$).

Replicating the results in study 4a, male participants in the romantic motive condition reported a higher likelihood to purchase the gender-specific gift ($M = 4.23$, $SD = 2.24$) than those in the control condition ($M = 3.46$, $SD = 2.07$; $F(1, 297) = 9.56$, $p = .002$; $\eta_p^2 = .03$). Participants in the romantic motive condition also reported a higher intention to signal their attractions to the gift recipient ($M = 6.42$, $SD = 1.95$) than those in the control condition ($M = 4.29$, $SD = 2.69$; $F(1, 297) = 61.71$, $p < .001$; $\eta_p^2 = .17$). Bootstrapping analyses (PROCESS Model 4 with 5,000 bootstrapping samples; Hayes 2013) with romantic motive as the independent variable, attraction-signaling intention as the mediator, and purchase likelihood as the dependent variable confirmed that attraction-signaling intention mediated the effect of romantic motive on participants' purchase intention of the gender-specific gift (95% CI: [.4274, .9852]).

3.7.3 Discussion

Studies 4a and 4b provided direct evidence for our proposed underlying mechanism. I showed that the effect of romantic motive on both female and male participants' purchase intention of the gender-specific gift was indeed driven by participants' intention to signal their attractions to the gift recipient.

3.8 STUDY 5: THE MODERATING ROLE OF SECRET CRUSH

I theorized that gift-givers use gender-specific products as a medium to communicate and express their attractions to the recipient. However, in some circumstances, albeit their attraction to the gift recipient, givers may not want to disclose their romantic feelings to the recipient. For example, if the gift-giver has a secret crush (e.g., romantic feelings that are not

expressed) for the recipient (e.g., Harrison 2010; Yadav 2020), they may want to hide their feelings. I expect that the observed effect will be weakened or dismissed when participants have a secret crush for the recipient.

3.8.1 Method

Four hundred and forty-eight female Chinese adults ($M_{\text{age}} = 29.73$) participated in this study via Credamo for a nominal payment. Participants were randomly assigned to conditions of a three-cell (motive: romantic motive vs. control vs. secret crush) between-subjects design.

Similar to previous studies, in the *romantic motive* condition, participants first imagined that they were going to buy a birthday gift for a male friend with whom they had an intention to pursue a romantic relationship. In the *control* condition, participants simply imagined that they were going to buy a birthday gift for a male friend. In the *secret crush* condition, however, participants imagined that they were going to buy a birthday gift for a male friend with whom they had an intention to pursue a romantic relationship, but they did not want him to know about their romantic feelings yet.

Then, all participants were presented with a men's shaver (e.g., a male-specific gift; see Appendix F). A pretest confirmed that the men's shaver was indeed perceived as a male-specific product (see Appendix L for details). Participants then reported their likelihood to purchase the presented product using the same 3-item I used in previous studies ($\alpha = .96$).

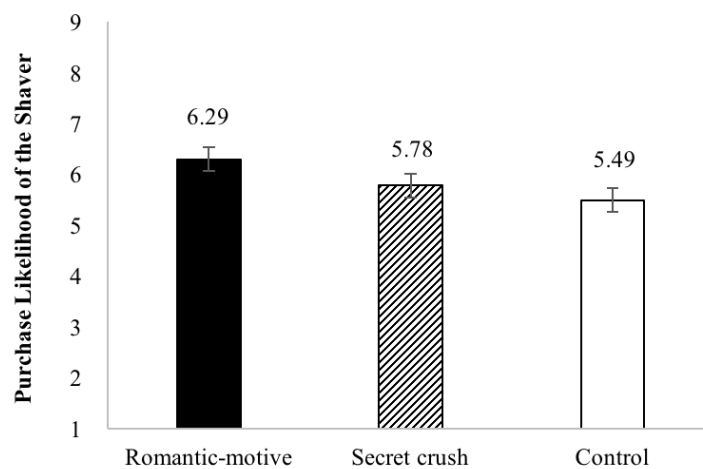
3.8.2 Results

An ANOVA revealed a significant main effect of the motive ($F(2, 445) = 6.93, p = .001; \eta_p^2 = .03$). As expected, female participants in the romantic motive condition were more likely to purchase the men's shaver as a gift ($M = 6.29, SD = 1.62$) than were those in the control condition ($M = 5.49, SD = 1.99; F(1, 445) = 13.53, p < .001; \eta_p^2 = .03$) and the secret crush condition ($M = 5.78, SD = 1.98; F(1, 445) = 5.49, p = .020; \eta_p^2 = .01$). However,

there was no significant difference on the purchase likelihood between the latter two conditions ($F(1, 445) = 1.80, p = .180; \eta_p^2 = .004$; see Figure 5).

Figure 5

PURCHASE LIKELIHOOD OF CHOOSING THE GENDER-SPECIFIC PRODUCT
—STUDY 5



3.8.3 Discussion

Study 5 showed that the observed effect was dismissed when gift-givers did not want to disclose their romantic feelings to the recipient. Specifically, I found that the effect disappeared when participants had a secret crush for the recipient.

3.9 STUDY 6: THE MODERATING ROLE OF COMMITTED RELATIONSHIP

I also predicted that the effect of romantic motive on givers' preference for gender-specific gifts would be attenuated or dismissed, when either the gift-giver or the gift recipient is already in a committed relationship with someone else, because gift-givers may feel that it

is inappropriate to disclose their romantic feelings in those situations. Study 6 tests this possibility.

3.9.1 Method

A total of 460 male US adults ($M_{\text{age}} = 39.15$) participated in this study via mTurk for a nominal payment. Participants were randomly assigned to conditions of a three-cell (motive: romantic motive vs. giver-committed vs. recipient-committed) between-subjects design.

Similar to previous studies, all participants first imagined that they were going to buy a birthday gift for a female friend with whom they had an intention to pursue a romantic relationship. In addition, participants were told to imagine that they themselves were currently in a committed relationship with someone else (in *giver-committed* condition) or the gift recipient was currently in a committed relationship with someone else (in the *recipient-committed* condition). Participants in the *romantic motive* condition were not provided additional information about relationship commitment.

Then, all participants were presented with a pair of women's high heels (e.g., a female-specific gift; see Appendix G). A pretest confirmed that the women's high heels were indeed perceived as a female-specific product (see Appendix L for details). Participants then reported their likelihood to purchase the presented product using the same 3-item I used in previous studies ($\alpha = .96$).

3.9.2 Results

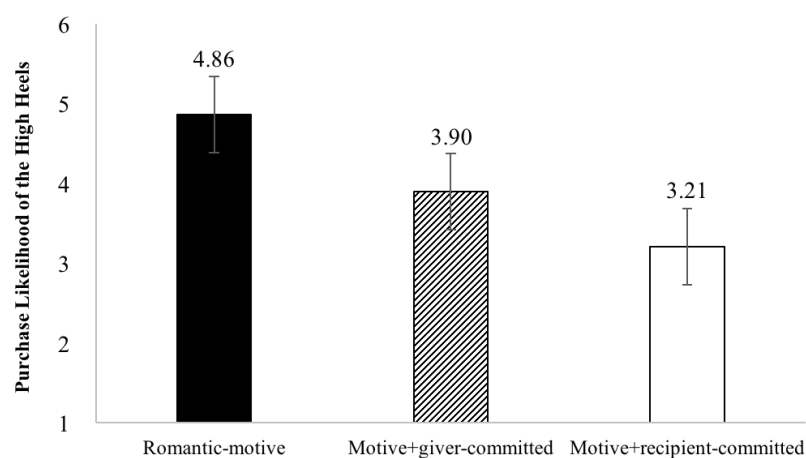
An ANOVA revealed a significant main effect of the motive ($F(2, 457) = 16.73, p < .001; \eta_p^2 = .07$). As expected, male participants in the romantic condition were more likely to purchase the women's high heels as the gift ($M = 4.86, SD = 2.74$) than were those in the giver-committed condition ($M = 3.90, SD = 2.50; F(1, 457) = 11.00, p = .001; \eta_p^2 = .02$) and

the recipient-committed condition ($M = 3.21$, $SD = 2.28$; $F(1, 457) = 33.18$, $p < .001$; $\eta_p^2 = .07$). Moreover, the purchase likelihood was higher in the giver-committed condition than in the recipient-committed condition ($F(1, 457) = 5.81$, $p = .016$; $\eta_p^2 = .01$; see Figure 6).

Figure 6

PURCHASE LIKELIHOOD OF CHOOSING THE GENDER-SPECIFIC PRODUCT

—STUDY 6



3.9.3 Discussion

Studies 6 confirmed our prediction that the observed effect would be weakened when gift-givers feel it is inappropriate to disclose their romantic feelings due to cultural or social norms. Specifically, I showed that givers' preference for gender-specific gifts decreased when the giver or the recipient was in a committed relationship with another person.

Interestingly, I found in this study that givers' preference for gender-specific gifts is higher in the giver-committed condition than in the recipient-committed condition. I speculate that this pattern appears because of the different levels of cost/benefits involved in these two conditions. If the recipient is committed to another person, sending a romantic signal may induce high social cost (e.g., destroy the social image of givers and induce hatred

from the recipient's partner) and low benefit (e.g., low possibility of establishing a romantic relationship with the recipient). However, if the giver is committed to another person, the cost of sending a romantic signal is relatively lower (e.g., it may not destroy social image if they hide well and there is no hatred from others), and the benefit is high (e.g., high possibility to establish a romantic relationship). Thus, for the gift-givers, it seems relatively less harmful to send the signal in the giver-committed condition than in the recipient-committed condition.

3.10 STUDY 7: THE MODERATING ROLE OF RELATIONSHIP STAGE

I also hypothesized that the effect of romantic motive on givers' preference for gender-specific gifts would be attenuated when givers and recipients are in the relationship maintenance stage (vs. relationship formation stage). It happens because gift-givers may think that gift recipients have already known their feelings and thoughts. They don't need to use gender-specific gifts to express their feelings anymore. Study 7 tests this possibility.

3.10.1 Method

A total of 450 male UK adults ($M_{\text{age}} = 43.19$) participated in this study via Prolific for a nominal payment. Participants were randomly assigned to conditions of a three-cell (motive: romantic motive vs. control vs. married) between-subjects design.

Similar to previous studies, in the *romantic motive* condition, participants first imagined that they were going to buy a birthday gift for a female friend with whom they had an intention to pursue a romantic relationship. In the *control* condition, participants simply imagined that they were going to buy a birthday gift for a female friend. In the *married* condition, participants imagined that they were going to buy a birthday gift for their wives, and they had married their wives for more than eight years.

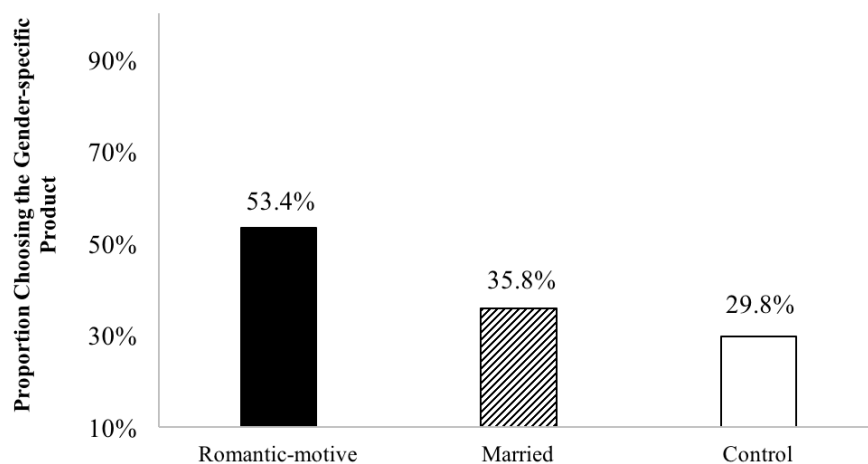
Then, all participants were presented with a pair of women's high heels and a pair of gender-neutral sneakers (see Appendix H). A pretest confirmed that the women's high heels were indeed perceived as female-specific and the gender-neutral sneakers were perceived as gender-neutral (see Appendix L for details). Participants were then asked to make a choice between the high heels and the gender-neutral sneakers as a gift for the recipient.

3.10.2 Results

A binary logistic regression revealed a significant main effect of the motive ($B = -.37$, $SE = .12$, Wald $\chi^2 = 9.48$, $p = .002$; $\text{Exp}(B) = .69$). Consistent with our expectation, male participants in the romantic motive condition were more likely to choose the gender-specific product (53.4%) as a gift for the recipient than those in the control condition ($M = 29.8\%$, $B = -.99$, $SE = .24$, Wald $\chi^2 = 16.74$, $p < .001$; $\text{Exp}(B) = .37$), and the married condition ($M = 35.8\%$, $B = -.72$, $SE = .24$, Wald $\chi^2 = 9.29$, $p = .002$; $\text{Exp}(B) = .49$). However, there was no significant difference in the preference for gender-specific gifts between the latter two conditions ($M_{\text{control}} = 29.8\%$ vs. $M_{\text{married}} = 35.8\%$; $B = -.27$, $SE = .25$, Wald $\chi^2 = 1.22$, $p = .270$; $\text{Exp}(B) = .76$; see Figure 7).

Figure 7

PROPORTION CHOOSING THE GENDER-SPECIFIC PRODUCT —STUDY 7



3.10.3 Discussion

Study 7 showed that the observed effect was weakened when gift-givers are in the relationship maintenance stage with the gift recipients. Specifically, consumers in the romantic motive condition indicated a higher preference for the gender-specific product (e.g., women's high heels) as a gift for the recipient. However, when consumers were told that they had been married to their wives for more than eight years, consumers' preference for gender-specific gifts was significantly weakened to the extent of those in the control condition. The results indicated that when consumers have already formed a relationship with the recipient, their tendency to choose the gender-specific product (vs. gender-neutral product) as a gift was significantly decreased.

3.11 STUDY 8: RULE OUT AN ALTERNATIVE EXPLANATION: IDENTITY-CONGRUENT GIFT

Across studies, I demonstrated the presence of a romantic motive increases consumers' intention to signal interpersonal attraction, which in turn leads to a higher intention to choose gender-specific products as gifts for recipients. However, one may argue this effect happens due to the fact that gender-specific gifts are consistent with the gift recipients' identity. After all, past research has shown that one's gender identity is the most significant social identity (e.g., Connell 1987; Corby, Hodges, and Perry 2007; Egan and Perry 2001). In addition, past gifting research has demonstrated that gift recipients prefer gifts that are reflective of their identity or image (e.g., Fugate and Phillips 2010; Neale, Robbie, and Martin 2016; Sirgy 1982).

However, does our effect happen because gender-specific gifts are identity-consistent? Our answer is no. Gender-specific gifts convey unique messages to the gift recipient since they remind the gift recipient that the gift-giver has paid great attention to

his/her gender. Thus, the salience and perception of gendered cues in gifting are crucial to the success of mating and reproduction (e.g., Birnbaum et al. 2014; Nummenmaa et al. 2012), while other types of identity-consistent gifts may not be able to achieve this goal.

To test this possibility, in Study 7, I provide participants with two gift options, one is gender-specific, and the other is consistent with another personal identity of the gift recipient (e.g., a gym lover). Both options are consistent with the recipient's identity, thus if the presence of a romantic motive simply increases gift-givers' effort in selecting a better gift (e.g., a gift consistent with the recipient's identity), I should not observe the effect in the current context. However, based on our proposed attraction-signaling mechanism, I expect to see that the presence of a romantic motive leads to a higher likelihood of choosing gender-specific gifts, even at the cost of forgoing another identity-consistent gift.

3.11.1 Method

A total of 199 male UK adults ($M_{\text{age}} = 43.90$) participated in this study via Prolific for a nominal payment. Participants were randomly assigned to conditions of a two-cell (motive: romantic motive vs. control) between-subjects design.

Similar to study 2b, in the *romantic motive* condition, participants first imagined that they were going to buy a gift after a trip for a female friend with whom they had an intention to pursue a romantic relationship; whereas in the *control* condition, participants simply imagined that they were going to buy a gift after a trip for a female friend. In both conditions, they were further told that the female friend identified herself as a gym lover.

Then, participants were asked to choose a gift between a gym bag (e.g., a gift that is congruent with the recipient's gym lover identity) and a pink backpack (e.g., a gift that is congruent with the recipient's gender; see Appendix I). A pretest confirmed that the gym bag

was perceived as gender-neutral and the pink backpack was perceived as female-specific, but they did not differ in overall attractiveness (see Appendix L for details).

3.11.2 Results

Consistent with our expectation, participants in the romantic motive condition were more likely to choose the gender-specific product as a gift for the recipient (39.0%) than those in the control condition ($M = 18.2\%$; $\chi^2(1) = 10.55, p = .001$; $OR = 2.88$).

3.11.3 Discussion

In this study, gift-givers faced a tradeoff between two gift options, one is gender-specific and the other is consistent with another personal identity of the gift recipient (i.e., a gym lover). Consistent with our expectations, I found that the presence of a romantic motive leads to a higher likelihood of choosing gender-specific gifts, even at the cost of forgoing another identity-consistent gift. This result suggests that gift-givers do not simply see the gender-specific gift as an identity-consistent gift; gender-specific gifts convey special symbolic meanings under a romantic motive.

It should be noted that even in the romantic motive condition, less than half (e.g., 39.0%) of the participants chose the gender-specific gift, probably due to the specific stimuli I picked. But considering the rate of choosing the gender-specific gift in the control condition is only 18.2%, the presence of a romantic motive more than doubled the choice share of the gender-specific gift. This suggests that the effect I observed is substantial.

3.12 STUDY 9: GIFT-RECIPIENTS' REACTIONS OF RECEIVING GENDER-SPECIFIC GIFTS (VS. GENDER-NEUTRAL GIFTS)

I argued that gift-givers choose gender-specific products as gifts to recipients to signal interpersonal attraction. Is this strategy effective? Will gift recipients successfully “decode”

the romantic feelings embedded in the gender-specific gift? In study 9, I attempt to answer these questions by taking the gift recipients' perspective.

3.12.1 Study 9A

A total of 203 male US adults ($M_{\text{age}} = 38.61$) participated in this study via mTurk for a nominal payment. Participants were randomly assigned to conditions of a two-cell (gift: gender-specific vs. gender-neutral) between-subjects design.

Participants imagined that they either received a bottle of perfume for men (e.g., a *gender-specific* gift) or receiving a bottle of gender-neutral perfume (e.g., a *gender-neutral* gift; see Appendix J) as a birthday gift from a female friend. A pretest confirmed that the gender-neutral perfume was perceived as gender-neutral and the perfume for men was perceived as male-specific, but they did not differ in overall attractiveness (see Appendix L for details).

Then, participants were asked to infer the extent to which the gift-giver had romantic feelings toward them on three items: “This person has romantic feelings to me,” “This person would like to engage in a romantic relationship with me,” and “This person is interested in developing a romantic relationship with me.” (1 = “strongly disagree”, 9 = “strongly agree”; $\alpha = .98$; adapted from Croes et al. 2020).

I found that male participants reported a higher perception of romantic feelings from the giver of the gender-specific gift ($M = 5.80$, $SD = 2.12$) than the giver of the gender-neutral gift ($M = 4.67$, $SD = 1.98$; $F(1, 201) = 15.42$, $p < .001$; $\eta_p^2 = .07$).

3.12.2 Study 9B

One hundred and ninety-nine female US adults ($M_{\text{age}} = 41.67$) participated in this study via mTurk for a nominal payment. Participants were randomly assigned to conditions of a two-cell (gift: gender-specific vs. gender-neutral) between-subjects design.

Similar to study 9a, participants imagined that they either received a bottle of perfume for women (e.g., a *gender-specific* gift) or receiving a bottle of gender-neutral perfume (e.g., a *gender-neutral* gift; see Appendix J) as a birthday gift from a male friend. A pretest confirmed that the gender-neutral perfume was perceived as gender-neutral and the perfume for women was perceived as female-specific, but they did not differ in overall attractiveness (see Appendix L for details). Then, participants inferred the extent to which the gift-giver had romantic feelings toward them on the same three items I used in study 9a ($\alpha = .99$).

As in study 9a, I found that female participants reported higher perception of romantic feelings from the giver of the gender-specific gift ($M = 6.22$, $SD = 1.97$) than the giver of the gender-neutral gift ($M = 4.27$, $SD = 2.35$; $F(1, 197) = 40.19$, $p < .001$; $\eta_p^2 = .17$).

3.12.3 Discussion

I tested in study 9 whether gift recipients can successfully “decode” the romantic feelings embedded in the gender-specific gift. Interestingly, I found that gift recipients can indeed sense the signal. Both male and female gift recipients inferred a higher level of romantic motive from the gift-giver, when they received a gender-specific (vs. gender-neutral) gift. This suggests that gendered gifting is indeed an effective strategy to express love to the gift recipient.

3.13 SUMMARY

The current research investigated the impact of an important motive - romantic motive – on consumers' gifting choices. Fourteen studies provided convergent support for our hypothesis that consumers have a higher preference for a gender-specific product (vs. a gender-neutral product) as a gift for the recipient when they have a romantic motive toward the recipient (vs. not). I found that the impact of romantic motive on preference for choosing

the gender-specific product as a gift for a romantic target (studies 1a, 1b, 2a, and 2b) is driven by the intention to signal interpersonal attractions (studies 4a and 4b). This effect exists regardless of people's sexual orientation (studies 3a and 3b) and even at the cost of forgoing an identity-consistent option (study 8). I further showed that the predicted effect is weakened or dismissed when gift-givers have a secret crush (study 5), when the giver/recipient already has a committed relationship with someone else (study 6), or when the giver and recipient are in the relationship maintenance stage (study 7). Finally, I demonstrate that gift recipients can successfully decode the romantic attractions embedded in the gender-specific gift (vs. gender-neutral gift) (studies 9a and 9b).

3.13.1 Theoretical Contribution

The present research contributes to the gifting literature (e.g., Cavanaugh, Gino, and Fitzsimons 2015; Chen et al. 2015; Luo et al. 2019; Polman and Lu 2022; Polman and Maglio 2017; Sozou and Seymour 2005). Past research on gifting has explored different gifting motives, givers' inputs in their gifts, preference mismatches of gifts between givers and recipients, post-gift exchange, and various contextual factors. However, we know little about consumers' gift preferences in the romantic relationship formation stage. The limited research in romantic gifting has found that gifts that are congruent with the recipient's self-image or costly are more likely to be appreciated and enhance the relationship closeness (e.g., Luo et al. 2019; Sozou and Seymour 2005). Our findings contribute to the gifting literature by examining an underexplored gifting occasion - romantic gifting. I found that consumers show a higher preference for gender-specific gifts (vs. gender-neutral gifts) when they have a romantic motive (vs. not) toward the recipient.

The current research also adds theoretical contributions to the romantic motive literature (e.g., Griskevicius and Kenrick 2013; Janssens et al. 2011; Jones and Barlow 1990;

Sundie et al. 2011). Past research on romantic motive largely revolves around how romantic motive influences interpersonal attitudes and behaviors. For instance, research has shown that a romantic motive can increase people's preference for marketing appeals with the associated number (Kim 2020), induce men's interest in buying conspicuous products for themselves, and boost women's public prosocial behaviors (Griskevicius et al. 2007). In this research, I extend romantic motive literature by showing the interpersonal consequences of romantic motive---gift choice. I demonstrate that the presence of a romantic motive can increase the consumption of products with gender-related cues.

Our work also provides contributions to the literature on the gender-specific product (e.g., Avery 2012; Deaux 1985; Fugate and Phillips 2010; Van Tilburg et al. 2015). Existing research on gender-specific product primarily focuses on examining what elements distinguish a gender-specific product from other product categories. For example, research shows that specific colors (e.g., pink vs. blue), shapes (e.g., curvy shape vs. sharp shape), materials (e.g., soft and smooth material vs. dim and rough material), and patterns (e.g., flowers vs. fierce animals) can effectively signal the product's gender (e.g., Ehrnberger, Räsänen, and Ilstedt 2012; Van Tilburg et al. 2015). In addition, past research explored how individuals project gendered meanings to different objects or behaviors, such as letter case (Kim and Maglio 2021), green consumption (Brough et al. 2016), and precise versus round numbers (Yan 2016). Little research is known about the factors that could affect the consumption of gender-specific/gender-neutral products. The current research finds that a common and influential psychological motivation - romantic motive, can significantly heighten preference for gender-specific products.

The current research also provides contributions to homosexuality literature (e.g., Broussard, Warner, and Pope 2018; Herek 1988, 2000; Saguy and Williams 2019; Wellman and McCoy 2014). Existing literature on homosexuality mainly focused on heterosexuals'

attitudes toward homosexual groups and the downstream consequences, such as depression and mental health (e.g., Blashill and Wal 2010; Herek 1988, 2000; Wellman and McCoy 2014). However, limited research has explored how sexual orientation and gender influence consumers' decisions in selecting gifts for someone they have a romantic motive (vs. not). The current research finds that homosexual females are more likely to choose a female-specific gift (vs. gender-neutral gift or gender-incongruent gift) when they have a romantic motive toward the recipient; while homosexual males do not express a significant difference in selecting gender-specific gifts since they prefer to conform the traditional gender norm. In addition, I found that when consumers have a romantic motive toward the recipient and indicate a salient gender role themselves (e.g., a male has a very masculine gender role or a female has a very feminine gender role), they are less likely to choose gender-specific gifts for recipients since they may expect the recipient do not have the salient, same gender role as themselves.

Last but not least, the current research contributes to the signaling literature (e.g., Berger and Heath 2007; Chen, Wang, and Ordabayeva 2022; Wang and Griskevicius 2014) by investigating how to signal interpersonal attraction with products. Much research has focused on investigating how people signal their traits or feelings, such as one's kindness, agreeableness, wealth, social status, and unique taste with consumption choices (e.g., Berger and Heath 2007; Griskevicius et al. 2007). Adding to this stream of research, I showed that gender-specific products could be used to signal interpersonal attraction since gender-specific products show that the giver has paid great attention to the recipient's gender.

3.13.2 Limitations and Future Directions

Our findings provide several directions for future research. First, the current research examined consumers' preference for choosing gender-specific (vs. gender-neutral) products

as a gift for recipients during the relationship formation stage since they need a gift to convey their attractions to the recipient. However, when the relationship is established, consumers' intention to signal attractions may also decrease. In addition, consumers not only send gifts during the relationship formation stage but also during the relationship maintenance stage (e.g., Huang and Yu 2000; Wang and Griskevicius 2014). In the relationship maintenance stage, they may show a lower preference for gender-specific gifts since their intention to signal attraction is not as strong as it is in the formation stage. Future research can further examine the predicted effect under such an occasion.

Second, in studies 9a and 9b, the results suggest that both males and females can detect giver's romantic feelings from gender-specific gifts (vs. gender-neutral gifts). However, I still find that the recipient's gender may influence their ability to detect the giver's attractions. Specifically, females are much more sensitive in detecting giver's attraction compared to males. This result is also consistent with the previous finding that females are much more sensitive to interpersonal relationships and are more skillful in judging the meaning of nonverbal cues than males (Briton and Hall 1995). It'll be interesting for future research to test possible downstream influences behind this data pattern. Moreover, I suggest future research can explore more downstream consequences besides inferred romantic motive I tested in the current research.

Third, future research may examine other gifting occasions. In the current research, I focus on romantic gifting, especially consumers' gift selection preference at the formation stage of romantic relationships. In addition to romantic gifting, consumers also purchase gifts on other occasions, such as holidays, birthdays, anniversaries, and weddings (Belk 1979), and purchase gifts for different recipients such as old people, bosses, strangers, and family members (Caplow 1982). Taking choosing a gift for older people as an example: since older people have a lower level of estrogen and testosterone, which are highly associated with the

salience of gender-related cues (Borau and Bonnefon 2020; Puts 2010), I expect that consumers are less likely to choose gender-specific products for old recipients.

Fourth, future research may explore moderators of the proposed effect, such as kinship. As I argued before, gender-related characteristics can affect perceived physical attractiveness (Perrett et al. 1998), and sending a gender-specific gift is a subtle compliment that the giver believes that the recipient is attractive. It's usual that a brother sends a gift to compliment his sister, and the intention of that compliment is not related to romantic motives. In this case, consumers may not avoid gender-specific gifts since even they have no romantic motive toward the recipient. I predict that consumers may show a higher preference for gender-specific products as a gift when they have *no* romantic motive toward the recipient with kinship.

3.13.3 Managerial Implication

The findings of the current research also have important managerial implications. First, our results offer extensive practical implications by helping marketers position their gender-specific products. The findings of the current research suggest that consumers with romantic motives (vs. not) are more likely to choose gender-specific products as a gift for recipients. Thus, if companies sell gender-specific products (e.g., high heels, razors, lipsticks, and products with salient gendered designs), they can consider applying romance motive related concept in their brand positioning. For example, Google released an advertisement about Parisian love and AXE once made public a commercial, Susan Glenn, talking about a high school crush.

In addition, many consumers with romantic motives are eager to find a love confession gift. Previous research suggests that a gift that is costly but worthless can help boost the closeness of romantic relationships (Sozou and Seymour 2005). However, these

options are too expensive. The current research provides consumers with an effective and economical option - sending gender-specific gifts to signal their attractions. Our findings also have implications for companies' promotion and advertising strategies. Companies that sell gender-specific products can strategically reach consumers who have strong romantic motives (e.g., users of dating websites or people who are searching for a love confession gift). Alternatively, companies can promote gender-specific products on common romance-related occasions, such as Valentine's Day.

CHAPTER 4. TOO OLD TO HAVE THE GENDER: THE EFFECT OF RECIPIENTS' AGE ON CONSUMERS PREFERENCE FOR GENDER-NEUTRAL PRODUCTS

Gifts have extensive social values (Larsen and Watson 2001) and are frequently used in maintaining different social relationships (Ruth et al. 1999). An appropriate gift can boost the relationship closeness (Belk and Coon 1993), while an inappropriate gift may ruin the relationship between the gift-givers and gift recipients. Therefore, deciding what kinds of gifts are suitable for a specific recipient is always a difficult question for gift-givers. Previous research in gifting consumption research indicates that gift recipients prefer gifts that are reflective of their identity or image (e.g., Fugate and Phillips 2010; Neale, Robbie, and Martin 2016; Sirgy 1982).

Currently, the speed of population aging is much faster than we imagine. Although there is no consistent division about the boundary of aging, most countries and organizations have reached an agreement that people aged 60 years or 65 years and over can be classified as an aging population (United Nations 2019). For example, the World Health Organization divides people aged 60 years and older into an aging population (World Health Organization 2022), while some countries and worldwide organizations define an aging population as people aged 65 years and older (e.g., OECD 2023). Based on statistics released by World Health Organization, the proportion of aging population will reach 16.7% by 2030 and 22% by 2050. It means that consumption among older adults has become a tremendous market all over the world. However, previous research didn't pay much attention to this area, especially how consumers choose gifts for older adults.

Adding to this stream of research, I focus on gifting consumptions for older adults and examine a specific type of gift: gender-neutral products, defined as products commonly used by consumers of all genders (adapted from Fugate and Phillips 2010; McGinley 2019; Van

Tilburg 2015). Drawing from literature on gifting, aging, and gender-neutral products, I propose that consumers hold a belief that older adults do not have a salient gender identity compared to younger adults, and such an age stereotype leads to a higher intention to choose gender-neutral products as gifts for older adults (vs. younger adults).

Our findings contribute to gifting literature (e.g., Belk 1979; Belk and Coon 1993; Liu, Dallas, and Fitzsimons 2019; Polman and Maglio 2017) by exploring an underexplored recipient group - older adults. The present research also has an extensive contribution to aging literature (e.g., Barber 2017; Cary and Chasteen 2015; Lamont, Swift, and Abrams 2015) by revealing a novel age stereotype: the salience of gender identity. Moreover, this research also adds to the gender-neutral product literature (e.g., Avery 2012; Deaux 1985; Fugate and Phillips 2010; Van Tilburg et al. 2015) by investigating an incentive that recipients' age can effectively induce consumers' preferences for gender-neutral products. In addition, the present research contributes to gender identity literature (e.g., Brems, Mark, & Johnson, 1990; Chaiken & Pliner, 1987; Gould, 1996) by showing the differences in gender identity salience in people of different ages. Practically, this research provides important insights to marketers about how to better position and promote their products for those who are looking for gifts for older or younger adults.

4.1 LITERATURE REVIEW

4.1.1 Gifting Consumptions and Ageing

As I mentioned before, besides pure economic value, gifts have extensive social value and play a significant role in consumers' social lives (Larsen and Watson 2001). Gifts are usually used in maintaining consumers' current social relationships with others (Ruth et al. 1999). However, gifts can effectively maintain social ties *only* when gift-givers choose the suitable product, and sometimes it may hurt or even ruin the current relationship if the gift-

giver mistakenly picks the wrong item (Belk and Coon 1993). Therefore, deciding what kinds of gifts are suitable for specific recipients is a significant and difficult question for gift-givers.

As population aging becomes more and more prevalent in most countries, consumption for older adults has grown into a tremendous market and a research area that is worthy of investigating. However, previous research did not focus on this topic, and the limited research mainly investigates the consumptions made by older adults *for themselves*. For example, some research indicates the consequences of older adults' food consumption (e.g., alcohol, coffee, vegetables, etc.; Armstrong-Moore et al. 2018; Johnson-Kozlow et al. 2002; Kim et al. 2015), and some research tests older adults' responses toward emotional advertisements (Williams and Drolet 2005). In the present research, I theorize that the consumers hold a belief that older adults do not have a salient gender identity compared to younger adults, and such an age stereotype leads to a higher intention to choose gender-neutral products as gifts for older adults (vs. younger adults).

4.1.2 Salience of Gender Identity Among Older Adults

People hold various age stereotypes toward older adults. For example, previous research finds that people usually think that older adults' bodies are fragile. They easily feel tired or get sick (Cuddy and Fiske 2002). Another research indicates that people believe that older adults are not good at controlling their negative emotions and easily get furious (Miele and Deaux 1989). In addition, some research examines the social lives and finds that people believe older adults do not like to participate in social activities actively (Crockett and Hummert 1987). In general, previous literature did not examine the gender identity among older adults. In the current research, I try to investigate a novel age stereotype - the salience of gender identity in older adults compared to younger adults. Specifically, I predict that people hold a lay belief that older adults' gender identities are not as salient as younger

adults, which in turn, may increase consumers' preferences for gender-neutral gifts that are consistent with older adults' identities.

This prediction is supported by several streams of literature. First, based on literature from biology and evolutionary psychology, the salience of masculine or feminine traits is the response to people's mating motivation. For example, most feminine traits (e.g., high voice pitch, the shape of hips and breasts) are stimulated by estrogen, and most masculine traits (e.g., low voice pitch, facial hair, and muscularity) are stimulated by testosterone. The salience of these masculine or feminine traits is highly correlated with the success of mating (Borau and Bonnefon 2020; Puts 2010). Second, when females have high mating motivations, such as ovulatory phase, they are more easily attracted by masculine faces or other masculine traits (Welling et al. 2007); similarly, when males have high mating motivation, such as when they have high testosterone level, they show strong interests in feminine traits (Welling et al. 2008). Finally, another stream of research indicates that behaviors and appearances that fit the traditional gender stereotype can enhance the possibility of mating success (Shively and De Cecco 1977). Therefore, people usually consume gender-related products (e.g., high heels) to enhance their physical attractiveness to attract potential mates (Borau and Bonnefon 2020). In sum, these literatures suggest that people represent salient gendered appearances when they have strong mating motivations and abilities.

However, a series of research indicates that people's physical function declines as they age, and their sexual function and mating motivation decline as well (e.g., Kingsberg 2002). Therefore, I speculate that when people get old, their gender-related identities are not as salient as young people since they have lower mating motivations and abilities.

4.1.3 Salience of Gender Identity and Preference for Gender-neutral Products

Adapted from previous definitions of gender-specific products, in the current research, I define gender-neutral products as products commonly used by consumers of all genders (adapted from Fugate and Phillips 2010; McGinley 2019; Van Tilburg 2015).

Based on self-congruency theory, people usually prefer products that are consistent with their social identities or products that can present their self-concepts (Escalas 2013; Grubb and Grathwohl 1967). From the gift-givers' perspective, sending gifts that are congruent with the recipient's self-image is more likely to be appreciated and enhance the relationship closeness (Luo et al. 2019). Thus, I predict that people prefer gender-neutral gifts for older adults (vs. younger adults) since they believe that older adults do not have salient gender identities and gender-neutral gifts fit older adults' identities.

4.2 THE CURRENT RESEARCH

I have argued above that recipients' age may influence consumers' preferences for gender-neutral products as gifts. Specifically, when choosing a gift for older adults (vs. younger adults), consumers are more likely to purchase gender-neutral products since they hold a belief that older adults do not have a salient gender identity anymore. Stating these hypotheses formally:

H1: *Consumers have a higher preference for a gender-neutral product as a gift for older (vs. younger) recipients.*

H2: *The effect of recipients' age on consumers' preference for gender-neutral gifts is mediated by the belief that older adults (vs. younger adults) do not have a salient gender identity.*

4.3 OVERVIEW OF STUDIES

Two studies explore how the recipient's age influences consumers' purchase likelihood of gender-neutral products. To show the complete picture of the predicted effect, study 1 provides initial evidence that consumers are more likely to purchase gender-neutral products as gifts for older adults (vs. younger adults) by investigating recipients who are at the age of 20 years old to 90 years old with an interval of 10. Study 2 further investigates whether this effect exists both in male and female recipients in a more realistic context (with product advertisements). Due to the research progress, I didn't test the mediating role (H_2) in this thesis.

4.4 STUDY 1: THE MAIN EFFECT OF RECIPIENTS' AGE ON CONSUMERS' PREFERENCE FOR GENDER-NEUTRAL PRODUCTS

I predict that consumers are more likely to purchase gender-neutral products as gifts for older adults (vs. younger adults). Study 1 tests this possibility and provides initial evidence for this basic prediction.

4.4.1 Method

Eight hundred US adults ($M_{\text{age}} = 40.91$; 50.9% female) participated in this study via mTurk for a nominal payment. Participants were randomly assigned to conditions of an eight-cell (recipients' age: 20 years old vs. 30 years old vs. 40 years old vs. 50 years old vs. 60 years old vs. 70 years old vs. 80 years old vs. 90 years old) between-subjects design.

In the *20 years old* condition, participants imagined that they were going to buy a pair of pants for a 20-year-old person, and a brand they were considering only has unisex designs. I also provided the definition of unisex design to help them learn the specific information about this product design (see Appendix N for the detailed scenario). Participants in other

conditions (e.g., 30 years old, 40 years old, ..., 90 years old) read the same scenario except for the recipients' age. Then, participants were asked to indicate how likely they would buy a pair of unisex pants for a 20-year-old person (vs. 30-year-old vs. 90-year-old) using a one-item scale (1 = very unlikely, 9 = very likely).

4.4.2 Results

To test the influence of recipients' age on consumers' purchase likelihood of gender-neutral products as gifts, I used quadratic regression analysis with recipients' age as the independent variable, and consumers' purchase likelihood of gender-neutral products as the dependent variable. As predicted, the results revealed that participants' purchase likelihood of gender-neutral products was significantly and positively predicted by recipients' age ($R^2 = .03$, $B = .04$, $t = 2.23$, $p = .026$). Furthermore, I combined the 20 years old condition to 50 years old condition as the *younger adults* condition, and combined 60 years old condition to 90 years old condition as the *older adults* condition. An ANOVA analysis revealed that consumers were more likely to purchase gender-neutral products for older adults rather than younger adults ($M_{\text{young}} = 5.10$, $SD = 2.47$ vs. $M_{\text{old}} = 5.89$, $SD = 2.41$; $F(1, 798) = 21.14$, $p < .001$).

4.4.3 Discussion

Study 1 supported our hypothesis that consumers are more likely to choose gender-neutral products for older (vs. younger) adults. I applied an eight-cell between-subjects design to show the complete picture of recipients at the age of 20 years old to 90 years old with an interval of 10. The results fitted a quadratic regression model.

4.5 STUDY 2: REPLICATION OF THE MAIN EFFECT

Study 1 showed that participants were more likely to purchase gender-neutral products for older (vs. younger) adults. However, the scenario used in study 1 didn't point out the recipient's gender and didn't show participants the product picture. To further investigate the main effect, I provide participants with the product picture and the recipients' age *and* gender. I expect that I can get similar results in both male and female participants after applying the product picture.

4.5.1 Method

Three hundred and seventeen UK adults ($M_{\text{age}} = 39.11$; 49.2% female) participated in this study via Prolific for a nominal payment. Participants were randomly assigned to one of four conditions of a 2 (recipients' age: 40 years old vs. 80 years old) \times 2 (recipients' gender: male vs. female) between-subjects design.

In the *40 years old* condition, participants either imagined that they were going to buy a pair of pants for a 40-year-old man, David (the *male* condition), or imagined that they were going to buy a pair of pants for a 40-year-old woman, Mary (the *female* condition). The scenarios were the same in the *80 years old* condition except for the recipients' age. After that, participants imagined that a pair of pants they found in a store was in a unisex design, and they were provided with the definition of a unisex design and a pair of unisex pants (see Appendix O and Appendix P for the detailed scenario). A pretest confirmed that the gender-neutral product was indeed perceived as gender-neutral, and the product was perceived as an age-neutral product (see Appendix Q for details).

Then, participants were asked to indicate how likely they would buy the given product for Mary/David on a one-item scale (1 = very unlikely, 9 = very likely).

4.5.2 Results

A 2 (recipients' age: 40 years old vs. 80 years old) \times 2 (recipients' gender: male vs. female) between-subjects ANOVA revealed a significant main effect of recipients' age ($F(1, 313) = 12.32, p = .001; \eta_p^2 = .04$), but not a significant main effect of recipients' gender ($F(1, 313) = 0.03, p = .871; \eta_p^2 < .001$) and an insignificant interaction effect of recipients' age and gender ($F(1, 313) = 1.20, p = .274; \eta_p^2 = .004$). As expected, planned contrasts showed that male participants in the 80 years old condition reported a higher likelihood to purchase the gender-neutral gift ($M = 5.74, SD = 2.23$) than those in the 40 years old condition ($M = 4.48, SD = 2.65; F(1, 313) = 10.71, p = .001; \eta_p^2 = .03$). Similarly, female participants in the 80 years old condition also reported higher likelihood to purchase the gender-neutral gift than those in the 40 years old condition ($M_{80 \text{ years old}} = 5.39, SD = 2.39$ vs. $M_{40 \text{ years old}} = 4.73, SD = 2.47; F(1, 313) = 2.89, p = .090; \eta_p^2 = .01$).

In addition, three-way interaction showed that there was not a significant interaction among participants' gender, recipients' age, and recipients' gender ($F(1, 309) = 0.55, p = .461; \eta_p^2 = .002$), and there was also no significant interaction among participants' age, recipients' age, and recipient's age ($F(1, 309) = 0.06, p = .813; \eta_p^2 < .001$).

4.5.3 Discussion

The findings of study 2 showed that the effect of recipients' age significantly influences consumers' purchase likelihood of gender-neutral products as gifts regardless of recipients' gender. And this effect is also irrelevant to participants' age and gender.

4.6 SUMMARY

The current research investigated the impact of an important motive – the recipient's age – on consumers' gifting choices. Two studies provided convergent support for our

hypothesis that consumers have a higher preference for a gender-neutral product as a gift for the recipient when they choose gifts for older adults (vs. younger adults). Study 1 showed the complete picture of the predicted effect by investigating recipients who are at the age of 20 years old to 90 years old with an interval of 10. The results revealed a linear trend and participants indeed preferred gender-neutral products as recipients aged. Study 2 further showed that the effect existed both in male and female recipients in a more realistic context. Moreover, the above results were not influenced by the participant's own age and gender.

The present research contributes to the gifting literature (e.g., Cavanaugh, Gino, and Fitzsimons 2015; Chen et al. 2015; Luo et al. 2019; Polman and Lu 2022; Polman and Maglio 2017; Sozou and Seymour 2005). Past research on gifting has explored different gifting motives, gift functions, and gift values. However, I know little about how consumers choose gifts for older adults. Our findings contribute to the gifting literature by examining what kind of product is preferred by consumers as gifts for older adults (vs. younger adults). I found that consumers show a higher preference for gender-neutral gifts when they choose gifts for older adults (vs. younger adults).

The current research adds extensive theoretical contributions to the aging literature, especially age stereotype literature (e.g., Barber 2017; Cary and Chasteen 2015; Lamont, Swift, and Abrams 2015). Past research on age stereotypes largely revolves around examining physical functions, emotional states, or social participation. In this research, I find a novel age stereotype against older adults - the salience of gender identity. I demonstrate that consumers hold a lay belief that older adults' gender identity is not as salient as younger adults, which in turn, leads to heightened preferences for gender-neutral products as gifts.

Finally, our work also provides contributions to the literature on the gender-neutral product (e.g., Avery 2012; Deaux 1985; Fugate and Phillips 2010; Van Tilburg et al. 2015). Little research is known about the factors that could affect the consumption of gender-neutral

products. The current research finds that a common and influential incentive - the recipient's age, can significantly heighten preference for gender-neutral products.

The findings of the current research also have important managerial implications. First, our results offer extensive practical implications by helping marketers promote their gender-neutral products. The findings of the current research suggest that consumers are more likely to choose gender-neutral products as a gift for older recipients (vs. younger recipients). Thus, if companies sell gender-neutral products, they can consider applying "the gift for the elderly" concept in their product or brand positioning. Similarly, companies can also promote their gender-neutral products to those who are seeking gifts for older adults.

This finding also has limitations. For example, the current research hasn't examined the proposed mediating role of the salience of gender identity. Also, future research can test the moderating role of recipient's mating motivation, and the older adults' opinions toward the gender-neutral gifts.

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APPENDICES

APPENDIX A. PRESCREENING QUESTIONS, FILLER QUESTIONS, AND MANIPULATIONS IN STUDY 1B

Prescreening Questions (Translated from Chinese)

Before you start our main study, please answer the following screening questions first. **Only participants who fit with our target participant profile are allowed to proceed to the main survey**; unqualified participants will be dismissed after the screening task.

First, please complete some basic demographic questions below:

(1) Your gender:

- A. male
- B. female

(2) Your age:

(3) What is your employment status?

- A. Full-time
- B. Part-time
- C. Job seeking
- D. Other

(4) What is your relationship/marital status?

- A. Single and have NO romantic target
- B. Single but have a CLEAR romantic target (e.g., someone with whom you have the motive and you are not afraid of forming a romantic relationship)
- C. In a relationship but not married yet
- D. Married
- E. Divorced
- F. Widowed
- G. Other, please specify _____

(Only male participants who were single but had a clear romantic target could enter to the main study, other participants were paid and thanked)

Eating Habits Survey

We're interested in individuals' eating habits. Please answer the following questions related to eating. There are no right or wrong answers. Please answer the following questions based on actual situations.

(1) How often do you usually eat **sweet food**?

(2) How often do you usually eat **fruit**?

(3) How often do you usually eat **fast-food**?

(4) How often do you usually drink **milk**?





(5) How often do you usually eat **vegetables**?

(1 = rarely, 9 = very often)

Manipulations (Translated from Chinese)

Romantic motive condition	<p style="text-align: center;">Join the Lucky Draw</p> <p>Thank you for completing the Eating Habits Survey!</p> <p>In addition to the payment you will receive later, we would like to invite you to a lucky draw to thank you for your participation.</p> <p>We will randomly select a winner based on participant's Credamo ID. The winner of the lucky draw will win a gift for a female friend (please note that if you win the lucky draw, we will contact you through the platform, and will mail the gift you chose to the recipient).</p> <p>Please note that this female friend should be someone with whom you have a motivation to pursue a romantic relationship.</p> <p>Please think about a female friend with whom you have motivation to pursue a romantic relationship, then write down her initials below:</p> <p>_____</p>
Control condition	<p style="text-align: center;">Join the Lucky Draw</p> <p>Thank you for completing the Eating Habits Survey!</p> <p>In addition to the payment you will receive later, we would like to invite you to a lucky draw to thank you for your participation.</p> <p>We will randomly select a winner based on participant's Credamo ID. The winner of the lucky draw will win a gift for a female friend (please note that if you win the lucky draw, we will contact you through the platform, and will mail the gift you chose to the recipient).</p> <p>Please note that this female friend should be someone with whom you just have pure friendship.</p> <p>Please think about a female friend with whom you just have pure friendship, then write down her initials below:</p> <p>_____</p>






APPENDIX B. STIMULI USED IN STUDY 1A AND 1B

Product Type	Study 1A	Study 1B
Gender-specific product	 <p>Leather shoes for men</p>	
Gender-neutral product	 <p>Genderless sneakers</p>	



APPENDIX C. STIMULI USED IN STUDY 2A AND 2B

Product Type	Study 2A	Study 2B
Gender-specific product	 <p>Perfume for men Price: \$100, 3.4 oz.</p>	 <p>Perfume for women Price: \$100, 3.4 oz.</p>
Gender-neutral product	 <p>Genderless Perfume Price: \$100, 3.4 oz.</p>	 <p>Genderless Perfume Price: \$100, 3.4 oz.</p>

APPENDIX D. STIMULI USED IN STUDY 3A AND 3B

Product Type	Study 3A	Study 3B
Men's Product	 <p>Leather shoes for men</p>	 <p>Men's watch</p>
Gender-neutral product	 <p>Genderless sneakers</p>	 <p>Genderless watch</p>
Women's Product	 <p>High heels for women</p>	 <p>Women's watch</p>


APPENDIX E. STIMULI USED IN STUDY 4A AND 4B

Product Type	Study 4A	Study 4B
Gender-specific product	 <p>Perfume for men Price: \$100, 3.4 oz.</p>	 <p>Perfume for women Price: \$100, 3.4 oz.</p>



APPENDIX F. STIMULI USED IN STUDY 5

Product Type	Study 5
Gender-specific product	 <p data-bbox="852 824 995 851">男士电动剃须刀</p>



APPENDIX G. STIMULI USED IN STUDY 6

Product Type	Study 6
Gender-specific product	<div data-bbox="772 560 1086 806"></div> <p data-bbox="788 824 1070 857">High heels for women</p>

APPENDIX H. STIMULI USED IN STUDY 7

Product Type	Study 7
Gender-specific product	 High heels for women
Gender-neutral product	 Genderless sneakers

APPENDIX I. STIMULI USED IN STUDY 8

Product Type	Study 8
Gender-specific product	
Gender-neutral product	

APPENDIX J. STIMULI USED IN STUDY 9A AND STUDY 9B

Product Type	Study 9A	Study 9B
Gender-specific product	 <p>Perfume for <i>Gentlemen</i> Price: \$100, 3.4 oz.</p>	 <p>Perfume for <i>Ladies</i> Price: \$100, 3.4 oz.</p>
Gender-neutral product	 <p><i>Genderless</i> Perfume Price: \$100, 3.4 oz.</p>	 <p><i>Genderless</i> Perfume Price: \$100, 3.4 oz.</p>

APPENDIX K. COMPARISON RESULTS OF RAW DATA AND HETEROSEXUAL PARTICIPANTS

Study	Sexual orientation	Results of raw data	Results of heterosexual participants only
Study 1A (N = 298; Prolific)	Heterosexual: 87.2% Homosexual: 4.0% Bisexual: 5.0% Asexual: 2.0% Prefer not to disclose: 1.7%	<ul style="list-style-type: none"> Main effect of motive on proportion choosing gender-specific product: $M_{\text{romantic}} = 56.7\%$ vs. $M_{\text{control}} = 38.5\%$; $B = .74$, $SE = .24$; Wald $\chi^2 = 9.73$, $p = .002$; $\text{Exp}(B) = 2.09$ 	<ul style="list-style-type: none"> Main effect of motive on proportion choosing gender-specific product: $M_{\text{romantic}} = 57.9\%$ vs. $M_{\text{control}} = 40.9\%$; $B = .69$, $SE = .25$; Wald $\chi^2 = 7.39$, $p = .007$; $\text{Exp}(B) = 1.98$
Study 1B (N = 228; Credamo)	Heterosexual: 94.7% Homosexual: 2.2% Bisexual: 2.2% Asexual: 0 Prefer not to disclose: 0.9%	<ul style="list-style-type: none"> Main effect of motive on proportion choosing gender-specific product: $M_{\text{romantic}} = 60.9\%$ vs. $M_{\text{control}} = 43.4\%$; $B = .71$, $SE = .27$; Wald $\chi^2 = 6.93$, $p = .008$; $\text{Exp}(B) = 2.03$ 	<ul style="list-style-type: none"> Main effect of motive on proportion choosing gender-specific product: $M_{\text{romantic}} = 63.9\%$ vs. $M_{\text{control}} = 44.4\%$; $B = .79$, $SE = .28$; Wald $\chi^2 = 8.11$, $p = .004$; $\text{Exp}(B) = 2.21$
Study 2A (N = 598; Prolific)	Heterosexual: 88.1% Homosexual: 2.8% Bisexual: 7.2% Asexual: 0.5% Prefer not to disclose: 1.3%	<ul style="list-style-type: none"> Main effect of motive: $F(1, 594) = 5.36$, $p = .021$; $\eta_p^2 = .01$ Main effect of product type: $F(1, 594) = 6.05$, $p = .014$; $\eta_p^2 = .01$ Interaction of motive and product type: $F(1, 594) = 9.48$, $p = .002$; $\eta_p^2 = .02$ Gender-specific product: $M_{\text{romantic}} = 4.06$, $SD = 2.09$ vs. $M_{\text{control}} = 3.18$, $SD = 1.86$; $F(1, 594) = 14.51$, $p < .001$; $\eta_p^2 = .02$ Gender-neutral product: $M_{\text{romantic}} = 3.16$, $SD = 1.97$ vs. $M_{\text{control}} = 3.28$, $SD = 2.04$; $F(1, 594) = .29$, $p = .589$; $\eta_p^2 < .001$ 	<ul style="list-style-type: none"> Main effect of motive: $F(1, 523) = 5.35$, $p = .021$; $\eta_p^2 = .01$ Main effect of product type: $F(1, 523) = 5.66$, $p = .018$; $\eta_p^2 = .01$ Interaction of motive and product type: $F(1, 523) = 9.42$, $p = .002$; $\eta_p^2 = .02$ Gender-specific product: $M_{\text{romantic}} = 4.10$, $SD = 2.09$ vs. $M_{\text{control}} = 3.16$, $SD = 1.88$; $F(1, 523) = 14.61$, $p < .001$; $\eta_p^2 = .03$ Gender-neutral product: $M_{\text{romantic}} = 3.15$, $SD = 1.96$ vs. $M_{\text{control}} = 3.28$, $SD = 2.03$; $F(1, 523) = .28$, $p = .595$; $\eta_p^2 = .001$
Study 2B (N = 600; Prolific)	Heterosexual: 87.8% Homosexual: 5% Bisexual: 6.3% Asexual: 0.3% Prefer not to disclose: 0.5%	<ul style="list-style-type: none"> Main effect of motive: $F(1, 596) = 14.94$, $p < .001$; $\eta_p^2 = .02$ Main effect of product type: $F(1, 596) = .55$, $p = .458$; $\eta_p^2 = .001$ Interaction of motive and product type: $F(1, 596) = 5.67$, $p = .018$; $\eta_p^2 = .01$ 	<ul style="list-style-type: none"> Main effect of motive: $F(1, 523) = 13.66$, $p < .001$; $\eta_p^2 = .03$ Main effect of product type: $F(1, 523) = 1.31$, $p = .254$; $\eta_p^2 = .002$ Interaction of motive and product type: $F(1, 523) = 5.92$, $p = .015$; $\eta_p^2 = .01$

		<ul style="list-style-type: none"> • Gender-specific product: $M_{\text{romantic}} = 3.96$, $SD = 2.33$ vs. $M_{\text{control}} = 2.91$, $SD = 1.88$; $F(1, 596) = 19.51$, $p < .001$; $\eta_p^2 = .03$ • Gender-neutral product: $M_{\text{romantic}} = 3.44$, $SD = 2.04$ vs. $M_{\text{control}} = 3.19$, $SD = 1.94$; $F(1, 596) = 1.10$, $p = .295$; $\eta_p^2 = .002$ 	<ul style="list-style-type: none"> • Gender-specific product: $M_{\text{romantic}} = 4.03$, $SD = 2.38$ vs. $M_{\text{control}} = 2.93$, $SD = 1.83$; $F(1, 523) = 19.09$, $p < .001$; $\eta_p^2 = .04$ • Gender-neutral product: $M_{\text{romantic}} = 3.39$, $SD = 2.08$ vs. $M_{\text{control}} = 3.16$, $SD = 1.97$; $F(1, 523) = .78$, $p = .376$; $\eta_p^2 = .001$
Study 4A (N = 299; Prolific)	Heterosexual: 86.6% Homosexual: 3% Bisexual: 10.0% Asexual: 0.3% Prefer not to disclose: 0	<ul style="list-style-type: none"> • Main effect of motive: $M_{\text{romantic}} = 4.29$, $SD = 2.12$ vs. $M_{\text{control}} = 3.47$, $SD = 1.95$; $F(1, 297) = 12.14$, $p = .001$; $\eta_p^2 = .04$ • Effect of motive on ME: $M_{\text{romantic}} = 6.36$, $SD = 1.79$ vs. $M_{\text{control}} = 3.54$, $SD = 2.37$; $F(1, 297) = 135.27$, $p < .001$; $\eta_p^2 = .31$ • Mediation effect: 95% CI: [.8432, 1.5672] 	<ul style="list-style-type: none"> • Main effect of motive: $M_{\text{romantic}} = 4.37$, $SD = 2.13$ vs. $M_{\text{control}} = 3.47$, $SD = 1.94$; $F(1, 257) = 12.65$, $p < .001$; $\eta_p^2 = .05$ • Effect of motive on ME: $M_{\text{romantic}} = 6.27$, $SD = 1.85$ vs. $M_{\text{control}} = 3.63$, $SD = 2.33$; $F(1, 257) = 102.60$, $p < .001$; $\eta_p^2 = .29$ • Mediation effect: 95% CI: [.7818, 1.5237]
Study 4B (N = 299; Prolific)	Heterosexual: 89.3% Homosexual: 5.4% Bisexual: 4.3% Asexual: 0.3% Prefer not to disclose: 0.7%	<ul style="list-style-type: none"> • Main effect of motive: $M_{\text{romantic}} = 4.23$, $SD = 2.24$ vs. $M_{\text{control}} = 3.46$, $SD = 2.07$; $F(1, 297) = 9.56$, $p = .002$; $\eta_p^2 = .03$ • Effect of motive on ME: $M_{\text{romantic}} = 6.42$, $SD = 1.95$ vs. $M_{\text{control}} = 4.29$, $SD = 2.69$; $F(1, 297) = 61.71$, $p < .001$; $\eta_p^2 = .17$ • Mediation effect: 95% CI: [.4226, .9751] 	<ul style="list-style-type: none"> • Main effect of motive: $M_{\text{romantic}} = 4.30$, $SD = 2.25$ vs. $M_{\text{control}} = 3.40$, $SD = 2.07$; $F(1, 265) = 11.65$, $p = .001$; $\eta_p^2 = .04$ • Effect of motive on ME: $M_{\text{romantic}} = 6.42$, $SD = 1.94$ vs. $M_{\text{control}} = 4.38$, $SD = 2.71$; $F(1, 265) = 50.59$, $p < .001$; $\eta_p^2 = .16$ • Mediation effect: 95% CI: [.3987, .9956]
Study 5 (N = 448; Credamo)	Heterosexual: 92.2% Homosexual: 0.4% Bisexual: 0.9% Asexual: 5.8% Prefer not to disclose: 0.7%	<ul style="list-style-type: none"> • Main effect of motive: $F(2, 445) = 6.93$, $p = .001$; $\eta_p^2 = .03$ • Romantic condition and control condition: $M_{\text{romantic}} = 6.29$, $SD = 1.62$ vs. $M_{\text{control}} = 5.49$, $SD = 1.99$; $F(1, 445) = 13.53$, $p < .001$; $\eta_p^2 = .05$ • Romantic and secret-crush condition: $M_{\text{romantic}} = 6.29$, $SD = 1.62$ vs. $M_{\text{secret crush}} = 5.78$, $SD = 1.98$; $F(1, 445) = 5.49$, $p = .020$; $\eta_p^2 = .02$ • Control condition and secret-crush condition: $M_{\text{secret crush}} = 5.78$, $SD = 1.98$ vs. $M_{\text{control}} = 5.49$, $SD = 1.99$; $F(1, 445) = 1.80$, $p = .180$; $\eta_p^2 = .005$ 	<ul style="list-style-type: none"> • Main effect of motive: $F(2, 410) = 5.37$, $p = .005$; $\eta_p^2 = .03$ • Romantic condition and control condition: $M_{\text{romantic}} = 6.33$, $SD = 1.56$ vs. $M_{\text{control}} = 5.64$, $SD = 1.91$; $F(1, 410) = 9.62$, $p = .002$; $\eta_p^2 = .04$ • Romantic and secret-crush condition: $M_{\text{romantic}} = 6.33$, $SD = 1.56$ vs. $M_{\text{secret crush}} = 5.79$, $SD = 1.98$; $F(1, 410) = 6.07$, $p = .014$; $\eta_p^2 = .02$ • Control condition and secret-crush condition: $M_{\text{secret crush}} = 5.79$, $SD = 1.98$ vs. $M_{\text{control}} = 5.64$, $SD = 1.91$; $F(1, 410) = .45$, $p = .503$; $\eta_p^2 = .001$

Study 6 (N = 460; mTurk)	Heterosexual: 90.2% Homosexual: 3.6% Bisexual: 4.6% Asexual: 0.7% Prefer not to disclose: 1.0%	<ul style="list-style-type: none"> • Main effect of motive: $F(2, 457) = 16.73, p < .001; \eta_p^2 = .07$ • Romantic condition and giver-committed condition: $M_{\text{romantic}} = 4.86, SD = 2.74$ vs. $M_{\text{giver-committed}} = 3.90, SD = 2.50$; $F(1, 457) = 11.00, p = .001; \eta_p^2 = .02$ • Romantic and recipient-committed condition: $M_{\text{romantic}} = 4.86, SD = 2.74$ vs. $M_{\text{recipient-committed}} = 3.21, SD = 2.28$; $F(1, 457) = 33.18, p < .001; \eta_p^2 = .07$ • Giver-committed condition and recipient-committed condition: $M_{\text{giver-committed}} = 3.90, SD = 2.50$ vs. $M_{\text{recipient-committed}} = 3.21, SD = 2.28$; $F(1, 457) = 5.81, p = .016; \eta_p^2 = .01$ 	<ul style="list-style-type: none"> • Main effect of motive: $F(2, 414) = 14.29, p < .001; \eta_p^2 = .07$ • Romantic condition and giver-committed condition: $M_{\text{romantic}} = 4.82, SD = 2.77$ vs. $M_{\text{giver-committed}} = 3.97, SD = 2.53$; $F(1, 414) = 7.81, p = .005; \eta_p^2 = .03$ • Romantic and recipient-committed condition: $M_{\text{romantic}} = 4.82, SD = 2.77$ vs. $M_{\text{recipient-committed}} = 3.21, SD = 2.29$; $F(1, 414) = 28.55, p < .001; \eta_p^2 = .10$ • Giver-committed condition and recipient-committed condition: $M_{\text{giver-committed}} = 3.97, SD = 2.53$ vs. $M_{\text{recipient-committed}} = 3.21, SD = 2.29$; $F(1, 414) = 6.21, p = .013; \eta_p^2 = .02$
Study 7 (N = 450; Prolific)	Heterosexual: 91.1% Homosexual: 4% Bisexual: 3.6% Asexual: 0.4% Prefer not to disclose: 0.9%	<ul style="list-style-type: none"> • Main effect of romantic motive: $B = -.37, SE = .12, \text{Wald } \chi^2 = 9.48, p = .002; \text{Exp}(B) = .69$ • Romantic motive condition and control condition: $M_{\text{romantic}} = 53.4\%$ vs. $M_{\text{control}} = 29.8\%$; $B = -.99, SE = .24, \text{Wald } \chi^2 = 16.74, p < .001; \text{Exp}(B) = .37$ • Romantic motive condition and married condition: $M_{\text{romantic}} = 53.4\%$ vs. $M_{\text{married}} = 35.8\%$; $B = -.72, SE = .24, \text{Wald } \chi^2 = 9.29, p = .002; \text{Exp}(B) = .49$ • Control condition and married condition: $M_{\text{control}} = 29.8\%$ vs. $M_{\text{married}} = 35.8\%$; $B = -.27, SE = .25, \text{Wald } \chi^2 = 1.22, p = .270; \text{Exp}(B) = .76$ 	<ul style="list-style-type: none"> • Main effect of romantic motive: $B = -.37, SE = .13, \text{Wald } \chi^2 = 8.90, p = .003; \text{Exp}(B) = .69$ • Romantic motive condition and control condition: $M_{\text{romantic}} = 55.9\%$ vs. $M_{\text{control}} = 29.9\%$; $B = -1.09, SE = .25, \text{Wald } \chi^2 = 18.29, p < .001; \text{Exp}(B) = .34$ • Romantic motive condition and married condition: $M_{\text{romantic}} = 55.9\%$ vs. $M_{\text{married}} = 38.0\%$; $B = .73, SE = .25, \text{Wald } \chi^2 = 8.71, p = .003; \text{Exp}(B) = 2.10$ • Control condition and married condition: $M_{\text{control}} = 29.9\%$ vs. $M_{\text{married}} = 38.0\%$; $B = -.36, SE = .26, \text{Wald } \chi^2 = 1.96, p = .161; \text{Exp}(B) = .70$
Study 8 (N = 199; Prolific)	Heterosexual: 91% Homosexual: 4% Bisexual: 3.5% Asexual: 0 Prefer not to disclose: 1.5%	<ul style="list-style-type: none"> • Main effect of motive: Romantic = 39.0% vs. Control = 18.2%; $\chi^2(1) = 10.55, p = .001; OR = 2.88$ 	<ul style="list-style-type: none"> • Main effect of motive: Romantic = 39.1% vs. Control = 16.9%; $\chi^2(1) = 11.09, p = .001; OR = 3.17$

Study 9A (N = 203; mTurk)	Heterosexual: 88.7% Homosexual: 4.9% Bisexual: 3.9% Asexual: 0.5% Prefer not to disclose: 2%	<ul style="list-style-type: none"> Main effect of motive: $M_{\text{gender-specific}} = 5.80$, $SD = 2.12$ vs. $M_{\text{gender-neutral}} = 4.67$, $SD = 1.98$; $F(1, 201) = 15.42$, $p < .001$; $\eta_p^2 = .07$ 	<ul style="list-style-type: none"> Main effect of motive: $M_{\text{gender-specific}} = 5.83$, $SD = 2.13$ vs. $M_{\text{gender-neutral}} = 4.61$, $SD = 1.98$; $F(1, 178) = 15.80$, $p < .001$; $\eta_p^2 = .08$
Study 9B (N = 199; mTurk)	Heterosexual: 82.9% Homosexual: 3% Bisexual: 10.6% Asexual: 3.5% Prefer not to disclose: 0	<ul style="list-style-type: none"> Main effect of product type: $M_{\text{gender-specific}} = 6.22$, $SD = 1.97$ vs. $M_{\text{gender-neutral}} = 4.27$, $SD = 2.35$; $F(1, 197) = 40.19$, $p < .001$; $\eta_p^2 = .17$ 	<ul style="list-style-type: none"> Main effect of product type: $M_{\text{gender-specific}} = 6.22$, $SD = 1.96$ vs. $M_{\text{gender-neutral}} = 4.37$, $SD = 2.40$; $F(1, 163) = 29.26$, $p < .001$; $\eta_p^2 = .15$

APPENDIX L. PRETEST RESULTS

STUDY 1A

Masculinity

To confirm that the two pairs of shoes we used in Study 1a differed in masculinity/femininity perception, we conducted a pretest (N = 40) with a separate group of participants from the same pool. In the pretest, participants were shown the two pairs of shoes and were asked to indicate their perceived masculinity/femininity on a single-item scale (“How masculine/feminine do you think this product is?” 1 = “very masculine,” 5 = “neutral,” and 9 = “very feminine”; adopted from Markstedt et al. 2021). As expected, the leather shoes for men were perceived as more gender-specific ($M_{\text{gender-specific}} = 1.65$, $SD = .83$) and the gender-neutral sneakers as more gender-neutral ($M_{\text{gender-neutral}} = 5.45$, $SD = 1.06$; $F(1, 39) = 243.79$, $p < .001$; $\eta_p^2 = .86$).

STUDY 1B

Masculinity

To validate the two phone wireless chargers we used in study 1b differed in masculinity/femininity perception, we conducted a pretest (N = 40) with a separate group of participants from the same pool. In the pretest, participants were shown two wireless chargers and were asked to indicate their perceived masculinity/femininity of each product in the same scale of study 1a. As expected, the wireless charger for men was perceived as more gender-specific ($M_{\text{gender-specific}} = 8.20$, $SD = 1.07$) and the gender-neutral wireless charger was more gender-neutral ($M_{\text{gender-neutral}} = 4.80$, $SD = 2.39$; non-significant difference than the midpoint 5: $t(39) = -.53$, $p = .599$; $M_{\text{gender-specific}} = 8.20$ vs. $M_{\text{gender-neutral}} = 4.80$, $F(1, 39) = 61.01$, $p < .001$, $\eta_p^2 = .61$).

STUDY 2A

Masculinity

To validate that these two bottles of perfume differed in masculinity/femininity perception, we conducted a pretest ($N = 40$) with a separate group of participants from the same pool. In the pretest, participants were shown two bottles of perfume and were asked to indicate perceived masculinity/femininity of each product using the same scale in study 1a. As expected, the perfume for men was perceived as more gender-specific ($M_{\text{gender-specific}} = 2.53$, $SD = 1.63$) and the gender-neutral perfume was more gender-neutral ($M_{\text{gender-neutral}} = 5.05$, $SD = 1.24$; non-significant difference than the midpoint 5: $t(39) = .26$, $p = .800$; $M_{\text{gender-specific}} = 2.53$ vs. $M_{\text{gender-neutral}} = 5.05$, $F(1, 39) = 74.24$, $p < .001$, $\eta_p^2 = .66$).

Attractiveness

In the above pretest, we also measured perceived attractiveness in the same scale in study 1a. The results revealed that these two bottles of perfume did not differ in attractiveness ($M_{\text{gender-specific}} = 5.50$, $SD = 1.95$ vs. $M_{\text{gender-neutral}} = 5.25$, $SD = 1.46$; $F(1, 39) = .45$; $p = .505$, $\eta_p^2 = .01$).

STUDY 2B

Masculinity

To validate that these two bottles of perfume differed in masculinity/femininity perception, we conducted a pretest ($N = 40$) with a separate group of participants from the same pool. In the pretest, participants were shown the two bottles of perfume and were asked to indicate perceived masculinity/femininity of each product using the same scale in study 1a (1 = very masculine, 9 = very feminine). As expected, the perfume for women was perceived as more gender-specific ($M_{\text{gender-specific}} = 7.05$, $SD = 1.58$) and the gender-neutral perfume was

more gender-neutral ($M_{\text{gender-neutral}} = 5.08$, $SD = 1.21$; non-significant difference than the midpoint 5: $t(39) = .39$, $p = .696$; $M_{\text{gender-specific}} = 7.05$ vs. $M_{\text{gender-neutral}} = 5.08$, $F(1, 39) = 61.48$, $p < .001$, $\eta_p^2 = .61$).

Attractiveness

Another pretest ($N = 40$) with a separate group of participants from the same pool measured the attractiveness of these two options using the same scale in study 1a. The results showed that these two bottles of perfume did not differ in attractiveness ($M_{\text{gender-specific}} = 4.93$, $SD = 1.42$ vs. $M_{\text{gender-neutral}} = 4.98$, $SD = 1.42$; $F(1, 39) = .03$; $p = .876$, $\eta_p^2 = .001$).

STUDY 3A

Masculinity

We conducted two separate pretests both among heterosexual participants and among homosexual participants in the same pool. Participants were presented with three pairs of shoes and were asked to indicate their masculinity/femininity perception of each product in the same scale in study 1a. Specifically, heterosexual participants ($N = 40$) perceived the women's high heels as female-specific, the men's leather shoes as male-specific, and the gender-neutral sneakers as gender-neutral ($M_{\text{women's high heels}} = 8.58$, $SD = 1.11$ vs. $M_{\text{gender-neutral sneakers}} = 5.30$, $SD = 1.14$; $F(1, 39) = 246.15$, $p < .001$, $\eta_p^2 = .86$; $M_{\text{men's leather shoes}} = 1.53$, $SD = .99$ vs. $M_{\text{gender-neutral sneakers}} = 5.30$, $SD = 1.14$; $F(1, 39) = 200.32$, $p < .001$, $\eta_p^2 = .84$).

Similarly, homosexual participants ($N = 43$) also confirmed that the women's high heels was female-specific, the men's leather shoes was male-specific, and the gender-neutral sneakers was gender-neutral ($M_{\text{men's leather shoes}} = 2.07$, $SD = 1.61$ vs. $M_{\text{gender-neutral sneakers}} = 5.30$, $SD = .80$; $F(1, 42) = 637.16$, $p < .001$, $\eta_p^2 = .94$; $M_{\text{women's high heels}} = 8.49$, $SD = 1.01$ vs. $M_{\text{gender-neutral sneakers}} = 5.30$, $SD = .80$; $F(1, 42) = 5619.96$, $p < .001$, $\eta_p^2 = .99$).

STUDY 3B

Masculinity

We conducted two separate pretests both among heterosexual participants and among homosexual participants in the same pool. Participants were presented with three watches and were asked to indicate their masculinity/femininity perception of each product in the same scale in study 1a. Specifically, heterosexual participants ($N = 40$) perceived the women's watch as female-specific, the men's watch as male-specific, and the gender-neutral watch was gender-neutral ($M_{\text{women's watch}} = 8.30$, $SD = .88$ vs. $M_{\text{gender-neutral watch}} = 4.83$, $SD = 1.65$; $F(1, 39) = 165.28$, $p < .001$, $\eta_p^2 = .81$; $M_{\text{men's watch}} = 1.93$, $SD = 1.21$ vs. $M_{\text{gender-neutral watch}} = 4.83$, $SD = 1.65$; $F(1, 39) = 96.75$, $p < .001$, $\eta_p^2 = .71$).

Similarly, homosexual participants ($N = 39$) also confirmed that the women's watch was female-specific, the men's watch was male-specific, and the gender-neutral watch was gender-neutral ($M_{\text{men's watch}} = 1.85$, $SD = 1.23$ vs. $M_{\text{gender-neutral watch}} = 5.56$, $SD = 1.47$; $F(1, 38) = 131.41$, $p < .001$, $\eta_p^2 = .78$; $M_{\text{women's watch}} = 8.62$, $SD = .71$ vs. $M_{\text{gender-neutral watch}} = 5.56$, $SD = 1.47$; $F(1, 38) = 135.41$, $p < .001$, $\eta_p^2 = .78$).

STUDY 4A & STUDY 4B

Masculinity

Study 4a and study 4b used the same gender-specific perfume in study 2a and study 2b. Thus, please refer to pretest results of study 2a and study 2b to see details of the masculinity/femininity perceptions.

STUDY 5

Masculinity

A pretest ($N = 40$) with a separate group of participants from the same pool showed that the men's shaver was perceived as male-specific than the mid-point ($M_{\text{shaver}} = 1.73$, $SD = 1.30$; significantly lower than the scale midpoint of 5: $t(39) = -15.93$, $p < .001$).

STUDY 6

Masculinity

A pretest ($N = 36$) with a separate group of participants from the same pool revealed that the women's high heels was perceived as female-specific compared to the mid-point ($M_{\text{high heels}} = 8.36$, $SD = 1.13$; significantly greater than the scale midpoint of 5: $t(35) = 17.92$, $p < .001$).

STUDY 7

Masculinity

Participants ($N = 40$) were presented with two pairs of shoes and were asked to indicate their masculinity/femininity perception of each product in the same scale in study 1a. Specifically, the women's high heels as female-specific and the gender-neutral sneakers was gender-neutral ($M_{\text{women's high heels}} = 8.58$, $SD = 1.11$ vs. $M_{\text{gender-neutral sneakers}} = 5.30$, $SD = 1.14$; $F(1, 39) = 246.15$, $p < .001$, $\eta_p^2 = .86$; $M_{\text{men's leather shoes}} = 1.53$, $SD = .99$ vs. $M_{\text{gender-neutral sneakers}} = 5.30$, $SD = 1.14$; $F(1, 39) = 200.32$, $p < .001$, $\eta_p^2 = .84$).

STUDY 8

Masculinity

A pretest ($N = 40$) with a separate group of participants from the same pool confirmed that the pink backpack was indeed more female-specific ($M_{\text{pink bag}} = 8.33$, $SD = 1.10$) and the gym bag was perceived as more gender-neutral ($M_{\text{gym bag}} = 5.55$, $SD = 1.57$; $F(1, 39) = 94.61$, $p < .001$, $\eta_p^2 = .71$).

Attractiveness

In the above pretest, we also measured the attractiveness using the same scale in study 2a. The results showed that these two bags were not differ in attractiveness ($M_{\text{pink bag}} = 4.65$, $SD = 2.12$ vs. $M_{\text{gym bag}} = 4.15$, $SD = 1.61$; $F(1, 39) = 2.14$, $p = .151$, $\eta_p^2 = .05$).

STUDY 9A

Masculinity

A pretest ($N = 40$) with a separate group of participants from the same pool confirmed that the perfume for gentlemen was indeed more male-specific ($M_{\text{gender-specific}} = 2.50$, $SD = 1.90$) and the gender-neutral perfume was perceived as more gender-neutral ($M_{\text{gender-neutral}} = 5.13$, $SD = 1.65$; non-significant difference than the midpoint 5: $t(39) = .48$, $p = .635$; $M_{\text{gender-specific}} = 2.50$ vs. $M_{\text{gender-neutral}} = 5.13$, $F(1, 39) = 96.52$, $p < .001$, $\eta_p^2 = .71$).

Attractiveness

Another pretest ($N = 42$) with a separated group of participants from the same pool confirmed that the perfume for gentlemen is as attractive as the gender-neutral perfume ($M_{\text{gender-specific product}} = 5.69$, $SD = 2.12$ vs. $M_{\text{gender-neutral}} = 5.24$, $SD = 2.34$; $F(1, 41) = 1.69$, $p = .201$, $\eta_p^2 = .04$).

STUDY 9B

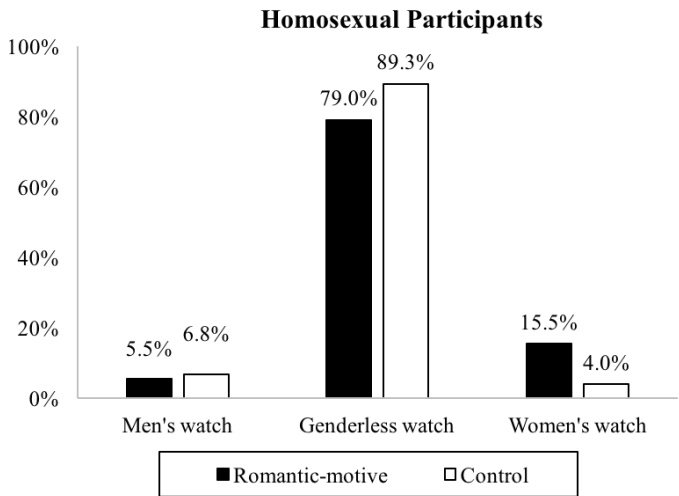
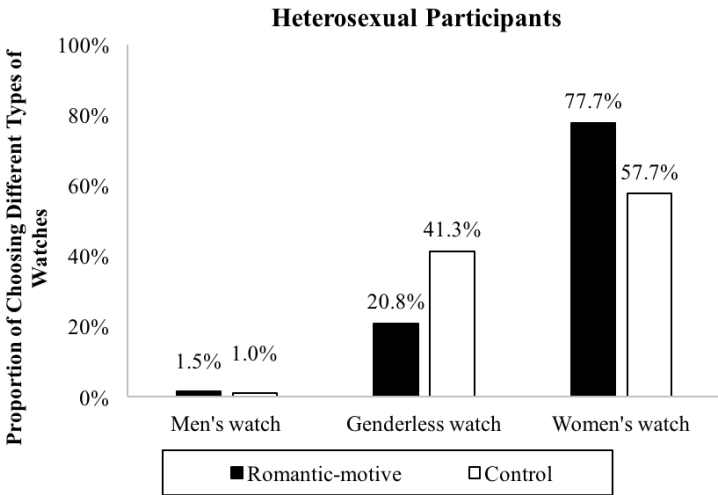
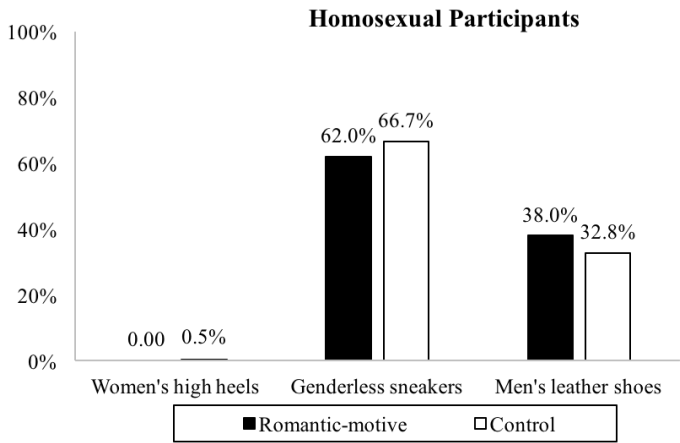
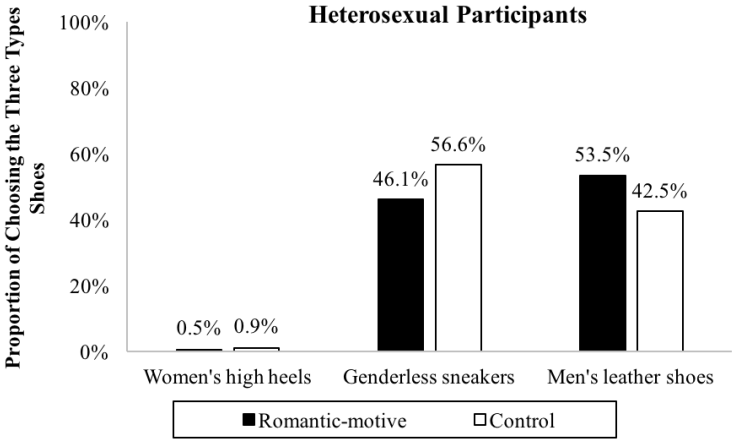
Masculinity

A pretest ($N = 40$) with a separate group of participants from the same pool revealed that the perfume for ladies was indeed more female-specific ($M_{\text{gender-specific}} = 7.33$, $SD = 1.44$) and the gender-neutral perfume was perceived as more gender-neutral ($M_{\text{gender-neutral}} = 4.98$, $SD = 1.35$; non-significant difference than the midpoint 5: $t(39) = -.12$, $p = .907$; $M_{\text{gender-specific}} = 7.33$ vs. $M_{\text{gender-neutral}} = 4.98$, $F(1, 39) = 61.06$, $p < .001$, $\eta_p^2 = .61$).

Attractiveness

In the above pretest, we also measured the attractiveness using the same scale in study 2a. The results showed that the perfume for ladies was as attractive as gender-neutral perfume ($M_{\text{gender-specific product}} = 5.83$, $SD = 2.17$ vs. $M_{\text{gender-neutral}} = 5.50$, $SD = 2.50$; $F(1, 39) = .51$, $p = .478$, $\eta_p^2 = .01$).

APPENDIX M. THE PROPORTION OF CHOOSING THREE TYPES OF PRODUCTS IN STUDIES 3A AND 3B



APPENDIX N. SCENARIOS USED IN CHAPTER 4.4

20 years old condition:

Product Preference Survey

Imagine that you would like to buy a pair of pants for a 20-year-old person. You are currently considering one brand. Pants from this brand are all comfortable, wear-resisting, and made from natural materials. However, this brand only has unisex designs.

The unisex design refers to a design that applies the same style for both genders. Males and females wear the same design in different sizes.

Other conditions applied the same scenario except the recipients' age.

APPENDIX O. SCENARIOS USED IN CHAPTER 4.5

40 years old & Male condition:

Product Preference Survey

Imagine that you want to buy a pair of pants for a 40-year-old man, David. You found one in a store. This pair of pants are comfortable, wear-resisting, and made from natural materials. However, this brand only has unisex designs.

The unisex design refers to the design which applies the same style for both genders. Males and females will wear the same design with different sizes. And you can find a suitable size for the recipient.

40 years old & Female condition:

Product Preference Survey

Imagine that you want to buy a pair of pants for a 40-year-old woman, Mary. You found one in a store. This pair of pants are comfortable, wear-resisting, and made from natural materials. However, this brand only has unisex designs.

The unisex design refers to the design which applies the same style for both genders. Males and females will wear the same design with different sizes. And you can find a suitable size for the recipient.

80 years old conditions applied the same scenario except the recipients' age.

APPENDIX P. STIMULI USED IN CHAPTER 4.5



Unisex pants

APPENDIX Q. PRETEST RESULTS IN CHAPTER 4.5

STUDY 2

Masculinity

To validate the unisex pants we used in study 2 is perceived as gender-neutral, we conducted a pretest ($N = 40$) with a separate group of participants from the same pool. In the pretest, participants were shown a pair of unisex pants, and they were asked to indicate their perceived masculinity/femininity in a single-item scale (“How masculine/feminine do you think this product is?”; 1 = “very masculine,” 5 = “neutral,” and 9 = “very feminine”; adopted from Markstedt et al. 2021). As expected, the unisex pants was perceived as gender-neutral ($M_{\text{pants}} = 5.35$, $SD = 1.59$; not significantly different from the scale midpoint of 5: $t(39) = 1.39$, $p = .173$).

Perceived Age

To validate the pair of unisex pants we used in study 2 is perceived as age-neutral, we conducted a pretest ($N = 40$) with a separate group of participants from the same pool. In the pretest, participants were shown the same pair of unisex pants, and they were asked to indicate their perceived age of the shown product in a single-item scale (“This product is mainly designed for _____”; 1 = “young customers,” 5 = “neutral,” and 9 = “old customers”). As expected, the unisex pants was perceived as gender-neutral ($M_{\text{pants}} = 5.05$, $SD = 1.95$; not significantly different from the scale midpoint of 5: $t(39) = .16$, $p = .872$).