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Library Award for Undergraduate Research

Reflecting on the Research Process

This thesis was completed through the Sociology Department's 2022-23 Honor's Program. As evidenced by the bibliography of this project, I conducted an expansive review of sociological, psychological, and social psychological literature on racial stereotypes to better understand the historical and contemporary research that has been conducted on this topic. I relied heavily on UCSB's library database to familiarize myself with the theories, methodologies, and findings of empirical research on stereotypes and the social categories (such as race), to which they are attributed.

In particular, I became closely acquainted with the SAGE Journals, Academic Search Complete, and Annual Reviews databases. I began each search with key terms related to my research, such as "sociology; racial stereotypes; experiment; categories," and refined my searches to see results for peer-reviewed articles, scholarly journals, or books. I evaluated sources according to the publishing journal, credentials of the author(s), citation history, and relevance to my research, only including those resources that enriched my thesis.

Through this initial review process, I discovered that while sociological and social psychological research consistently demonstrates that racial stereotypes are activated when phenotypic or cultural racial cues are present, what had yet to be directly examined is whether stereotypic concepts elicit associations with racialized groups when these cues are not present. In other words, by the end of the review process I found myself asking, do we visualize race beyond what is visibly perceived?

I saw this gap in sociological literature as an opportunity to explore my interests in social categories as well as race and ethnicity and to contribute to a more contemporary understanding of the social construction race. My research explored two key questions: (1) Does exposure to racially stereotyped concepts elicit stereotype-consistent visualizations of racial group members, even when phenotypic or descriptive cues to race are not available? and (2) If participants do visualize racial group members, how do these visualizations differ between participants?

To answer these questions, I used a mixed-methods approach, which included participant interviews and the creation of an experimental website where participants were tasked with creating avatars after reading a description of a fictional movie character. Because of the multifaceted approach of my research, it was particularly important for me to understand not only how to conduct both quantitative and qualitative research, but how to integrate them as complimentary rather than contrasting methods. As such, I continued to use the library's database to review and learn from researchers who had implemented a mixed-methods approach. Throughout the research process, I sought to learn from and include sources from top scholars in each field and experts in the various methodologies I used in my research design.

In my analysis, I found that participants' exposure to a racial stereotype activated racialized thinking – even when physical or descriptive racial cues were not preset. Overall, this research contributes to the field of Sociology by suggesting that even in the absence of a racialized individual, exposure to stereotypic language can elicit images of racialized group members. Ultimately, the findings from this research suggest that race and racism are embedded in everyday language, a key implication for the sociology of race and ethnicity. Sociological understandings of race have primarily been based on the shared experience of race as purely visual; race is what we see. My research refines these understandings by suggesting that people visualize race beyond what can be visibly perceived.

I have cherished the opportunity to pursue my research interests throughout my participation in the Sociology Honors Program this past year. The program's director, Dr. Hannah Wohl, guided the design of my project, including the submission of my research as an expedited-level project to the Institutional Review Board. My advisor, Dr. Alicia Cast, supported me through each step of the research process and challenged me to engage with sociological literature at a deeper level. I received additional support from Dr. Maria Charles, who assisted me in learning Stata to analyze my quantitative data, and from Dr. Terrell Winder, who helped me create my interview guide. Finally, graduate students Lauren Bickell and Jenn David gave me endless encouragement and advice throughout the design and writing process. The completion of my thesis was truly the result of teamwork, community support, and access to literature through UCSB's' library database.

VISUALIZING RACE: HOW STEREOTYPES ACTIVATE RACIALIZED THINKING WHEN RACIAL CUES ARE NOT PRESENT

a thesis submitted by

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to

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Dedicated in loving memory to my friend and mentor

Reginald G. Daniel

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ABSTRACT

Sociological and social psychological research consistently demonstrates that racial stereotypes are activated when phenotypic or cultural racial cues are present. In the present study, I examined whether this relationship exists in a bidirectional manner. That is, I explored whether this relationship exists when these racial cues are *not* present. Using a quasi-experimental design, participants were tasked with creating avatars after reading a description of a fictional movie character. Interviews were then conducted with participants to investigate whether (and how) stereotypic content in the character descriptions influenced how participants racialized their avatars. The findings of this study suggest that stereotype activation operates in a bidirectional manner. Respondents' exposure to a racial stereotype activated racialized thinking – even when physical or descriptive cues to race were unavailable. This research contributes to sociological understanding of how race and racism are embedded in everyday language, a key implication for the sociology of race and ethnicity.

Theories of the relationship between the individual and the social have produced an understanding that humans learn to be social actors through experiences and interactions that take place in varying contexts of time and space (Blumer 1969; Schütz and Luckmann 1973; Goffman 1981; Zerubavel 1997). Such theories further articulate the role of categories – and the social meanings we give them – in influencing the complex web of social interactions we engage in every day (Blumer 1969; Sacks 1972; Goffman 1974). In the present study, I expand on this theoretical discussion by adopting and sociologically re-conceptualizing *visualization* (Kaszynski 2016) as a process of symbolic categorization that produces imaginations of social objects held by individuals. I suggest that through socialization and a constellation of social interactions we learn to become social actors and learn to think and imagine in social *and* symbolic terms. As a consequence of this learning, the symbolic meanings and social influences we are exposed to produce subjective, imaginative *visualizations* (Kaszynski 2016) of social categories. In this study, I examine racial stereotypes as a potential source of symbolic meanings that influence how we imagine and visualize racial groups members to be – even in the absence of phenotypic or descriptive racial cues.

Existing research on stereotypes demonstrates that individuals' knowledge of stereotypical information about racial groups can lead them to develop unconscious biases that, in turn, influence how they think about, see, and behave toward racialized others. This extensive scholarship on stereotypes and implicit racial bias can largely be organized into two broad areas: (1) an examination of the content and general level of consensus of stereotypes (Karlins, Coffman, and Walters 1969; Dovidio and Gaertner 1986; Devine and Elliot 1995), as well as their automatic or controlled contributions to cognitive processes of person perception (Dovidio, Evans, and Tyler 1986; Devine 1989; Greenwald, McGhee, and Schwartz 1998); and (2) the effects of stereotypical

thinking on individuals' evaluation and judgment of racialized others (Dovidio and Gaertner 2000; Quillian and Pager 2001; Blair, Judd, Sadler, and Jenkins 2002; Maddox and Gray 2002).

The culmination of these lines of research has produced a significant understanding of the relationship between stereotypes and racial categories such that exposure to a stereotyped group member (e.g., Black Americans) brings to mind stereotypic concepts (e.g., criminal) associated with that racial category. However, only a small number of studies have examined whether racial groups activate stereotypic concepts in a bidirectional manner (Eberhardt, Dasgupta, and Banaszynski 2004; Freeman, Penner, Saperstein, Schuetz, and Ambaday 2011; Obasogie 2014; Kaszynski 2016; Garcia and Abascal 2016). Indeed, few studies have asked whether exposure to stereotypic concepts (e.g., criminal) bring to mind images of racial group members (e.g., Black Americans) associated with those concepts. In other words, we know that when a person is identified as a member of a racial group, certain assumptions are made about likely characteristics and qualities of that person, such as heroic or dangerous. What has yet to be directly examined is whether these qualities and characteristics are associated with racial categories such that racial group members are imagined without even seeing a person.

In an effort to contribute to this body of research and sociological understanding of symbolic racial meaning-making more generally, I focus on two main research questions. First, does exposure to racially stereotyped concepts (in the form of hypothetical vignette characters) elicit stereotype-consistent visualizations of racial group members, even when phenotypic or descriptive racial cues are not available? Second, if participants do visualize racial group members, how do these visualizations differ between participants?

To investigate these questions, I used a novel quasi-experimental method in which I provided participants with a vignette describing a fictional character and then tasked them with

creating a digital avatar to represent their imagined character. I then conducted brief interviews with participants to investigate whether (and how) participants felt that the stereotypic content influenced the choices they made in producing their avatar images. This mixed-methodological approach allows for a more nuanced understanding of whether stereotypic concepts in the vignettes led to the generation of racialized images in the minds of my participants The follow up interviews with participants further shed light on how stereotypic concepts may influence individual visualizations of race by exploring a) whether race came to mind when participants read the character descriptions and b) what participants believed influenced their visualizations of racial group members.

I hypothesized that racially stereotypic concepts would elicit visualizations of racial group members such that participants would imagine White characters when primed with White stereotypes and Black characters when primed with Black stereotypes. In considering the interpretive, subjective nature of social experience and socialization, I further anticipated that participants' identity groups (e.g., race) would influence the race of the character that they imagined. In other words, I predicted consistency between participant's racial categorization of their avatars according to the social groups to which the participants themselves belonged.

This study proceeds as follows. First, I establish the theoretical framework for, and conceptualization of racial visualizations as imaginative constructs shaped by sociocultural and sociohistorical contexts. I then broadly examine the scholarly discussion on racial categorization, racial meaning-making, and race as a symbolic category. Here, I suggest that racial stereotypes are a type of symbolic meaning that influence how we imagine racial group members to be – even when group members are not physically present. Next, I review the methods and procedures used by researchers who have examined stereotypes to situate this study's empirical contributions to the

literature on racial stereotypes. Following this discussion, I present the methods, procedures, and results of this study. The findings of this study suggest that stereotype activation operates in a bidirectional manner. That is, when participants were exposed to racially stereotypic concepts, it activated racialized thinking – even when physical or descriptive racial cues were not available. The results of my study indicate that the persistence of racial stereotyping may, in part, be attributed to its tacit reinforcement within language and social interaction. Furthermore, my results suggest that race and racism are embedded in everyday language, a key implication for the sociology of race and ethnicity.

LITERATURE REVIEW

Visualization of Social Categories

> We think not only as individuals and as human beings, but as social beings, products of particular social environments that affect, as well as constrain the way we cognitively interact with the world. (Zerubavel 1997:6)

Visualization, as conceptualized by Kaszynski (2016), is the process by which the meaning of and relationships between things are shaped, recreated, and pieced together by events in the world. In this study, I adopt Kaszynski's concept of visualization and expand on its conceptualization sociologically as an *intersubjective* (Schütz and Embree 2011) imaginative process that is rooted in and shaped by sociocultural and sociohistorical contexts. The theoretical framework for this conceptualization draws from the principles of symbolic interactionism and Alfred Schütz's *intersubjectivity* and *stock of knowledge at hand*, which recognize the relationship between the individual and the social as reciprocal and co-constitutive; as social actors, we both influence and are influenced by the social context in which we live.

Sociological understandings of social intercourse as a continuous series of interactions between perceivers, symbols, and meaning is most notably articulated in the principles of symbolic

interactionism. The symbolic interactionist perspective assumes that (1) people act toward things, including each other, on the basis of the meanings they have for them; (2) these meanings are derived through social interaction with others; and (3) these meanings are managed and transformed through an interpretive process that people use to make sense of and handle the objects that constitute their social worlds (Blumer 1969:2). In considering the influence of spatial and temporal contexts on the creation and perpetuation of categories and symbolic meaning, Alfred Schütz proposes that our existence in society is that of a learning process, one in which we experience the world as shared rather than private. Schütz suggests that this shared experience, which he calls "intersubjectivity," shapes our awareness of objects, ideas, symbols, and representations. As such, intersubjectivity is at the genesis of the "life-world," the temporal and spatial structures in which shared experiences are the basis for all social relations (Schütz and Luckmann 1973). Furthermore, in a given space and time, we come to learn the typifications, or categories, that comprise the social world to which we belong.

Indeed, from infancy, we experience the outer world not as a collection of singular or unique objects, but as representations of categories such as "plants," "animals," "people." Schütz identifies these common-sense arrangements of fundamental knowledge as our "stock of knowledge at hand" (Schütz and Embree 2011), which accounts for the understanding, organization, and implementation of day-to-day meanings that are transmitted through language and instituted in action. It is through intersubjectivity – our existence in a given temporal or spatial context – that our stock of knowledge is refined, and meaning is "socially derived, handed down and accepted… through others as a frame of reference, interpretation and orientation" (Schütz 1962: 10). In other words, the collective social imagination of any given spatial or temporal context

shapes how we visualize the social categories that comprise the basis of our knowledge and interactions.

Because of the interdependent relationship between the social and the individual, "knowledge is from the outset socialized" (Schütz and Embree 2011:152). Indeed, the knowledge (in the broadest sense) that any of us has is a result of complex socialization (Zaner 1961). When caregivers and educators recount stories, we tacitly learn which descriptions and details are important; we learn which figures in history are noteworthy and which events are worth remembering; we learn to separate men from women and to categorize the "good" from the "bad." As such, tacit socialization teaches us what is important and unimportant, relevant and irrelevant; socialization teaches us how to think (Blumer 1969; Zerubavel 1997).

Social Categories. Social categorization informs our understanding of innumerable situations and contexts and is one of the most deeply rooted and normative patterns of social order. In the social sciences, the term *category* is representative of templated information that perceivers have about objects, persons, situations, and organizations. This information underlies and shapes individual beliefs and knowledge, perceptions, and expectations about social actors and institutions. Even when we are unaware of them, categories can subtly (sometimes obviously) influence our judgments of and subsequent behavior toward social objects (Dovidio et al. 1986; Blair et al. 2002; Maddox and Gray 2002) by activating expectancies consistent with categorical representations. We interact with and experience the world through our individual senses as well as socially shared meanings that we define and internalize as actors situated in a particular context.

The categorization of objects is a fundamentally cognitive, yet an innately social process that creates structure and order (Brubaker, Loveman, and Stamatov 2004) in a complex world of stimuli and experience (Schütz 1973). As George Lakoff put it, "Without the ability to categorize,

we could not function at all, either in the physical world or in our social and intellectual lives" (1987:6). These shared categories are unmistakably social such that they produce definitions of the situation (Goffman 1959) that are "embodied in persons, encoded in myths, memories, narratives, and discourses, and embedded in institutions and organizational routines" (Brubaker et al. 2004:38). Thus, from a sociological standpoint, the shared meanings of social categories are not only learned through socialization but are employed by individuals as they perceive the world and interact in a given cultural and historical context. Consequently, categories establish conventional rules of mental associations and meaning-making that affect the ways in which individuals visualize and interact with others.

Race as a Symbolic Social Category

> How is it possible that although I cannot live in your seeing of things, cannot feel your love and hatred, cannot have an immediate and direct perception of your mental life as it is for you– how is it possible that I can nevertheless share your thoughts, feelings, and attitudes? (Zaner 1961:76)

Social constructionist views on race and racial categorization assert that social meanings of race originate in the perception of visible racial differences. These meanings are ascribed onto bodies and perpetuated as socially shared understandings of visible difference; thus, it is the self-evident nature of race as visually salient which produces meanings that are attached to bodies and rearticulated as normative, natural, or inherent group traits (Daniel 2002; Obasogie 2014). This essentialist, paradigmatic view of race as visually obvious is rooted in our unfailing trust in sight to inform our understanding of experience, articulated and reflected in many common sayings: 'I see what you mean'; 'seeing is believing'; 'I call it like I see it'; 'a picture is worth a thousand words'; 'beauty is in the eye of the beholder.' The taken-for-granted view that racial categorization is the result of a passive visual input process (Friedman 2011) suggests that the optical and neurological process of racial perception is void of cognitive interpretation. The historical formation of racial categories suggests, however, that who we "see" as Black or White is neither

fixed nor objective; rather, meanings of race have been constructed and reconstructed as sociocultural and sociohistorical processes that continuously contest, reimagine, and transform racial symbols of categorization (Daniel 2006; Omi and Winant 2016).

When what we visually perceive is equated with knowing, race as a social fact (Durkheim, Lukes, and Halls 2014) is sustained under the false pretense that it is a biological reality (Rawls and Duck 2022). As such, maintaining a perspective of racial categorization as something that is merely visual constrains our understanding that how we "see" race cannot be isolated from our collective social imagination; it cannot be distinguished from shifting symbolic categories or the historical contexts in which they are created. In other words, the categorization and social construction of race is not merely a result of the visible perception of observable phenotypes; it is also a process by which symbolic meanings are active in shaping and maintaining visualizations of difference.

The relationship between what can be seen with the eyes (vision) and what is imagined (visualized) relies on an intersubjective process of symbolic categorization that influences racial perceptions at both the physiological (visual) and ideological (visualized) levels. Research by Osagie Obasogie (2014) demonstrates this relationship and suggests it is the result of constitutive social processes that produce our very ability to see (vision) and imagine (visualize) race. Drawing on interviews with people blind since birth, Obasogie finds that blind people learn about and experience race through social practices, experiences, and interactions that produce an ability to "see," or visualize, race. In other words, these findings demonstrate that an individual's capacity to have a visual understanding of race is not dependent on their ability to see, but on their ability to learn as social actors.

Extending this insight, I suggest that the social practice of symbolic categorization

establishes a visualization of race beyond what is visibly perceived. Through intersubjective socialization, learned and shared meanings of racial categories produce imaginative visualizations of racial group members that tacitly affect the way we see and interact with the world. These categories become a "way of seeing," not as "things in the world, but perspectives on the world, not ontological but epistemological realities" (Brubaker et al. 2004:43-45). As Kaszynski (2016) notes, the relationship between vision and visualization has significant implications in regard to the academic study of, and individual engagement with, race, as what is seen (or not seen) as visible racial "truth" obscures a deeper understanding of how race is symbolically constructed in the collective social imagination and refined as individual visualizations of symbolic racial categories.

Stereotypes – Symbolic Meanings of Racial Categories

> When they approach me they see only my surroundings, themselves, or figments of their imagination—indeed, everything and anything except me…That invisibility to which I refer occurs because of a peculiar disposition of the eyes of those with whom I come in contact. A matter of the construction of their inner eyes, those eyes with which they look through their physical eyes upon reality. (Ellison 1952:3)

Like social categories, stereotypes are mental conceptions that contain a combination of "prototypical features, concrete exemplars, expectations and theory-like causal knowledge" (Brubaker et al. 2004:39). Stereotypes were first characterized by Lippmann (1922) as "pictures in our heads" that are reliant on a "repertory of fixed impressions" (p. 6). Although contemporary conceptualizations of stereotypes define them as "a category that singles out an individual as sharing assumed characteristics on the basis of group membership" (Zanden 1966:80-81), Lippman's original depiction of stereotypes suggests that race can be visualized as an imaginative cognitive construct. While it is widely recognized that stereotypes are cognitive representations that contain shorthand information about individuals based on their social group membership(s) (Maddox and Gray 2002; Brubaker et al. 2004), stereotyping is not synonymous with

categorization; rather, it is an idea that accompanies the category (Lippman 1922).

Stereotyping goes beyond mere categorical classification to integrate templated beliefs and expectations about the personality, characteristics, and behaviors of social group members (Zanden 1966). Stereotypes, in part, link a target group (e.g., racial group) to an ascribed set of descriptive characteristics (e.g., ambitious, lazy) via a collection of associations (Gaertner and McLaughlin 1983). As such, stereotypes represent typifications (Schütz 1962), the meanings of which are drawn from an inventory of learned and socially oriented information. Consequently, rather than perceiving the constellation of unique attributes, traits, and tendencies of an individual, a perceiver's evaluation is instead driven by categorical templates and imaginative stereotypical thinking.

Stereotype Research. Early research on stereotypes utilized direct measures to examine their content (adjectives/descriptions) and consensus (the degree of agreement about the attributes) through the use of an adjective checklist procedure (Katz and Braly 1933; Gilbert and Hixon 1951; Karlins, Coffman, and Walters 1969). The results of this early body of research were mixed, with findings that showed discrepancies between the adjectives associated with stereotypes and their general consensus. Several researchers have replicated (Dovidio and Gaertner 1986) or revised (Gaertner and McLaughlin 1983; Devine and Elliot 1995; Maddox and Gray 2002) these early studies, but, yet again, had varied findings. Given this, a primary criticism of the original and replicated studies is that the changes in the content of consensus around racial stereotypes are influenced by participants' reactions to direct measures of racial beliefs (Fazio, Jackson, Dunton, and Williams 1995); the reduced social acceptance of explicitly (negative) racial beliefs may increase the likelihood that respondents experience social desirability pressures (Schaeffer and Presser 2003; Bonilla-Silva 2017).

Attempting to address bias associated with direct measures, researchers have used indirect measures to examine the implicit nature of stereotype activation (Devine 1989; Macrae and Bodenhausen 2001; Freeman et al. 2011). These studies aimed to explore/develop unobtrusive procedures that measure or uncover implicit bias to examine the relative contributions of automatic (i.e., unconscious) and controlled (i.e., conscious) processing of racial bias, unaltered by social desirability bias (Fazio, Jackson, Dunton, and Williams 1995). The use of unobtrusive priming techniques to obscure or conceal the associative relationships between experimental stimuli has been shown to reduce participant concerns about social desirability when responding to measures of implicit racial bias (Bargh and Pietromonaco 1982; Gilbert and Hixon 1991; Dovidio and Gaertner 2000; Blair et al. 2002).

For example, in Devine (1989)'s study, participants viewed terms flashed on a screen – too quickly for participants to consciously register – and then evaluated ambiguous stereotype-relevant behavior in a vignette, such as the aggressiveness of a fictional individual. Devine (1989) found that the participants primed with words related to African American stereotypes described the figure's actions as more aggressive than the participants who were not primed with words associated with African Americans. Devine's study shows that preconscious presentation (i.e., priming) of subjects with racial stimuli is sufficient to activate stereotypic content associations for almost all subjects.

The second most common research technique used to examine implicit racial bias and stereotypes is the latency method. Latency measures of implicit bias detect implicit associations between items based on participant response times (Greenwald, McGhee, and Schwartz 1998; Kawakami, Dion, and Dovidio 1998; Dovidio, Kawakami, and Gaertner 2002). Among current

latency measures, the Implicit Association Test (IAT) developed by Greenwald et al. (1998) is the most commonly used. The IAT measures the strength of associations between concepts and evaluations or stereotypes by using a computer to measure the latency (the length of time) participants take to sort and then associate valanced words to names or images. To measure implicit racial bias, subjects proceed through a series of tasks where they are asked to categorize whether each of a number of pairings (e.g., "Ebony-Flower") matched the concepts of "Black-Pleasant," "Black-Unpleasant," "White-Pleasant," or "White-Unpleasant." Greenwald et al. (1998) found that "Subjects were faster at correctly identifying the pair of concepts matching the task concepts when 'Black' was matched with 'Unpleasant' and 'White' with 'Pleasant'" (p.316).

Since the development of the racial IAT, researchers have replicated or adapted (Gaertner and McLaughlin 1983; Dovidio, Kawakami, and Gaertner 2002) the IAT to examine bias and prejudice. Despite widespread use of the IAT, there remains controversy about what is being measured (Brendl, Markman, and Messner 2001). Devine (2001) suggests that, rather than a measure of implicit attitudes toward racial groups, the IAT captures individual knowledge of socially known stereotypes. These concerns may be due to participants' heightened awareness of the IAT's purpose to examine racial beliefs; as such, I adapted a latency method similar to the IAT developed by Greenwald et al. (1998) and used it to indirectly examine the relationship between stereotypic concepts and racial categorization.

While the culmination of this research on stereotypes has generally suggested that stereotypic thinking is activated by phenotypic or culturally specific racial cues (Devine 1989; Blair et al. 2002; Brubaker et al. 2004), more contemporary research proposes that the racial categorization of a person (i.e., as Black or White) may not simply reflect perceived physical features and objective traits. This body of research suggests that the perception of visible physical traits is influenced by the social stereotypes held by perceivers (Kawakami and Dovidio 2001;

Kawakami, Dion, and Dovidio 1998; Eberhardt et al. 2004; Freeman et al. 2011; Obasogie 2014; Garcia and Abascal 2016). In other words, stereotypes actively influence how we see and evaluate racial "others." Recently, research has begun to examine whether stereotypic concepts and cues influence perceptions of race. This body of research suggests that racial stereotypes actively influence *how* race is seen.

For example, Eberhardt et al. (2003) used images of Black, White, and ambiguously-raced faces to examine the influence of racial labels and individual differences on the perception of racially-ambiguous faces. The results of their study showed that participants' perceptions of physical characteristics were influenced by racial categories and social beliefs. Research by Freeman et al. (2011) used computer-simulated faces on a 13-point White-Black morpha continua to demonstrate that cues to social status (e.g., attire) changed participants' perceptions of a face's race. In their study, Eberhardt et al. (2004) used crime word primes to demonstrate that the activation of the crime concept led police officer participants to attend to Black male faces (over White male faces). Moreover, they found that priming officers with crime words increased the likelihood that they misremembered a Black face as more stereotypically Black than it actually was. These findings support Obasogie (2014)'s assertion that "the salience of race is produced rather than merely observed" and that seeing race is not merely based on objective perception but is instead a sociological phenomenon in which visual understandings of race are produced by social context and experiences (p.2).

CONTRIBUTIONS

These studies have opened the discussion for examining how stereotypic concepts influence an individual's perception, evaluation, and judgment of racialized others. What remains to be investigated is the link between stereotypes and how racial group members are imagined. This raises an important question that has yet to be examined: Do we visualize race beyond what is visibly perceived? That is, to what extent do stereotypes influence how individuals imagine racial groups, even

when physical or descriptive racial cues are not present? To fill this gap in the research on racial stereotypes, the primary aims of this study were (a) to examine the visibility of racialized bodies when no racial body is present and (b) to better understand if (and how) exposure to racial stereotypes produces a subjective visualization of racial group members.

This research empirically contributes to the field of Sociology by demonstrating that stereotypes may indeed operate in a bidirectional manner, as suggested by Eberhardt et al. (2004); that, even in the absence of a racialized individual, exposure to stereotypic language can elicit images of racialized group members.

More broadly, this study contributes to the growing body of literature on the micro-level interactions that (re)produce the meanings associated with racialized groups by exploring how individuals associate stereotypic concepts with racial categories. As social actors, we are largely influenced by personal experience and the social, as well as historical and cultural context in which we live. I suggest that as a consequence of the social interactions that take place in these contexts, individuals are tacitly socialized into thinking in symbolic racial terms.

DATA AND METHODS

A combination of methods and procedures were used to examine the relationship between racial group stereotypes and participants' imagined visualizations of racial group members in order to examine whether stereotype activation operates in a bidirectional manner. Specifically, I investigate whether (and how) individuals think in racial terms, regardless of whether phenotypic or cultural racial cues are visible. The study was designed to explore the following questions:

(1) *Does exposure to racially stereotyped concepts (in the form of hypothetical vignette characters) elicit stereotype-consistent visualizations of racial group members, even when phenotypic or descriptive cues to race are not available?*

(2) *If participants do visualize racial group members, how do these visualizations differ between participants?*

The study consisted of two phases. In the first phase, I conducted a quasi-experiment in which I unconsciously primed participants using racial stereotype stimuli and subsequently tasked participants with creating images of racialized bodies using an avatar creator. In the second phase of the study, I interviewed participants to understand how social concepts that are stereotypically associated with racial groups influenced participants' construction of racialized avatars. In other words, I explored why participants racialized their avatar images in the ways that they did. This study was approved by the Institutional Review Board; as such, all names and identifying characteristics have been changed to protect participant confidentiality.

Participants

I recruited participants from introductory sociology courses at a West Coast liberal arts community college. Forty undergraduate students participated in the study for extra credit in the class. The participants largely identified as women (83%), and as White (45%), Non-white (30%), or White and some other race (25%) (see Table 1.1 below for full participant demographics).

Table 1.1 Demographic Characteristics of Participants

Characteristic	Number (%)	*Characteristic*	Number (%)
Mean Age	22 (-)		
Gender		Level of Education	
Woman	33 (82.5)	Some College	36 (90.0)
Man	6 (15.0)	AA	3 (7.5)
Gender Non-Binary	1 (2.5)	BA	1 (2.5)
Racial Identity*		Annual Income	
White	18 (45.0)	$10,000 or less	24 (60.0)
White-Other	10 (25.0)	Greater than $10,000	16 (40.0)
Nonwhite	12 (30.0)		
Sexual Identity		Political Orientation	
Heterosexual	31 (77.5)	Democrat	26 (65.0)
Gay	3 (7.5)	Independent	2 (5.0)
Bisexual	5 (12.5)	Republican	3 (7.5)
Pansexual	1 (2.5)	None	9 (22.5)

Note: N=40. See page 32 for breakdown of participant's racial identities.*

Procedure

The study took place remotely on zoom. First, I reviewed the consent form verbally with participants. During the consent process, participants were asked to give consent to audio-video recording of their participation. They were informed that their responses would be kept confidential and were told that their participation was voluntary. After the consent process was completed, participants were asked to fill out an online survey to collect demographic information such as age, gender, racial and/or ethnic identity, and religious affiliation. Participants were then asked a series of short pre-assessment interview questions and were then instructed to complete the decision tasks portion of the study (Phase 1). Next, participants were asked a final series of interview questions (Phase 2). Finally, participants were debriefed and given an opportunity to withdraw their participant data.

Participants were told that the purpose of the research was to "understand how people make decisions based on the amount of information available to them." To maintain the study's fictional purpose throughout the research process, I included pre-experiment interview questions about participants' habits when decision-making (Appendix D) [1]. I did not analyze participant responses

[1] The aim of this study's design was to use an unobtrusive procedure to avoid making race or ethnicity salient to participants (Gilbert and Hixon 1991; Dovidio and Gaertner 2000; Maddox and Gray 2002; Blair et al. 2002) in order to circumvent participant reactivity and social desirability concerns. Several researchers have investigated stereotypes through measures of concealment in which their participants were unaware of the true purpose of the study. For example, to examine the effects of cognitive distraction on the activation and application of stereotypes, Gilbert and Hixon (1991) informed participants that they were evaluating the hypothesis that "people are capable of performing two tasks simultaneously as long as the two tasks involve different cerebral hemispheres" (p.510). Dovidio and Gaertner (2000) utilized the aversive-racism framework to test the hypothesis that while surface-level (overt) racial prejudice may decline significantly over time, the subtle manifestations of bias may persist. To examine the existence of bias, their participants were informed that during the course of the experiment, they would be asked questions about "the desirability and feasibility of a peer counseling program and the qualities of personnel" (Dovidio and Gaertner 2000; p.316). In yet another study, Blair et al. (2002) found that faces with more "Afrocentric" features were "given higher probability ratings in person descriptions that contained stereotypically African American attributes" and suggested that these results were "particularly compelling" due to the fact that "At no time during the judgment process was ethnicity made salient to participants, and their own reports of their judgment strategies confirmed that they were unaware of this factor" (p.17).

to these questions because they functioned to increase the salience of the fictional research purpose only.

Phase 1: Stereotype Assessment Decision Tasks

To complete the assessment, participants were directed to a website where they were informed that they would be completing a series of decision tasks. After reading a 95-word description of the task instructions scenario, participants read a series of movie role character vignettes and then used an avatar creator to design each character as they imagined them to be, based on the description in the vignette. Participants completed a total of ten decision tasks. The instructions read as follows:

> Your movie script has been chosen for production! For the casting director and their team to move forward with posting the casting calls and scheduling auditions, you need to provide them with your vision of the characters in your script. Your task is to review the summary details of each character in your script and construct your vision of the characters using the avatar creator. Production cannot move forward without this, so you must complete this task quickly. You will have one minute to review each movie role description and create the character.

Character vignettes. To elicit visualizations of racial group members, I created a series of movie role character vignettes whose status, traits, and characteristics were based on socially shared constructs (i.e., stereotypes). I based my selection of stereotypes on the expansive body of research that has examined the adjective content of racial stereotypes and their general level of consensus (Dovidio et al. 1986; Devine and Elliot 1995; Maddox and Gray 2002; Kurdi, Mann, Charlesworth, and Banaji 2019; Russell-Brown 2018; Lane, Williams, Hunt, and Paulk 2020). Vignettes have been widely used by race and ethnicity scholars to investigate racial prejudice, bias, and attitudes (Dovidio and Gaertner 2000; Duck 2009; Schram, Fording, Soss, and Houser 2009; Hughey, Rees, Goss, Rosino and Lesse 2017). In designing the decision task vignettes, which included the status, traits, and/or qualities of a character as racial primes, conveyed through

stereotypic language (e.g., wealthy, unintelligent, nurturing), I omitted any references or cues to physical descriptions of the characters.

To reduce the potential effects and influence of social desirability bias, I primed participants with stereotypic content cues embedded in the movie role character vignettes. All participants were assigned an identical series of vignettes presented in the same order. The vignettes were systematically ordered such that the stereotypic language of each character's description was random (i.e., vignettes were not presented in a patterned order). The gender and racial makeup of the characters were: (2) White man; (2) White woman; (2) Black man; (2) Black woman; and (2) ambiguous (non-racialized, non-gendered) characters. Each pair of vignettes were presented as one brief and one extended description. The brief vignettes contained one racialized stereotype and were not gendered via stereotypic language. The extended vignettes were gendered and contained two racialized stereotypes. For example:

Vignette I.	integrated White men stereotypes and described a character who is ambitious and wealthy. The masculine element in this vignette references the character's strength.
Vignette II.	integrated a White man stereotype and described a heroic character.
Vignette III.	integrated Black women stereotypes and described a character that is aggressive and loud. The feminine element in this vignette references the character as nurturing.
Vignette IV.	integrated a Black woman stereotype and described a character that is on welfare.

Creating avatars. I employed an avatar creator program to examine the mental images of characters produced by the stereotype primes in the character vignettes. As detailed in the instructions scenario above, participants were instructed to use the avatar creator to produce an image of their imagined character. The gender options in the avatar creator were man and woman and skin tone varied along a five-point White-Black morph continua.

Racial Category Measures

To determine the racial categorization of the skin tones in the Black-White morph continua, I surveyed 122 undergraduates at a West coast liberal arts university. The survey contained 5 questions with the instructions, "Please review the images below and then choose the racial category that you believe best fits each image." Survey participants were given the choice between White, Ambiguous, and Black racial categories. As seen in Table 2.1 below, the majority of respondents categorized skin tones 1 and 2 as White (94% and 81%, respectively), skin tone 3 as ambiguous (93%), and skin tones 4 and 5 as Black (63% and 96%, respectively). For the purposes of this study, skin tones 1 and 2 were coded as White; skin tones 3,4, and 5 were coded as Non-white.

Table 2.1 Skin Tone Scale Survey Percentages.

Racial Classification	Skin Tone 1	Skin Tone 2	Skin Tone 3	Skin Tone 4	Skin Tone 5
White	94.3	81.9	4.9	0.0	0.0
Ambiguous	5.7	18.1	93.4	36.9	4.1
Black	0.0	0.0	1.6	63.1	95.9

Note: N = 122.

The unit of analysis in this study is "task-person," defined as one avatar-creation task completed by one person. The total sample size is 320, with 40 persons completing eight tasks each. Because each person contributed eight observations to the sample, the observations are not statistically independent, as required for statistical significance tests. The chi-square values can provide a first exploratory measure of racialized association within and across persons.

Phase 2: Participant Interviews

Upon completion of the decision tasks assessment, I conducted brief interviews with participants to better understand how racial stereotypes influenced their visualizations of the vignette characters. Each interview was approximately 13-18 minutes long and was audio-video

recorded and transcribed. All participants were asked questions such as, “What did you find difficult or challenging about these tasks, if anything?,” “What information did you rely on most to create your vision of what the character looks like?,” and “What do you believe influenced the way you created your avatars?” Following this series of interview questions, participants were debriefed about the fictional purpose of the study and then asked a final interview question that was dependent upon their responses to the questions above (see Appendix E for the interview guide).

Because subject participation was completed in one session, the interviews were conducted on Zoom. For participants’ privacy, only myself and the interview participants were present. The majority of participants seemed eager to take part in sociological research – several mentioned that this was their first time participating in research and that they were excited to do so. I prioritized engaging with participants through commonalities, as such, my identity as a White, heterosexual female sociology student aligned with the race, sexuality, and educational attainment of the majority of the sample. This positionality facilitated comfort with my presence as a “researcher,” which allowed participants to feel relaxed and even give space for the occasional exchanging of jokes and laughter.

Transcript Data

The transcripts contained dialogue between myself and the interviewees throughout the experimental process and during the interviews. Only passages coded as post-experiment interviews were analyzed. I utilized an “in vivo” coding method (Saldaña 2016) to establish a consistent comparison between the participant’s responses. Once I identified the common patterns within each transcript using an emergent coding procedure, three transcripts were coded using a

pilot frame (Schreier 2012) to check for coding consistency and to adjust my coding frame as needed. Once finalized, the coding categories were then applied to all data in the sample.

FINDINGS

CHAPTER 1: PICTURES IN OUR HEADS

Stereotype Consensus

Does exposure to racially stereotyped concepts (in the form of hypothetical vignette characters) elicit stereotype-consistent visualizations of racial group members, even when phenotypic or descriptive cues to race are not available? To examine this research question, I began by examining the number of times the race of a participants' avatar was congruent with the racial stereotype of the decision task, measured from 0-8. Two of the 10 decision tasks were not analyzed as they were mock (ambiguous) tasks only (vignettes IX and X, Appendix C). As shown in Table 3.1 below, in 50% of the tasks, over half (67%) of participants racialized their avatars in stereotype-congruent ways (N = 40). That is, more than half of participants adhered to at least half of the stereotypes presented. Notably, no participants had either zero or eight stereotype-congruent avatars.

Table 3.1 Frequency of Participants' Avatars Congruent with Stereotype Expectations.

Number of Stereotype-Congruent Avatars	Number of Participants	Percent
1	4	10.0
2	2	5.0
3	7	17.5
4	12	30.0
5	7	17.5
6	6	15.0
7	2	5.0
Total	40	100.0

N = 40.

Following this initial analysis, I used Stata statistical software to conduct a crosstabulation Chi-square analysis to determine whether there is a relationship between stereotypes and the racial categories of participants' avatars. The dependent variable was the racial categorization of participants' avatars as White or non-white, measured along a 5-point Black-White morph continua.

The results of the Chi-square analysis are statistically significant, $\alpha = 0.05$, $\boldsymbol{x}^2$ (7, 320) = 33.22, $p < 0.001$. Consistent with my prediction, for five out of eight stereotypes, participants racialized White characters when primed with White stereotypes and Nonwhite characters when primed with Black stereotypes. Table 4.1 presents the frequency and percentage of racial categorization by stereotype for seven of the eight stereotypes embedded within the character vignettes. The stereotype "Pure" is excluded from this table as the analysis showed that participants categorized the "Pure" stereotype as White/Non-white equally (50%).

When reviewing this data, two patterns emerge. First, these findings support previous research examining the content of contemporary stereotypes. Literature on stereotypes has consistently shown participants' associations of Blackness with crime. In the present study, participants were most likely to categorize the Criminal stereotype (66%) as Non-white. These findings align with previous research by Devine (1989) which found that for both low- and high-prejudiced individuals, as measured by the Modern Racism Scale (McConahay, Hardee, and Batts 1981), Black people were associated with criminal-like behaviors. Additionally, research by Eberhardt et al. (2004) found that respondents demonstrated strong associations between Black Americans and crime across five studies. While the present research focused on White and Non-white racialization, 32% of the 25 participants who racialized the Criminal stereotype as Non-white chose skin tones 4 or 5.

Additionally, the Heroic, Kind/Trustworthy, and Ambitious/Wealthy stereotypes were more likely to be categorized as White rather than Non-white (61%; 51%; and 66%, respectively). These findings support numerous studies which have found that respondents associate these positively valenced stereotypes with whiteness (Dovidio et al. 1986; Devine and Elliot 1995; Maddox and Gray 2002; Russell-Brown 2018; Lane et al. 2020). While the consensus about these stereotypes has been debated in recent decades, my findings suggest that the content of White racial stereotypes has remained steady since Katz and Braly's original stereotype research in the 1930s.

TABLE 4.1 Frequency and Percentage Crosstabulation of Racial Categorization by Stereotype.

	STEREOTYPE						
Racial Category of Avatar	*Heroic*	*Aggressive, Loud*	*Kind, Trustworthy*	*Unintelligent*	*Single Parent on Welfare*	*Ambitious, Wealthy*	*Criminal*
White	23	27	20	30	10	27	13
(Percentage)	(60.5)	(71.1)	(51.3)	(75.0)	(26.3)	(67.5)	(34.2)
Non-white	15	11	19	10	28	13	25
(Percentage)	(39.5)	(28.9)	(48.7)	(25.0)	(73.7)	(32.5)	(65.8)
Total	38	38	39	40	38	40	38
(Percentage)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Note: N = 271; Pearson's chi-square = 33.22 (7), $p < 0.001$, Cramér's V = 0.3289.

Second, participants were more likely to categorize the Aggressive (71%) and Unintelligent (75%) stereotype as White. These findings deviate from previous research (Karlins et al. 1969; Dovidio and Gaertner 1986; Devine and Elliot 1995) which found that unintelligent and aggressive stereotypes were associated with non-white racial groups. However, these findings are, partially, supported by Gaertner and McLaughlin (1983), who found that the characteristics "stupid" was selected as a Black stereotypic trait by only 7% of participants. My findings suggest that the consensus for these adjectives as Black stereotypic traits remains debatable.

Notably, the stereotype with the largest percentage of participant consensus (as either White or Non-white) was the Single Parent on Welfare stereotype; 74% of participants racialized this character as Non-white. Because welfare recipients are disproportionately women, and women on welfare are disproportionately Black, Collins (1990) identifies this as a "controlling image" for Black women. The large proportion of participants who categorized the Single Parent on Welfare stereotype as a Non-white woman (61%; see Appendix F) provides support for Collins' argument.

Imagining Race

The majority of respondents (65%) explicitly reported that they felt they were stereotyping as they read the character vignettes and constructed their avatars. This indicates that participants were influenced by the stereotypic concepts associated with a particular racial group, even in the absence of visible racial cues. Furthermore, this suggests that participants were sensitized to the idea that they were racially stereotyping, even when it wasn't explicitly mentioned. Three participants provide concrete examples of how racial groups came to mind when exposed to stereotypic language cues. Grace, a White 19-year-old woman, poignantly explained how automatic the association between stereotypes and race was for her:

> I almost felt like I was going by race, like, automatically. We racial profile all the time, which is horrible, but it's what you know. A lot of times people do and I almost felt myself like whoa, why am I going to pick this color versus this? You know, so I kind of caught myself profiling based off the description.

As Grace admits here, stereotypic concepts influenced how she chose to racialize her avatars. Grace's assertion that racial profiling is "what you know" suggests that she relied on a stock of knowledge about particular racial groups which was influenced by the social context in which she lives ("we"). Later in the interview, when asked to expand on how race played a role in the creation of her avatars, she stated, "I was stereotyping way too much." Four out of eight of Grace's avatars were stereotype-congruent.

Similarly, when asked what was difficult about these tasks, Jay, a 20-year-old White man, described the automatic role that stereotypic concepts played in creating his avatars: "I was just going with the first thing that came to mind. I felt kind of guilty or felt bad, because for the crime prompt in my head, I thought of someone with darker skin." The vast majority of participants (74%) chose to frame racial categories in this way (i.e., "darker skin" or "lighter skin"), rather than speaking about race directly and verbally assigning a racial category (e.g., Black or White). For Maya, a 20-year-old multiracial woman, racializing her avatar was also challenging. Her response illustrates an awareness that the skin tone she chose for the Single Parent on Welfare avatar aligned with stereotype expectations:

> Picking the color of the skin [was challenging]… For the mother struggling, to me, that sounded like somebody who has experienced a lot of inequality and that's generally someone with a darker skin tone, so I wanted to make it accurate, but I also didn't want to make everything like such a stereotype.

Interestingly, when reflecting on this particular task, Maya refers to the "mother" who is struggling, however, all vignettes were constructed with they/them pronouns. While an expanded analysis of the role of gender stereotypes is beyond the scope of this study, Maya's response highlights the ways in which gender categorization of participants' avatars were also influenced by gendered stereotypes (see Appendix F for gender categorization analysis by stereotype).

From these examples, it is clear that the stereotypic language elicited mental associations with particular racial groups, despite the absence of physical descriptions in the vignettes. These findings are supported by numerous studies that have demonstrated the relationship between stereotypes and racial groups. What is notable, however, is the consideration of how stereotypes operated in a bidirectional manner during these tasks; for these participants, the stereotypic concepts activated thoughts of categorical racial groups.

The second question I asked participants was whether there was a character that was particularly challenging to create. However, rather than detailing a specific role, most participants (64%) described how "images" or "pictures" came to mind. This suggests that when participants were exposed to stereotypic concepts, it triggered images of categorical racial groups. For example:

> I did have an image come to mind, but not necessarily a specific person. – Lucy
>
> Well, the image pops first into my mind, and then I just kind of went off of that. – Sophie
>
> I kind of had some kind of general blurry image in my mind, like, as I was reading. – Alex
>
> I would struggle to picture a detailed person in my mind, like what hairstyle or eyebrows, because when I pictured them, they were just a blank face. – Hannah

These interviews reveal that, as proposed by Lippman (1922) and Eberhardt et al. (2004), participants visualized stereotypes as pictures in their heads, regardless of physical or descriptive racial cues. In other words, participants visualized race beyond what they could visibly perceive. Furthermore, when asked how quickly an image came to mind, 70% of participants (P) responded that it happened reflexively, i.e., that this visualization happened "in seconds"; "instantaneously"; "really quickly"; "immediately."

CHAPTER 2: PERSPECTIVES ON THE WORLD

Social Group Membership

The findings discussed in Chapter 1 suggest that exposure to racially stereotyped concepts (in the form of hypothetical vignette characters) elicits stereotype-consistent visualizations of racial group members, even when phenotypic or descriptive racial cues are not present. The second research question addressed in this study asks how these visualizations differ between participants. To examine potential differences, I conducted additional Chi-square analyses and controlled for two independent variables: participant's racial identities and the source of influence – as believed

by participants – for what came to mind when reading the character vignettes. Data on participant's racial group membership was obtained in the demographic information collection survey (Table 1.1); the variable, source of influence, was extracted from interviews with participants.

Research has shown that membership in one racial group influences individuals' expectations about other racial groups (Berger and Murray 2006). These "expectation states" (Melamed, Munn, Barry, Montgomery, and Okuwobi 2019) influence evaluations about the competence, abilities, and worth of members of racial outgroups. To examine the association between racial categories (Black/White) and relative status (high/low), Melamed et al. (2019) adapted the Implicit Association Test (IAT) developed by Greenwald et al. (1998) as a novel measure of implicit status beliefs. Through a series of studies, they found that "black participants and people who identify as racial 'others' implicitly associate black individuals with higher status than white individuals, and all other groups (whites, Hispanics, and Asians) implicitly associate white individuals with higher status than black individuals" (p.1014). Considering these findings, I conducted a Chi-square analysis controlling for participants' race to examine whether there was a relationship between participants' racial identity and the racial categorization of their avatars.

In this analysis, I coded participants' race as White (N=18), White-Other (N=10), or Non-white (N=12). I classified participants who selected "White" as their only racial identity as White and classified participants who selected "White" as their first racial identity, as well as one or more other racial identities, as White-Other. All other participants were classified as Non-white. The results of my analysis reveal that participants' racial identities do moderate the racial categorization of stereotypes as White or Non-white, but for White and White-Other participants only ($\boldsymbol{x}^2 = 21.40$, $df = 7$, $p < 0.05$; $\boldsymbol{x}^2 = 16.31$, $df = 7$, $p < 0.05$, respectively)[2]. For Non-white participants, the Chi-

[2] Four cells (25.0%) have expected count less than 5. The minimum expected count is 4.50. Researchers have noted that this raises the possibility of committing a Type I error and conclude that there is a significant

square analysis is not statistically significant, $\alpha = .05$, $\boldsymbol{x}^2$ (7,12) = 12.93, $p > 0.05$. As shown in Table 5.1 below, controlling for participants' racial identity reveals distinct differences in how participants racialized their avatars.

White participants were most likely to racialize the Heroic (65%), Kind/Trustworthy (56%), and Ambitious/Wealthy (67%) stereotypes as White.[3] These findings align with previous research on implicit bias by Greenwald et al. (1998), which found that for White college-student participants, there was a "considerably stronger association of White (than of Black) with positive evaluation" (p.1474). In the present research, I find similar associations between positively and negatively valenced stereotypes and the racial categorization of participants' avatars. Like Gaertner and McLaughlin (1983), I find that participants more frequently racialized their positively valenced characters as White avatars than the rate at which they racialized their negatively valenced characters as White Non-white or avatars. These findings are consistent with literature on intergroup bias (Brewer 1979), which suggests that positive intergroup bias may be stronger than negative outgroup bias.

difference when there isn't one. Given the debate about the seriousness of this issue, in combination with this study's exploratory nature, I encourage future researchers to replicate this study with a larger sample.

[3] The racialization of White-Other participants' avatars aligned with White participants' racialization of their avatars with at least a 50% majority in each of the stereotype tasks.

TABLE 5.1 Percentage Crosstabulation of Racial Categorization by Stereotype, Controlled for Participant's Race.

Racial Category of Avatar *(Participant Race)*	STEREOTYPE							
	Pure	*Heroic*	*Aggressive, Loud*	*Kind, Trustworthy*	*Unintelligent*	*Single Parent on Welfare*	*Ambitious, Wealthy*	*Criminal*
White								
(White)	50.0	64.7	88.2	55.6	77.8	35.3	66.7	25.0
(White-Other)	55.6	80.0	66.7	50.0	50.0	10.0	70.0	20.0
(Non-white)	45.5	36.4	50.0	45.4	91.7	27.3	66.7	58.33
Non-white								
(White)	50.0	35.3	11.8	44.4	22.2	64.7	33.3	75.0
(White-Other)	44.4	20.0	33.3	50.0	50.0	90.0	30.0	80.0
(Non-white)	54.5	63.6	50.0	54.5	8.3	72.7	33.3	41.7

Note: White participants: $N = 18$; Pearson's Chi-square = 21.40, d$f = 7$, $p < 0.05$, Cramér's V = 0.3952.
White-Other participants: $N = 10$; Pearson's Chi-square = 16.31, d$f = 7$, $p < 0.05$, Cramér's V = 0.4869.
Non-white participants: $N = 12$; Pearson's Chi-square = 12.93, d$f = 7$, $p > 0.05$, Cramér's V = 0.3798.

Comparatively, for Non-white participants, there were several stereotypes in which the racialization of their avatars deviated from both White and White-Other participants. As seen in Table 5.1, Non-white participants were more likely to racialize the Pure, Heroic, and Kind/Trustworthy stereotypes as Non-white. Interestingly, the majority of Non-white participants (58%) racialized the Criminal stereotype as White. Again, I find that, consistent with intergroup bias, Non-white participants racialized positively valenced stereotypes as Non-white more frequently than they racialized negatively valenced stereotypes as White.

Intersubjective Experiences

In the follow-up interviews, many participants (60%) expressed that they felt it was their personal experiences which influenced how they imagined the characters in the vignettes. Jay, a White 20-year-old man, said: "[I relied on] my own knowledge. I wasn't googling what Google thought or what other people thought." Some participants said that they imagined friends or family members or felt that they were influenced by their surroundings in some way. Others, still, provided a more nuanced explanation, like 19-year-old Daniela who identified as Hispanic:

> So, with the criminal character, for example, I know a lot of people might say, oh, the darker-skinned people, they might commit more crimes, but I grew up around that, so I know it's not only Black people who are like that. From my personal experience, it's not just in the skin color, even though that's the stereotype.

In this quote, Daniela explains the influence that her lived experiences had on her visualizations of race. For Daniela, who used skin tone 2 to racialize her avatar for the Criminal stereotype, the concept "crime" brought to mind the White racial category. Despite knowledge of the "criminal black man" stereotype, Daniela's association between race and crime was not stereotypical, it was subjective. Gabby, a 19-year-old Hispanic woman, voiced a similar association between race and crime:

> When it mentioned someone who gets in trouble with the police, I know in the movies there are a lot of racial things, it's mainly people of color involved in that. I know there are a bunch of stereotypes about gang violence and drugs and, I don't know, in my head I didn't picture a brown person, I pictured a White man.

While Gabby expressed knowing that there are stereotypes in which "people of color" are involved with the police, her visualization did not elicit stereotypic concept associations; she, instead, pictured a White man and chose skin tone 1 for the Criminal stereotype.

Alexis, an 18-year-old woman who identified as White and Hispanic, detailed the ways in which her environment influenced her visualizations of race:

> I kind of stayed in the lighter colors because that's who I'm surrounded by and especially living here in Santa Barbara, we don't really see as many nationalities. The nationalities are mostly White and Hispanic.

After being debriefed, when asked to elaborate on how race came up for her and whether she believed race played a role in the creation of her avatars, Alexis described her visualization of the Criminal stereotype, for which she chose skin tone 3 for her avatar:

> Well, I was definitely influenced – especially when it came to, like, skin color. It was the one with the cop. I feel like I was able to picture someone in my head, so it was like, okay, let's create this.

Other participants (25%) reported that the stereotype adjectives primarily influenced their visualizations. For Brie, who chose skin tone 3 for her avatar in the Criminal stereotype task, the mental association between "criminal" and "dark skin" was particularly salient:

> [I relied on] the adjectives describing who they were or what they were doing. So, for example, the person who was being caught by the cops, it's easy, like, the man would have a darker skin tone.

After debriefing, I revisited this response with Brie and asked her to elaborate on how race came up for her when creating her avatars. She responded:

> It was kind of making me feel like a bad person. Like, for a specific example, the criminal one… my brain just went to a Black man. And that was like, oh, that's not me. I'm not racist, but it made me think of stereotypes.

Here, Brie expressed what was echoed by several participants when discussing the Criminal stereotype: I'm not racist, but I thought of a Black man. This assertion has been similarly identified by Bonilla-Silva and Forman (2000) who suggest that, among other phrases and language, "I'm not a racist, but…," may represent a new form of more covert discrimination, a new "racetalk," that is used when discussing race in public settings (p.52).

These participants demonstrate how individuals' different life experiences influenced their interpretation of different stereotypes. For Brie and Alexis, who are White and White-Hispanic, their visualizations reflect an association between darker-skinned individuals and crime. However, for Daniela and Gabby, who are Hispanic, the Criminal stereotype elicited visualizations of White men.

To further investigate these responses and to examine whether they are reflected as an influence on the relationship between visualizations of racial categories and the racial categorization of participants' avatars, I conducted a final Chi-square analysis. To control for this influence, I created the variable "Influence." I retained the qualitative coding of responses as

personal experience = 1, movies/TV = 2, and stereotype adjectives = 3. Given the percentages of these responses by participants (60%, 15%, and 25%, respectively), in conjunction with considerations of symbolic interactionist theory, I recoded this variable as a Y/N, 1/0 dummy variable (1=1; 2 3=0) to create the variable "Personal Experience?" The results for this analysis are significant for participants who expressed that they were influenced by personal experience (α = 0.05, $\boldsymbol{x}^2$ (7, 183) = 24.38, p < 0.05). For participants who expressed that they felt influenced by either Movies/TV or the adjectives in the vignettes, the Chi-square analysis is not statistically significant (α = 0.05, $\boldsymbol{x}^2$ (7,124) = 13.95, p > 0.05).

As shown in Table 6.1 below, with the exception of the "Pure" stereotype, the racialization of avatars among participants who believed that personal experiences (e.g., family, friends, demography of their community, etc.) influenced their visualizations is nearly congruent with the racial categorization by participants as a whole (see Table 4.1). Participants who stated that personal experience influenced the creation of their avatars were more likely to categorize the Heroic (61%), Aggressive/Loud (68%), Kind/Trustworthy (54%), Unintelligent (83%), and Ambitious/Wealthy (79%) stereotypes as White. Comparatively, both the Single Parent on Welfare and Criminal stereotypes were most likely (68%) to be racialized as Nonwhite.

Table 6.1 Percentage Crosstabulation of Racial Categorization by Stereotype, Controlled for Type of Influence.

	STEREOTYPE							
Racial Category *(Influence)*	*Pure*	*Heroic*	*Aggressive, Loud*	*Kind, Trustworthy*	*Unintelligent*	*Single Parent on Welfare*	*Ambitious, Wealthy*	*Criminal*
White *(Personal Experience)*	59.1	60.9	68.2	54.2	83.3	31.8	79.2	31.8
(Movies/Tv, Adjectives)	35.7	60.0	75.0	46.7	62.5	18.8	50.0	37.5
Non-white *(Personal Experience)*	40.9	39.1	31.8	45.8	16.7	68.2	20.8	68.2
(Movies/Tv, Adjectives)	64.3	40.0	25.0	53.3	37.5	81.3	50.0	62.5

Note: Personal Experience: $N = 24$; Pearson's Chi-square = 24.38, d$f = 7$, $p > 0.001$, Cramér's V = 0.3650.
Movies/TV, Adjectives: $N = 16$; Pearson's Chi-square = 13.95, d$f = 7$, $p < 0.05$, Cramér's V = 0.3354.

DISCUSSION

For decades, social scientists have stressed the socially constructed nature of race as obvious and straightforward; race is what you see. However, researchers (Kawakami and Dovidio 2001; Eberhardt et al. 2004; Freeman et al. 2011; Obasogie 2014) have begun to question this linear assumption and, instead, propose that race is way of seeing, both literally *and* figuratively (Garcia and Abascal 2016). I have suggested throughout this research that racial perceptions are conditioned by social context, and, in part, through the symbolic meanings of concepts that are associated with racialized groups. As a result, individuals come to an understanding of race beyond what can be visibly perceived. My findings indicate that exposure to a concept associated with a racialized group was sufficient to elicit mental images of racial group members among participants. In addition to demonstrating that concepts bring to mind the racialized groups with which those concepts are associated, but interviews with participants confirmed that participants visualized specific racial groups when constructing their avatars (Chapter 1). Although

exploratory, this relationship appears to be associated with racial group membership and lived experience (Chapter 2).

As predicted, the majority of participants racialized their avatars in stereotype-consistent ways. For five out of eight stereotype tasks, when presented with White stereotypic concepts (Heroic, Kind/Trustworthy, and Ambitious/Wealthy), the majority of participants racialized their avatars as White; when presented with Black stereotypic concepts (Single Parent on Welfare and Criminal), most participants racialized their avatars as Non-white. My results are consistent with recent research findings on stereotypic associations between White racialized groups and positively valenced stereotypes (Russell-Brown 2018; Lane et al. 2020; Kurdi et al. 2019; Maddox and Gray 2002) and Non-white racialized groups and negatively valenced stereotypes (Dovidio et al. 1986; Maddox and Gray 2002; Devine and Elliot 1995;).

In particular, my findings provide support for other experimental research which has found strong associations between crime and Non-white individuals when using indirect measures. For example, using a videogame simulation, Correll, Judd, and Wittenbrink (2002) found that, irrespective of individual differences in racial attitudes, participants shot armed Black targets more quickly than they shot armed White targets. Similarly, across five studies, Eberhardt et al. (2004) demonstrated bidirectional associations between social groups and concepts such that exposure to racialized group members brought to mind stereotypic concepts with which those groups are associated and exposure to stereotypic concepts brought to mind the racialized groups with which those concepts are associated.

Consistent with these findings by Eberhardt et al. (2004), my results suggest that stereotype activation operates in a bidirectional manner; stereotypes are not simply activated by racial categorization processes, they are also imbued with racial meanings that produce racialized images

in the absence of physical or descriptive racial cues. Furthermore, participants' visualizations and mental associations between race and stereotypic concepts were believed by participants to be shaped by their intersubjective positionality as social actors. For the participants in this study, the symbolic meanings of stereotypic concepts produced subjective visualizations of racial categories.

CONCLUSION

My findings suggest that we do think in symbolic racial terms with significant consensus; we are tacitly socialized into thinking racially, regardless of whether racial cues are present. Furthermore, when thinking in racial terms, we visualize specific racial groups according to the stereotypic concepts we are exposed to, a consequence of socially shared meanings and social patterns of racialization.

These findings have important implications for how sociologists approach the social construction of race, as sociological understandings of race have primarily been based on the shared experience of race as purely visual; race is what we see. Consequently, sociologists have largely neglected to examine the tacit ways (Rawls and Duck 2022) in which we learn to know and see racial difference through the symbolic meanings associated with racial categories. My research refines these understandings by suggesting that people visualize race beyond what can be visibly perceived.

The results of my study indicate that the persistence of racial stereotyping may, in part, be attributed to its tacit reinforcement within language and social interaction, creating, as Eberhardt et al. (2004) suggests, a "way of seeing" (p.43). More broadly, my findings bring into question the notion that visible racial differences are a precursor to racial categorization; this research suggest that race and racism are embedded in everyday language, a key implication for the sociology of race and ethnicity.

Considering this, I suggest that to understand how race is consequential at the macro-level, we must engage with race more deeply at the micro-level. Sociologists must continue to expand the depth and breadth of race and ethnicity research and investigate the intersubjective actions and interactions through which individuals come to understand and engage with the social world; importantly, the learned and unlearned forms of racial meaning-making that are shaped by categories and their associated concepts.

The limitations of this study lie in the small convenience sample used to examine these research questions; however, the participant population in this study – comprised of sociology students at a liberal arts college – should be less likely to adhere to stereotype norms, suggesting that these patterns are likely to be found in a larger sample more representative of the U.S. population. As such, the findings of this study are likely to provide conservative estimates. I propose that future research should replicate this study with a larger sample that is more representative of the U.S. population and should aim to examine more closely how everyday language tacitly (re)produces racism.

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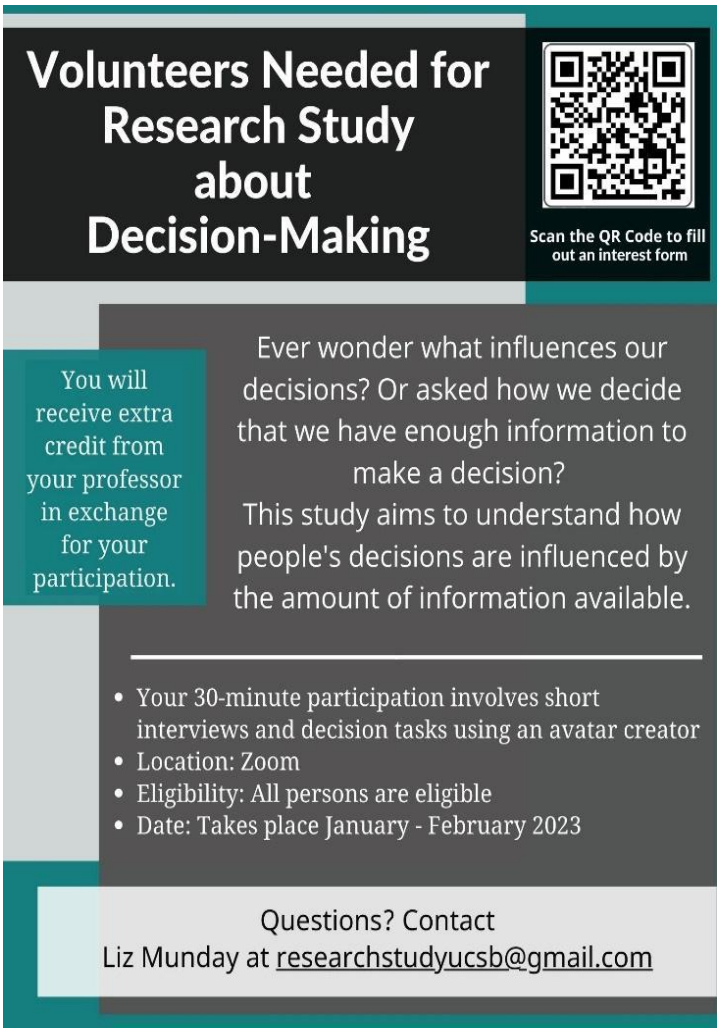
APPENDIX A. RECRUITMENT FLYER



APPENDIX B. CONSENT TO PARTICIPATE

Purpose:
You are being asked to participate in a research study being conducted by Liz Munday at the University of California, Santa Barbara. Participation is voluntary. The purpose of this research study is to better understand how people make decisions based on the amount of information they have.

Procedures:
If you agree to be in the study, you will fill out a short survey, complete a series of decision tasks, and will be interviewed by Liz. The study will take place on Zoom. The study will be audio and video recorded if you agree to have it audio and video recorded. If you do not wish to have your participation audio and video recorded then you can still participate in the study. Additionally, the experiment portion of this study requires that you share your computer screen while you complete a series of tasks. You will be asked to fully expand the experiment website and to have no other tabs open during this time. Once the consent process has been completed, I will ask you to turn your zoom camera off so that we can begin the study.

To start, Liz will ask you to fill out a short survey online. In the survey you will be asked questions about your personal characteristics such as age, gender, and religion. This will take approximately 2-3 minutes to complete. You will then be asked 4 pre-study interview questions about how you make decisions. This will take approximately 5 minutes to complete.

After the pre-study interview, you will be given a link to the experiment website at which point you will be asked to share your screen. On this site, you will be tasked with completing a series of 10 short decision tasks in which you will have one minute to read a very short description of a character in a movie and create an avatar of the character as you imagine them to be. This will take approximately 8-10 minutes to complete.

Finally, you will be asked 6 post-study interview questions. In the post-study interview Liz will ask you questions about how you made decisions during the decision tasks. Following the post-study interview, you will be debriefed and asked one final question. The study will take approximately 30 minutes to complete from start to finish and participation is entirely voluntary. You may refuse to participate or withdraw at any time without penalty. You also have the right to decline or skip any questions you prefer not to answer.

Risks:
There are no anticipated risks for you for your participation in this study. If participating in this study causes you to feel concerns beyond your normal daily living, please feel free to contact Liz at any time for assistance.

Benefits:
You may learn more about yourself and have a better understanding of how you make decisions. The research project might provide a better understanding of how people make decisions based on

the amount of information they have. There is no direct benefit to you anticipated from your participation in this study.

Confidentiality:
Confidentially will be strictly maintained. The audio recording will be saved on a password protected, secure server. You will be assigned an ID number and this number will replace your name on all study documents. Any research findings will be presented only in the form of statistical summaries and anonymous quotes that use fake names. No one but Liz will have access to your interview and your interview audio recording will be deleted once the data analysis is complete.

Absolute confidentiality cannot be guaranteed since research documents are not protected from subpoenas. Additionally, third party platforms used to record the interview may have access to the recordings under their privacy policy.

Transcript and audio and video recording data from this study will NOT be shared with other researchers. Transcripts may be used in future research studies conducted by Liz and will be kept indefinitely and permanently stored in a password-protected file. Transcripts will be de-identified through the use of a participant ID. Audio and video recordings will be deleted following data analysis.

Compensation:
You will be awarded extra credit from your professor for your participation in the study. A non-research alternative to earn extra credit has been offered by your professor.

Right to Refuse or Withdraw:
If you choose not to complete any part of the study, you will still receive extra credit.

Contact Information:
If there is anything about the study or your participation that is unclear or if you have questions or wish to report a research-related problem, you may contact Liz by phone at 805-259-9837 or by email at emmunday@ucsb.edu. You may also contact Hannah Wohl at hwohl@ucsb.edu or Alicia Cast at acast@ucsb.edu.

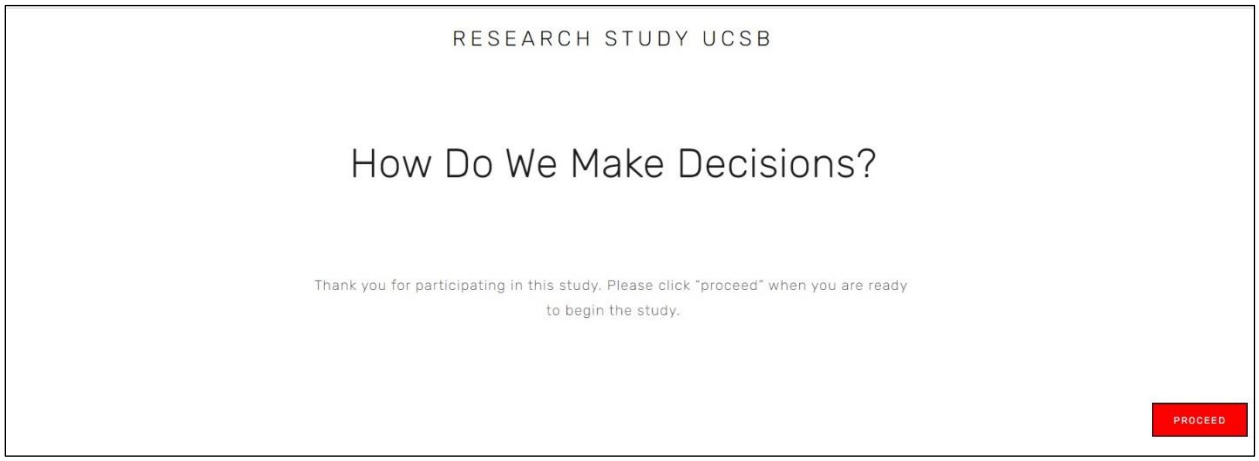
For questions about your rights as a research participant, you may contact the University Committee on Activities Involving Human Subjects at UC Santa Barbara at 805-893-3807 or hsc@research.ucsb.edu. Or write to the University of California, Human Subjects Committee, Office of Research, Santa Barbara, CA 93106-2050. You have been emailed a copy of this consent document to keep for your records.

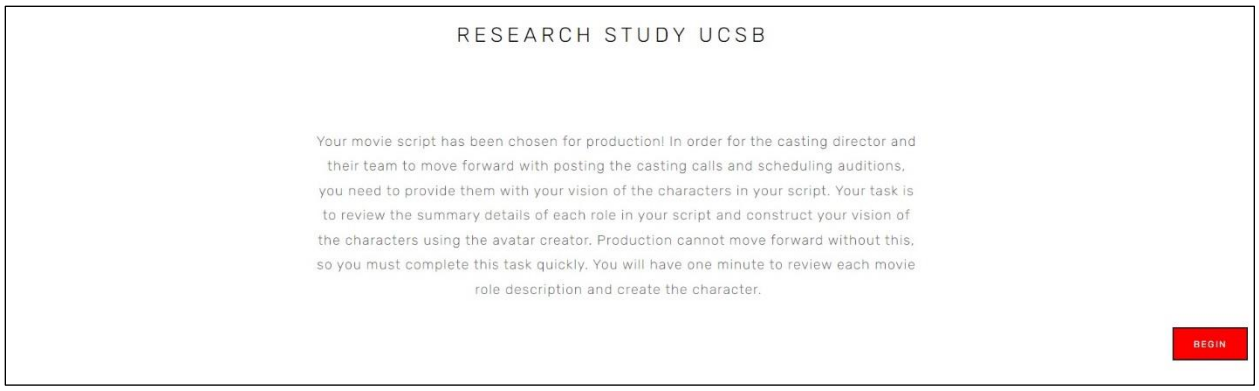
APPENDIX C. CHARACTER VIGNETTES

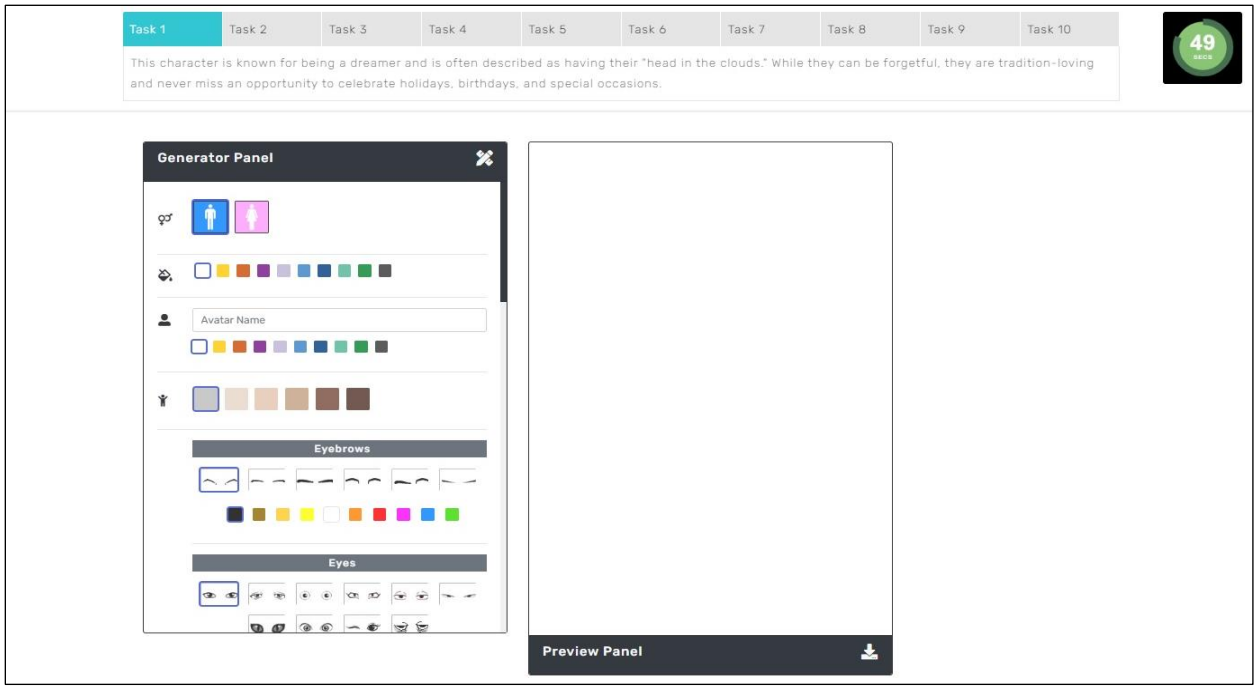
Vignette I.	This character is known for being an ambitious and driven go-getter. They believe in working hard to get what you want. Their strength is matched only by their wealth. (White man)
Vignette II.	Whenever someone is in need, this character steps in as the hero who saves the day. (White man)
Vignette III.	This character is known for their caring nature, which is reflected in the deep love they have for their children and in their desire to help those who need it most. This character's closest friends describe them as "kind" and "trustworthy." (White woman)
Vignette IV.	This character is often described as someone who is "pure of heart, body, and mind." (White woman)
Vignette V.	While this character is known for being strong, they are often perceived by others as lazy and lacking the motivation to succeed in life. They are seen as unintelligent, which means taking whatever job they can get. (Black man)
Vignette VI.	This character does things that are questionable and sometimes illegal, which causes frequent run-ins with the cops. (Black man)
Vignette VII.	This character is often seen as being "aggressive" or "loud," but is also known for their nurturing side. (Black woman)
Vignette VIII.	This character has had a challenging life as a single parent of three. They need welfare from the government to pay for rent, food, and bills. (Black woman)
Vignette IX.	This character is known for being a dreamer and is often described as having their "head in the clouds." While they can be forgetful, they are tradition-loving and never miss an opportunity to celebrate holidays, birthdays, and special occasions. (Ambiguous)
Vignette X.	This character is as average as a person can be. (Ambiguous)

APPENDIX D: EXPERIMENT WEBSITE

Website Address: www.researchstudyucsb.com







APPENDIX E. INTERVIEW GUIDE

Pre- Experiment Interview Questions

1. Do you have a process that you typically use when you are making decisions?
2. Do you find it easy to make decisions when you feel you have limited information?
    a. Possible follow up: Do you make any efforts to delay your decision until you have more information?
3. Have you ever had to make a quick decision with limited information?
    a. If yes: How did that play out for you?
    b. If no: move on to the experiment portion of the study.

Post- Experiment Interview Questions

1. What did you find difficult or challenging about these tasks, if anything?
2. What character was the most challenging to create?
    a. Why?
3. What do you believe influenced the way you created your avatars?
4. How quickly, would you say, did you form an image of the character in your mind?

Post-Debrief Interview Questions

If race was mentioned as a factor in the construction of their images:

1. You mentioned [subject response] as being part of the reason why you made the image for [specific] movie role character. Can you tell me a little more about that?
2. Do you have any final questions for me before we end?

If race was not mentioned as a factor in the construction of their images:

1. Did any associations between the movie role descriptions and race come up for you during the decision tasks?
    a. If yes: In what way?
    b. If no: move on to question 2
2. Do you have any final questions for me before we end?

APPENDIX F: GENDER CROSSTABULATION TABLES

Table 1.1 Percentage Crosstabulation of Gender Categorization by Stereotype

	STEREOTYPE							
Gender Category	*Pure*	*Heroic*	*Aggressive, Loud*	*Kind, Trustworthy*	*Unintelligent*	*Single Parent on Welfare*	*Ambitious, Wealthy*	*Criminal*
Woman	66.7	30.8	36.8	84.6	15.0	90.0	37.5	2.5
Man	33.3	69.2	63.2	15.4	85.0	10.0	62.5	97.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: $N = 312$; Pearson's Chi-square = 113.05, d$f = 7$, $p < 0.001$, Cramér's V = 0.6020.

Table 1.2 Percentage Crosstabulation of Gender & Racial Categorization by Stereotype.

	STEREOTYPE							
Racial & Gender Category	*Pure*	*Heroic*	*Aggressive, Loud*	*Kind, Trustworthy*	*Unintelligent*	*Single Parent on Welfare*	*Ambitious, Wealthy*	*Criminal*
Nonwhite Woman	30.6	18.4	5.3	38.5	0.0	60.5	15.0	2.6
White Woman	36.1	13.2	31.6	43.6	15.0	26.3	22.5	0.0
Nonwhite Man	19.4	21.1	23.7	10.3	25.0	13.2	17.5	63.2
White Man	13.9	47.4	39.5	7.7	60.0	0.0	45.0	34.2

Note: $N = 312$; Pearson's Chi-square = 146.69, d$f = 21$, $p < 0.001$, Cramér's V = 0.3991.

APPENDIX G: STATA OUTPUT


```
                                                                  ___  ____  ____  ____  ____(R)
                                                                 /__    /   ____/   /   ____/
                                                                ___/   /   /___/   /   /___/
                                                                  Statistics/Data analysis

 1 . do "C:\Users\lizmu\AppData\Local\Temp\STD3510_000000.tmp"

 2 . **Crosstab Senior Thesis
 3 .
 4 . use "C:\Users\lizmu\Box\1_Senior Thesis\3_Analysis\Cross Tab\Crosstab_Testing for thesis\Crosstab_Thesis_Testin

 5 .
 6 . **Label Variables
 7 .
 8 . label var PID "Participant"

 9 . label var PAge "Age"

10 . label var PLoc "Hometown"

11 . label var PEd "Level of Education"

12 . label var PRace "Participant Race"

13 . label var PSexOr "Sexual Orientation"

14 . label var PGen "Participant Gender"

15 . label var PRel "Religion"

16 . label var PPol "Political Orientation"

17 . label var PInc "Income"

18 . label var STask "Stereotype"

19 . label var SRace "Racial Category"

20 . label var SGen "Gender Category"

21 . label var SRacGen "Racial and Gender Category"

22 . label var PInfl "Influence"

23 .
24 . ** Define Values on Nominal and Ordinal Vars
25 . label define PEd 1 "High school/GED" 2 "Some College" ///
   > 3 "Associates" 4 "Bachelors" 5 "Masters" 6 "Doctorate"

26 . label values PEd PEd

27 .
28 . label define PRace 1 "Asian American" 2 "White" 3 "Black/African American" ///
   > 4 "Indigenous/Native American" 5 "Hispanic/Mexican American" ///
   > 6 "Middle Eastern" 7 "Pacific Islander" 8 "Biracial/Multiracial" ///
   > 9 "Other" 10 "White_Other"
```

```
29 . label values PRace PRace

30 .
31 . label define PSexOr 1 "Straight/Heterosexual" 2 "Gay" 3 "Bisexual" ///
   > 4 "Pansexual" 5 "Other"

32 . label values PSexOr PSexOr

33 .
34 . label define PGen 1 "Female" 2 "Male" 3 "Transman" 4 "Transwoman" ///
   > 5 "Gender Nonbinary" 6 "Other" 7 "Female-Other" 8 "Male-Other"

35 . label values PGen PGen

36 .
37 . label define PRel 1 "Protestant" 2 "Catholic" 3 "Jewish" 4 "Buddhist" ///
   > 5 "Hindu" 6 "Muslim" 7 "Orthodox-Christian" 8 "Christian" ///
   > 9 "Native American" 10 "Inter-nondenominational" 11 "None" ///
   > 12 "Other" 13 "More Than 1"

38 . label values PRel PRel

39 .
40 . label define PPol 1 "Strong Democrat" 2 "Not Very Strong Democrat" ///
   > 3 "Independent, Close to Democrat" 4 "Independent" ///
   > 5 "Independent, Close to Republican" 6 "Not Very Strong Republican" ///
   > 7 "None" 8 "Other"

41 . label values PPol PPol

42 .
43 . label define PInc 1 "Less Than $10,000" 2 "$10-15,000" 3 "$15-20,000" ///
   > 4 "$20-30,000" 5 "$30-40,000" 6 "$40-50,000" 7 "$60-75,000" ///
   > 8 "Greater Than $75,000"

44 . label values PInc PInc

45 .
46 . label define STask 1 "Pure" 2 "Heroic" 3 "Aggressive,Loud" ///
   > 4 "Kind,Trustworthy" 5 "Unintelligent" 6 "Single Parent on Welfare" ///
   > 7 "Ambitous,Wealthy" 8 "Criminal"

47 . label values STask STask

48 .
49 . label define SRace 1 "White" 2 "White" 3 "Ambiguous" ///
   > 4 "Black" 5 "Black"

50 . label values SRace SRace

51 .
```

```
52 . label define SGen 1 "Female" 2 "Male"

53 . label values SGen SGen

54 .
55 . label define SRacGen 1 "Nonwhite Female" 2 "White Female" ///
   > 3 "Nonwhite Male" 4 "White Male"

56 . label values SRacGen SRacGen

57 .
58 . label define PInfl 1 "Personal Experience" 2 "Movies,TV" ///
   > 3 "Adjectives"

59 . label values PInfl PInfl

60 .
61 . **Define Missing Values
62 .
63 . replace SRace=. if SRace == -999
   (13 real changes made, 13 to missing)

64 . replace SGen=. if SGen == -999
   (8 real changes made, 8 to missing)

65 . replace SRacGen=. if SRacGen == -999
   (13 real changes made, 13 to missing)

66 .
67 . **Frequencies
68 . fre PRace PGen PAge PEd PPol PRel PSexOr PInfl
```

PRace ── Participant Race

		Freq.	Percent	Valid	Cum.
Valid	1 Asian American	**16**	**5.00**	**5.00**	**5.00**
	2 White	**144**	**45.00**	**45.00**	**50.00**
	3 Black/African American	**8**	**2.50**	**2.50**	**52.50**
	5 Hispanic/Mexican American	**56**	**17.50**	**17.50**	**70.00**
	8 Biracial/Multiracial	**16**	**5.00**	**5.00**	**75.00**
	10 White_Other	**80**	**25.00**	**25.00**	**100.00**
	Total	**320**	**100.00**	**100.00**	

PGen ── Participant Gender

		Freq.	Percent	Valid	Cum.
Valid	1 Female	**264**	**82.50**	**82.50**	**82.50**
	2 Male	**48**	**15.00**	**15.00**	**97.50**
	5 Gender Nonbinary	**8**	**2.50**	**2.50**	**100.00**
	Total	**320**	**100.00**	**100.00**	

PAge — Age

		Freq.	Percent	Valid	Cum.
Valid	18	88	27.50	27.50	27.50
	19	72	22.50	22.50	50.00
	20	64	20.00	20.00	70.00
	21	24	7.50	7.50	77.50
	22	8	2.50	2.50	80.00
	23	24	7.50	7.50	87.50
	25	8	2.50	2.50	90.00
	29	8	2.50	2.50	92.50
	38	8	2.50	2.50	95.00
	44	8	2.50	2.50	97.50
	46	8	2.50	2.50	100.00
	Total	320	100.00	100.00	

PEd — Level of Education

		Freq.	Percent	Valid	Cum.
Valid	2 Some College	288	90.00	90.00	90.00
	3 Associates	24	7.50	7.50	97.50
	4 Bachelors	8	2.50	2.50	100.00
	Total	320	100.00	100.00	

PPol — Political Orientation

		Freq.	Percent	Valid	Cum.
Valid	1 Strong Democrat	64	20.00	20.00	20.00
	2 Not Very Strong Democrat	72	22.50	22.50	42.50
	3 Independent, Close to Democrat	72	22.50	22.50	65.00
	4 Independent	16	5.00	5.00	70.00
	5 Independent, Close to Republican	16	5.00	5.00	75.00
	6 Not Very Strong Republican	8	2.50	2.50	77.50
	7 None	72	22.50	22.50	100.00
	Total	320	100.00	100.00	

PRel — Religion

		Freq.	Percent	Valid	Cum.
Valid	1 Protestant	8	2.50	2.50	2.50
	2 Catholic	24	7.50	7.50	10.00
	3 Jewish	8	2.50	2.50	12.50
	4 Buddhist	8	2.50	2.50	15.00
	7 Orthodox-Christian	80	25.00	25.00	40.00
	8 Christian	48	15.00	15.00	55.00
	10 Inter-nondenominational	8	2.50	2.50	57.50
	11 None	88	27.50	27.50	85.00
	12 Other	24	7.50	7.50	92.50
	13 More Than 1	24	7.50	7.50	100.00
	Total	320	100.00	100.00	

PSexOr ── Sexual Orientation

		Freq.	Percent	Valid	Cum.
Valid	1 Straight/Heterosexual	**248**	**77.50**	**77.50**	**77.50**
	2 Gay	**24**	**7.50**	**7.50**	**85.00**
	3 Bisexual	**40**	**12.50**	**12.50**	**97.50**
	4 Pansexual	**8**	**2.50**	**2.50**	**100.00**
	Total	**320**	**100.00**	**100.00**	

PInfl ── Influence

		Freq.	Percent	Valid	Cum.
Valid	1 Personal Experience	**192**	**60.00**	**60.00**	**60.00**
	2 Movies,TV	**48**	**15.00**	**15.00**	**75.00**
	3 Adjectives	**80**	**25.00**	**25.00**	**100.00**
	Total	**320**	**100.00**	**100.00**	

```
69 .
70 . ***Recode variables***
71 .
72 . **Recode Participant Race (PRace) Variable
73 . recode PRace (2=1 "White") (10=2 "White_Other")(else=3 "NonWhite"), gen (PRaceWNW)
```
(312 differences between **PRace** and **PRaceWNW**)

```
74 . label var PRaceWNW "Participant Race_WNW"

75 . fre PRaceWNW
```

PRaceWNW ── Participant Race_WNW

		Freq.	Percent	Valid	Cum.
Valid	1 White	**144**	**45.00**	**45.00**	**45.00**
	2 White_Other	**80**	**25.00**	**25.00**	**70.00**
	3 NonWhite	**96**	**30.00**	**30.00**	**100.00**
	Total	**320**	**100.00**	**100.00**	

```
76 .
77 . **Recode Racial Category (SRace) Variable
78 . recode SRace (1 2 = 1 "White") (3 4 5 = 2 "NonWhite"), gen (SRaceWNW)
```
(223 differences between **SRace** and **SRaceWNW**)

```
79 . label var SRaceWNW "Racial Category_ WNW"

80 . label value SRaceWNW SRaceWNW
```

```
81 . fre SRaceWNW
```

SRaceWNW ── Racial Category_ WNW

		Freq.	Percent	Valid	Cum.
Valid	1 White	**168**	**52.50**	**54.72**	**54.72**
	2 NonWhite	**139**	**43.44**	**45.28**	**100.00**
	Total	**307**	**95.94**	**100.00**	
Missing	.	**13**	**4.06**		
Total		**320**	**100.00**		

```
82 .
83 . **Recode Influence (PInfl) Variable
84 . recode PInfl (1=1) (2 3= 0) , gen (PInflNew)
```
(128 differences between **PInfl** and **PInflNew**)

```
85 . label var PInflNew "Personal Experience?"

86 . label value PInflNew PInflNew

87 . fre PInflNew
```

PInflNew ── Personal Experience?

		Freq.	Percent	Valid	Cum.
Valid	0	**128**	**40.00**	**40.00**	**40.00**
	1	**192**	**60.00**	**60.00**	**100.00**
	Total	**320**	**100.00**	**100.00**	

```
88 .
89 . **Recode Valence (Val) Variable
90 . gen SValPN = 1 if (STask == 1 | STask == 2 | STask == 4 | STask == 7)
```
(160 missing values generated)

```
91 . replace SValPN = 0 if (STask == 3 | STask == 5 | STask == 6 | STask == 8)
```
(160 real changes made)

```
92 . label var SValPN "Stereotype_Positive Negative"

93 . label values SValPN SValPN

94 . fre SValPN
```

SValPN ── Stereotype_Positive Negative

		Freq.	Percent	Valid	Cum.
Valid	0	**160**	**50.00**	**50.00**	**50.00**
	1	**160**	**50.00**	**50.00**	**100.00**
	Total	**320**	**100.00**	**100.00**	

```
 95 .
 96 . **Descriptive Statistics
 97 . sum PAge
```

Variable	Obs	Mean	Std. dev.	Min	Max
PAge	**320**	**21.625**	**6.458694**	**18**	**46**

```
 98 .
 99 . **********Crosstabs*************
100 .
101 . ***Cross Tabulate Stereotype(IV)_Racial Catgory(SRace)
102 . tab SRaceWNW STask , col all
```

Key
frequency *column percentage*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**18**	**23**	**27**	**20**	**30**	**10**	**27**	**13**	**168**
	50.00	**60.53**	**71.05**	**51.28**	**75.00**	**26.32**	**67.50**	**34.21**	**54.72**
NonWhite	**18**	**15**	**11**	**19**	**10**	**28**	**13**	**25**	**139**
	50.00	**39.47**	**28.95**	**48.72**	**25.00**	**73.68**	**32.50**	**65.79**	**45.28**
Total	**36**	**38**	**38**	**39**	**40**	**38**	**40**	**38**	**307**
	100.00	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

```
         Pearson chi2(7) =  33.2195   Pr = 0.000
Likelihood-ratio chi2(7) =  34.1337   Pr = 0.000
              Cramér's V =   0.3289
                   gamma =   0.1312  ASE = 0.074
         Kendall's tau-b =   0.0877  ASE = 0.050
```

```
103 . tab SRaceWNW STask , exp
```

Key
frequency *expected frequency*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**18**	**23**	**27**	**20**	**30**	**10**	**27**	**13**	**168**
	19.7	**20.8**	**20.8**	**21.3**	**21.9**	**20.8**	**21.9**	**20.8**	**168.0**
NonWhite	**18**	**15**	**11**	**19**	**10**	**28**	**13**	**25**	**139**
	16.3	**17.2**	**17.2**	**17.7**	**18.1**	**17.2**	**18.1**	**17.2**	**139.0**
Total	**36**	**38**	**38**	**39**	**40**	**38**	**40**	**38**	**307**
	36.0	**38.0**	**38.0**	**39.0**	**40.0**	**38.0**	**40.0**	**38.0**	**307.0**

```
104 .
105 . *Cross Tabulate with Control for Participant Race (PRaceWNW)
106 . bys PRaceWNW: tab SRaceWNW STask, col all
```

-> PRaceWNW = White

Key
frequency *column percentage*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	8	11	15	10	14	6	12	4	80
	50.00	64.71	88.24	55.56	77.78	35.29	66.67	25.00	58.39
NonWhite	8	6	2	8	4	11	6	12	57
	50.00	35.29	11.76	44.44	22.22	64.71	33.33	75.00	41.61
Total	16	17	17	18	18	17	18	16	137
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

```
         Pearson chi2(7) =  21.4020   Pr = 0.003
Likelihood-ratio chi2(7) =  22.6886   Pr = 0.002
              Cramér's V =   0.3952
                   gamma =   0.2104  ASE = 0.113
         Kendall's tau-b =   0.1402  ASE = 0.076
```

-> PRaceWNW = White_Other

Key
frequency *column percentage*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	5	8	6	5	5	1	7	2	39
	55.56	80.00	66.67	50.00	50.00	10.00	70.00	20.00	50.00
NonWhite	4	2	3	5	5	9	3	8	39
	44.44	20.00	33.33	50.00	50.00	90.00	30.00	80.00	50.00
Total	9	10	9	10	10	10	10	10	78
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

```
         Pearson chi2(7) =  16.3111   Pr = 0.022
Likelihood-ratio chi2(7) =  17.8475   Pr = 0.013
              Cramér's V =   0.4573
                   gamma =   0.3290  ASE = 0.136
         Kendall's tau-b =   0.2242  ASE = 0.094
```

-> PRaceWNW = NonWhite

Key
frequency *column percentage*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**5** **45.45**	**4** **36.36**	**6** **50.00**	**5** **45.45**	**11** **91.67**	**3** **27.27**	**8** **66.67**	**7** **58.33**	**49** **53.26**
NonWhite	**6** **54.55**	**7** **63.64**	**6** **50.00**	**6** **54.55**	**1** **8.33**	**8** **72.73**	**4** **33.33**	**5** **41.67**	**43** **46.74**
Total	**11** **100.00**	**11** **100.00**	**12** **100.00**	**11** **100.00**	**12** **100.00**	**11** **100.00**	**12** **100.00**	**12** **100.00**	**92** **100.00**

Pearson chi2(**7**) = **12.9364** Pr = **0.074**
Likelihood-ratio chi2(**7**) = **14.4230** Pr = **0.044**
Cramér's V = **0.3750**
gamma = **-0.1568** ASE = **0.133**
Kendall's tau-b = **-0.1056** ASE = **0.090**

107 . bys PRaceWNW: tab SRaceWNW STask, exp

-> PRaceWNW = White

Key
frequency *expected frequency*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**8** **9.3**	**11** **9.9**	**15** **9.9**	**10** **10.5**	**14** **10.5**	**6** **9.9**	**12** **10.5**	**4** **9.3**	**80** **80.0**
NonWhite	**8** **6.7**	**6** **7.1**	**2** **7.1**	**8** **7.5**	**4** **7.5**	**11** **7.1**	**6** **7.5**	**12** **6.7**	**57** **57.0**
Total	**16** **16.0**	**17** **17.0**	**17** **17.0**	**18** **18.0**	**18** **18.0**	**17** **17.0**	**18** **18.0**	**16** **16.0**	**137** **137.0**

-> PRaceWNW = White_Other

Key
frequency *expected frequency*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**5** **4.5**	**8** **5.0**	**6** **4.5**	**5** **5.0**	**5** **5.0**	**1** **5.0**	**7** **5.0**	**2** **5.0**	**39** **39.0**
NonWhite	**4** **4.5**	**2** **5.0**	**3** **4.5**	**5** **5.0**	**5** **5.0**	**9** **5.0**	**3** **5.0**	**8** **5.0**	**39** **39.0**
Total	**9** **9.0**	**10** **10.0**	**9** **9.0**	**10** **10.0**	**10** **10.0**	**10** **10.0**	**10** **10.0**	**10** **10.0**	**78** **78.0**

-> PRaceWNW = NonWhite

Key
frequency *expected frequency*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**5** **5.9**	**4** **5.9**	**6** **6.4**	**5** **5.9**	**11** **6.4**	**3** **5.9**	**8** **6.4**	**7** **6.4**	**49** **49.0**
NonWhite	**6** **5.1**	**7** **5.1**	**6** **5.6**	**6** **5.1**	**1** **5.6**	**8** **5.1**	**4** **5.6**	**5** **5.6**	**43** **43.0**
Total	**11** **11.0**	**11** **11.0**	**12** **12.0**	**11** **11.0**	**12** **12.0**	**11** **11.0**	**12** **12.0**	**12** **12.0**	**92** **92.0**

```
108 .
109 . **Cross Tabulate Stereotype(IV)_Racial Catgory(SRace)with Control for Experience Influence (PInflNew)
110 . bys PInflNew: tab SRaceWNW STask, col all
```

-> PInflNew = 0

Key
frequency *column percentage*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	5	9	12	7	10	3	8	6	60
	35.71	60.00	75.00	46.67	62.50	18.75	50.00	37.50	48.39
NonWhite	9	6	4	8	6	13	8	10	64
	64.29	40.00	25.00	53.33	37.50	81.25	50.00	62.50	51.61
Total	14	15	16	15	16	16	16	16	124
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Pearson chi2(7) = 13.9450 Pr = 0.052
Likelihood-ratio chi2(7) = 14.6462 Pr = 0.041
Cramér's V = 0.3354
gamma = 0.1476 ASE = 0.115
Kendall's tau-b = 0.0992 ASE = 0.078

-> PInflNew = 1

Key
frequency *column percentage*

Racial Category_ WNW	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	13	14	15	13	20	7	19	7	108
	59.09	60.87	68.18	54.17	83.33	31.82	79.17	31.82	59.02
NonWhite	9	9	7	11	4	15	5	15	75
	40.91	39.13	31.82	45.83	16.67	68.18	20.83	68.18	40.98
Total	22	23	22	24	24	22	24	22	183
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Pearson chi2(7) = 24.3836 Pr = 0.001
Likelihood-ratio chi2(7) = 25.2926 Pr = 0.001
Cramér's V = 0.3650
gamma = 0.1179 ASE = 0.098
Kendall's tau-b = 0.0782 ASE = 0.065

111 . bys PInflNew: tab SRaceWNW STask, exp

-> PInflNew = 0

Key
frequency *expected frequency*

Racial Category_ WNW	Stereotype Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**5**	**9**	**12**	**7**	**10**	**3**	**8**	**6**	**60**
	6.8	**7.3**	**7.7**	**7.3**	**7.7**	**7.7**	**7.7**	**7.7**	**60.0**
NonWhite	**9**	**6**	**4**	**8**	**6**	**13**	**8**	**10**	**64**
	7.2	**7.7**	**8.3**	**7.7**	**8.3**	**8.3**	**8.3**	**8.3**	**64.0**
Total	**14**	**15**	**16**	**15**	**16**	**16**	**16**	**16**	**124**
	14.0	**15.0**	**16.0**	**15.0**	**16.0**	**16.0**	**16.0**	**16.0**	**124.0**

-> PInflNew = 1

Key
frequency *expected frequency*

Racial Category_ WNW	Stereotype Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
White	**13**	**14**	**15**	**13**	**20**	**7**	**19**	**7**	**108**
	13.0	**13.6**	**13.0**	**14.2**	**14.2**	**13.0**	**14.2**	**13.0**	**108.0**
NonWhite	**9**	**9**	**7**	**11**	**4**	**15**	**5**	**15**	**75**
	9.0	**9.4**	**9.0**	**9.8**	**9.8**	**9.0**	**9.8**	**9.0**	**75.0**
Total	**22**	**23**	**22**	**24**	**24**	**22**	**24**	**22**	**183**
	22.0	**23.0**	**22.0**	**24.0**	**24.0**	**22.0**	**24.0**	**22.0**	**183.0**

```
112 .
113 . **Cross Tabulate Stereotype(IV)_Gender Category(SGen)
114 . tab SGen STask, col all
```

Key
frequency *column percentage*

Gender Category	Stereotype Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
Female	**24**	**12**	**14**	**33**	**6**	**36**	**15**	**1**	**141**
	66.67	**30.77**	**36.84**	**84.62**	**15.00**	**90.00**	**37.50**	**2.50**	**45.19**
Male	**12**	**27**	**24**	**6**	**34**	**4**	**25**	**39**	**171**
	33.33	**69.23**	**63.16**	**15.38**	**85.00**	**10.00**	**62.50**	**97.50**	**54.81**
Total	**36**	**39**	**38**	**39**	**40**	**40**	**40**	**40**	**312**
	100.00	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

```
         Pearson chi2(7) = 113.0537   Pr = 0.000
  Likelihood-ratio chi2(7) = 130.0564   Pr = 0.000
               Cramér's V =   0.6020
                    gamma =   0.2228  ASE = 0.069
            Kendall's tau-b =   0.1544  ASE = 0.048
```

```
115 . tab SGen STask, exp
```

Key
frequency *expected frequency*

Gender Category	Stereotype								
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	Total
Female	24	12	14	33	6	36	15	1	141
	16.3	17.6	17.2	17.6	18.1	18.1	18.1	18.1	141.0
Male	12	27	24	6	34	4	25	39	171
	19.7	21.4	20.8	21.4	21.9	21.9	21.9	21.9	171.0
Total	36	39	38	39	40	40	40	40	312
	36.0	39.0	38.0	39.0	40.0	40.0	40.0	40.0	312.0

```
116 .
117 . **Cross Tabulate Stereotype(IV)_ Race&Gender Category (SRacGen)
118 . tab SRacGen STask, col all
```

Key
frequency *column percentage*

Racial and Gender Category	Stereotype								To
	Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	
Nonwhite Female	11	7	2	15	0	23	6	1	
	30.56	18.42	5.26	38.46	0.00	60.53	15.00	2.63	21
White Female	13	5	12	17	6	10	9	0	
	36.11	13.16	31.58	43.59	15.00	26.32	22.50	0.00	23
Nonwhite Male	7	8	9	4	10	5	7	24	
	19.44	21.05	23.68	10.26	25.00	13.16	17.50	63.16	24
White Male	5	18	15	3	24	0	18	13	
	13.89	47.37	39.47	7.69	60.00	0.00	45.00	34.21	31
Total	36	38	38	39	40	38	40	38	
	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100

```
         Pearson chi2(21) = 146.6875   Pr = 0.000
  Likelihood-ratio chi2(21) = 164.5562   Pr = 0.000
               Cramér's V =   0.3991
                    gamma =   0.1046  ASE = 0.052
            Kendall's tau-b =   0.0863  ASE = 0.043
```

```
119 . tab SRacGen STask, exp
```

Key
frequency *expected frequency*

Racial and Gender Category	Stereotype Pure	Heroic	Aggressiv	Kind,Trus	Unintelli	Single Pa	Ambitous,	Criminal	To
Nonwhite Female	**11** **7.6**	**7** **8.0**	**2** **8.0**	**15** **8.3**	**0** **8.5**	**23** **8.0**	**6** **8.5**	**1** **8.0**	**6**
White Female	**13** **8.4**	**5** **8.9**	**12** **8.9**	**17** **9.1**	**6** **9.4**	**10** **8.9**	**9** **9.4**	**0** **8.9**	**7**
Nonwhite Male	**7** **8.7**	**8** **9.2**	**9** **9.2**	**4** **9.4**	**10** **9.6**	**5** **9.2**	**7** **9.6**	**24** **9.2**	**7**
White Male	**5** **11.3**	**18** **11.9**	**15** **11.9**	**3** **12.2**	**24** **12.5**	**0** **11.9**	**18** **12.5**	**13** **11.9**	**9**
Total	**36** **36.0**	**38** **38.0**	**38** **38.0**	**39** **39.0**	**40** **40.0**	**38** **38.0**	**40** **40.0**	**38** **38.0**	**36**

```
120 .
121 .
122 .
    end of do-file

123 .
```