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Creating Constructs Through Categorization: Gender and Race

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CREATING CONSTRUCTS THROUGH CATEGORIZATION: GENDER AND RACE

by

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ABSTRACT

In U.S. society, the systems of gender and race operate to privilege and oppress individuals based on their location within these systems. All of the interactions an individual experiences as they go about their day-to-day lives are shaped by these interlocking systems. As a result, there is an extensive body of sociological literature addressing how individuals in U.S. society are privileged and oppressed on the basis of their perceived membership in gender and race categories; however, relatively little research exists examining how individuals come to be seen by others as members of gender and race categories in the first place. In order to address this gap in the existent literature, this thesis asked 354 participants to perform gender and race categorizations for 28 target individuals of various gender and race category memberships. Participants were asked to make a categorization, rate how confident they were in that categorizations accuracy, and then explain why they made the gender or race categorization that they did. In analyzing these categorizations, this thesis produced three important findings about the process of gender and race categorization. First, this thesis identified two gender categories ("female" and "male") and eight race categories ("White," " Black," "Latino," "Asian," "Southeast Asian," "South Asian/Indian," "Middle Eastern," and "Mixed Race") used in gender and race categorization. Second, particularly in the common usage of the biologically-based concepts of "sex" and "race," rather than the socially-based concepts of "gender" and "ethnicity." Third, this thesis found interactions between the gender and race systems in categorization, finding that White individuals and male individuals are gender categorized more easily than Black individuals or female individuals, and individuals will less "ambiguous" skin coloration are more easily categorized than others.

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CHAPTER 1: INTRODUCTION

In US society, individuals are privileged and oppressed in different ways depending on their location within intersectional systems of stratification, such as gender and race (Collins 2005; Massey 2007; Newman 2007). The universal relevance of gender and race has resulted in an enormous body of work dedicated to describing the unequal distribution of social and material resources to individuals on the basis of their membership in gender and race categories (e.g. Collins 2005; Massey 2007; Newman 2007). Much less common is research which describes how individual members of U.S. society come to be members of gender and race categories in the first place. This thesis addresses this deficit in the sociological understanding of gender and race by examining cues used to place individuals into a gender and race category.

Systems of stratification create privilege and oppression through two interlocking processes - the categorization and allotment processes - which are given legitimacy by the natural attitude toward that system (Heritage 1984; Massey 2007; Newman 2007). The categorization process produces socially constructed identity categories which members of society are placed into. For example, the categorization process within the gender system constructs two identity categories, "female" and "male" (Kessler and McKenna 1978; West and Zimmerman 1987; Crawley et al. 2008), The allotment process distributes social prestige, social goods, and economic good to individuals, typically on the basis of their identity category membership. For example, the allotment process within the race system provides white individuals with more prestige and more social and economic opportunity than black or Hispanic individuals (Massey 2007; Newman 2007). Undergirding each system of stratification

and the process with them is the "natural attitude" toward that system. The natural attitude toward a system of stratification is a collection of the "irreducible facts" or taken-as-granted cultural beliefs about the nature of the reality of that system (Heritage 1984; Ridgeway and Correll 2004). Whenever a member of society accounts for their actions, they reference these cultural beliefs to defend their decisions. For example, one cultural belief of the gender system is that "females" and "males" are inherently different biologically, socially, and cognitively; this "fact" might then be used to defend someone's decision to pay a female employee less than a male one (Ridgeway and Correll 2004; Lindsey 2005).

The systems of gender and race are somewhat unique among systems of stratification. The effects systems of stratification have on individuals and their interactions within society vary relative to the relevance a given system has in the context that an individual is acting (Massey 2007; Newman 2007). What makes the systems of gender and race unique is that unlike most other systems, gender and race are omnirelevant (West and Fenstermaker 1997). The omnirelevance of gender and race means that individuals are categorized and allocated resources by these systems in all of their lived reality; and that the cultural beliefs within the natural attitude toward gender and race are always present in those individuals' thoughts (Collins 2005; Ridgeway and Correll 2004; West and Fenstermaker 1997). It is for these reasons that gender and race have recieved particular attention in the literature on social stratificiation (Massey 2007; Newman 2007). However, despite the substantial amount of literature on gender and race in the social sciences, one significant feature of both systems has been largely overlooked: the categorization process.

CHAPTER 2: LITERATURE REVIEW

The categorization process within the gender and race systems - i.e., "gender categorization" and "race categorization" - occurs when one actor in society makes a decision to place a target into a gender or race category (Kessler and McKenna 1978; Massey 2007; Stangor et al. 1992). This act of gender and race categorization occurs in a variety of unique contexts. For example, the decision by doctors to proclaim a newborn baby with ambiguous external genitalia a "girl" or a "boy" on the basis of chromosomal sex is a form of gender categorization; the formation of a black racial identity, or sense of oneself as "black," is a form of race categorization where an individual is both the actor making a categorization and the target of that categorization (Fausto-Sterling 2000; Massey 2007). One of the most important contexts in which gender and race categorization occurs is face-to-face interaction (Stangor et al. 1992; Quinn and Macrae 2005).

In face-to-face interaction, individual actors make gender and race categorizations automatically when first meeting a new target individual in a process known as "automatic initial categorization" (Irmen 2006; Stangor et al. 1992). Once these categorizations are made, they tend to stick - the target individual's subsequent actions, including seemingly contradictory cues, are understood through the lens of the initial categorization (Kessler and McKenna 1978). With the notable exceptions of interactions over the telephone and many interactions over the internet, the two types of cues first available in interaction - and therefore the most consequential to placement in a gender and race category - tend to be "behavioral cues" and "biophysical cues" (Kessler and McKenna 1978; Jackson 1992). Behavioral cues are patterns of movement and ways of holding one's body, such as range of motion when walking and the

position of the feet when seated (Birdwhistell 1970; Lippa 1998). Biophysical cues are visible, primarily biological elements of an individual's body, such as skin tone and bone structure (Brown and Perret 1993; Jackson 1992).

2.1) Gender Categorization

Most theoretical descriptions of the gender system argue that there are only two categories which members can be categorized as: "female" or "male" (e.g., Kessler and McKenna 1978; West and Zimmerman 1987; Crawley et al. 2008). Although there are cases of individuals who do not place themselves or are not placed by others into the categories of "female" or "male," the individuals in those cases are commonly understood as being either physically or mentally deficient. Even in these cases, individuals are still seen as being, in "the final analysis," either "female" or "male" (Garfinkel 1967; Kessler and McKenna 1978).

Doctors, midwives, or similar persons first place members into a gender category at birth, usually on the basis of external genitalia. If external genitalia are not visible or ambiguous, then other criteria such as gonad sex or sex chromosomes are turned to as the "truth" of an individual's gender category (Fausto-Sterling 2000). Over time, new members of society are taught through socialization to think of themselves as members of the gender category they were placed into at birth. During socialization, members learn how to produce and recognize the cues which signal membership in a gender category and begin to orient themselves to others relative to their membership in a gender category. At the end of this initial socialization process, members have learned to think of themselves as either "female" or "male," to produce the biophysical and behavioral cues associated with their gender category,

and to place others into a gender category on the basis of observed behavioral and biophysical cues (Crawley et al. 2008).

2.1.1) Studies of Gender Categorization from Behavioral Cues

Ray Birdwhistell's (1970) essay on femininity and masculinity as displays serves as the foundation of many of the studies on gender categorization from behavioral cues. Birdwhistell differentiated between three types of different, yet interconnected, sexual characteristics: primary, secondary, and tertiary. Birdwhistell writes:

> It seems methodologically useful to me to distinguish between *primary* sexual characteristics which relate to the physiology of the production of fertile ova or spermatozoa, the *secondary* sexual characteristics which are anatomical in nature, and the *tertiary* sexual characteristics which are patterned social-behavioral in form. These latter are learned and are situationally produced. (P. 42)

Birdwhistell assumes that among members of the species *Homo sapiens*, primary, secondary, and tertiary sexual characteristics are all dimorphic into two sex categories, male and female. However, Birdwhistell points to evidence showing that primary sexual characteristics are often covered by clothing and therefore unavailable for the determination of sex in day-to-day interaction. As well, secondary sexual characteristics, while more often available in day-to-day interaction, are only very weakly dimorphic and therefore not a good

enough indicator of sex. Tertiary sexual characteristics, then, must be the most influential resource for the identification of gender (Birswhistell 1970).

Birdwhistell's essay urges a research program that is fairly similar to that urged by later feminist writers (Kessler and McKenna 1978; West and Fenstermaker 1995). In his concluding paragraphs, Birdwhistell exhorts other researchers to remember that gender behavior is not always related to sexual behavior and that gender display and recognition systems are a product of social construction. Birdwhistell argues several times that the ability to display and recognize gender is not an innate characteristic of *Homo sapiens*, but is rather learned in childhood. As well, Birdwhistell acknowledges that gender display and recognition are modified by individuals' other identities and the context in which display and recognition take place (Birdwhistell 1970:45).

Studies that build upon Birdwhistell's (1970) theoretical framework examine behavioral cues by examining differences in behavior between individuals identified as "masculine" and "feminine." Three of the four studies reviewed here used similar methodologies (Alley and Kolker 1988; Barlow et al. 1979; Lippa 1998). First, target individuals were selected from the population, divided into "females" and "males," and, in the Barlow and colleagues' (1979) and Lippa's (1998) studies, rated on masculinity and femininity scales by the investigators. Second, target individuals were observed performing different activities, such as carrying books (Alley and Kolker 1988), standing, sitting, and walking (Barlow et al. 1979), and pretending to be in a television commercial (Lippa 1998). Finally, the targets' observed behaviors were coded as "feminine" or "masculine" depending on the observed gender category of the target and/or targets' ratings on a scale of masculinity and femininity. The one study which didn't use this

methodology, Birdwhistell's (1970) preliminary description of gender-linked behavioral cues, didn't include a methodology at all.

The findings of these studies are occasionally contradictory and the behavioral cues described can be vague. Only one cue is reported by all Barlow and colleagues (1979), Birdwhistell (1970), and Lippa (1998) - the masculine cue "feet apart when sitting." Notably, while the complementary feminine cue "feet together when standing or sitting" is reported by Barlow and colleagues (1979) and Birdwhistell (1970), Lippa (1998) finds no association between this feminine cue and a target individual's rating as masculine or feminine. Both Barlow and colleagues (1979) and Lippa (1998) found only weak connections between behavioral cues and a target individual's rated masculinity or femininity. Alley and Kolker's (1988) description of male and female carrying styles, as "carried at the side with his arm straight" for males and "carried at her side, resting on her hip bone" for females, demonstrates both the difficulty in differentiating the masculine and feminine cues described in these studies.

2.1.2) Studies of Gender Categorization from Biophysical Cues

Studies of gender categorization from biophysical cues tend to draw on the concept of "categorical thinking" from cognitive theory. Categorical thinking is a cognitive strategy whereby a social perceiver places a perceived individual into a certain category - in this case, a gender category - on the basis of various physical and social characteristics (Quinn and Macrae 2005). Breaking from studies of gender categorization from behavioral cues, these studies argue that gender categorizations are made on the basis of biophysical cues located in the face (Brown and Perrett 1993).

The face is chosen as the site for investigation for three primary reasons. First, in Western societies, the face is “usually the first source of information available about a person” (Jackson 1992:3). Second, individuals tend to attend to the appearance of the face because it is a rich resource for categorizing individuals on the basis of race, age and sex, and for determining the familiarity, emotional status, and gaze direction of an interactional partner (Jackson 1992; Quinn and Macrae 2005; Stangor et al. 1992). Finally, although other behavioral and biophysical cues such as body appearance, hair, grooming, clothing, and behavior may change from interaction to interaction, facial appearance tends to stay fairly stable over multiple interactions (Jackson 1992).

Studies of gender categorization from biophysical cues in the face tended to use similar methodologies: participants were presented with a series of images composed of facial photographs and asked to identify whether the target individual shown in each image was male or female (Brown and Perret 1993; Bruce et al. 1993; Burton, Bruce, and Dench 1993; Chronicle et al. 1994; Dupuis-Roy et al. 2009; Roberts and Bruce 1988; Schyns, Bonnar, and Gosselin 2002; Yamaguchi, Hirukawa, and Kanazawa 1995). Images were created from either "natural" photographs of target individuals' faces, or so-called "prototype" images, made by averaging hundreds of different faces together into a composite. The importance of individual cues was studied using three experimental procedures, either: (1) placing a mask over the face so that only certain parts were visible; (2) presenting the same feature from different angles; or (3) swapping features between prototypical "female" and "male" faces - for example, a "female" face with a "male" nose.

Two studies used a different methodology than the one described above (Russell 2009; Stephen and McKeegan 2010). In these studies, participants were asked to either make a gender categorization or rate the masculinity and femininity scores for a series of prototype images. These images were digitally altered to create different color contrast effects in order to study how contrasts between the coloring of different parts of the face affect gender categorization.

Again, the findings of these studies prove to be rather inconclusive. The most common finding was that the region of the face which encompasses the eyes and eyebrows contained cues which produced the highest rates of accurate gender categorization (Brown and Perret 1993; Dupuis-Roy et al. 2009; Schyns et al. 2002; Yamaguchi et al. 1995). Brown and Perret (1993) report that while the regions around the eyes and eyebrows are the most important, "all features except the nose carried information about gender" (839). Counter to this conclusion, Roberts and Bruce (1988) concluded the nose contained very important cues as participants took a significantly longer time to assign a gender category to a stimuli where the nose was masked, and Chronicle and colleagues (1994) report that gender categorizations can be made with greater-than-chance accuracy from the nose by itself. Both Roberts and Bruce (1988) and Bruce and colleagues (1993) conclude that the configuration of facial features, rather than those features' characteristics, convey gender category cues. However, this conclusion is also challenged by Brown and Perret (1993) and Yamaguchi and colleagues (1995), who were able to manipulate the perceived gender of compiled prototype faces by switching out specific features while leaving the configuration essentially unchanged. Later findings also prevent making a definitive conclusion, as Dupuis-Roy and colleagues (2009), Stephen and McKeegan (2010), and

Russell (2009) all point towards the importance of chromatic and contrast cues in gender categorization.

The most confounding finding, however, is that in the five studies which performed tests of gender categorization accuracy, participants' accuracy on these tests was over 70% in almost all cases, and over 90% in cases where only one facial feature was masked (Bruce et al. 1992; Burton et al. 1993; Chronicle et al. 1994; Dupuis-Roy 2009; Roberts and Bruce 1988). Taken together, the findings of these ten studies seem to support the conclusion that *every* region of the face contains cues which can produce gender categorizations with significant accuracy.

2.2) Race Categorization

Compared to gender categorization, much less information is available about racial categorization and how it operates in U.S. society. The full breadth of race categories which see use in U.S. society has not been laid out by any one research project as of yet, but several categories see common use. These are: "white," "black," "Asian," "Hispanic," and "Native American," although individual members may use different terms - such as "Caucasian," "African American," "Latino," or "Oriental" - when using these categories (Newman 2007; Smedley 1998). Other categories, such as "Jewish," may come into use in certain geographic areas or by individuals who see those categorical distinctions as important, such as those with individual prejudice (Blascovich et al. 1997; Newman 2007).

In US society, individuals are placed into a race category as well as a gender category at birth, typically on the basis of the race category membership of the individual's parents.

Individuals born to parents of different races, a small but growing phenomenon in the US, tend to be placed in the same category as the more oppressed parent as a result of the "one drop rule" (Ho et al. 2011). As with gender categorization, new members of society are socialized to think of themselves as members of a race category, to produce and recognize the cues which signal membership in a race category, and to orient themselves to others relative to their membership in a race category (Newman 2007).

2.2.1) Studies of Race Categorization from Behavioral Cues

Unlike studies of gender categorization, no studies at present argue that race categorization occurs on the basis of behavioral cues. None of the literature on the topic explicitly states why this is, but it could be a result of differences in how gender and race are traditionally conceptualized ascribed or achieved attributes in the social sciences. Traditionally, the concept of gender as it is used in this proposal is divided into the biological, ascribed attribute "sex" and the behavioral, achieved attribute "gender"; similarly, the concept of race as it is used here is divided into the biological, ascribed attribute "race" and the behavioral, achieved attribute "ethnicity" (Newman 2007). Although in the traditional conception categories within biological "sex" and behavioral "gender" line up fairly neatly, the categories within biological "race" and behavioral "ethnicity" do not - a biological "race" category might contain several behavioral "ethnicity" categories and vice versa. As a result, previous researchers may have found that the arguments used to support the use of behavioral cues in gender categorization did not hold up to scrutiny when applied to race categorization.

2.2.2) Studies of Race Categorization from Biophysical Cues

Members of race categories are socially believed to have similar biophysical characteristics (Smedley 1998). These beliefs are justified by the belief that members of a particular category have a shared ethnic ancestry originating from a shared geographic region, "as though racial categories were geographically delimited biological subspecies" (Carmill 1998:652). These assumptions have received broad and extensive criticism from physical anthropologists and sociologists who argue that race categories are socially constructed, have varied in composition and importance over time, and have no biological or genetic foundation (Aho 1999; Carhill 1998; Smedley 1998). Despite these criticisms, in U.S. society biophysical features are still typically seen as the primary indicators of race category membership (Aho 1999; Peery and Bodenhausen 2008).

Studies of race categorization from biophysical cues share much with studies of gender categorization from biophysical cues - both draw on the concept of "categorical thinking" from cognitive theory, and both utilize the face as the primary site for investigation. However, the studies of race categorization reviewed here focused on cues located in skin tone and overall facial physiognomy rather than those located in individual facial features (Bar-Haim, Saidel, and Yovel 2009; Stepanova and Strube 2009; Willenbockel, Fiset, and Tanaka 2011). These studies produced mixed results, although overall their findings seem to indicate that facial physiognomy is treated as more important to racial categorization than skin tone. Bar-Haim and colleagues (2009) and Willenbockel and colleagues (2011) both concluded that facial physiognomy was a better indicator of racial category membership than skin tone. Stepanova

and Strube (2009) concluded that facial physiognomy and skin tone had an additive effect on race categorization and judgments racial typicality.

CHAPTER 3: IDENTIFICATION OF GAPS FROM PREVIOUS RESEARCH

Due to the relatively small amount of literature on gender and race categorization, many gaps still remain. In reviewing the previous research on gender and race categorization, four primary issues arise: (1) addressing the interaction between behavioral and biophysical cues; (2) addressing gender and race from a perspective of intersectionality; (3) the usage of problematic methods in the production of stimuli; and (4) often inconclusive results.

First, previous studies of gender and race categorization have failed to account for how behavioral and biophysical cues interact and shape one another. Although studies of behavioral cues attempted to control for biophysical cues and studies of biophysical cues attempted to control for behavioral cues, the success of these studies in presenting the effects of *only* behavioral cues or *only* biophysical cues is debatable. Studies of behavioral cues attempted to control for biophysical cues by masking target individuals' heads, but this doesn't control for other biophysical cues which may have been visible in the materials analyzed such as body size, body shape, and body hair (Alley and Kolker 1988; Barlow et al. 1979; Lippa 1998). Studies of biophysical cues were arguably better at controlling for behavioral cues, as they presented participants with still photographs instead of short video recordings. However, none of the studies of either type of cue addressed the complex ways in which behavior and biology interact to shape both bodies and behaviors. Behaviors such as shaving, use of makeup, and participation in contact sports affect the biophysical cues visible on a target individual's face, while biological characteristics such as hair (facial and otherwise), bone structure, and musculature affect a target individual's behavior (Crawley et al. 2008).

Second, there was an overall lack of intersectionality in the approach and analyses of all of the studies reviewed here. Studies of gender categorization universally failed to consider the intersectional effects of race on gender categorization. Only two studies explicitly used non-white target individuals: Russell (2009), who used "East Asian" or "Caucasian" target individuals; and Yamaguchi and colleagues (1995), who used solely "Japanese" target individuals. All of the other studies either reported using only "white" or "Caucasian" target individuals (Chronicle et al. 1994; Dupuis-Roy et al. 2009; Stephan and McKeegan 2010), or failed to report the race, ethnicity, or nationality of target individuals completely (Alley and Kolker 1988; Brown and Perrett 1993; Bruce et al. 1993; Burton et al. 1993; Roberts and Bruce 1998; Lippa 1998; Schyns et al. 2002). In particular, the findings of Dupuis-Roy and colleagues (2009) and Russell (2009), which emphasize the role of skin tone and light/dark facial contrasts, likely only apply to individuals with light-colored skin.

Studies of race categorization were similarly lacking. Two studies used only male target individuals (Stepnova and Strube 2009; Willenbockel et al. 2011), while one study failed to report the gender of target individuals (Bar-Haim et al. 2009). None of these studies addressed whether or not facial physiognomy varied between males and females.

Third, several studies used problematic methods to produce stimuli for participants to categorize which don't represent the target individuals participants would observe outside of the study environment. Two studies prescreened target individuals so that only highly "feminine," "masculine," or "race-typical" target individuals were shown to participants (Barlow et al. 1979; Willenbockel et al. 2011). This prescreening for "acceptable" target individuals artificially both reduces variability and increases the apparent differences between categories.

One study utilized animation software to create the stimuli shown to participants, imposing on the data the beliefs about racial physiognomy of the unknown programmers (Stepanova and Strube 2009). Finally, the most common problematic practice was the creation of "ambiguous" stimuli by taking two stimuli categorized differently - such as a "female" stimulus and a "male" stimulus, or a "white" stimulus and an "Asian" stimulus - and then using a computer program to combine the two stimuli into an average face (Brown and Perrett 1993; Burton et al. 1993; Willenbockel et al. 2011; Yamaguchi et al. 1995). These averaged stimuli were then declared "ambiguous" by the researchers and treated as such. The issues with this methodology are twofold: (1) it creates stimuli which do not exist in reality; and (2) although these stimuli are arbitrarily declared "ambiguous," since participants aren't given the choice to offer up an ambiguous categorization, all of these stimuli are categorized one way or another - "ambiguous" turns out to be "male" and "black."

Finally, the findings of all of these studies, on both gender and race categorization, tend to be vague and inconclusive. Taken as a whole, the body of literature on gender categorization reviewed above seems to indicate that most behavioral cues and all biophysical cues in the face can be involved in making a gender categorization. The body of literature on race categorization starts from the assumption that all of the features in the face are involved in making a race categorization, but doesn't address where ideas of "racial typicality" come from or why prototypical facial physiognomy looks the way it does. While these result could be seen as supporting the claim of the omnirelevance of gender and race - that cues used in gender and race categorization are omnipresent in the body - it doesn't do much to explain how gender and race categorization are accomplished.

CHAPTER 4: THEORETICAL APPROACH

A major gap in the existing literature on gender and race categorization is the relative lack of understanding of how gender and race categorization are accomplished. This thesis argues that this gap can be best addressed by combining previous research on gender and race categorization with Kessler and McKenna's (1978) ethnomethodological theory of gender.

In *Gender: An Ethnomethodological Approach*, Kessler and McKenna (1978) present one of the earliest descriptions of the process of gender categorization, which they term "gender attribution." They argue that there is no one concrete cue which can be used in every context to make a gender categorization. Instead, they write that:

> Although within a positivist framework it is important to delineate specific gender cues ... doing so glosses over the deeper structures of the social construction of gender. Members do not simply learn rules for telling females from males. They learn how to *use* the rules in their relation to the socially shared world of two genders. There is no one rule for deciding "male" or "female" that will always work. Members need to know, for example, when to disregard eyebrows and look for hand size. Gender attributions are made within a particular social context and in relation to all the routine features of everyday life. (P. 158)

When seen through this theoretical lens, the inconclusiveness of the findings reported above is largely to be expected. When presented with missing cues, participants move on to a different

set, or possibly two sets to make up for lost information. In this way, very high levels of accuracy can still occur even when minimal cues are available. These rules can be understood as the cultural beliefs which undergird the categorization process in the gender system of stratification - they explain the gender categorization being made, and provide a defense as to why that particular categorization is "correct".

Kessler and McKenna (1978) propose a different path for future research on gender categorization. Instead of solely attempting to catalog and cross-reference all of the cues which an individual can use to display their membership in a gender category, they argue that a more productive research project would try to identify and understand the rules by which cues are understood as more or less meaningful. In line with this project and on the basis of previous research, Kessler and McKenna propose a rule to explain how cues are used in gender categorization: "*See someone as female only when you cannot see them as male*" (1978:158; Simpkins 2011).

Although Kessler and McKenna (1978) only addressed gender categorization in their work, this theoretical framework can easily be adapted to apply to race categorization as well. By identifying and understanding the rules for how cues can be interpreted as indicative of membership in a particular race category, an equally robust understanding of race categorization can be produced. Finally, recognizing the intersectional nature of the systems of gender and race, Kessler and McKenna's (1970) framework can be applied to both gender and race categorization simultaneously to examine how the rules for gender categorization are affected by the rules for race categorization and vice versa.

CHAPTER 5: PURPOSE

The purpose of this thesis is to examine the categorization process of both the gender and race systems - i.e., gender and race categorization - and the cultural beliefs associated with these processes. This thesis utilizes the theoretical framework put forth by Kessler and McKenna (1978) and a methodology which draws heavily on the methods utilized in studies of gender and race categorization from biophysical cues while improving on the shortcomings of those methods in order to address the issues raised in the review of the literature above. This thesis uses the face in interpersonal interactions as the site for investigation of gender and race categorization, and focuses on the facial cues used in gender and race categorizations, the categorizations made on the basis of these cues, and the cultural beliefs or "rules" which explain why using certain cues and making certain categorizations is "correct."

5.1) Scope

This thesis focuses on how gender and race categorization are accomplished in interpersonal interactions. Drawing on previous studies of gender and race categorization from biophysical cues, the face will be the primary site for investigation.

The face is selected as the site for investigation for three primary reasons. First, in Western societies, the face is “usually the first source of information available about a person” (Jackson 1992:3). Second, individuals tend to attend to the appearance of the face because it is a rich resource for categorizing individuals on the basis of race, age and sex, and for determining the familiarity, emotional status, and gaze direction of an interactional partner (Jackson 1992; Quinn and Macrae 2005; Stangor et al. 1992). Finally, although other behavioral

and biophysical cues such as body appearance, hair, grooming, clothing, and behavior may change from interaction to interaction, facial appearance tends to stay fairly stable over multiple interactions (Jackson 1992).

5.2) Hypotheses

Although little previous research on gender and race categorization exists, wider research on the intersection of cultural beliefs regarding gender and race supports the following hypotheses:

Hypothesis I: The categories used by participants for the gender system will include female and male.

Hypothesis II: The categories used by participants for the race system will include Black or African American, White or Caucasian, Hispanic or Latino, and Asian or Asian American.

Hypothesis III: Gender and race categorization will not vary significantly relative to the gender and race category membership of the individuals making categorizations

Hypothesis IV: Gender and race categorization will vary significantly relative to the gender and race category membership of the individuals being categorized, with more privileged categories (i.e., White Men) eliciting greater accuracy and confidence from participants.

Hypothesis V: Target individuals categorized as Black or African American will be more likely to be categorized as male or masculine than female or feminine.

Hypothesis VI: Target individuals categorized as Asian or Asian American will be more likely to be categorized as female or feminine than male or masculine.

CHAPTER 6: METHODOLOGY AND DATA COLLECTION

6.1) Phase I - Target Individual Photograph Collection

In Phase I, a sample of 28 target individuals volunteered to create the stimuli to be shown to participants. Target individuals were asked to show up for picture taking dressed and prepared as they would be for a normal day so as to minimize any effect artificial constraints could have on stimulus appearance. Each target individual completed a short demographic survey asking them to report their age, gender, and race/ethnicity (see Appendix A). Then, photographs were taken of each target individual using a Nikon COOLPIX S8100 digital camera stabilized on a tripod 36 inches away from the target individuals' faces. All target individuals were photographed in front of the same white/grey surface, under the same lighting conditions. Target individuals were asked to adopt a natural facial expression, whatever they felt was most natural or appropriate. Three photographs were taken of each target individual; of these, the clearest and best quality photograph was selected.

These photographs of target individuals were then edited using the Paint.NET image editing software to create stimuli for Phase II participants to view and categorize. For each photograph, seven different stimuli types were created, each showing a different part of the face identified as having potential importance in the previous literature: (A) the full face; (B) the mouth; (C) the nose; (D) the eyes; (E) the chin/jaw line; (F) the "facial oval," defined as an oval shape drawn on the face delimited at the bottom by the chin, the top by the hairline, and on either side by the ears; and (G) the inverted facial oval, defined as the remainder of the rectangular image not included in the facial oval (Simpkins 2011; 2014). This resulted in a total

of 196 stimuli (28 of each type, 7 for each target individual) to be shown to participants in Phase II (for an example, see Appendix C).

6.2) Phase II – Gender and Race Categorization

These stimuli were then used in an internet survey created using Qualtrics online survey software. This method of data collection was chosen because of its ability to generate semi-random surveys and the broad reach of internet-based surveys. This survey was then completed by participants in Phase II of this research (hereby referred to as *participants*).

The survey used in Phase II was broken into two parts. First, participants completed the same demographic survey as the target individuals in Phase I, asking them their age, gender, and race/ethnicity (see Appendix A). Second, participants were shown a series of 14 stimuli randomly chosen from those created in Phase I, two of each stimulus type. For each stimuli, participants were asked the following question: "Q1: What is the [X] of the person in the above image?" with [X] being replaced with "sex/gender" or "race/ethnicity", alternating, for each of the 14 stimuli. Participants were also asked "Q2: On a scale from 1 to 7, 1 being 'Not confident at all' and 7 being 'Completely confident', how confident are you that your answer to Question 1 is correct?" and "Q3: Briefly explain the reason for your answers to questions 1 and 2" for each stimuli. Both Q1 and Q3 were open response, with participants being able to write in whatever they thought would best answer the question (see Appendix B).

6.3) Independent Variables

This research measured four independent variables: stimulus image race and gender category membership; and participant race and gender category membership.

Data on the race and gender category membership of stimulus images were collected from the responses of target individuals to a short demographic survey (see Appendix A) used in Phase II. A stimulus was coded as having the same race and gender category membership as the target individual whose image is used in that stimulus. Data on participants' race and gender category membership was collected from their responses to the same short demographic survey. Due to the open-ended nature of the questions in this demographic survey, target individual and participant responses were coded before being statistically analyzed.

6.4) Dependent Variables

This research measured two independent variables: categorization accuracy and categorization confidence.

Categorization accuracy was measured by comparing participants' coded gender or race categorization of a stimulus with the self-reported gender or race of the target individual in that stimulus. If both the participant and the target individual use the same category, then the response will be considered accurate; if not, inaccurate. These binary accurate/inaccurate values were then averaged across independent variables to create an "accuracy rating" for each variable, expressed as the percentage of "accurate" categorizations. Besides being compared to other category accuracy ratings across independent variables, categorization accuracy was also

compared to chance, .500 for gender categorization (as target individuals could be accurately placed in 1 of 2 gender categories) and .200 for race categorization (as target individuals could be accurately placed in 1 of 5 race categories).

Categorization confidence was measured by collecting participants' ratings of their own confidence in their categorizations. This variable was measured on a seven item Likert scale (see Appendix B). Besides being compared to other levels of categorization confidence across independent variables, categorization confidence was also compared to the mid-point of the Likert scale, or 3.5.

6.5) Data Preparation

At the end of data collection in Phase II, all of the participant responses were downloaded from the Qualtrics server and prepared for analysis in Excel. Using Excel, the researcher was able to review the full data set and "get a feel for the data" before coding and statistical analysis, similar to the process of "immersing" oneself used in grounded theory research (Berg 2009). By utilizing this technique, two problems identified in previous research were addressed: trolling and missing data (Simpkins 2011; 2014). Immersion in the data also helped identify and resolve an issue caused by the structure of the Phase II survey: mistaken and dual categorization.

6.5.1) Trolling

Trolling, as it exists online, is the deliberate posting of inflammatory, confrontational, or off-topic content online for no other purpose than to disrupt online communication for the

troll's personal amusement (Mantilla 2013). Trolling can be a very serious problem online, and is often linked to the deliberate silencing of online discussion and debate by privileged individuals (Mantilla 2013; Newman 2007). The issue of "hostile participants" producing deliberately misleading data has always been an issue in sociological research, and the prevalence of trolling online and these ease with which it can be accomplished in an online survey means that it is just as necessary to take these concerns into account here, if not more so.

In order to remove data provided by troll participants, all of the data analyzed by this research was reviewed several times over the course of analysis, similar to the process of "immersing" oneself in the data used in grounded theory research (Berg 2009). This resulting in two participants being identified as possible troll participants and being expunged from the sample, along with all of their data. These participants were identified as possible trolls due to listing their sex/gender as "meat popsicle" and "meatball," their race as "hella white" and "Moon Man," and both listing their confidence in categorizing all stimuli as 7, or "Completely confident." This behavior is similar to trolling behavior identified in previous research (Simpkins 2011). Although the researcher does not want to invalidate the chosen gender or racial identities of these or any individuals, it was decided that the risk that they were trolling and providing deliberately misleading data outweighed these concerns.

6.5.2) Missing Data

Since participants in Phase II were able to leave the survey at any time and leave a question blank but continue the survey, missing data was a fairly common occurrence in data

collection. For the purposes of this analysis, missing data is defined as a participant failing to indicate their categorization confidence in response to a stimuli, leaving a text field blank in response to an open-ended question, or entering something non-interpretable into a text field (ex: "\.....l" or "__%"). Missing data were dealt with in two ways.

First, a few participants did not provide enough data to analyze any of their categorizations. If any of the demographic questions asked of participants was left blank, the participant and all of their data were expunged from the sample (see Appendix A). If participants did not make a categorization about a single stimulus, they and all of their data were also expunged from the sample. On the basis of these criteria, 81 responses were expunged.

Second, not all participants gave enough information when categorizing all of the stimuli presented to them. Participants may have closed the survey without completing it, may have skipped one or more stimuli, may have miss-clicked while taking the survey, or any number of other contingencies. Individual participants' categorization data were expunged if it met any of the following criteria: failed to report a categorization confidence; failed to make a categorization and failed to provide an explanation; or provided either a categorization or explanation that was non-interpretable (see above). However, as one of the benefits of immersion in the data, several missing categorizations were able to be reconstructed by considering the explanations participants gave for their categorization. For example, if a participant failed to report a categorization in response to the question "What is the sex/gender of the person in the above image?" but did provide an explanation of "his eyes,"

this was interpreted to mean that the participant had made a gender categorization of "male," only failing to write that categorization in the correct text field.

6.5.3) Mistaken and Dual Categorization

As described above, in the Phase II participants were shown two images of each type, one after the other, alternating between performing a gender categorization for one stimulus of a certain type and performing a race categorization for a different stimulus of the same type. In this way, participants were shown 14 stimuli, 2 of each type, and asked to make 7 gender and 7 race categorization, 1 for each type of stimuli. However, because the survey alternated between asking the participant to perform a gender categorization and asking the participant to perform a race categorization, several participants may have been confused as to what type of categorization they were being asked to make. As a result, for some categorizations, participants made a gender categorization when asked to make a race categorization (N = 137) or a race categorization when asked to make a gender categorization (N = 21). These "mistaken categorizations" were still included in analysis, just analyzed according to the categorization being made instead of the categorization being asked for.

As well, after immersion in the data, several cases were identified where participants performed both gender AND race categorization, instead of just one or the other (N = 109). Since these "dual categorizations" provided data about both gender AND race categorizations, they were analyzed twice - once for the gender categorization, and once for the race categorization.

6.6) Coding

When making gender and race categorizations, both about themselves and stimuli, participants were able to write in whatever gender or race categories they desired to use. As a result, categorizations needed to be coded before they could be quantitatively analyzed. Codes were developed deductively based on the content analysis techniques presented by Berg (2009), along the same lines as in previous research (Simpkins 2011; 2014).

6.6.1) Coding Gender Categorization

When performing gender categorization, either towards themselves or the stimuli, participants primarily utilized the categories "female" and "male." Participants applied these categories by either writing the words "female" or "male" explicitly or using terms which correspond to "female" or "male." Categorizations were coded as "Female" if they explicitly used the term "female" or another term judged to correspond to the "female" gender category, such as with the responses of "her," "lady," "feminine," etc. Categorizations were coded as "Male" if they explicitly used the term "male" or another term judged to correspond to the "male" gender category, such as with the responses of "his face looks strong," "fat little white guy," "dude," etc.

Participants also utilized non-binary gender categories when making gender categorizations. These categories were "Agender," "Androgyne," "Genderqueer," "MtF," "neuter," "Other," "Queer," "Queer / Fluid," and "Transgender." Due to the relatively small usage of these categories (N = 9), they were coded together as "Other - Queer."

Although in most cases, participants at least attempted to make a definitive gender categorization, in a small minority of cases they did not (N = 49). These non-categorizations were also coded, on the basis of the reason given for refusing to make a categorization. In some cases, participants argued that they could not perform a gender categorization for a stimulus because there was not enough information in the stimulus for them to make a definitive categorization, indicated by responses like "Can't tell," "no idea," or "unknown." These categorizations were coded as "Other - Don't Know." Finally, in some cases (N = 8), participants argued they could not perform a gender categorization because an individual's gender cannot be categorized unless that information is explicitly relayed by the individual, as gender is constructed and not "real." These non-categorizations were coded as "Other - No Gender," and excluded from further analysis.

These coding guidelines were applied consistently to both the categorizations of stimuli made by participants, and the self-categorizations made by participants and target images when describing their own gender.

6.6.2) Coding Race Categorization

When performing race categorization, participants used a variety of different racial and ethnic categories. Primarily, however, they tended toward 4 categories - "White," "Black," "Latino," and "Asian." These 4 categories were used as codes when coding race categorizations. Race categorizations were coded as "White" if they explicitly used the terms "White" or "Caucasian," or if they used another related term (ex. "whitey," "Irish," "European"). Race categorizations were coded as "Black" if they explicitly used the terms "Black," "African," or

"African American," or if they used another related term (ex. "negroid," "Black Haitian"). Race categorizations were coded as "Latino" if they explicitly used the terms "Latino" or "Hispanic," or if they used another related term (ex. "Mexican," "Non-White Hispanic," "South American"). Race categorizations were coded as "Asian" if they explicitly used the terms "Asian" or "Asian American," or if they used another related term (ex. "east asian," "Chinese").

Participants also occasionally indicated that they believed a stimulus belonged in a mixed-race category, using terms such as "mixed," "mixed black/white," and "bi-racial." Two target individuals also identified themselves as mixed race. Categorizations which used these terms indicating the use of a "Mixed Race" category were coded as "Mixed."

Participants used a few other terms as well when placing stimuli into a race category, such as "Indian," "Islamic," "South asian/india," "Middle Eastern," "Lebanese," and "Polynesian." These categories were grouped together and coded as "Other," since no individual category was used very often and since none of the target individuals identified as any of those categories. However, the use of these categories in addition to the hypothesized categories of White, Black, Latino, and Asian is of interest and discussed further below.

In a few cases, participants made categorizations which were interpreted to mean that they didn't know which race category was "correct" for a stimulus, and therefore refused to make a definitive categorization. These cases fell into two types. In the first type, participants' categorizations and/or their explanations referenced that they believed they didn't have enough information to make a definitive categorization (ex. "I don't know," "how can i tell a person's race from their lips?!?"). In the second type, participants' categorizations listed 3 or more different race categories (ex. "black/mexican/southeast asian/polynesian") or a broad

category (ex. "non-white"), often with an explanation that indicated that they didn't know what category to apply to the stimulus and were just guessing. These categorizations were coded as "Other - I Don't Know."

Interestingly, participants never argued in their race categorizations that race or ethnicity was constructed and therefore needed to speak with the target individual to learn their race identity as a small number did with gender categorization.

These coding guidelines were applied consistently to both the categorizations of stimuli made by participants, and the self-categorizations made by target images when describing their own race/ethnicity. However, after the self-categorizations made by participants when describing their own race/ethnicity were handled differently, due to the large percentage of participants who were coded as "White" (73.10 percent) versus the next largest group, participants coded as "Mixed" (7.87 percent). As a result, participant race was recoded into two codes: White (N = 268, 75.71 percent) and Non-White (N =86. 24.29 percent).

CHAPTER 7: SAMPLE

7.1) Phase I

In Phase I, target individuals (N = 28) used in the creation of stimuli were selected using a snowball sampling method through the investigator's personal contacts. Target individuals were selected for inclusion based on their self-described gender and race so as to produce as diverse a sample as possible. When asked about their sex/gender, 18 (64.29 percent) target individuals identified as female and 10 (35.71 percent) as male. When asked about their race/ethnicity, 14 (50.00 percent) identified as White or Caucasian, 5 (17.86 percent) as Black or African American, 4 (14.29 percent) as Hispanic or Latino, 3 (10.71 percent) as Asian or Asian American, and 2 (7.14 percent) identified as Mixed Race - one as "Black/Pacific Islander" and one as "White and Japanese." The age of target individuals ranged from 18 to 28 (M = 23.68, SD = 2.49) (see Table 1).

7.2) Phase II

In Phase II, participants (N = 354) were recruited primarily online through a variety of snowball sampling techniques, including: posting on Facebook, posting on the r/samplesize subreddit, posting on imgur.com, a student listserv at a large Southern college, and posting on the websites for undergraduate Introduction to Sociology courses at the University of Central Florida. Participants were also recruited by handing out pieces of paper with a link to the Phase II survey in Introduction to Sociology courses a large southern college.

Based on participants' responses when asked their sex/gender, 231 (65.25 percent) participants were coded as female, 114 (32.20 percent) as male, and 9 (2.54 percent) as

"other." Based on participants' responses when asked their race/ethnicity, 268 (75.71 percent) were coded as White or Caucasian, 27 (7.63 percent) as Black or African American, 21 (5.93 percent) as Hispanic or Latino, 6 (1.69 percent) as Asian or Asian America, 28 (7.91 percent) as Mixed Race, and 4 (1.13 percent) as "Other." The age of participants ranged from 18 to 66 (M = 27.75, SD = 10.30) (see Table 1).

Table 1: Demographic Information for Target Individuals and Participants (Percentage)

	Target Individuals	Participants
Total N	28	354
Gender		
Female	18 (.6429)	231 (.6525)
Male	10 (.3571)	114 (.3220)
Other	-----	9 (.0254)
Race		
White	14 (.5000)	268 (.7571)
Black	5 (.1786)	27 (.0763)
Latino	4 (.1429)	21 (.0593)
Asian	3 (.1071)	6 (.0169)
Mixed Race	2 (.0714)	28 (.0791)
Other	-----	4 (.0113)
Age	18 - 28 M = 23.68 SD = 2.49	18 - 66 M = 27.75 SD = 10.30

7.3) Final Dataset

Each participant made from 1 to 14 gender and/or race categorizations, with an average of 10.56 categorizations per participant (SD = 5.11). After the data preparation procedures outlined above, the final dataset contained 3743 unique categorizations - 1973 which categorized gender, 1661 which categorized race, and 109 which categorized both. A dataset of

2082 categorizations (gender plus both) was used in analyses of gender categorization, and a dataset of 1770 categorizations (race plus both) was used in analyses of race categorization (see Table 2).

In the gender categorization dataset, 1396 (67.03 percent) categorizations were performed by "Female" coded participants, 644 (30.93 percent) by "Male" coded participants, and 42 (2.02 percent) by "Other" coded participants. In the same dataset, 1522 (73.10 percent) categorizations were performed by "White" coded participants, 171 (8.21 percent) by "Black" coded participants, 147 (7.06 percent) by "Latino" coded participants, 23 (1.10 percent) by "Asian" coded participants, 198 (9.51 percent) by "Mixed" coded participants, and 21 (1.01 percent) by "Other" coded participants. Due to the small number of non-White participants, these categorizations were recoded so that 1522 (73.10 percent) were performed by "White" coded participants and 560 (26.90 percent) were performed by "Non-White" coded participants.

Also in the gender categorization dataset, categorizations were made about 1322 (63.50 percent) "Female" coded stimuli, and 760 (36.50 percent) "Male" coded stimuli. In the same dataset, categorizations were made about 1030 (49.47 percent) "White" coded stimuli, 364 (17.48 percent) "Black" coded stimuli, 292 (14.02 percent) "Latino" coded stimuli, 228 (10.95 percent) "Asian" coded stimuli, and 169 (8.07 percent) "Mixed" coded stimuli.

In the race categorization dataset, 1182 (66.78 percent) categorizations were performed by "Female" coded participants, 548 (30.96 percent) by "Male" coded participants, and 4 (2.26 percent) by "Other" coded participants. In the same dataset, 1327 (74.97 percent) categorizations were performed by "White" coded participants, 144 (8.14 percent) by "Black"

coded participants, 124 (7.01 percent) by "Latino" coded participants, 22 (1.24 percent) by "Asian" coded participants, 131 (7.40 percent) by "Mixed" coded participants, and 22 (1.24 percent) by "Other" coded participants. Due to the small number of non-White participants, these categorizations were recoded so that 1327 (74.97 percent) were performed by "White" coded participants and 443 (25.03 percent) were performed by "Non-White" coded participants.

Also in the gender categorization dataset, categorizations were made about 1141 (64.46 percent) "Female" coded stimuli, and 629 (35.54 percent) "Male" coded stimuli. In the same dataset, categorizations were made about 911 (51.47 percent) "White" coded stimuli, 297 (16.78 percent) "Black" coded stimuli, 263 (14.86 percent) "Latino" coded stimuli, 179 (10.11 percent) "Asian" coded stimuli, and 120 (6.78 percent) "Mixed" coded stimuli.

Table 2: Demographic Information for Target Individuals and Participant Categorizations Included in Final Dataset (Percentage)

		Gender Categorization		Race Categorization	
		Target Individuals	Participants	Target Individuals	Participants
Total N		2082	2082	1770	1770
Gender					
	Female	1322 (.6350)	1396 (.6703)	1141 (.6446)	1182 (.6678)
	Male	760 (.3650)	644 (.3093)	629 (.3554)	548 (.3096)
	Other	-----	42 (.0202)	-----	40 (.0226)
Race					
	White	1030 (.4947)	1522 (.7310)	911 (.5147)	1327 (.7497)
	Black	364 (.1748)	171 (.0821)	297 (.1678)	144 (.0814)
	Latino	292 (.1402)	147 (.0706)	263 (.1486)	124 (.0701)
	Asian	228 (.1095)	23 (.0110)	179 (.1011)	22 (.0124)
	Mixed Race	169 (.0807)	198 (.0951)	120 (.0678)	131 (.0740)
	Other	-----	21 (.0101)	-----	22 (.0124)
Race Recoded					
	White	-----	1522 (.7310)	-----	1327 (.7497)
	Non-White	-----	560 (.2690)	-----	443 (.2503)

CHAPTER 8: RESULTS

After the data were prepared for analysis and coded, the interactions between gender and race categorization were statistically analyzed. In total, 2082 gender categorizations and 1770 race categorizations were analyzed. ANOVA testing was used to establish the significance of the variations based on respondent gender and race, and target individual gender and race, with Fisher Least Significant Difference (LSD) post-hoc testing to examine between-factor interactions.

8.1) Gender Categorization Analysis

Analysis of gender categorization involved measuring how categorization accuracy and categorization confidence (defined above) varied relative to 4 independent variables: participant gender, participant race, target individual gender, and target individual race. The interactions between participant race and gender, and target individual race and gender were also considered. These six separate analyses are presented below.

8.1.1) Participant Gender

Categorization accuracy was above chance for participants in all three gender groups (Female: M = .81, SD = .396; Male: M = .81, SD = .391; Other: M = .74, SD = .445). Categorization confidence was above mid-point for Females (M = 4.94, SD = 1.791) and Males (M = 5.08, SD = 1.669), but slightly below the median for Others (M = 3.33, SD = 1.734) (see Table 3). Categorization accuracy did not vary significantly relative to participant gender (F = .699, p = .497); however, categorization confidence did vary significantly (F = 19.654, p < .000). Post-hoc

testing revealed that this variation in categorization confidence was between Other coded participants and Female ($p < .000$) and Male ($p < .000$) coded participants; the variation between Female and Male coded participants was not significant ($p = .104$).

8.1.2) Target Individual Gender

Categorization accuracy was above chance for both Female (M = .77, SD = .423) and Male (M = .88, SD = .331) target individuals. Similarly, categorization confidence was also above the mid-point for both Female (M = 4.73, SD = 1.754) and Male (M = 5.34, SD = 1.727) target individuals (see Table 3). Both categorization accuracy ($F = 37.099$, $p < .000$) and categorization confidence ($F = 59.140$, $p < .000$) varied significantly across target individual gender, with higher categorization accuracy and categorization confidence reported when participants categorized Male target individuals.

8.1.3) Participant Race

Categorization accuracy was above chance for both White (M = .81, SD = .394) and Non-White (M = .80, SD = .399) participants. Similarly, categorization confidence was also above the mid-point for both White (M = 4.93, SD = 1.739) and Non-White (M = 5.03, SD = 1.846) participants (see Table 3). There was no significant difference between White and Non-White participants' categorization accuracy ($F = 1.482$, $p = .224$) or categorization confidence ($F = .085$, $p = .771$).

8.1.4) Target Individual Race

Categorization accuracy was above chance for White (M = .81, SD = .390), Black (M = .76, SD = .429), Latino (M = .84, SD = .371), Asian (M = .77, SD = .421), and Mixed (M = .86, SD = .345) target individuals. Similarly, categorization confidence was also above the mid-point for White (M = 5.03, SD = 1.727), Black (M = 4.80, SD = 1.815), Latino (M = 5.11, SD =1.755), Asian (M = 4.81, SD = 1.809), and Mixed (M = 4.71, SD = 1.845) (see Table 3). Both categorization accuracy (F = 3.118, p = .014) and categorization confidence (F = 2.928, p = .020) varied significantly between target individual race groups. Post-hoc LSD testing was then conducted to analyze consistent between-group differences for target individual race; the most relevant highlights are presented here.

Categorization accuracy and categorization confidence were significantly lower for Black target individuals compared to White target individuals (respectively, p = .024 and p = .031) and Latino target individuals (respectively, p = .013 and p = .027). Categorization accuracy was also significantly lower for Black target individuals compared to Mixed target individuals (p = .004), but not for Asian target individuals (p = .681); similarly Black target individuals did not produce significantly lower categorization confidence than Asian (p = .951) or Mixed (p = .593) target individuals. There was no significant difference between White and Latino target individuals for either categorization accuracy (p = .380) or categorization confidence (p = .524). No other between-group differences were consistently significant across both categorization accuracy and categorization confidence.

Table 3: Gender Categorization - Categorization Accuracy and Categorization Confidence, by Independent Variables, by Target Individual and Participant

		Target Individuals		Participants	
		Categorization Accuracy	Categorization Confidence	Categorization Accuracy	Categorization Confidence
Gender					
	Female	.77	4.73	.81	4.94
	Male	.88	5.34	.81	5.08
	Other	-----	-----	.74	3.33
Race					
	White	.81	5.03	.81	4.93
	Black	.76	4.80	-----	-----
	Latino	.84	5.11	-----	-----
	Asian	.77	4.81	-----	-----
	Mixed Race	.86	4.71	-----	-----
	Non-White	-----	-----	.80	5.03

8.1.5) Respondent Gender and Race Interactions

Categorization accuracy and categorization confidence were also compared across respondent race and gender simultaneously - i.e., between White Females, Non-White Females, White Males, and Non-White Males. Removing categorizations made by participants coded as "Other," there were no significant differences between White Female, Non-White Female, White Male, and Non-White Male respondents for either categorization accuracy (F = .718, p = .541) or categorization confidence (F = 1.174, p = .318).

8.1.6) Target Individual Gender and Race Interactions

Categorization accuracy and categorization confidence were then compared across target individual race and gender simultaneously - i.e., between White Females, Black Females, Latino Females, Asian Females, Mixed Females, White Males, Black Males, Latino Males, Asian Males, and Mixed Males. Both categorization accuracy ($F = 7.265$, $p < .000$) and categorization confidence ($F = 10.222$, $p < .000$) varied significantly across these groupings. Post-hoc LSD testing was then conducted; the most relevant highlights are presented here (see Table 4, Table 5).

First, each race grouping was compared across gender. Categorization accuracy was significantly lower for White Females than White Males ($p <.000$), lower for Black Females than Black Makes ($p <.000$), and lower for Latino Females than Latino Males ($p <.000$), but there was no significant difference between Asian Females and Asian Males ($p = .235$) or Mixed Females and Mixed Males ($p = .151$). categorization confidence was significantly lower for White Females than White Males ($p <.000$), lower for Latino Females than Latino Males ($p <.000$), and lower for Asian Females than Asian males ($p =.002$), but there was no significant difference between Black Females and Black Males ($p = .064$) or Mixed Females and Mixed Males ($p = .638$).

Then, each gender grouping was compared across race and gender, first looking at Female groupings (i.e., White Female, Black Female, Latino Female, Asian Female, or Mixed Female groupings). Categorization accuracy for Black Female target individuals was the lowest of all groupings, significantly lower than all other Female groupings, with the exception of Asian Female target individuals ($p = .374$), while Mixed Female target individuals had a categorization

accuracy significantly higher than all other female groupings and was not significantly different from any of the Male groupings. However, there was no significant difference in categorization confidence between any of the Female groupings.

Then, analysis looked at Male groupings (i.e., White Male, Black Male, Latino Male, Asian Male, and Mixed Male groupings). Categorization accuracy for Latino Male target individuals was significantly higher than all other Male groupings, with the exception of Black Male target individuals (p = .511); categorization confidence for Latino Male target individuals was significantly higher than all other groupings, Male or Female. Asian Male target individuals had the lowest categorization accuracy of the Male groupings, significantly lower than Latino Males (p = .008) and Black Males (p = .049). Interestingly, categorization accuracy for Asian Male target individuals was also not significantly different from White Females, Latino Females, Asian Females, or Mixed Females - the only exception being Black Females (p = .040) which also had the lowest categorization accuracy over all. However, categorization confidence for Asian Male target individuals was significantly higher than all Female groupings, not significantly different from White Male (p = .623) or Black Male (p = .588) target individuals, and significantly higher than Mixed Male (p = .018) target individuals. Mixed Male target individuals produced significantly lower categorization confidence compared to White Male (p < .000), Latino Male (p < .000) and Asian Male (p = .018) target individuals, but was not significantly lower than Black Male (p = .081) target individuals.

Looking at all 10 groupings together, Latino Males had the highest categorization accuracy of any grouping, significantly higher than every grouping except Mixed Females (p = .259) and Black Males (p = .511). Latino Males also had the highest categorization confidence of

any grouping, significantly higher than all. Black Females had the lowest categorization accuracy of any grouping, significantly lower than every grouping except Asian Females ($p = .374$). Asian Females had the lowest categorization confidence of any grouping, however this difference was only significant when compared to White Males ($p < .000$), Black Males ($p = .015$), Latino Males ($p < .000$), and Asian Males ($p = .002$), groupings which had higher categorization confidence on average than all of the Female groupings.

Table 4: Gender Categorization - Mean Differences (I - J) in Pairwise Comparisons of Categorization Accuracy, by Gender and Race of Target Image

I \ J	Female, White	Female, Black	Female, Latino	Female, Asian	Female, Mixed	Male, White	Male, Black	Male, Latino	Male, Asian	Male, Mixed
Female, White	-----	.057[1]	-.014	.022	-.136[1]	-.100[1]	-.136[1]	-.204[1]	-.041	-.049
Female, Black		-----	-.071[1]	-.035	-.193[1]	-.157[1]	-.221[1]	-.262[1]	-.099[1]	-.106[1]
Female, Latino			-----	.036	-.122[1]	-.086[1]	-.149[1]	-.191[1]	-.028	-.035
Female, Asian				-----	-.158[1]	-.122[1]	-.185[1]	-.226[1]	-.064	-.071
Female, Mixed					-----	.036	-.027	-.069	.094	.087
Male, White						-----	-.063	-.105[1]	.058	.051
Male, Black							-----	-.041	.122[1]	.114
Male, Latino								-----	.163[1]	.155[1]
Male, Asian									-----	-.008
Male, Mixed										-----

[1] Mean difference is significant at $\alpha = .05$

Table 5: Gender Categorization - Mean Differences (I - J) in Pairwise Comparisons of Categorization Confidence, by Gender and Race of Target Image

I \ J	Female, White	Female, Black	Female, Latino	Female, Asian	Female, Mixed	Male, White	Male, Black	Male, Latino	Male, Asian	Male, Mixed
Female, White	-----	.061	.035	.246	.001	-.607[1]	-.356	-1.324[1]	-.505[1]	.126
Female, Black		-----	-.026	.185	-.060	-.667[1]	-.417	-1.385[1]	-.566[1]	.066
Female, Latino			-----	.210	-.035	-.642[1]	-.392	-1.359[1]	-.541[1]	.091
Female, Asian				-----	-.245	-.852[1]	-.602[1]	-1.570[1]	-.751[1]	-.119
Female, Mixed					-----	-.607[1]	-.357	-1.325[1]	-.506	.126
Male, White						-----	.250	-.718[1]	.101	.733[1]
Male, Black							-----	-.968[1]	-.149	.483
Male, Latino								-----	.819[1]	1.451[1]
Male, Asian									-----	.632[1]
Male, Mixed										-----

[1] Mean difference is significant at α = .05

8.2) Race Categorization Analysis

Analysis of race categorization involved measuring how categorization accuracy and categorization confidence (defined above) varied relative to 4 independent variables: participant gender, participant race, target individual gender, and target individual race. The

interactions between participant race and gender, and target individual race and gender were also considered. These six separate analyses are presented below.

8.2.1) Participant Gender

Categorization accuracy was above chance for participants in all three gender groups, Female (M = .68, SD = .468), Male (M = .65, SD = .477), and Other (M = .53, SD = .506). Categorization confidence were also above mid-point for Females (M = 4.77, SD = 1.686), Males (M = 4.87, SD = 1.605), and Others (M = 3.78, SD = 1.790) (see Table 6). Categorization accuracy did not vary significantly relative to participant gender (F = 2.307, p = .100); however, categorization confidence did vary significantly (F = 8.101, p < .000). Post-hoc testing revealed that this variation in categorization confidence was between Other coded participants and Female (p < .000) and Male (p < .000) coded participants; the variation between Female and Male coded participants was not significant (p = .247).

8.2.2) Target Individual Gender

Categorization accuracy was above chance for both Female (M = .65, SD = .476) and Male (M = .68, SD = .465) target individuals. Similarly, categorization confidence was also above the mid-point for both Female (M = 4.72, SD = 1.683) and Male (M = 4.88, SD = 1.643) target individuals (see Table 6). Categorization accuracy did not vary significantly between Female and Male target individuals (F = 1.523, p =.217). Categorization confidence were significantly higher for Male target individuals than Female target individuals, however the significance of this finding is weak (F = 3.859, p = .050).

8.2.3) Participant Race

Categorization accuracy was above chance for both White (M = .66, SD = .474) and Non-White (M = .68, SD = .467) participants. Similarly, categorization confidence was also above the mid-point for both White (M = 4.78, SD = 1.677) and Non-White (M = 4.77, SD = 1.650) participants (see Table 6). There was no significant difference between White and Non-White participants' categorization accuracy (F = .556, p = .456) or categorization confidence (F = .006, p = .937).

8.2.4) Target Individual Race

Categorization accuracy was above chance for White (M = .80, SD = .398), Black (M = .82, SD = .381), Latino (M = .37, SD = .483), and Asian (M = .55, SD = .499) target individuals. Categorization accuracy for Mixed target individuals was very low (M = .05, SD = .219). Categorization confidence were above the mid-point for all target individuals, whether White (M = 4.89, SD = 1.649), Black (M = 5.24, SD = 1.585), Latino (M = 4.08, SD = 1.621), Asian (M = 4.77, SD = 1.742), and Mixed (M = 4.31, SD = 1.477) (see Table 6). Both categorization accuracy (F = 141.458, p < .000) and categorization confidence (F = 21.390, p < .000) varied significantly between target individual race groups. Post-hoc LSD testing was then conducted to analyze consistent between-group differences for target individual race; the most relevant highlights are presented here.

Black target individuals had the highest categorization accuracy and categorization confidence of any group. Black target individuals had categorization accuracy significantly

higher than Latino ($p < .000$), Asian ($p < .000$) and Mixed ($p < .000$) target individuals, and categorization confidence significantly higher than White ($p = .001$), Latino ($p < .000$), Asian ($p = .002$), and Mixed ($p < .000$) target individuals. Mixed target individuals had the lowest categorization accuracy, significantly lower than White ($p < .000$), Black ($p < .000$), Latino ($p < .000$), and Asian ($p < .000$) target individuals. Latino and Mixed target individuals had the lowest categorization confidence; both had significantly lower categorization confidence than White ($p < .000$ and $p < .000$, respectively), Black ($p < .000$ and $p < .000$, respectively), and Asian ($p < .000$ and $p = .018$) target individuals, and their own categorization confidence was not significantly different ($p = .212$).

Table 6: Race Categorization - Categorization Accuracy and Categorization Confidence, by Independent Variables, by Target Individual and Participant

	Target Individuals		Participants	
	Categorization Accuracy	Categorization Confidence	Categorization Accuracy	Categorization Confidence
Gender				
Female	.65	4.72	.68	4.77
Male	.68	4.88	.65	4.87
Other	-----	-----	.53	3.78
Race				
White	.80	4.89	.66	4.78
Black	.82	5.24	-----	-----
Latino	.37	4.08	-----	-----
Asian	.55	4.77	-----	-----
Mixed Race	.05	4.31	-----	-----
Non-White	-----	-----	.68	4.77

8.2.5) Respondent Gender and Race Interactions

Categorization accuracy and categorization confidence were also compared across respondent race and gender simultaneously - i.e., between White Females, Non-White Females, White Males, and Non-White Males. Removing categorizations made by participants coded as "Other," there were no significant differences between White Female, Non-White Female, White Male, and Non-White Male respondents for either categorization accuracy (F = .452, p = .716) or categorization confidence (F = .560, p = .641).

8.2.6) Target Individual Gender and Race Interactions

Categorization accuracy and categorization confidence were then compared across target individual race and gender simultaneously - i.e., between White Females, Black Females, Latino Females, Asian Females, Mixed Females, White Males, Black Males, Latino Males, Asian Males, and Mixed Males. Both categorization accuracy (F = 66.319, p < .000) and categorization confidence (F = 10.577, p < .000) varied significantly across these groupings. Post-hoc LSD testing was then conducted; the most relevant highlights are presented here (see Table 7, Table 8).

First, each race grouping was compared across gender. Categorization accuracy was significantly lower for Latino Females than Latino Males (p =.048) and lower for Asian Females than Asian Males (p <.000), but there was no significant difference between White Females and White Males (p = .096), Black Females and Black Males (p = .975) or Mixed Females and Mixed Males (p = .964). Categorization confidence was significantly lower for Asian Females than Asian males (p =.018), but there was no significant difference between White Females and White

Males (p = .062), Black Females and Black Males (p = .688), Latino Females and Latino Males (p = .821), or Mixed Females and Mixed Males (p = .727).

Then, each gender grouping was compared across race and gender, first looking at Female groupings (i.e., White Female, Black Female, Latino Female, Asian Female, or Mixed Female groupings). Black and White Females had the highest categorization accuracy of all the Female groupings, significantly higher than Latino Female (p < .000 and p < .000, respectively), Asian Female (p < .000 and p < .000, respectively), and Mixed Female (p < .000 and p < .000, respectively) groupings. Although Black Females had slightly higher categorization accuracy ratings than White Females, this difference was not significant (p = .197). Mixed Females had the lowest categorization accuracy of all the Female groupings, significantly lower than every other grouping. Categorization confidence for Black Females was significantly higher than all other Female groupings. Latino Females had the lowest categorization confidence of the Female groupings, significantly lower than White Females (p < .000), Black Females (p < .000), and Asian Females (p = .016), but not significantly different from the categorization confidence of Mixed Females (p = .277).

Then, analysis looked at Male groupings (i.e., White Male, Black Male, Latino Male, Asian Male, and Mixed Male groupings) which appeared to be split into two groups, with White Male, Black Male, and Asian Male target individuals in one group, and Latino Male and Mixed Male target individuals in the other. White, Black, and Asian Males had similar categorization accuracy ratings and categorization confidence, with no significant differences in categorization accuracy and categorization confidence between the three. All three of these groupings were significantly higher than the remaining two groupings, Latino and Mixed Males. Although Latino

Males had significantly higher categorization accuracy ratings than Mixed Males (p = .001), there was no significant difference in the categorization confidence of Latino or Mixed Males.

Looking at all 10 groupings together, White Females, Black Females, White Males, Black Males, and Asian Males had the highest categorization accuracy and categorization confidence of the groupings, being significantly higher than all other groups and not significantly different from one another. Mixed Females and Mixed Males had the lowest categorization accuracy of all the groupings, significantly lower than all other groupings but not significantly different from one another, closely followed by Latino Females and Latino Males. Latino Females, Mixed Females, Latino Males, and Mixed Males all also had the lowest categorization confidence.

Table 7: Race Categorization - Mean Differences (I - J) in Pairwise Comparisons of Categorization Accuracy, by Gender and Race of Target Image

I \ J	Female, White	Female, Black	Female, Latino	Female, Asian	Female, Mixed	Male, White	Male, Black	Male, Latino	Male, Asian	Male, Mixed
Female, White	-----	-.042	.386[1]	.311[1]	.732[1]	-.046	-.040	.500[1]	.058	.735[1]
Female, Black		-----	.427[1]	.372[1]	.744[1]	-.004	.002	.542[1]	.100	.777[1]
Female, Latino			-----	-.055	.346[1]	-.432[1]	-.426[1]	.114[1]	-.328[1]	.350[1]
Female, Asian				-----	.401[1]	-.377[1]	-.371[1]	.169[1]	-.273[1]	.405[1]
Female, Mixed					-----	-.778[1]	-.772[1]	-.232[1]	-.674[1]	.003
Male, White						-----	.006	.546[1]	.104	.781[1]
Male, Black							-----	.540[1]	.098[1]	.775[1]
Male, Latino								-----	-.442[1]	.235[1]
Male, Asian									-----	.677[1]
Male, Mixed										-----

[1] Mean difference is significant at $\alpha = .05$

Table 8: Race Categorization - Mean Differences (I - J) in Pairwise Comparisons of Categorization Confidence, by Gender and Race of Target Image

I \ J	Female, White	Female, Black	Female, Latino	Female, Asian	Female, Mixed	Male, White	Male, Black	Male, Latino	Male, Asian	Male, Mixed
Female, White	-----	-.411[1]	.711[1]	.252	.446[1]	-.206	-.501[1]	.763[1]	-.354	.550[1]
Female, Black		-----	1.121[1]	.663[1]	.856[1]	.205	-.090	1.174[1]	.057	.960[1]
Female, Latino			-----	-.429[1]	-.265	-.917[1]	-1.212[1]	.052	-1.064[1]	-.161
Female, Asian				-----	.193	-.458[1]	-.753[1]	.511[1]	-.606[1]	.297
Female, Mixed					-----	-.651[1]	-.947[1]	.217	-.799[1]	.104
Male, White						-----	-.295	.969[1]	-.148	.755[1]
Male, Black							-----	1.264[1]	.148	1.051[1]
Male, Latino								-----	-1.117[1]	-.213
Male, Asian									-----	.903[1]
Male, Mixed										-----

[1] Mean difference is significant at $\alpha = .05$

CHAPTER 9: DISCUSSION

This thesis proposed to examine the interlocking systems of gender and race categorization by examining how individuals make gender and race categorizations on the basis of both their own gender and race category membership and the gender and race category membership of those being categorized. Four hypotheses about the nature of these systems was proposed and examined. Discussion of the findings of this research on these hypotheses is presented below, along with a general discussion of the results. Limitations of this research are also discussed.

9.1) Category Usage

Hypotheses I and II dealt with the categories used by individuals in U.S. society. Hypothesis I proposed that the gender categories of "female" and "male" will be used in gender categorization, while Hypothesis II proposed that the race categories of "White" or "Caucasian," "Black" or "African American," "Latino" or "Hispanic," and "Asian" or "Asian American" will be used in race categorization.

Hypothesis I is largely supported by these results, as not only were the categories of "female" and "male" used in respondents' categorizations of themselves and target individuals, but they were also far and away the most commonly used categories. Although several respondents identified themselves as having a non-binary gender, such as "genderqueer" or "genderfluid," only 3 (.14 percent) categorizations of target individuals used non-binary terms, an even small finding than in previous research (Simpkins 2011; 2014).

Hypothesis II is also largely supported by these results, as the categories of "White," "Black," "Latino," and "Asian" were the mostly commonly used race categories. The category of "Mixed Race" was also occasionally used, although these categorizations always also indicated which races were being "mixed" in the particular individual, such as "black/white" or "Asian and black." Three additional racial categories were also used, although not as extensively: "Middle Eastern," "Indian" or "South Asian," and "Southeast Asian." Although these categories were used less often, it should also be noted that none of the target individuals in the research categorized themselves using any of these categories, either. It is possible that these three race categories are used in U.S. society alongside the categories of "White," "Black," "Latino," and "Asian," although more research would be necessary to support this argument.

9.2) Category Construction

Participants in this research were asked to identify target individuals' "sex/gender" or "race/ethnicity," with that specific wording. These wordings were chosen for two reasons: (1) to give respondents more flexibility in choosing gender and race categories than the wording "gender" and "race"; and (2) both sex and gender and race and ethnicity are often constructed as being either one in the same or very tightly linked in U.S. society. A few respondents took advantage of this particular wording to categorize a target individual according to both sex AND gender or race AND ethnicity, as seen in the categorizations "male/male-identified" and "Black / Person of African heritage." However, these types of categorizations were the exception, not the rule.

Instead, most categorizations used only what can be considered "sex" or "race" terminology. When asked to report a target individual's "sex/gender," most participants defaulted to the terms "female" and "male" instead of the terms "woman" and "man" or "feminine" and "masculine." This seems to indicate that, for these respondents, sex (and therefore biology) is considered to be "more base" than gender (and therefore society); that by telling the researcher a target's sex, they were therefore, in effect, also telling the researcher the target's gender. Biological sex is considered so indicative of social gender that a distinction between the two does not even need to be made. This is not necessarily surprising, as sex and gender are often conflated in U.S. society, and previous research has reported similar results (Simpkins 2011).

What is interesting, however, is that this construction of sex and gender seems to be paralleled in participants' constructions of race and ethnicity. When asked to report a target individual's "race/ethnicity," most participants defaulted to the terms "White," "Black," "Latino" or "Hispanic," and "Asian", or occasionally "Caucasian," "African American," or "Negroid." Very few categorizations used a term of ethnicity at all, much less both a term of race and ethnicity (the possible exception here being "Hispanic," but this term was mostly used as a synonym for "Latino"; only 2 participants used the terms "White Hispanic" or "Black Hispanic").

The parallels between sex/gender and race/ethnicity are also echoed in the few respondents who explicitly argued that gender is a social construct and can not really be seen to exist in "just a face" or "just a pair of lips." Although most of the respondents who indicated adherence to this belief got around it by explicitly making a categorization about a target individual's "sex" instead of their "gender," one participant went so far as to refuse to make a

"sex" or "gender" categorization at all, arguing that "Gender is about identity and identity is individually derived. Without knowing the persons choice, one can not know their gender." Despite this insistence, every one of these participants - including the participant who refused to make and gender categorizations - expressed no such issue when making race categorizations.

From this, this thesis argues that, in U.S. society, sex and race are constructed as essentially parallel, both biological and inherent. At the same time, gender and ethnicity are both constructed as essentially parallel, subsumed within sex and race.

9.3) Participant Gender and Race

Hypotheses III and IV both deal with how gender and race categorization vary relative to the gender and race category membership of the individual making the categorization and the individual being categorized. Hypotheses V and VI deal with specific expected interactions between the gender and race systems.

Previous research has found that the gender and race of individuals making gender categorizations has little effect on the performance of gender categorization (Simpkins 2014). The findings presented here support this conclusion, and also support expanding this conclusion to race categorization - with one possible exception. Participants who identified as a non-binary gender were less confident when making gender and race categorizations compared to their Female or Male counterparts. However, only a relatively small number of participants identified as a non-binary gender (N = 9, 2.54 percent), and analysis also found that these participants were not significantly less accurate when making gender or race categorizations

compared to their Female or Male counterparts. These findings seem to support hypothesis III, that gender and race categorization vary little relative to the gender and race category membership of the individuals making the categorization.

9.4) Target Individual Gender and Race

Hypothesis IV predicted that gender and race categorization would vary significantly relative to the gender and race category membership of the individuals being categorized. Although gender categorization was affected by variations in both the gender and race of target individuals, variations in race categorization were much more strongly linked to the race system than the gender system. While both the gender and race systems affect both gender and race categorization, the gender of the individual being categorized appears to be less influential on the process of race categorization.

9.4.1) Gender Categorization

Participants' overall lower categorization accuracy and categorization confidence when categorizing Female target individuals is well explained by Kessler and McKenna's (1978) rule for gender categorization, "*See someone as female only when you cannot see them as male.*" However, this rule does not explain the findings of racial differences in accuracy and categorization confidence. For that, this thesis turns to the intersectional theories of gender and race proposed by Collins (2005) and others (Crawley et al. 2008; Newman 2007).

Based on intersectional theories of Black hyper-masculinity, hypothesis V predicted that Black target individuals would be more likely to be categorized as "male" than as "female."

When performing categorizations of Black Female and Black Male target individuals, participants reported significantly lower levels of categorization confidence compared to other Female and Male target individuals, respectively. However, while Black Female target individuals had the lowest categorization accuracy of any grouping, Black Male target individuals had the second highest. Although these findings may appear contradictory, they make sense when viewed in light of the idea in U.S. culture that Black individuals are more masculine than other, non-Black individuals (Collins 2005; Crawley et al. 2008). Acting on the rule put forth by Kessler and McKenna (1978), participants had to fail to see the target individual as "male" in order to see them as "female;" participants relying on the cultural idea of the "hyper-masculine Black" may have therefore found it difficult to not see a Black target individual as "male." These findings seem to support hypothesis V, that black target individuals were more likely to be categorized as "male" regardless of their actual gender identity.

In previous writings, intersectional and post-colonial theorists have argued, parallel to the idea of Black "hyper-masculinity," there exists in U.S. culture an idea of Asian "hyper-femininity." Drawing on these theories, hypothesis VI predicted that Asian target individuals would be more likely to be categorized as female than male. However, this hypothesis is not supported by these findings. Instead, nearly the opposite seems to be true - while there was no significant difference between how often Asian and White Male target individuals were categorized as "female," Asian Female target individuals were categorized as "male" significantly more often than White, Latino, or Mixed target individuals.

9.4.2) Race Categorization

While gender categorization varies more or less equally relative to the gender and race category membership of the individual being categorized, differences in race categorization are strongly linked to race category membership alone. These findings seem to indicate that individuals being categorized are split into two groups on the basis of their race category membership: a low ambiguity group, and a high ambiguity group.

The low ambiguity group is composed of White and Black target individuals. In this group, there is no significant difference in categorization accuracy or categorization confidence between Female and Male target individuals. By comparison, the high ambiguity group is composed of Latino and Asian target individuals. In this group, gender differences do produce differences in categorization accuracy and categorization confidence, but the differences are mixed - participants were significantly more accurate and confident when categorizing Asian Males versus Asian Females, but significantly more accurate when categorizing Latino Females versus Latino Males (and no significant difference in categorization confidence between Latino Females and Latino Males).

These differences may be due to the relative "brown-ness" of the specific Latino and Asian target individuals used in this study. When categorizing White and Black target individuals, participants commonly referenced skin color in their explanations as the reason for making the categorization that they did. In comparison, when categorizing Latino and Asian target individuals, participants commonly referenced skin color as contributing to their confusion and uncertainty.

9.5) Limitations

Although this thesis does much to overcome several of the limitations of past research, sampling issues still limit its findings.

Whenever research attempts to address issues of gender and race, procuring a sufficiently diverse sample is always a top priority. The sample utilized by this thesis, both in Phase I target individuals and Phase II participants, was much more diverse than the samples used in much of the previous research (see Simpkins 2011; 2014). However, the sample of target images was majority female (64.29 percent) and the sample of participants was majority White (75.71 percent White). Although all of the target images racial categories (i.e., White, Black, Latino, Asian, and Mixed Race) each contained at least 1 female and 1 male, the Black, Latino, Asian, and Mixed Race categories all contained only 1 male. The lack of diversity among participants was limiting when participants had to be recoded as "White" or "Non-White" instead of into the 5 codes used to code the target images. Although this simplifying of participant race category membership may not have affected the findings of this thesis relating to gender categorization (see Simpkins 2011; 2014), it is unknown if this simplification changed findings related to race categorization.

CHAPTER 10: CONCLUSION

The systems of gender and race in U.S. society are two of the most studied phenomena within the social sciences. Despite this, relatively little research has been conducted to date studying the process of how individuals come to be seen as members of a gender or race category - the process of categorization. This thesis expands the sociological understanding of the processes of gender and race categorization with three primary findings.

First, this thesis has identified some of the gender and race categories individuals can be members of in U.S. society. In the gender system, individuals can be seen as being members of the "Female" or "Male" categories. In the race system, individuals can be seen as being members of the "White," "Black," "Latino," "Asian," "Southeast Asian," "South Asian/Indian," "Middle Eastern," and "Mixed Race" categories. Although these findings are not necessarily revolutionary, they do support the findings of previous research identifying these categories as being of primary importance in U.S. society (Bonilla-Silva 2010; Garfinkel 1967; Kessler and McKenna 1978; Newman 2007).

Second, this thesis has found novel new parallels between the gender system and the race system, particularly between the concepts of "sex" and "race," and "gender" and "ethnicity" in the lay understanding of these concepts. Participants' usage of "sex"- and "race"-linked terms as indicative of both "sex/gender" and "race/ethnicity" can be seen as indicating the primacy of "sex" and "race" in lay understandings of the gender and race systems, and the conceptual connections between how the gender and race systems are constructed in day-to-day interactions. To the participants analyzed here, both "sex" and "race" are inherent and invariant constructs from which "gender" and "ethnicity" inevitably emerge.

Third, the findings of this thesis about the interactions between gender and race categorization, and the gender and race systems provides new sociological understanding of how categorization is shaped by these systems. In both gender and race categorization, this thesis found that the gender and race of the individual performing categorization has little or no effect on the categorization process. In gender categorization, this thesis found that male individuals are more easily and confidently categorized than female individuals, which supports Kessler and McKenna's (1978) proposed rule of gender categorization. Additionally, this thesis found that the "hyper-masculinity" of Black individuals in U.S. society affects how Black females and males are placed into gender categories, increasing the likelihood that Black females will be inaccurately categorized as male. In race categorization, this thesis found that while the gender of the individual being categorized has little to no effect on categorization, an individual's skin color has a significant effect on categorization, with more "ambiguous" skin colors producing less accurate and less confident categorizations.

Gender and race categorization are processes which undergird the entirety of their respective systems. The ability to see others as "female" or "male," as "White" or "Black," is central to how individuals in U.S. society orient their social interactions as they go about their day-to-day lives. These two processes form the foundation upon which nearly all of social interaction in U.S. society takes place. By better understanding these processes, as this thesis strives to do, sociologists can better understand how these systems of stratification shape privilege and oppression in U.S. society, and better understand how to dismantle them.

APPENDIX A: DEMOGRAPHIC SURVEY QUESTIONS

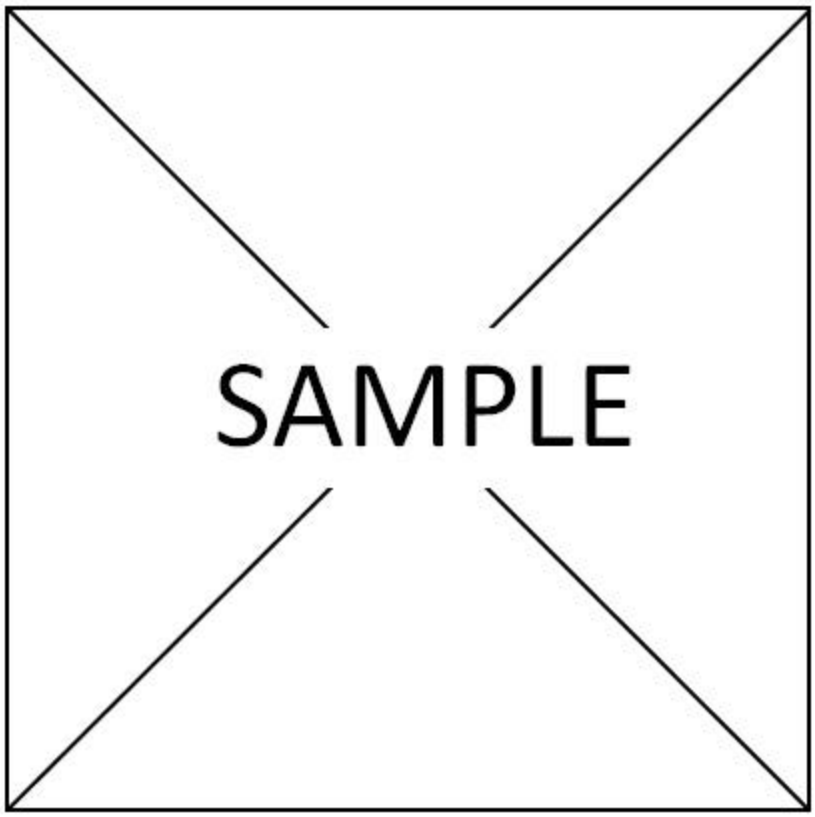
Demographic Survey Questions:

1.1) What is your age? _____ years old

1.2) What is your gender?
_____

1.3) What is your race/ethnicity?
_____

APPENDIX B: STIMULUS IMAGE AND SURVEY QUESTIONS EXAMPLE



Question 1: What is the [sex/gender OR race/ethnicity] of the person in the above image?

_____

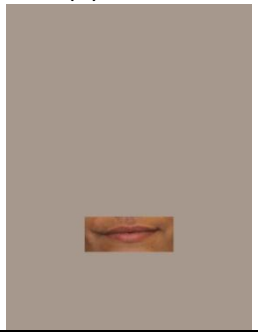
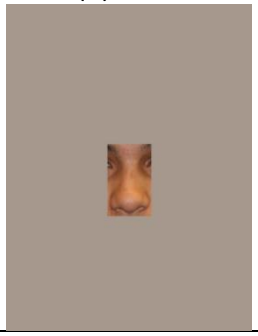
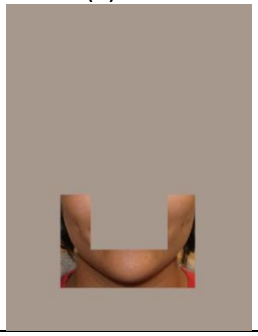
Question 2: On a scale from 1 to 7, 1 being “Not confident at all” and 7 being “Completely confident”, how confident are you that your answer to Question 1 is correct?

Not confident -----> -----> -----> -----> Completely confident
1 2 3 4 5 6 7

Question 3: Briefly explain the reason for your answers to questions 1 and 2.

_____
_____
_____
_____
_____

APPENDIX C: SAMPLE STIMULI

(A) Full Face 	(B) Mouth 
(C) Nose 	(D) Eyes 
(E) Jaw 	(F) Facial Oval 
(G) Inverted Facial Oval 	

APPENDIX D: IRB APPROVAL LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Joshua J. Simpkins**

Date: **November 06, 2012**

Dear Researcher:

On 11/6/2012, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	Creating Constructs through Categorization: Gender and Race
Investigator:	Joshua J Simpkins
IRB Number:	SBE-12-08770
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 11/06/2012 10:34:16 AM EST

IRB Coordinator

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