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Which Toys are Right for Boys? How Threat and Confirmation of the Gender Hierarchy Impact Purchase Intentions for Stereotypical and Counter Stereotypical Products

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WHICH TOYS ARE RIGHT FOR BOYS? HOW THREAT AND CONFIRMATION OF THE

GENDER HIERARCHY IMPACT PURCHASE INTENTIONS FOR

STEREOTYPICAL AND COUNTER STEREOTYPICAL PRODUCTS

by

CONNOR SAMUELSON

(Under the direction of Amy Hackney)

ABSTRACT

Social movements with potential to change the traditional gender hierarchy may be met with approval or disapproval, depending upon levels of status-legitimizing beliefs (SLBs). Under conditions of gender hierarchy change, one mechanism in which people may choose to fight or support such change is through their purchase of gender stereotypical or counter-stereotypical products. Community members completed a measure of System Legitimizing Beliefs (Levin et al., 1998) and then read one of two news articles about women in the workplace that suggested trends that either threatened or did not threaten the current gender hierarchy. Participants then imagined needing to purchase a toy for their (hypothetical) young boy and rated a series of advertisements that depicted a boy playing with stereotypically masculine toys and stereotypically feminine toys. Results supported the predicted interaction between SLB levels and preference for masculine toys, but hierarchy threat information did not significantly modify this association. Overall, people higher in SLBs preferred masculine toys over feminine toys, and the data suggested that this relationship was maintained, regardless of level of gender hierarchy threat. On the other hand, individuals lower in SLBs rated masculine and feminine toys similarly

when there was no threat to the gender hierarchy. When the gender hierarchy was threatened,

individuals lower in SLBs rated feminine toys more favorably than masculine toys. Although this

three-way interaction between SLBs, toy type, and gender hierarchy threat was not statistically

significant, the predicted pattern of means suggests that the causal impact of gender hierarchy

threat on the relationship between SLBs and toy preferences deserves further study.

INDEX WORDS: Gender hierarchy, Status-legitimizing beliefs, Advertisements, Market
research, Purchase intention, Masculine toys, Feminine toys, Counter stereotypical
advertisements, Non-traditional toys, Non-traditional advertisements.

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CHAPTER 1

INTRODUCTION

Exposure to advertisements has increased at an exorbitant rate, with market researchers believing the average American is exposed to roughly 360 advertisements per day (Media Dynamics Inc., 2014) with some believing the number to be closer to 5,000 advertisements, due to brand names on clothing, billboards, products, and various other items seen on a daily basis (Subramanian, 2015). With so many advertisements and images extensively promoted, companies have focused more on targeted advertising towards an intended audience to gain salience in the congested market (Simpson, 2017). One of the issues that is noted with this goal to create salient advertisements is that the advertisement images can portray negative stereotypes, with gender stereotypes being one of the more prominent stereotypes seen (Eisend, 2019). Gender stereotypes are depictions of a specific gender participating or being associated with an action that is not equally represented by the other gender (Ashmore & Del Boca, 1981), with traditional gender stereotypes associating women with communal roles and men with agency roles (Eagly et al., 2020). Communal roles are considered to be actions that are more selfless and community-minded, while agency roles are associated with self-empowerment and mastery of one's own skills (Bakan, 1966). What has been seen among advertisements is a continuous trend of unequal representation in advertisements where one gender performs a specific role or action, with the understanding that the other gender does not perform that role or action. This has created a system of inequality between men and women, where men are placed into societal roles that indicate they are in higher positions of power than women are.

Research on the topic of gender stereotypes in advertisements has focused primarily on how society accepts women portraying masculine gender stereotypes (e.g., being viewed as

strong and intelligent) (Eisend, 2019; Weisgram & Bruun, 2016; Zwisza & Cinnirella, 2010) with only a few articles discussing how accepting society is of men performing feminine gender stereotyped behaviors (e.g., men performing household duties) (Gentry & Harrison, 2010; Tuncay & Coleman, 2015). As such, we aim to assess the extent to which people are accepting of boys engaging in activities that are stereotypically associated with girls, specifically through their intent to purchase gender stereotypic and counter stereotypic toys for boys. We begin by describing status ideologies and how status-legitimizing beliefs (SLBs) have been used to increase approval of the traditional status system. We then describe gender role stereotypes in advertising and how these stereotypes have been depicted in the past and present. From there, we highlight the "mirror vs. mold" argument in terms of advertisement influences on society. This allows us to examine the bidirectional relation between advertisements and gender stereotyping. Finally, we discuss how purchase intention is achieved and the persuasive appeals that influence purchase intention. We attempt to illustrate that although it has become more acceptable for women/girls to engage in agentic behaviors which are stereotypically associated with higher social status, men/boys continue to be stigmatized for engaging in communal behaviors which are stereotypically associated with a lower social status.

Status Ideologies

To better understand how people perceive stereotypical advertisements, it is first important to understand status ideologies. Status ideologies are formed when multiple groups of people interact together within a society and one of those groups becomes more dominant over others (Sidanius & Pratto, 1993). These groups typically rise in power when they secure an abundance of resources that the other groups do not have access to. As such, those in the higher dominant status will use their power to ensure their status remains the same, usually by

convincing members of all statuses that the current social system is legitimate (Zelditch, 2001).

These disparities can create a divide between status groups as one group feels as if they are

unable to move up in society due to the lack of resources they have (Major & Kaiser, 2017). This

divide can be seen in lower status groups as well. If people in lower status groups endorse the

status hierarchy and perceive those in higher status in a positive manner, lower status individuals

are more likely to view their peers or those slightly lower than them as inferior, possibly leading

to negative judgment (Jost et al., 2002). In other words, lower status members that believe in the

status quo system will try to separate themselves from their status members, even though they

are among that status as well.

Members of society will often use status ideologies to increase their understanding of

social constructs to then promote positive identities within society (Hogg & Abrams, 1988; Tajfel

& Turner, 1986). What has been found is that individuals either endorse the status system and

believe that legitimizing the ideologies of the system is crucial for social order (Jost et al., 2004),

or they believe the system is unjust and that ideologies need to change. What becomes

problematic for individuals that legitimize the system is when their ideologies about the system

become disconfirmed. This disconfirmation increases uncertainty and anxiety among those that

legitimize the system, leading to threatening behaviors from those who wish to reaffirm the

ideology (Major et al., 2007). Because of this, discrimination has been a widely used tool to

reassert dominance, instill doubt among inferior status members, and further legitimize the

attacker's role in society due to them feeling threatened (Major & Kaiser, 2017). These acts are

typically used by those who legitimize the status quo as an attempt to regain their group's status.

This provides a theoretical understanding of why parents would endorse the use of gender-

specific toys for boys, as men have traditionally been at the top of the status quo (Sidanius &

Pratto, 1999). Purchasing feminine toys for a boy would go against the ideology that men are supposed to be agentic and masculine, while also putting the boy in a position that would decrease their social status, as they will not be exhibiting behaviors that align with traditional male stereotypes. This would be more prominent for people that are higher in status-legitimizing beliefs, who want to increase the status of males in society by maintaining traditional toy engagement.

Status-Legitimizing Beliefs

Status-legitimizing beliefs (SLBs) are tools used by high-status members to maintain an existing status hierarchy by perpetuating ideologies that the system is legitimate (Jost et al., 2004). This is seen when those in higher statuses promote beliefs that will increase social disparities if high-status members feel their status is being threatened (Sidanius & Pratto, 1999). The use of these beliefs is common among all societies that have group-based inequalities; the difference among cultures is the degree in which these beliefs are executed (Glaser, 2005). The beliefs that are prominent in American society are primary examples of how SLBs are used to increase the disparities of the system, based on how high-status members respond when progressive changes are attempted to be made (see Glaser, 2005, for comprehensive break down of status-legitimizing beliefs/ideologies within American society). The beliefs in America are used to increase the divide among status members, such as is seen with gender stereotypes (Kahalon et al., 2020), believing that working hard will increase status (Wellman et al., 2016), and thinking that the world is just, so long that you abide by the system (McCoy et al., 2013). The issue with these beliefs is that it places blame on lower status members for their disadvantages and inability to increase their status (Major et al., 2007). As discussed earlier, lower status groups will use these beliefs against their peers to try and separate themselves from

the low status, which further increases stereotypes about low-status groups. For instance, women who stay at home and perform traditional gender roles in the household will attempt to shame working women for not being the caregiver for their family (Hupfer, 2002). These SLBs are not specific to one group or another; rather, they are used among all status groups, which further perpetuates the concept that the system is legitimate since some members of all status groups hold these beliefs.

For individuals that are more likely to endorse SLBs, the continuity of the hierarchy becomes a form of comfort, stability, and structure. As such, when beliefs are introduced that go against the hierarchy, these individuals are more likely to feel that these new beliefs threaten the hierarchy, causing SLB-endorsing individuals to attack the new belief in order to maintain the hierarchy (Levin et al., 1998). When individuals that endorse SLBs are presented with threatening acts, their attacks may come in various forms, attempting to circumvent the ability of threatening acts to become prevalent. This was seen by Rudman et al. (2012) where colleagues engaged in actions that decreased the ability of a coworker to obtain high merits in the workplace, even to the point of sabotaging the coworker's work.

Actions of maintaining the established hierarchy can be seen within advertisements as well, as stereotypes of gender roles have been commonly portrayed, even to the point of depicting certain genders playing with specific types of toys. Wilkins and colleagues (2017) saw that when progress begins to change for the advancement of others (civil rights, women's suffrage), members who believe in the status hierarchy are more likely to try and reestablish the current system by any means necessary. In this sense, advertisements can be used as a tool to either perpetuate traditional stereotypes that maintain the hierarchy (GoDaddy commercials with Danica Patrick portraying a sexualized woman in the hopes men would be interested in website

domains), or advertisements can be used promote change against the hierarchy for social progress (Nike's 2020 commercial *For Once, Don't Do It* that promotes equality among races.). Utilizing this understanding of maintenance actions when threats are perceived by those more likely to endorse SLBs, viewing advertisements that would threaten the hierarchy could result in people not endorsing the product, company, or brand that the advertisement is associated with. Because of this, higher-SLB individuals could refuse to purchase nontraditional toys for boys as a means to maintain the belief that boys only play with masculine toys.

Mirror vs. Mold Theories

The role that advertisements have on influencing society has been debated for the better part of the last century. After noticing the images being portrayed in advertisements, researchers realized that the views society members held about gender might be connected with the types of marketing techniques used by companies. Because of this, mirror theory (belief that advertisements portray the values and viewpoints currently present in society) was introduced (Holbrook, 1987). At the same time, mold theory was introduced to counteract mirror theory, as mold theory postulates that advertisements influence the beliefs and values that are present in society (Pollay, 1986; 1987).

Mirror theory focuses the attention on a society's values, stating that advertisers use these values to promote positivity to their consumers by conveying images of beliefs that consumers already uphold. Fabrigar and Petty (1999) demonstrated this when they found that more positively viewed advertisements have greater chances of people wanting to purchase products from the company of that advertisement. In essence, people will base their purchase intentions off how much the person agrees with a company's advertisement. One way that advertisers have attempted to provide positive imagery to consumers, though, is through the use of gender

stereotypes. These stereotypes were intended to align with consumers that already held prior beliefs of these stereotypes, increasing the likelihood that gender stereotypes would be positively received (Tuncay & Coleman, 2015). As such, the occurrence of gender stereotypes within society is utilized by advertisers to then implement gender stereotypes into advertisements in the hopes that the message will be positively received by the perceived audience of the product.

In contrast, mold theory holds that advertisers are the ones influencing society's values. Pollay saw the perpetuation of gender stereotypes within advertisements, further influencing the views of society members. Mold theory utilized the beliefs of Gerbner's cultivation theory (1976), which posits that media use and exposure can cause long-term effects on people depending on the amount of media that is consumed. Pollay took the results from cultivation theory and expanded upon them, concluding that advertisements are the media in question and by viewing them, they have more of an impression on society as opposed to society having an impression on advertisements. Through this understanding, we can see that the multitude of advertising images and messages that are present in society can have a permanent impression on how people view the appropriateness of gender roles and differing of gender stereotypes.

Although the mirror and mold arguments differ in the proposed directionality between stereotypical advertisements and stereotypical beliefs, Grau and Zotos (2016) believe they are more connected than previously believed. They concluded that the mirror and the mold arguments are a continuation upon each other. That is, gender stereotypes are present in society and are reflected in advertising (mirror argument). Because of this, society sees these portrayals of gender stereotypes in all aspects of their life and view that if this is being advertised, it's accepted, therefore being shaped by the advertising messages (mold argument). This new concept has been deemed a "hybrid" concept (Grau & Zotos, 2016) in which advertising impacts

society in such a way that it significantly impacts the ebb and flow of society. In other words, what is presented in advertisements is scrutinized throughout all of society and can perpetuate systematic stereotypes as these stereotypes are seen to uphold the same values that those in higher statuses use to remain above others.

Gender Stereotypes in Advertising

Through the last half of the twentieth century (and beyond), the topic of gender stereotypes in advertising has been prevalent in much of the research conducted on advertising effectiveness. Deaux and Lewis (1984) describe these stereotypes as specific attributes between men and women that set them apart such as: parental roles, level of concern for others, their physical make-up, and what kind of occupation they have. Although obvious stereotypes have decreased over time, they have instead taken a more nuanced subtlety to them within the advertising world (Eisend, 2019; Furnham & Mak, 1999; Grau & Zotos, 2016). When it comes to children, girls are still predominantly pictured alongside images such as baby dolls, Barbies, and kitchen appliances, while boys are predominantly pictured with science experiments, monster trucks, and Hotwheels (Loffredi, 2020).

To understand the prevalence of gender stereotypes within advertisements, researchers utilize a standardization process that compares how advertisements might achieve nonstereotyping in their imagery (Eisend, 2019). Typically, what has been seen is that advertisements have portrayed one gender's actions to be more degrading than the other gender's actions, leading to unequal stereotypical representation (Eisend, 2019). For instance, Hoover vacuums would put out Christmas advertisements in the 1950's, enticing men to purchase the vacuums for their wives to make her happy (Hoover, 1953). Since the depictions of the gender roles in the advertisement deviate from equality, the advertisement matches the requirements that

researchers use to check for gender stereotypes in advertisements. However, there are instances where certain attributes are not desired to be equal between men and women, even among those that wish to see equality in all aspects.

Physical attributes (such as height and weight standards) are qualities that are known to be biologically different and are not desirable for standardization when it comes to gender differences (Eisend, 2019). For instance, men and women differ in terms of muscle mass, average height, average weight, and tone of voice (Carothers & Reis, 2013). Because these differences are biologically inherent, a standardization of equality that uses these physical attributes becomes obsolete; women shouldn't be stereotyped because they are unable to have the same muscle composition as men. Considering that gender stereotypes are used in advertisements due to their potential connection to consumers, having advertisements that use undesirable gender stereotypes (e.g., unequal physical attributes) would decrease acceptance within society. It's important to note the acceptance of certain attributes among society members as it shows the degree to which people are willing to adjust their viewpoints, based on their own perceptions of fairness. For instance, younger individuals who are not as exposed to traditional gender stereotypes can have a different understanding of fairness towards stereotype portrayal; this is emphasized by Baxter, Kulczynski, and Illicic (2015) when they found images of men being caregivers were positively received by those who considered themselves egalitarian (belief that men and women should equally distribute the amount of work they do, both inside the home and at work).

One of the topics that has been prevalent in advertising is the effect gender stereotypes have when they are presented in advertisements. Zawisza and Cinnirella (2010) analyzed research in gender stereotypes in advertisements within a 35-year span, concluding that

determining the effectiveness that gender stereotypes have on consumerism is much harder than expected; effectiveness of increased consumerism depends on how receptive individuals are to the stereotype in question. For instance, Hupfer (2002) found that the use of traditional advertisements (where women are depicted as being in the home) caused members of society to alienate women who left the home to work, as women in the workplace were viewed as nontraditional. On the other hand, Orth and Holancova (2004) found that women models portraying nontraditional female actions in printed ads (much like Rosie the Riveter was portrayed) were viewed more favorably among women participants, as women saw the nontraditional advertisement as an advancement in society. These studies indicate that gender stereotype approval directly depends on the reception of the consumer; the more the stereotype is approved, the more likely the consumer is to positively receive the stereotyped message. Women who want to see progress and development in society view nontraditional ads as more appealing, while women who accept the status quo view traditional ads more favorably. This finding has been congruent across much of the gender stereotype research and is consistent with societal views (Eisend, 2019). What has not been present in much of the gender stereotype research is how men are perceived when performing acts that go against the status quo.

Stereotype Effects on Children

When children view gender stereotypes, their understanding of which products they can interact with narrows only to items that are viewed as acceptable for the child's gender to play with. Weisgram and Bruun, (2018) note that having gender-specific toys can limit the diversity of traits in children, as gender stereotypes can promote the use of single-gendered toys, while simultaneously discouraging the use of the toys that represent the opposite gender. Children are still stigmatized by their toy choices (which negatively impacts development), even though

certain toys are known to offer different abilities in cognitive, social, and physical development (Weisgram & Dinella, 2018). These differences have shown that boys tend to have higher spatial awareness due to playing with building toys and video games (Liben et al., 2018), while girls have higher empathy because of the communal toys they play with, such as dolls and playhouses (Li & Wong, 2016). However, diversity in traits in children has been found to promote positive development, due to certain toys' capabilities of enhancing specific skillsets (e.g., blocks used for problem-solving and dolls used for communal skills), which can then be expanded upon later in life (Weisgram & Bruun, 2018). By reducing gender stereotypes in the toys children play with, children are no longer limited to specifics traits that can be developed; instead, children will have the opportunity to develop a wide range of skills.

Purchase Intention

Considering that the end goal of advertising is to increase the purchase of a product or brand, purchase intention--any situation in which an individual is willing and intends to make a purchase--either online, in-store, or other various ways (Pavlou, 2003) has been one of the many interests in gender stereotype assessments within advertisements (Ford & Latour, 1993). Connell et al. (2014) saw that purchase intention can be influenced by how an advertisement is able to promote positive feelings within a person towards either the company, brand, or product. This finding is consistent with prior research where researchers have been able to see an increase of product purchase intention based on how favorable an individual feels overall about the advertisement (how much they like the product, whether the message in the advertisement is favorable with the company, and how much they endorse the brand itself) (see Bush et al., 1999; Chang et al., 2016; Fabriger & Petty, 1999; and Phelps & Thorson, 1991).

Endorsement of a product can be achieved in various ways, but Wang and colleagues (2013) found rationality has a higher chance of persuasion as opposed to an emotional appeal. As people are more likely to use logic and reasoning in their decision-making process, advertisements that are able to provide a rational appeal (e.g., "buying this nonstick pan will greatly reduce time spent on cleaning dishes") will garner more favorable responses. Sadeghi and colleagues (2015) were also able to see that emotional appeal (e.g., Sarah McLachlan's song *Arms of an Angel* playing in the background of the SPCA commercials) was less effective than rational appeals when it came to the effectiveness of advertisements. In this context, the more an advertisement can show the use of the item in the advertisement in a rational sense (e.g., the effectivity of boys playing with baby dolls in a nurturing way to increase parenting skills), the more likely the person is to endorse and/or purchase the product.

With this information, we can see how purchase intention can be used to assess the endorsement of an advertisement or product. Considering that consumers are more likely to purchase a product if an advertisement aligns with their ideals (Sadeghi et al., 2015; Wang et al., 2013), we can measure how likely an individual is to purchase a toy product for a hypothetical son, based on the participant's ideology. Weisgram and Bruun (2018) noted the effect of favorability by having parents rate how much they favor traditional and nontraditional toy products, as if the parents were to play with the toys. Parents were more likely to purchase the toy for their child that was favorable to the parent, regardless if the toy was traditionally used by the same gender of their child. This provides reasons to believe that people will favor a certain type of product, increasing the likelihood that they will purchase the product, based on their SLB traits.

Current Study

Although previous research has been conducted on how advertisements depict boys playing with feminine toys, there are no known studies that evaluate how SLBs influence perceptions and purchase intention of boys playing with feminine toy products. However, there evidence that stereotypes occur in advertisements (Grau & Zotos, 2016; Kahalon et al., 2020; Li & Wong, 2016), as well as how SLBs can be expressed in various ways to maintain the status quo (Jost et al., 2004; Levin et al., 1998; Wilkins et al., 2018). Taking the foundations of these theoretical constructs, we wanted to examine whether different levels of SLBs would influence overall perception of a counter stereotypical advertisement that depicted boys playing with feminine toy products. Previous research did examine the likelihood that parents would purchase nontraditional toys for their hypothetical children based on the toys they played with growing up, which showed that parents were more likely to purchase the same type of toys (traditional or nontraditional) that they themselves grew up with (Weisgram & Bruun, 2018). With the understanding that nontraditional toys were not as accepted among parents that played with traditional toys, there is reason to believe that upholding traditional toy use could be associated with SLB traits, considering SLBs utilize current views of society (traditional views) to uphold the status quo (Glaser, 2005).

The SLB scale (Levin et al., 1998) has been used to assess people's belief of whether the status quo is legitimate or not, indicating their acceptance of societal changes, and how likely they are to push against any changes to the status quo (Glaser, 2005; Major & Kaiser, 2017; Wilkins et al., 2018). Considering that boys playing with feminine toys is counter stereotypical (Wiesgram & Bruun, 2018), it is possible that SLBs can indicate how likely people are to accept a product that goes against stereotypically accepted norms, such as a boy playing with feminine

toy products. The present study sought to examine this hypothesis by utilizing three subscales from the original SLB scale (Levin et al., 1998) that have been used in previous research examining SLB traits (Wellman et al., 2016; Wilkins et al., 2018).

These SLB subscales measure belief in system legitimacy, perceived system permeability, and the Protestant work ethic, which are items associated with beliefs in a meritocracy (equal opportunities exist in society, but it is up to the individual to conform to the standards of society to increase status) (Madeira et al., 2019). These will be combined for a total SLB score, with higher scores indicating participants are more likely to believe the current system is legitimate, while lower scores indicate participants are less likely to believe in the system and that viewpoints should be changed. With previous studies showing the validity of utilizing all three subscales to obtain the legitimizing beliefs score, the present study will utilize the same three subscales, due to their use in previous studies (Wellman et al., 2016; Wilkins et al., 2018).

With the understanding that SLBs indicate acceptance of traditional ideologies, it is possible to predict how accepting someone is of boys playing with counter stereotypical toys. It is predicted that those who hold higher SLB traits should be less likely to purchase a feminine toy product for their hypothetical son, on the basis that buying the feminine toy product threatens the gender hierarchy. As such, participants who have lower SLB traits should be more likely to purchase the feminine toy product for their hypothetical son, on the basis that purchasing a feminine toy product for a boy could change the gender hierarchy, increasing the permeability of lower status members. The belief is that there will be an association between SLB traits and the acceptance of the type of toy that the boy is playing with. This is assumed based on the assumption that higher SLB participants will view boys playing with feminine toy products as a

threat to the hierarchy, therefore decreasing the acceptance of feminine toys for their hypothetical son. For participants lower in SLBs, viewing boys playing with feminine toy products can be seen as equalizing the hierarchy, which in turn increases favorability and acceptance of feminine toys for their hypothetical son.

To experimentally test the effects of gender progress, a fabricated news article was presented as a prime, which has been utilized in previous research (Gnall, 2020). Making gender progress salient (gender hierarchy threat) or not (no gender hierarchy threat) allowed us to experimentally test how gender hierarchy threat affects perceptions of gender stereotypical and counter stereotypical toys for boys. We tested whether SLBs moderate the relationship between gender hierarchy threat and toy preference.

Considering that individuals who have higher SLBs are more likely to feel threatened by changes to the existing hierarchy (Wilkins et al., 2017), it was expected that participants higher in SLBs would be more likely to purchase the masculine toy product, regardless of which news article they are presented with. When presented with the news article that threatens the gender hierarchy, participants higher in SLBs should see the article as an attack against the hierarchy. This perceived threat should create a response to maintain the existing hierarchy, which can be achieved by purchasing products that promote typical gender norms (e.g., masculine toy products). This response to maintain the existing hierarchy by purchasing stereotypical toys for boys is also predicted to be seen in the no threat article, but the effects are not predicted to be as high in this condition. Since the news article that depicts gender to still be a marker of status is not altering the perceived beliefs of participants higher in SLBs, the first image to be a threat to the status quo would occur with the presentation of boys playing with feminine toy products. Because boys playing with feminine toy products goes against the beliefs of the participants that

have higher SLBs, the participants would be less likely to purchase the feminine product for their hypothetical son.

It was also predicted that those with lower SLBs who receive the gender hierarchy threat news article would be more likely to purchase the feminine product. By reading an article that enacts equality among sexes, participants that are not threatened by the concept of gender stereotype changes should be more accepting of boys playing with feminine toys. As such, these participants would be more likely to endorse the change in society by purchasing the feminine product for their hypothetical son. However, the no threat article provided to lower SLB participants will not have a similar activation effect as the threat article does. This is based on the assumption that lower SLB participants will associate the concepts in the no-threat article with current societal trends. Because of this, the no threat article is not providing a change in ideals or different concepts than what is already assumed, ultimately not having an influence on lower SLB participants. Lower SLB participants reading the no threat article would therefore continue to use their previously held beliefs when analyzing the toy products, due to the article depicting current society trends, and not influencing current viewpoints.

Hypotheses

Based on the reasoning provided in the literature review, our hypotheses are as follows:

H_1: Individuals who are higher in SLBs will be more likely to prefer the product that conforms to the gender hierarchy (boy playing with masculine toys) compared to a product that disrupts the gender hierarchy (boy playing with feminine toys). This finding will be demonstrated through an interaction between SLBs and type of toy.

H_2: Individuals who are lower in SLBs will be more likely to prefer the product that disrupts the gender hierarchy (boy playing with feminine toys) compared to a product

that maintains the gender hierarchy (boy playing with masculine toys). This finding will be demonstrated through an interaction between SLBs and type of toy.

H_3: Individuals with higher SLBs who read the gender hierarchy threat article will be more likely to prefer the traditional gender toys (masculine toys for boys) compared to a product that disrupts the gender hierarchy (feminine toys). This finding will be demonstrated through an interaction between SLBs, type of article, and type of toy.

H_4: Individuals with lower SLBs who read the gender hierarchy threat article will be more likely to prefer the nontraditional gender toys (feminine toys for boys) compared to individuals with lower SLBs who read the no threat article. This finding will be demonstrated through an interaction between SLBs, type of article, and type of toy.

H_5: Individuals with higher SLBs who read the gender hierarchy threat article will be more likely to prefer the traditional gender toys (masculine toys for boys) compared to higher SLB individuals who read the no threat article. This finding will be demonstrated through an interaction between SLBs, type of article, and type of toy.

CHAPTER 2

METHOD

Participants

Recruitment

Participants were recruited from across the United States, utilizing a convenience network that the primary researcher knew through social media accounts such as Facebook, LinkedIn, and Instagram. Individuals 18 years or older were eligible to participate and there were no race or gender restrictions for participation. The study was posted on the researcher's personal social media pages, where other social media users could choose to share and distribute to friends, family, or colleagues. The study did not have any restrictions on the link, which allowed any person who clicked the Qualtrics link to then be presented the entirety of the study, providing them the opportunity to complete the study anonymously. Considering that 75% of parents utilize some form of social media (Duggan et al., 2015) and a majority of adults between the ages of 18 and 49 (82%-90%) engage in social media use as well (Pew Research Center, 2019), social media accounts were used in an attempt to obtain a more representative sample of a parent population. Participants were not emailed or messaged directly; they were only presented with the survey link via social media and had to decide if they wanted to activate the link and voluntarily participate. There was no monetary incentive provided to any participants.

Demographics

A total of 300 participants were recruited via online social media accounts that were held by the primary researcher. Of those participants, 38 did not pass exclusionary criteria and were subsequently removed from the analysis (a more detailed explanation of the exclusion procedures is reported in the analyses and results section). The final sample consisted of 262 community members. The majority of the sample was female (82.4% female, 16% male, and

0.8% indicating transgender). The average age of these participants was 41.86 (*SD* = 14.12) with

a range of 18-77 years of age. The sample that we obtained showed some diversity in race, with

79% indicating White/Caucasian, 7% indicating Black/African American, 7% indicating

Hispanic or Latinx, and the remaining participants indicating multiracial or other. Detailed

demographics information from the current sample are reported in Table 1.

Table 1

Demographic Information for Participants in the Current Study

	M	*SD*
Age	41.92	14.10
	N	%
Gender		
Men	42	16.0%
Women	216	82.4%
Other	4	1.6%
Race/Ethnicity		
African American or Black	19	7.3%
Asian or Pacific Islander	4	1.5%
Hispanic or Latino/Latina	18	6.9%
White/Caucasian	209	79.8%
Multiracial	7	2.7%
Other	5	2.0%
Parental status		
Yes	170	64.9%
No	88	33.6%
Number of children		
1	49	30.8%
2	69	43.3%
3	25	15.7%
4 or more	16	10.06%
Political affiliation		
Liberal	115	43.9%
Conservative	29	11.0%
Moderate	118	45.0%

Materials

Informed Consent

The informed consent was the first item read by participants. This informed consent describes the general purpose, participant risks and benefits, study confidentiality, participant rights, and the contact information of the primary investigator and faculty mentor. They were then given the option to voluntarily consent to continue to the study or to not continue to the study.

Status-Legitimizing Beliefs

Participants completed the Status-Legitimizing Beliefs measure (Levin et al., 1998) to assess each participants' belief in status ideologies. This scale is split into three sub-scales, utilizing a 7-point Likert-type rating ranging from 1 = *strongly disagree* to 7 = *strongly agree*: Perceived social system legitimacy ("America is a 'just' society where differences in status between race/ethnic groups reflect actual group differences"), Perceived system permeability ("Advancement in American society is possible for individuals of all races/ethnic groups"), and Protestant work ethic ("If people work hard, they almost always get what they want"). Following Wilkins and Kaiser (2014), the sub-scale scores were combined for a total SLB score and the total score was averaged for ease of interpretation (α = .90; M = 2.63, SD =1.04).

Article Stimuli

The news articles that were used were modified from Gnall (2020). The articles served as the stimuli for gender hierarchy threat (gender equality) and no gender hierarchy threat (gender inequality). One of the news articles will be less than a page and will depict concepts of how women will increase their presence in STEM jobs with a final understanding that by the

year 2030, sex will no longer be a marker of status in society. This article will be utilized as a threat to gender hierarchy as it shifts the roles of power towards women. The second article will be roughly the same length and provide similar constructs, but it will depict women not qualifying for STEM positions, with the understanding that by year 2030, sex will still be a marker of status in society. The article for gender stereotype threat describes the rates at which women are achieving positions of power in various aspects of society (i.e., becoming CEO's) to depict the decline in gender-based inequality (i.e., "Social analysts suggest that if recent trends continue, by 2030, sex will no longer be a marker of social status in the United States."). In order to create a similar condition for no gender stereotype threat, the article describes that despite women achieving positions of power, men still have a higher position of privilege (i.e., "Social analysts suggest that if recent trends continue, by 2030, sex will still be a marker of social status in the United States.").

Article Evaluation Questionnaire

Participants were asked to respond to two statements, modified from Gnall (2020), on a 7-point Likert-type scale (1 = strongly disagree to 7 = strongly agree) that were associated to the news article that the participants just read. To stay in line with the cover story that the researchers were evaluating two different studies, these questions were provided. The questions were "This article is clear and well-written" and "The sentences in this article are well-constructed."

Advertisement Stimuli

Six individual colored advertisement pictures depicting boys playing with various toys were used to evaluate participant perception of the toys. Three of the pictures depicted boys playing with toys associated with masculinity and the other three pictures depicted boys playing with toys associated with femininity. The six advertisements were presented one after another in

random order. This within-subjects design for viewing advertisements has been used in numerous studies, but we have adapted this specifically from Chu and colleagues (2016).

A pilot study was conducted to test the salience and validity of gender stereotypes associated with toy products in the six advertisement pictures (Samuelson & Hackney, 2020). Twelve picture advertisements were obtained from online sources showing boys playing with six masculine toy products (e.g., Transformers model, superhero toys, building sets) and six feminine toy products (e.g., baby dolls, Barbies, toy strollers). Participants (n = 43) answered a 6-item evaluation scale for each masculine and feminine toy product (example item being "On a scale from 1 to 5 (1 being not at all masculine and 5 being very masculine), how masculine would you rate the product in the picture?"). The masculine toy product items were combined for the analysis (α = .79, *M* = 63.40, *SD* = 4.89) as were the feminine toy product items (α = .80, *M* = 63.84, *SD* = 4.71) to assess the reliability of the items. The results of the analysis showed that participants did assign a specific gender to each product within the advertisement, indicating that gender stereotypes are still prevalent in society, indicating that the advertisements were able to be used.

Advertisement Questionnaire

To evaluate participants' attitudes about the advertisements, a 3-question ad-attitudes scale utilizing a 7-point Likert scale modified from Mackenzie and colleagues (1986) was used. The first question asks, "What were your overall feelings towards the product that the boy was playing with?" (1 = *very negative* to 7 = *very positive*). The second question asks, "What was your overall reactions to the advertisement and what it depicted?" (1 = *very displeased* to 7 = *very pleased*). The final question asks, "How likely are you to purchase this product for your

son?". (1 = *very unlikely* to 7 = *very likely*). All three items were combined into an aggregate

score to be assessed together. See Table 2 for reliability statistics.

After the six advertisements had been viewed and rated, participants were taken to an

additional page where all six advertisements were presented simultaneously in smaller scale.

Participants were then asked, "If money was not an issue, which 4 products would be your top

choices to give to your son for his 5th birthday? Please only select up to 4 products". This had

multiple options to answer, with participants selecting a check box next to the product that they

would purchase, for a maximum of 4 items. This was an additional variable participants were

asked to complete, but it was not analyzed in this thesis.

Attention to Manipulation

To ensure participants were paying attention to the news article that they read, they were

asked what the context of the article was, with choices being gender in the workforce, climate

change, or other. If participants chose "other," a free-response box was provided for an

explanation. Participants also completed an item that stated, "If you received an article about

gender in the workforce, what was the conclusion of the article?" Participants were provided

with two response options, "Sex will not be a marker of status in society by year 2030" and "Sex

will be a marker of status in society by year 2030." Multiple choice was utilized for this answer

to ensure participants had the opportunity to provide the correct answer, as opposed to an open-

ended question where they might not have the knowledge base to infer that the news articles

represented gender hierarchy threat or no gender hierarchy threat.

Following the manipulation check questions, participants were then provided a list of

eight toy names (4 names of toys presented in the advertisements and 4 toy names that were not

presented in the advertisements). Participants were expected to check only the products that were

displayed in the study. This acted as an attention check and allowed participant responses to be

screened for random responding. The question asked participants, "In regards to the second part

of this study that was focused on toy advertisements, please indicate from the list below which

items you believe were shown in the pictures presented to you earlier. Note: the items below will

not be listed in the order that they appeared in. Check all that apply."

Demographics

Participants were asked to complete an 8-item self-report questionnaire to evaluate their

age, race, gender, profession, and parent status.

The last question presented, after completion of the demographics form, was taken from

Aust (2013), which asked participants "It would be very helpful if you could tell us at this point

whether you have taken part in this survey seriously, so that we can use your answers for our

scientific analysis, or whether you were simply clicking through to take a look at the survey?"

This served as a means for participants to decide whether their data should be used in the study

or not.

Procedure

With the approval of the university's Institutional Review Board, the primary researcher

activated the study on the Qualtrics website. Participants were recruited through the various

social media platforms listed previously, with a link to the study. Within the link, participants

were randomly assigned to one of two conditions ("gender hierarchy threat" or "no gender

hierarchy threat") using the block randomization function. These blocks were set to be presented

an even amount of times to ensure participants were distributed evenly across the two conditions.

Continuing the study, participants were then required to read and acknowledge the informed

consent form that lists the purpose, risks and benefits, confidentiality protocol, participant rights,

and the primary researcher's contact information. Consenting to the study by clicking the two "agree" checkmarks on the informed consent form was required for participants to continue with the study. Participants were not allowed to begin the study without the informed consent marked.

For the participants that agreed to participate, they were prompted to fill out the Status-Legitimizing Beliefs scale. The SLB scale was presented before the news article and article questionnaire in the hopes that the SLB scale was associated to the news article priming portion of the study, limiting the affects the scale might have on the advertisement portion of the study. Additionally, the placement of the SLB scale before the independent variable ensured that SLB scores were not affected by the manipulation. Once the SLB scale was completed, participants were randomly assigned to a news article that depicted the views of society for women in STEM career fields.

After the participants finished their article, they were provided with questions evaluating the article content. This was used as an attention check to ensure participants were following the study instructions, as well as to gauge their favorability of the article. From there, participants were provided with the six color advertisements of boys playing with either feminine or masculine toys, one after another, in random order. These advertisements were displayed for as long as the participant needed to see them, with participants having the ability to continue to the next part of the survey on their own.

Once the participants finished viewing an advertisement, they were directed to the ad attitudes questionnaire (Mackenzie et al., 1986), which served as the dependent variable. In total, each participant filled out six attitude questionnaires. After every attitude questionnaire was completed, participants were provided with a manipulation check questionnaire, asking them to indicate which toy products were presented in the advertisement pictures among a provided list.

Lastly, they were asked to fill out the demographics form, with a final data quality check allowing participants to choose whether their data should be used in the study. Finally, the participants were thanked for their participation, and the study was concluded. See Figure 1 for a visual representation of the study procedures.

Figure 1

Flowchart of Participant Decisions
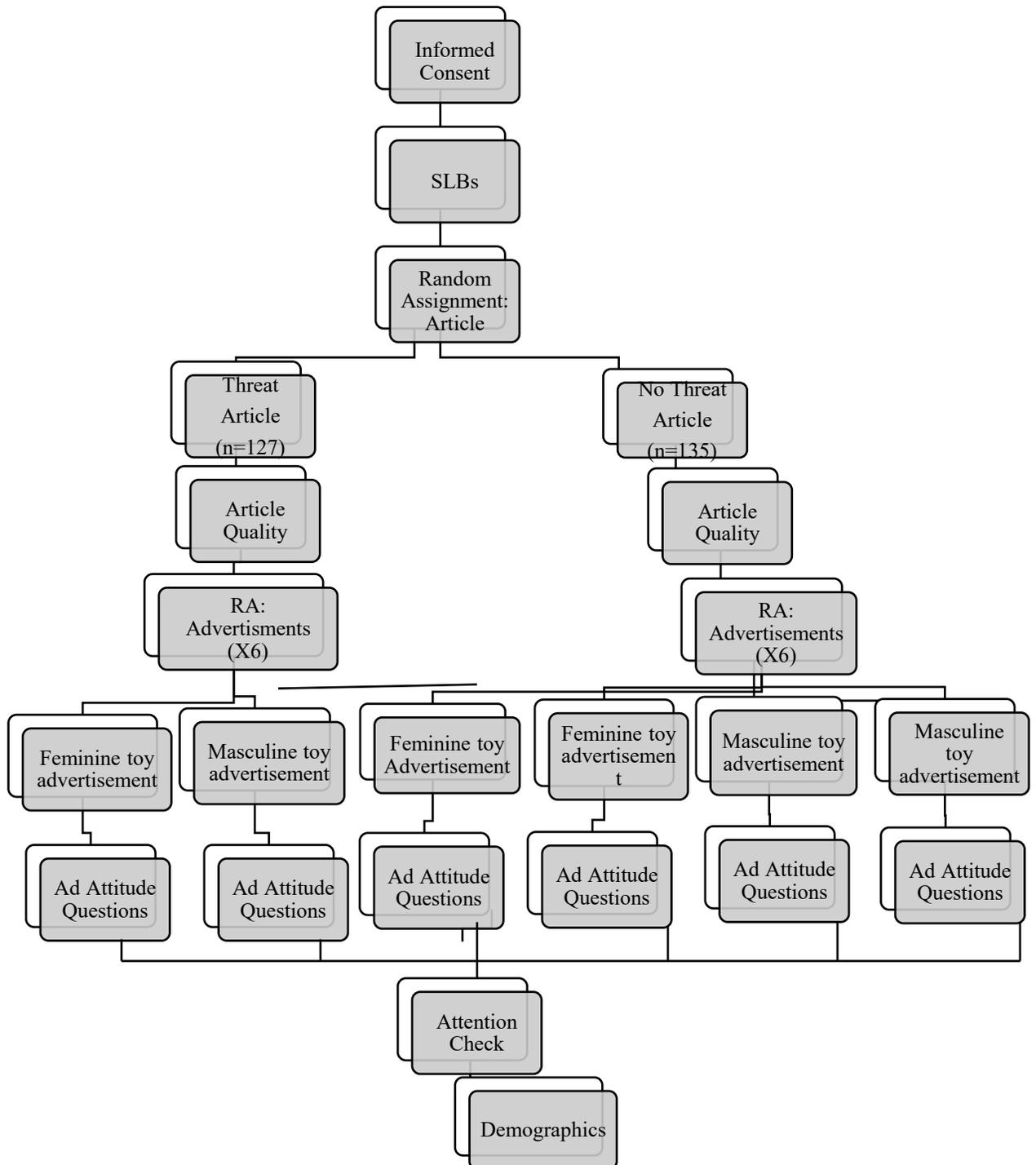
Note. Participant path throughout the study process is shown.

CHAPTER 3

RESULTS

Data Preparation and Preliminary Analyses

Participant Exclusion

A total of 300 participants responded before data collection was ended to meet university

thesis deadlines. Before data analysis occurred, a set of exclusionary criteria were developed that

would identify whether participants attended to the study and received the manipulations.

Participants were excluded during the SLB scale section if they had more than 2 items that were

not completed (n=2). Since this information was vital for the research, these participants were

excluded. Participants were required to pass the news article manipulation check questions,

indicating which type of article they received. Participants who failed to correctly identify the

type of article they received (n=2) or who failed to correctly identify the gender hierarchy

manipulation of the article (n=33) were excluded. Participants were also required to complete all

of the advertisement attitude questions and were excluded if they were unable to provide answers

to two or more questions on a single advertisement, or if they missed more than one set of

advertisement questions. There were 0.003% of participants (n=1) that failed this criterion. The

items listed above cover the items that participants failed during manipulation checks. However,

there were additional manipulation checks provided that did not have any participant failures,

which will be covered further.

With the section that asked participants to choose four items they were most likely to

choose for their son, there were no exclusionary criteria that forfeited participants' responses.

However, since this was a measure to test preference of gendered-toy, any participants that failed

to provide any answer in this section would be given a 0 rating and separated from the rest of the

participants. Further analyses would be performed between the two separate groups if there were any excluded participants, but there weren't any participants that failed this section, therefor negating any additional analyses. Finally, the last question asked participants if they answered truthfully throughout the survey or if they wanted their data to be thrown away. There were no instances of participants indicating they wanted their data to be thrown away, resulting in all participants to pass this condition.

During the initial requirements of exclusionary criteria, the researchers decided to exclude any participant that answered one or more incorrect items from the advertisement attention check, where a list of 8 toy products was presented, with half of the products being ones that were not presented in the study. After evaluating participant responses, there were 135 instances of at least one incorrect product marked, with some participants indicating multiple incorrect items. This was the only exclusionary criterion that resulted in a large fail rate, which lead the researchers to decide that this attention check item was likely poorly constructed. The researchers agreed to change the exclusionary criteria so that any participant that failed to provide any answer to this question (i.e., skipping this section entirely) would then be subsequently removed and their data excluded. The reason the criterion was not adjusted to accept participants with multiple incorrect products was due to the realization that the construct was poorly designed. Instead of assigning an arbitrary number of incorrect items, the researchers agreed that it was in the best interest to change the criterion to a total fail, as the interpretation of the product descriptions was ambiguous. After this change, it was found that all participants answered at least one item correctly, which allowed the researchers to retain all participants in this section.

After all exclusionary conditions were filtered, 87% of participants (n=262) were retained for data analysis.

Before the hypotheses were analyzed, the researchers conducted preliminary analyses to test the reliability of the study measures. The results are listed in the order they were presented in the study.

Status-legitimizing beliefs

To test the reliability of the respondent scores a reliability test was conducted (α = .90; M = 2.63, SD = 1.04) on the total composite scores of the SLB measure. These results are similar to the inter-item reliability found in previous studies (Levin et al., 1998; O'Brien & Major, 2005; Wilkins & Kaiser, 2014).

Article Conditions

An independent samples *t*-test was conducted on article type and SLB score, to verify that participants who received the threat article (M = 2.58, SD = 1.03) had similar levels of SLBs as participants who received the no threat article (M = 2.68, SD = 1.07), t (260) = .78, p = .44, Cohen's d = .095 An additional independent samples *t*-test was conducted on article type and the averaged political affiliation scores, to verify that participants who received the threat article (M = 2.84; SD = 1.44) had similar levels of political conservatism/liberalism as participants who received the no threat article (M = 3.15, SD = 1.63), t (260) = -1.60, p = .11, Cohen's d = -.20. There was no significant effect of article type on political affiliation, further indicating that our article conditions were randomly assigned to participants.

Advertisement Questions

Inter-item reliability was assessed for each set of advertisement attitude questions. The three ad attitude questions were assessed for each individual advertisement utilizing Cronbach's alpha

for each set of three questions. The results are displayed in Table 2. To measure how well the

feminine toy advertisements correlated together, but also differed from the masculine toy

advertisements, a Pearson's *r* correlation was performed. The results are displayed in Table 3,

indicating the strong positive significant correlations between advertisements of the same

gendered toy and nonsignificant correlations between opposite gendered toys. Given the strong

positive associations within the three feminine advertisements and within the three masculine

advertisements, coupled with the non-association between feminine and masculine

advertisements, we created an average feminine ad preference and an average masculine ad

preference for each participant.

Table 2

Model Summary of Reliability Among Advertisement Questions

Advertisements[a]	Reliability Rating		
	M	*SD*	α
PJ Mask Truck	5.11	1.40	.89
White Baby Doll	5.39	1.47	.89
Pink Stroller	4.63	1.66	.89
Mechanic Set	5.65	1.16	.88
Drill Tool Set	5.52	1.24	.89
Black Baby Doll	5.17	1.45	.87

Note: [a]n of items=3

Table 3

Matrix of Correlation Between Masculine and Feminine Advertisements

Advertisements	1	2	3	4	5	6
1. PJ Mask Truck	1	.523**	.569**	-.058	-.015	-.003
2. Drill Tool Set		1	.671**	.064	.062	.067
3. Mechanic Set			1	.004	.033	.050
4. Pink Stroller				1	.796**	.805**
5. White Baby Doll					1	.837**
6. Black Baby Doll						1

Note. Results are grouped by type of toy, with masculine toy products first (1-3) and feminine toy products after (4-6).

**p \leq .01.

Data Analysis

The design of this experiment was a 2 (feminine toy rating vs. masculine toy rating) x 2 (hierarchy threat vs. no threat) x SLBs. The first factor is a repeated measures factor, hierarchy threat is a between-subjects factor, and SLBs are a continuous measure. Because SLBs are nested within the toy ratings, multi-level modeling would best test the hypotheses. However, multilevel modeling procedures are beyond the scope of this thesis. As such, a mixed-factorial ANCOVA was conducted to examine the relationship between the hierarchy threat prime (IV; 2 levels; between-subjects), toy ratings (repeated measures) and average SLB scores (covariate). See Appendix F for output table. This analysis provides results for all hypotheses, where the interaction between type of toy and SLB scores tests hypotheses 1 and 2 and the interaction between type of toy and article condition tests hypotheses 3-5.
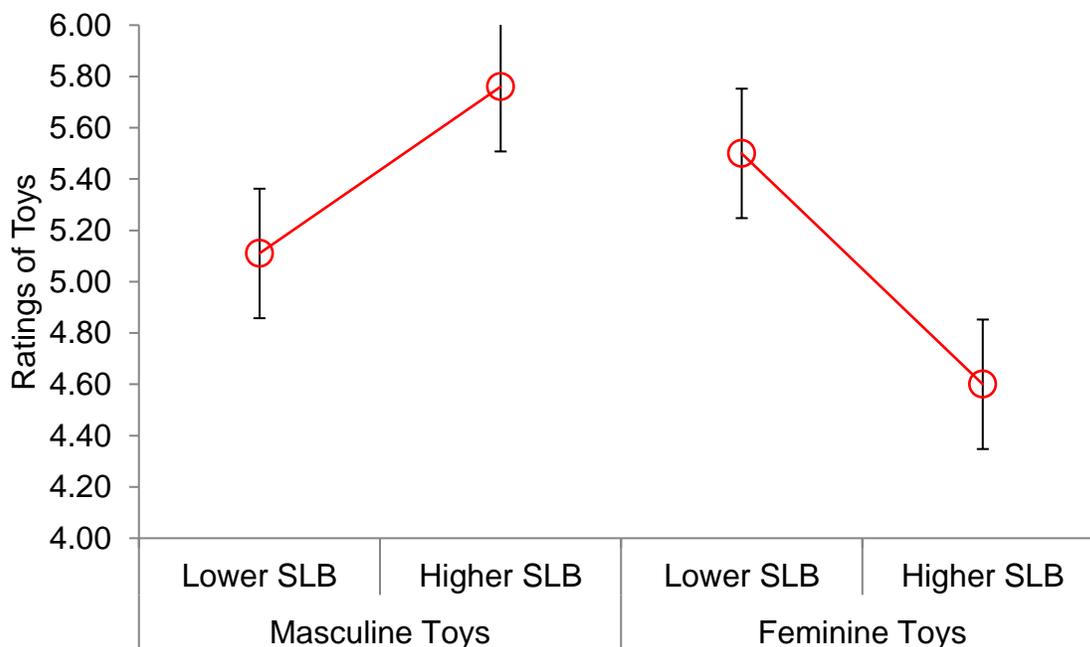
Hypothesis 1 and Hypothesis 2

It was predicted that individuals who are higher in SLBs would be more likely to prefer the product that conforms to the gender hierarchy (boy playing with masculine toys) compared to a product that disrupts the gender hierarchy (boy playing with feminine

toys). It was further predicted that individuals who are lower in SLBs would be more likely to prefer the product that disrupts the gender hierarchy (boy playing with feminine toys) compared to a product that maintains the gender hierarchy (boy playing with masculine toys). Results showed that the interaction between toy type and SLBs was statistically significant,

As predicted, results showed a significant interaction between type of toy products and SLB scores on preferences for masculine and feminine toy products $F(1, 258) = 92.37$, $p < .001$, $\eta_p^2 = .26$. To aid in the interpretation of this significant interaction, a median split of SLB scores was created, and a graph was created to visually depict the preferences of masculine and feminine toy products for participants above the median SLB score and for participants below the median SLB score. See Figure 2.

Figure 2

Interaction Between Type of Toy and SLB Score

Hypothesis 3, 4, and 5

It was predicted that individuals who are higher in SLBs who read the gender hierarchy threat article would be more likely to prefer the traditional gender toys for boys (masculine toys) compared to a product that disrupts the gender hierarchy (feminine toys). It was predicted that individuals with lower SLBs who read the gender hierarchy threat article would be more likely to prefer the nontraditional gender toys (feminine toys) compared to individuals with lower SLBs who read the no threat article. Finally, it was predicted that individuals with higher SLBs who read the gender hierarchy threat article would be more likely to prefer the traditional gender toys (masculine toys) compared to higher SLB individuals who read the no threat article. Contrary to predictions, the three-way interaction between type of toy, article condition, and SLB scores was not statistically significant. This suggests that the association between SLBs and toy preference was not altered by the experimental manipulation of gender hierarchy threat. See Figure 3 and Appendix F for graph and table reports.

Figure 3

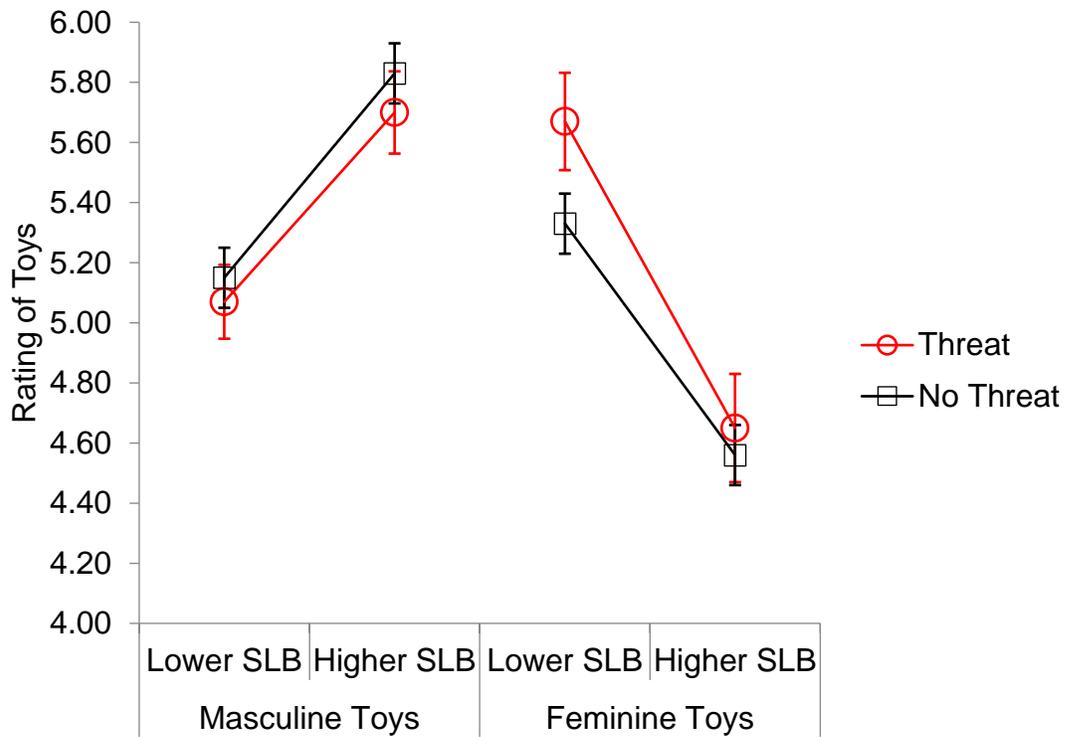*Interaction Between Type of Toy Product by Article Condition with SLB Score*

Figure 2. A line graph depicting the interaction between toy type and SLB scores (significant) and the interaction effect between toy type, SLB scores, and hierarchy threat level (nonsignificant).

CHAPTER 4

DISCUSSION

The purpose of this study was to better understand how status-legitimizing beliefs can influence people's purchase intention towards a product that is depicted in a counter-stereotypical advertisement. This was performed by asking participants to complete the status-legitimizing beliefs scale (Levin et al. 1998; Wellman et al., 2016). One of two news articles was then used to prime the participants with a message that either threatened the hierarchy status or did not threaten the hierarchy status. To gauge the level of how favorable participants were in each priming condition and each SLB status, six advertisements depicting young boys playing with either masculine toys or feminine toys in random order were presented, with participants being asked to fill out a questionnaire about the advertisements (MacKenzie et al., 1986). Data was collected from these items and interpreted, with the results of the analysis providing partial support of the hypotheses.

Overall, there was a statistically significant difference in how participants favored and purchased gender typed toys based on their SLB scores. These results support our assumptions for hypotheses 1 and 2 where we expected participants who scored higher in SLBs would be more likely to favor the masculine product that maintained the status hierarchy, while participants who scored lower in SLBs would be more likely to favor the feminine product that would threaten the status hierarchy. These results were expected based on previous studies on SLB traits and how SLBs are used to maintain the status hierarchy. Our results support the theories that individuals who exhibit higher SLB traits would be more likely to favor products that maintain men in positions of power (Tajfel & Turner, 1979), while people who exhibit lower

SLB traits were more likely to favor products that aim to delegitimize the current system in place (Major & Kaiser, 2017).

Our study brings to light how SLB traits can be a predictor of how parents and other adults buy certain toys for their children. To this date, the researchers were unable to find any previous research on the specifics of how SLBs influence purchase intention and product favorability under one study. The researchers hope to introduce a combination of research on advertisement effectiveness and SLB theories to help increase the understanding of why certain people do not accept images that promote counter-stereotypical ideologies. By understanding the factors that increase acceptance of progressive trends, advertisers are able to make accommodations that are more applicable to a broader audience, potentially in a manner that decreases resistance. This understanding also allows market researchers to adapt marketing strategies to introduce more accepting advertisements that do not have negative stereotypical messages.

For hypotheses 3-5, we predicted the news article conditions would have a priming effect on participants which would heighten the relationship between SLBs and preferences for masculine and feminine toys. More specifically, it was predicted that higher SLB participants in the threat to gender hierarchy article condition would rate masculine toy products higher and feminine toy products lower, while lower SLB participants in the threat to gender hierarchy condition would rate feminine toy products higher than masculine toy products. Gender hierarchy news articles have been used in prior studies, with the results from these previous studies indicating a significant effect seen from the priming articles (Gnall, 2020). These studies supported the use of the gender hierarchy news article to prime gender hierarchy threat or no threat. However, results showed that the priming of gender hierarchy threat did not affect

participants' ratings of toys. The gender hierarchy threat and no gender hierarchy threat news articles were modified from Gnall (2020). Gnall & Hackney (2019) observed a trend in which men who read about a threat to the gender hierarchy were more likely to award scholarship money to a male student than to a female student. Wilkins & Kaiser (2014) observed that when a threat to the racial hierarchy was made salient, Whites who were higher in SLBs were more likely to report that Whites were victims of racial discrimination, while Whites lower in SLBs were unaffected by reading about a threat to the racial hierarchy. In the section below, limitations to the current study will be described, to help understand why the gender hierarchy threat articles did not affect participants ratings of toys.

Limitations and Future Directions

Our a priori power analysis indicated that 210 participants were needed for a medium effect size (0.25) at high power (0.95). We obtained a total of 262 participants, after exclusions were checked. Even though our sample surpassed the suggested sample size to obtain high power for a medium sized effect, it is possible that our sample was not representative of the intended population. To start, we saw a disproportionate number of participants score at or below the average SLB score range (n = 196; $M = 2.63$, $SD = 1.04$ compared to Wilkins & Kaiser (2014): $M = 3.65$, $SD = 1.02$). This indicates that about 25% of our sample scored in the higher SLB range, which could be the result of why the prime effect was not statistically significant; the gender hierarchy threat article was intended to activate a threat in higher SLB participants, but if there were more participants lower in SLBs, this effect would be difficult to observe. This effect could be evidenced based on our results of lower SLB participants across article conditions; the means trend of lower SLB participants in the gender hierarchy threat article condition was higher among the feminine toy products, compared to lower SLB participants in the no gender hierarchy

threat article condition. This shows that, although the results between lower SLB participants between conditions was not statistically significant, those in the threat article were more likely to purchase feminine toy products than those in the no threat article.

We also saw a higher proportion of women than men participate (n=216) in the study, which might further emphasize the error of recruitment methods. There is a link between lower SLB endorsement and women in other studies (Glaser, 2005; O'Brien & Major, 2005; Wellman et al., 2015), which might give reason as to why there was a disproportionate number of lower SLB participants. It is possible that the use of personalized social media accounts may have caused this issue. By limiting the study to be accomplished by people who were associated with the primary researcher, the chances of sample bias were increased. Along with that, utilizing a study that was online may have limited the salience in which the news articles were received. With the ability to access the study anywhere, participants were not required to focus on the study itself, allowing for distractors to be present during the study. Future designs should emphasize more control of the demographics of participants that take the study. Because our recruiting efforts were not as controlled, the participants we obtained in our study might not be representative of the intended population, even though there were statistically significant results between SLB scores and type of toy product that was favored.

One of the factors that may limit this study was the strength of the manipulation. To achieve proper salience and effect of the news articles, participants would need to have focused on the message that was being presented. If the content of the gender hierarchy article was not engaging (participants rated the threat article as clearer and better written compared to the no threat article), the environment was not conducive for survey testing, or if the time of day the participants took the survey was not adequate, the article might not have activated the gender

hierarchy prime. As such, ensuring participants complete the study in an environment that allows them to be engaged in the content that is provided could increase the manipulation effect. Another possibility as to why the manipulation may have been weak could be due to our sample not being large enough. Although the effects of the news article was not statistically significant between condition groups, we did see a small effect of the threat article among lower SLB participants. It is possible that more participants are needed to observe a statistically significant effect.

Another limitation of this study was a clerical error on the advertisement attitude questions. In particular, the second question "On a scale of 1 to 7 (1 being extremely displeased and 7 being extremely pleased) what was your overall reactions to the advertisement and what it depicted" had inaccurate rating terminology. Instead of having the rating scale being "extremely pleased/displeased" the scale was "very pleased/displeased". Although the rating system was kept the same, the error between instructions and the ratings themselves could cause issues with participants, leading to systematic error in the study. This has been noted as an issue and will be corrected if more participants are required for further analysis.

Considering that one of the main limitations we encountered in the study was the disproportionate number of lower SLB participants (n=196 lower SLB participants vs. n = 66 higher SLB participants), the goal for future research is to obtain more participants that have higher SLB scores. It would also be imperative for us to obtain more male participants, as men typically exhibit higher SLB traits (Glaser, 2005; Wilkins et al., 2014). With an increase of participation from men, it's possible our results support the hypotheses, considering that the sample would be more representative. This could be achieved by specifically seeking out participants that the researchers believe to exhibit higher SLB traits, such as men higher in

meritocracy beliefs, or recruitment through a recruiting company (e.g., MTurk, Prolific, etc.) that provides the option to limit participants based on certain parameters. However, utilizing a recruiting company would require additional funding, as these companies require participants to be paid. If funding was to be provided, the selection process achieved through recruiting companies would be more selective, allowing us to obtain the remainder of the participants needed to properly evaluate a sample with greater variability of SLB scores.

One of the items that was discussed by the researchers was having a converse variable of girls playing with either masculine toy products or feminine toy products. Based on prior research (see Eagly et al., 2020), acceptance of women's equality has increased over time, giving us the background understanding that girls playing with counter-stereotypical toys would be more accepting across either SLB range. With that being said, having information about the different levels of acceptance between boys and girls utilizing counter-stereotypical toys would provide a more informative baseline to indicate whether SLBs did influence purchase intention or not. As our study only focused on how perceptions were viewed among boys, a converse variable of girls playing with stereotypical and counter-stereotypical toys would allow us to see how SLBs limit perceptions of progressive ideologies when it comes to multiple types of counter-stereotypical images. Due to time and resources however, utilizing girls in advertisements was not used in this study.

Implications

The information that was obtained by this sample could also be used to inform future research decisions. The significant results obtained highlighted how those higher in SLB traits would be more likely to maintain the status quo by purchasing masculine toy products for their son, while those lower in SLB traits were more accepting of boys playing with feminine toy

products. This finding does suggest that a stigma about boys and the types of toys they play with is still present in society, which is seen in the literature (Rabelo et al., 2014; Weisgram, 2019; Wong & Hines, 2015). Although the stigma is present, our study does suggest that people lower in SLB traits show more intent to purchase a feminine toy product for their son, which may lead to more acceptance of boys playing with feminine toys. would be more likely to accept their son if he were to play with feminine toy products This is an important factor as it shows how more acceptance could be attained for boys if they want to exhibit more communal traits. By knowing that those lower in SLB traits are more accepting of counter stereotypical toy products, we can attempt to better understand how those higher in SLB traits can be more accepting of boys playing with feminine toy products.

Status ideologies are prevalent in various facets of society, interjecting themselves among any system where a hierarchy is capable of forming (Glaser, 2005). As such, our research findings indicate there is a link between purchase intention, advertising, and status ideologies. More specifically, our findings show that gender hierarchy can be applied to broader areas such as advertisements, SLB endorsement, and status ideologies. With the information obtained from our study, we're able to see status ideologies that are prevalent in society can influence an individual to endorse certain products, if they deem the product to go against the status quo. This also indicates that other areas can be examined through the scope of advertising and status ideologies. For instance, how status ideologies relate to views of companies (do consumers think companies uphold certain ideologies that promote the status quo), or instead of testing counter stereotypical advertisements with boys, various other types of advertisements can be utilized that might be seen to destabilize the current status system. There are many areas in which this paradigm may be implemented in further research.

Conclusions

Overall, there are many conclusions that can be attained from our results. Preferences for stereotypical versus counter stereotypical toys for boys differ by levels of status-legitimizing beliefs. More specifically, participants that scored higher in SLBs were more likely to favor masculine toy products and less likely to favor feminine toy products for boys than participants that scored lower in SLBs. These results can shed more understanding of the intricacies that inhibit people from supporting counter stereotypical norms that could be beneficial to children (Weisgram, 2019). With much of the progress in gender equality being beneficial to women (Matthes et al., 2016; Zawisza & Cinnirella, 2010) leading to more acceptance of women performing counter stereotypical roles, the results from our study hope to highlight the disparity among men performing counter stereotypical roles as seen by society members. With our findings, we note that boys are still stigmatized to play with toys that promote traditional agentic roles as opposed to nontraditional communal roles based on the person's SLB traits. The important finding of our study is the implication that people lower in SLB traits are more accepting of boys playing with stereotypically feminine toy products, indicating the possibility that other societal members might view feminine toys to be acceptable for boys as well.

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APPENDIX A

BEHAVIORAL INTERVENTION – NO THREAT

Thank you for consenting to participate in this study. You will be completing two parts in today's research session.

INSTRUCTIONS: For part 1, please read the following news media article. After reading, you will be asked to answer questions regarding the quality of the article.

WASHINGTON (AP) - Women have occupied a relatively low social position during much of the nation's history, but it appears that women have made tremendous social progress. They seem to have risen on all the standard markers of success in terms of occupational status, income, and power. Within the last decade, in particular, women have: gained access to top positions in Fortune 500 companies, been nominated for the presidency, and appointed to the Supreme Court. However, they still possess a low social status in the United States.

Only 5% of women occupy top leadership positions in Fortune 500 companies and 28% of positions in STEM. Additionally, we continue to see the mistreatment of women in the United States from the undermining of women's reproductive health to blame of female sexual assault victims. All of this suggests that men will still occupy a position of privilege relative to women. Social analysts suggest that if recent trends continue, by 2030, sex will still be a marker of social status in the United States.

APPENDIX B

BEHAVIORAL INTERVENTION – THREAT TO GENDER HIERARCHY

Thank you for consenting to participate in this study. You will be completing two parts in today's research session.

INSTRUCTIONS: For part 1, please read the following news media article. After reading, you will be asked to answer questions regarding the quality of the article.

WASHINGTON (AP) - Although women have occupied a relatively low social position during much of the nation's history, women have made tremendous social progress. They have risen on all the standard markers of success in terms of occupational status, income, and power. Within the last decade, in particular, women have: gained access to top positions in Fortune 500 companies, been nominated for the presidency, and appointed to the Supreme Court.

The individuals who have achieved these positions are not simply exceptions; the average social position of women has also improved. Within the workforce, there has been a 70% increase of women as CEOs in the last five years, and the rate of women in STEM fields has risen from 5% to 28% since 1993. Compared to men, women make up 56% of the college educated population (projected to reach 58% in the next ten years) and 47% of the workforce.

All of this suggests that men will no longer occupy a position of privilege relative to women. Social analysts suggest that if recent trends continue, by 2030, sex will no longer be a marker of social status in the United States.

APPENDIX C

ARTICLE EVALUATION QUESTIONNAIRE

INSTRUCTIONS: Please carefully read each of the following statements. We are interested in what you think about the quality of the article you read. We ask that you rate the article by indicating your agreement with the statements below using the scale provided. Use the complete range of the scale to express your exact opinion.

1. This article has a clear and logical argument.
   - Strongly Disagree (1)
   - Disagree (2)
   - Somewhat Disagree (3)
   - Somewhat Agree (4)
   - Agree (5)
   - Strongly Agree (6)
2. This article is clear and well-written.
   - Strongly Disagree (1)
   - Disagree (2)
   - Somewhat Disagree (3)
   - Somewhat Agree (4)
   - Agree (5)
   - Strongly Agree (6)
3. The sentences in this article are well-constructed.
   - Strongly Disagree (1)
   - Disagree (2)
   - Somewhat Disagree (3)
   - Somewhat Agree (4)
   - Agree (5)
   - Strongly Agree (6)
4. How much do you agree with the arguments in this article?

   - Strongly Disagree (1)
   - Disagree (2)
   - Somewhat Disagree (3)
   - Somewhat Agree (4)
   - Agee (5)
   - Strongly Agree (6)

APPENDIX D

MANIPULATION CHECK/RANDOM RESPONDING

Instructions: For this part of the study, we would like to evaluate your memory on the advertisements you just viewed.

In regards to the *first* part of this study:

1) The newspaper article I read was about…

    a. Climate change

    b. The workforce

    c. Other

        i. Fill in the blank

2) What was the main point of the news article?

    a. How gender is different and that certain genders should perform certain roles.

    b. Genders should not be assigned certain roles.

    c. Everyone should change their gender as they see fit.

    d. Gender was not a topic of the news article I read.

In regards to the *second* part of this study, please indicate from the list below whether you remember viewing the item at any time throughout this study. *Note*: the items will not be listed in the order that they appeared. Check all that apply.

- Pink Doll House

- Transformer

- Pokémon Stuffed Animal

- Barbie doll(s)

- Legos

- Race car

- Large Blue Playhouse

APPENDIX E

Demographics

1. Please indicate your age: _____

2. Which of the following best describes your racial/ethnic identity? (Please select one)

     ☐   African American or Black

     ☐   American Indian or Alaskan Native

     ☐   Asian or Pacific Islander

     ☐   Hispanic or Latino/Latina

     ☐   White or Caucasian

     ☐   Multiracial (specify) _____

     ☐   Other (specify) _____

3. Gender (Please select one):

     ☐   Female

     ☐   Male

     ☐   Transgender (specify) _____

     ☐   Other (specify) _____

4. What is your current profession?

     ☐ _____

5. Please indicate if you are a parent or expect to be a parent within 9 months of taking this study.

     ☐   Yes, I'm a parent or will be within 9 months

     ☐   No, I'm not a parent

6. How would you describe your political party preference?

     1) Strong Democrat

2) Democrat

3) Somewhat Democrat

4) Neither Democratic nor Republican

5) Somewhat Republican

6) Republican

7) Strong Republican

Instructions: Sometimes participants do not pay attention to the questions during a survey, or they will respond randomly, which can hurt the validity of the study results.

It would be very helpful if you could tell us at this point whether you have taken part in this study seriously (so that we can use your answers for our scientific analysis), or if you were simply clicking through to take a look at the survey?

- I have taken part seriously.
- I have just clicked through, please throw my data away.

APPENDIX F

ANCOVA Results Table

Table 4

ANCOVA Results with All Study Variables

Source	df	F	Sig.	η^2
Between-Subjects Effects				
SLB	1	3.366	.068	.013
Gender Hierarchy Effect	1	.553	.458	.002
Interaction	1	.364	.547	.001
Error	258			
Within-Subjects Effects				
Source	df	F	Sig.	η^2
Type of Toy	1	56.874	<.001**	.181
Type of Toy * SLB	1	92.374	<.001**	.264
Type of Toy * Gender Hierarchy Threat	1	3.443	.065	.013
Type of Toy * Gender Hierarchy Threat * SLB	1	1.675	.197	.006
Error	258			

Note. $N = 262$.

*$p < .05$. **$p < .001$.