



Spring 2016

# Using Intersectionality to Enhance and Mitigate Group Threats

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**Using Intersectionality to Enhance  
and Mitigate Group Threats**

By

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Accepted in Partial Completion  
of the Requirements for the Degree  
Master of Science

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Jeremy R. Becker  
May 2016

**Using Intersectionality to Enhance  
and Mitigate Group Threats**

A Thesis  
Presented to  
The Faculty of  
Western Washington University

In Partial Fulfillment  
Of the Requirements for the Degree  
Master of Science

By  
Jeremy R. Becker  
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## Abstract

Much of the research studying stereotypes and prejudice focuses on a single social category (e.g., race or gender). Intersectionality research allows for multiple social categories to be evaluated together. The current work investigates whether emotions that are linked to outgroup threats (Cottrell and Neuberg, 2005) can be manipulated by intersecting different groups with one another. I proposed two hypotheses derived from a single theory. The Threat Enhancement Hypothesis of Intersectionality predicts that intersections comprised of categories that share a threat profile will be more threatening than either of the individual categories. The Threat Mitigation Hypothesis of Intersectionality predicts that intersections comprised of categories whose stereotypes counter one another will be less threatening than either of its individual categories. Additionally, these hypotheses predict that intersections with the same threat profile will be more (hypothesis 1) threatening than intersections comprised of groups with different threat profiles, and that intersections whose stereotypes counter one another (hypothesis 2) will be less threatening than intersections comprised of groups with different threat profiles. Results indicated social categories cannot be added (hypothesis 1), nor can they fully mitigate a threat below individual categories (hypothesis 2). However, threat-specific combinations better manipulate perceived threat levels.

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## Using Intersectionality to Enhance and Mitigate Group Threats

Stereotyping research has primarily focused on one category of a person's full identity. For example, researchers have focused on a person's race, but have ignored all other social categories that person belongs to that make up their full identity (e.g., gender, age, sexual orientation, etc.). Recently, however, there has been a shift to focus on intersectionality – a concept created by Kimberle Crenshaw (1994). Crenshaw saw numerous discrimination complaints by Black women that were denied because the housing or workplace cited other Black people or women that were not being discriminated against, leaving Black women marginalized. Intersectionality is defined for the current work as the state of having multiple social categories made salient. Intersectionality research expands the focus from a single social category to combinations of multiple social categories to assess how they interact when perceived by others. Intersectionality can be likened to the idea that the whole is different than the sum of its parts. For example, the perception of a person as a whole (e.g., a female atheist) is different than if the person is perceived as either category alone (i.e., only a female or only an atheist) and then combined (i.e., a female *and* an atheist). Knowing multiple categories of a person could create different perceptions of that person than if an observer only relied on one social category at a time.

Prior research has found that different groups have different stereotypical profiles (Neuberg & Sng, 2014), and that sometimes these stereotypes can elicit threats in perceivers that correspond with that group's stereotypes (Cottrell & Neuberg, 2005). For example, perceptions of a Black man may elicit stereotypes of his race (e.g., hostility, aggression, etc.) that are characteristics that threaten one's safety (Cottrell & Neuberg, 2005). However, perceptions of this man as a gay Black man may elicit stereotypes from both his race as well as his sexual

orientation, which may alter an observer's perceptions of his level of threat. Thus, intersectionality can identify any effect multiple social categories have on perceived threats. The purpose of this thesis is to examine the influence of intersected categories on perceived threat.

Research on single-group evaluations (i.e., focusing on a single salient social category such as race) has been useful to assess stereotypes of a group as a whole, and has given a very broad understanding about how people stereotypically perceive different groups. Previous research has shown that people like to categorize others into groups for simplicity and to better make sense of their social world (Brewer, Dull & Lui, 1981; Kang & Bodenhausen, 2015). One comprehensive approach to stereotyping research is the Stereotype Content Model (SCM; Fiske, Cuddy, Glick, & Xu, 2002). According to SCM, perceivers use two traits, warmth and competence, in order to evaluate outgroups. The SCM shows that most outgroups are perceived to have a mixture of warmth and competence. Some groups (e.g., housewives, the elderly) are perceived as low-competence but high-warmth, indicating that they pose no threat to the ingroup, nor would they be successful in doing so. Yet other groups (e.g., Asians, the rich) are perceived as low-warmth but high-competence indicating they are able to do well for themselves, but could possibly pose a threat to the ingroup.

The SCM has also demonstrated that identifying additional details about social groups (e.g., socio-economic status, sexual orientation) can change how people perceive target groups. For example, poor Blacks were rated with low warmth and low competence indicating that people stereotypically perceived impoverished Black people as mean and unintelligent. However, Black professionals were rated as very competent and moderately warm showing that they were stereotypically perceived as intelligent and fairly nice. Similarly, when evaluating women, housewives were given a very high rating on warmth and a low rating on competence

indicating that people stereotypically perceived housewives as very kind and friendly but unintelligent (Fiske et al., 2002). Yet businesswomen were rated as very competent, but socially cold, suggesting that women in a professional setting (e.g., manager, CEO) are perceived as smart but unkind.

The subgroups that Fiske et al. (2002) expanded upon show that there is a difference in group perception when more information is revealed and additional categories (career, socio-economic status, etc.) are considered. The ratings of Black people also changed when they were classified as either poor or professional; similar to how the ratings of women changed when they were classified as housewives or as businesswomen. Notably, Fiske et al. (2002) showed that subgroups provide more complex information and lead to different evaluations than general groups do on their own.

However, research suggests that participants sometimes have difficulty attending to multiple social categories simultaneously (Bodenhausen & Macrae, 1998; Macrae, Bodenhausen & Milne, 1995). Macrae and Bodenhausen (2001) argued that, even when primed with multiple categories, participants do not attend to all of the categories equally because stereotypes associated with one category may become more salient than the stereotypes associated with the other. Effectively, the stereotypes attributed to one social category overtake, or distract from, the stereotypes of the other social category. For example, Macrae et al. (1995) had participants watch a 15 second video of an Asian woman either eating noodles from a bowl with chopsticks or applying makeup by a mirror. Participants then performed a word-identification task to measure the salience of stereotypes associated with the primed identity (e.g., Woman or Chinese). Macrae et al. (1995) found that if people saw the video of an Asian woman eating with chopsticks, participants more quickly identified words associated with Asian stereotypes than

words associated with female stereotypes. Conversely, participants who saw the video of the Asian woman fixing her makeup identified words associated with female stereotypes more quickly. Primed participants paid more attention to the salient category and its relevant stereotypes, while disregarding the other social categories of the Asian woman.

Previous research has found that attending to one category over another can also influence a person who personally identifies with multiple social categories. Advancing the work of Claude Steele (2010), Ambady, Shih, Kim, and Pittinsky (2001) primed female Asian participants with either their Asian or female identity and had them complete a math task. When the participants were primed with their Asian identity, they performed better on the math task, whereas the participants primed with their female identity performed worse on the math task indicating that participants attended to their primed identities which affected their performance. Similarly, Shih, Pittinsky and Trahan (2006) primed female Asian participants with either identity and had them complete a verbal test. Participants whose female identity was made salient performed better on the verbal test than participants whose Asian identity was made salient, echoing the results of Ambady et al. (2001). These studies demonstrate that when one category is emphasized the accessibility of that category's stereotypes increases and influences performance on tasks. Not only will words and stereotypes for that group become more accessible (Macrae et al., 1995), but performance on tasks can also be affected (Ambady et al., 2001; Shih et al., 2006).

Research on the activation and application of stereotypes of a single category may be limited in that it cannot account for the nuanced perceptions when multiple social categories are simultaneously salient. Additionally, single-group evaluations come with the assumption that a group's stereotypes are distributed equally to all members of the group (Wilkins, Chan & Kaiser,

2011). For example, when measuring the athleticism of a group such as Black people, single-group evaluations assume that Black men, Black women, young Black people, and old Black people to be equally athletic, or are in some way all predisposed to be athletic. While this would give a general sense about athleticism for Black people, it ignores the influence that the other categories (e.g., female, elderly, etc.) may have.

Further, Sesko & Biernat (2010) argued that people construct a prototype about a group based upon that group's stereotypes. For example, based upon Black stereotypes of hypermasculinity, hostility and aggression, the prototypical Black person may be assumed to be a heterosexual Black male. However, these prototypes cannot account for the influence of other social categories that a target may also possess. Therefore, when members of a group are not prototypical (i.e., belong to a subgroup or do not fulfill stereotypes that match the prototype) they may be perceived rather differently. For instance, Black women may fail to fit the prototypes for both women and Black people. If the prototype largely held of Black people is a Black man, a Black woman's female category violates the prototype. Similarly, if the prototype of women is a White woman, a Black woman's racial category violates the female prototype. Therefore, the use of prototypes built from stereotypes that are generalized across an entire group alone will not fully account for the effects of multiple salient social categories.

### **Intersectionality**

Some researchers argue that the perception of a person changes when more than one of his or her social categories are made salient simultaneously (Purdie-Vaughns & Eibach, 2008). For instance, instead of focusing only on a gay Black man's gender, race or sexual orientation alone, people perceive him as a gay Black man. This intersectionality of social categories results in a perception that is different from the Black and gay categories alone because the stereotypes

of both groups are salient which differs from perceptions that one would have of a Black man or a gay man.

Kang and Chasteen (2009) used computer software that changed artificial 3D facial expressions of either young or old Black and White men. Participants were to indicate when they noticed the face they were shown appeared to change emotions (e.g., happy, angry, neutral.). The social categories (i.e., old and Black, old and White) were combined and participants had different perceptions for old Black men than would be expected for either race or age group alone. Old White men were seen as quicker to anger and slower to become happy than young White Men. However, this trend was reversed for Black men. Young Black men were seen as quicker to anger and slower to become happy than old Black men. These results suggest that perceptions changed not only when more than one social category was made salient, but also depended on which social categories were combined.

One of the foundational views in intersectionality research is the Double Jeopardy Hypothesis (Beale, 1979). The Double Jeopardy Hypothesis posits that people who belong to multiple subgroups (e.g., Black women) will receive a “double negative” compounding effect of their respective negative stereotypes. For instance, Black women carry double the burden than that of White women and Black men (Beale, 1979). Double Jeopardy hypothesizes that Black women will not only receive the negative effects of Black stereotypes (hostile, deviant, etc.), but also simultaneously receive the negative effects of female stereotypes (incompetent, naïve, etc.).

Greene (1997) argues that the compounding effect of the Double Jeopardy Hypothesis can be expanded into what she calls Triple Jeopardy. Greene argues that if a person belongs to even more subgroups (e.g., Black lesbian woman), he or she will receive an even more severe effect of his or her stereotypes than those with fewer subgroup categories. The arguments of the

Double and Triple Jeopardy hypotheses imply that social categories are additive in a way such that more socially unfavorable categories lead to experiencing more difficulties in society. When expanded, the logic posed by Beale (1979) and Greene (1997) argues that a person belonging to five negative subgroups will be worse off than someone with only three negative subgroups because their compounding effect is much more severe. However, trying to quantify who is “worse off” (e.g., a Black single mother, or a married Hispanic gay father) and identifying the exact source of their hardship (i.e., in which context is their race the source, or them being a parent, or a mixture of all?) is unwieldy in research (Purdie-Vaughns & Eibach, 2008; Bowleg, 2008).

Furthermore, empirical research on intersectionality does not show this additive effect. Over two studies, Remedios, Chasteen, Rule and Plaks (2011) showed participants photos of Black and White men who self-identified as gay or straight, though participants were never told about the sexual orientation of the men in the photos. In Study 1, participants attended to the race of the men pictured, and then had to rate how likable the target in the photo was (e.g., “To the average Canadian, how likable would this person seem?”). Results indicated that participants liked straight White targets over straight Black targets, straight White men over gay White men, but gay Black men over straight Black men. In Study 2, participants were told to approach one race and avoid the other by moving a joystick toward (approach condition) or away (avoid condition) from a computer screen. After the task, the photos were shown again and participants rated the targets on likability. Overall, White targets were approached more quickly than Black targets. Additionally, White targets were perceived to be more likable than Black targets, straight White men were more likable than gay White men, but gay Black men were again perceived as more likable than straight Black men. If Double and Triple Jeopardy were supported, we would



expect that gay Black men would be less likable than both the gay White men and straight Black men; however, gay Black men had more favorable reactions than the straight Black men. It is notable that participants were never made aware of the targets' sexual orientation, so participants made evaluations based upon how the targets presented themselves. This suggests that people with intersected identities (e.g., gay Black men) may present themselves differently.

Another framework in intersectionality research is Intersectional Invisibility (Purdie-Vaughns & Eibach, 2008), which posits that people who belong to multiple subgroups (e.g., gay Black men, Black women, White lesbians, etc.) will experience "becoming invisible" across various contexts (e.g., historical, legal, economical, etc.). Purdie-Vaughns and Eibach (2008) argue that people become invisible because they do not match their group's prototype, and are forgotten about because they are an atypical group member. Some current research has shown support for the "becoming invisible" effect proposed by Intersectional Invisibility. Across two studies, Sesko and Biernat (2010) found that participants had a harder time recognizing Black women compared to Black men, White men and White women. In their first study, White participants studied pictures of Black and White men and women. Afterwards, participants were shown a series of photos and had to determine if they had seen the face in the picture before, or if it was a new face. Participants were least successful at telling the difference between previously shown and newly presented faces of Black women. Study 2 used the "who said what" paradigm to assess whether participants could accurately remember who said which statements given the person's race and gender (Black and White men and women). A small discussion was recorded, and each statement was paired with the picture of the person who said it. After hearing the discussion, participants were played specific statements and had to determine which picture belonged to which statement. Complementing the findings of Study 1, participants most

inaccurately attributed the statements of Black women than those of Black men, White men and White women. Black women became invisible in these experiments because participants used their prototypes of men, women and Black people. Men and women were each prototyped as White, whereas Black people were prototyped as men, leaving Black women further out of participants' salience.

Similarly, Thomas, Dovidio and West (2014) had participants categorize pictures on a screen by gender and race. The researchers found that while women were more quickly categorized than men, Black women were more slowly categorized as women than White women. Similarly, participants categorized Black people by race faster than White people, though Black women were again more slowly categorized as Black than Black men. Because participants had to switch between categorizing by race and gender, the prototypes they were attending to changed. Black women did not fit the prototypes for Black or Women and were effectively invisible.

### **Intersectionality and Threat**

Although previous research has suggested some specific ways in which intersected social categories facilitate the creation of novel evaluations, it is not yet fully understood how this occurs. Research has established that different groups have distinct stereotypic profiles (Kang & Bodenhausen, 2014; Neuberg & Sng, 2013). Put simply, the stereotypes attributed to Black people are different than the stereotypes attributed to Asians, or women, or homeless people. Further, some stereotypes elicit emotions that can lead to perceived threats. Therefore, one possible way of understanding the novel evaluations of intersected categories would be to look at the threat-based approach to prejudice outlined by Cottrell and Neuberg (2005). Their model identifies emotions that are linked with threats that allowed humans to evolve as they navigated

the world. Some of these emotions, such as pity and guilt are social regulation emotions that allow people to navigate their social relationships. Other emotions, such as anger and disgust, appear to be more about survival and fitness. However, all of these emotions can be attributed to distinct outgroup threats. Cottrell and Neuberg argue that threats to ingroup prosperity will evoke different emotions based upon the threat type. The emotions that occur as a result of the threat can then lead to ingroup actions to maintain ingroup prosperity. The three major threats the current work investigates are physical, resource and value threat.

A physical threat is elicited by a perceived immediate danger to one's personal or ingroup physical safety. This threat elicits the primary emotion fear which can lead to people wanting to escape to safety, or may make them then feel anger because their ingroup was threatened (Cottrell & Neuberg, 2005). For example, the hostile and aggressive stereotypes of Black people (Devine, 1989) elicit a physical safety threat, which tend to elicit the primary emotion fear for self and ingroup safety. When people feel physically threatened, their fear can motivate them to flee from the danger, and also make them feel anger, the secondary emotion, toward Black people. This can result in discrimination (explicitly, implicitly, institutionally, etc.) that affects all Black people, not just those perceived as physically threatening.

Resource threat occurs when an outgroup is perceived to either take resources from the ingroup, or the outgroup is perceived to have an opportunity, advantage or societal cost that the ingroup does not. A resource threat leads to the primary emotion of anger due to threats of ingroup prosperity or obstacles that block the ingroup from succeeding (Cottrell & Neuberg, 2005). There are two kinds of groups that pose a resource threat: those that are perceived to have an advantage due to intelligence, high work ethic or interpersonal connections (e.g., Asians, Jews and the rich) and those that take resources due to lack of education, low work ethic, or economic

disadvantage (e.g., undocumented immigrants, high school dropouts and the poor; Glick & Fiske, 2001; Fiske et al., 2002). A resource threat then results in the secondary emotions of envy or fear that motivate people to minimize possible ingroup obstacles (Cottrell & Neuberg, 2005).

Groups that have higher levels of economic success are not only envied, but the envy comes as a direct result of competition (i.e., these groups prosper because they have an advantage over others, or because they are taking public resources for themselves). For example, Asian stereotypes of intelligence and strong work ethic (Fiske et al., 2002) suggest that Asians pose a resource threat to others, such that Asians may have jobs that could go to others who do not have those qualities. This may explain why Asians tend to receive higher levels of prejudice in times of economic distress (Butz & Yogeeswaran, 2011; Glick & Fiske, 2001). Groups that have lower levels of economic success can experience anger because Asians can be seen as taking resources (e.g., jobs) that people would prefer to see given to others. People under resource threat will try to remove the groups responsible for the threat as an obstacle for resources (Cottrell & Neuberg, 2005).

Finally, a value threat occurs when one's group-based views or beliefs conflict with another group in a way that can be perceived to hinder the ingroup's freedoms, rights, or ideals (Cottrell & Neuberg, 2005). When this threat occurs, people first feel disgust because their group's values could be contaminated by the threatening group. In response, value-threatened people will try to minimize the contamination so their values remain constant. In doing so, they may then feel anger, pity and fear toward the threatening group. For example, Cook, Cottrell and Webster (2015) found higher levels of prejudice and discriminatory intention toward atheists than students. They argue that atheists receive such negativity because their stereotypes of cynicism and non-normativity threaten other groups' values (e.g., trust, socialization, etc.).

Cottrell and Neuberg (2005) would suggest that the stereotypes of atheists' anger others and elicit a value threat.

It is worth noting that the threats attributed to groups because of their stereotypes should be distinct, like their stereotypic profiles expanded in Neuberg and Sng (2013). The physical safety threat elicited by Black stereotypes should be different from the resource threat elicited by Asian stereotypes, or the value threat elicited by atheist stereotypes. For example, the physical threat elicited by Black stereotypes would not be expected to be elicited by an Asian man, because an Asian man is not stereotypically physically threatening. Similarly, the value threat of atheists would not be expected to be elicited by a Black man because being a Black man does not violate anyone's beliefs.

### **Threat Enhancement Hypothesis of Intersectionality**

Previous research has demonstrated that the Double Jeopardy Hypothesis (Beale, 1979) does not necessarily lead to a compounding effect of negative group stereotypes (Remedios et al., 2011; Kang & Chasteen, 2009; Livingston & Pearce, 2009). However, the multiple negative social categories Beale (1979) used as examples did not have similar stereotypic and threat profiles. Beale focused on Black women because they are underrepresented and have two distinct non-majorative categories (i.e., not male and not White), but the stereotypic profile of women (e.g., nurturing, incompetent, etc.) does not match the stereotypic profile of Black people (e.g., hostile, aggressive, etc.). Additionally, the threats posed by Black people and women are different. Stereotypes of Black people pose a physical threat, whereas stereotypes of women do not necessarily pose a particular threat. Because of the misalignment of stereotypic and threat profiles from these groups, the compounding effect of negative stereotypes was not observed. The Threat Enhancement Hypothesis of Intersectionality argues that for a compounding effect of

negative stereotypes, similar to the Double Jeopardy Hypothesis, the intersected groups must have similar stereotypic and threat profiles. The compounding effect – now referred to as threat enhancement – results from when two groups whose stereotypes elicit the same threat are combined. For example, Black men receive harsher sentences than White men for the same crime (Freiburger & Hilinski, 2013). This result may make a Black man even more threatening because he is no longer just a Black man (whose stereotypes are already violent and hostile), but he is also a convict (a group whose stereotypes are also physically threatening).

The Threat Enhancement Hypothesis of Intersectionality should also apply to resource and value threats. For example, the resource threat elicited by Asian stereotypes may contribute to Asians receiving higher levels of prejudice in times of economic distress (Butz & Yogeeswaran, 2011). Asians (whose stereotypes of hard work and intelligence) may be compounded by another category that has a similar resource threat (e.g., the super rich). The combination of a rich Asian may pose more of a resource threat than Asians or the rich would get on their own. Further, the distrust atheists experience (Cook et al., 2015) may be due to atheists posing a value threat. Therefore, atheists (who are subject to stereotypes of cynicism and non-normativity) may be compounded when combined with another group whose values threaten someone's values (e.g., homosexual, feminist, etc.). Perceptions of a gay atheist, for example, may indicate higher value threat than either gay or atheist would get on its own.

### **Threat Mitigation Hypothesis of Intersectionality**

If a threat can be enhanced by combining social categories whose stereotypes have the same threat, then combining social categories whose stereotypes counter one another should mitigate an elicited threat. This process will be referred to as threat mitigation – defined here as the reduction of a perceived threat elicited by stereotypes of multiple social categories that have

incompatible stereotypic profiles. Stereotypes that counter one another may result in threat mitigation because one category's stereotypes (e.g., weak, passive) specifically counter the other category's stereotypes (e.g., hostile, aggressive), thereby reducing the threat. To mitigate physical threat, this approach argues that a physically-threatening group intersected with a group that undermines the physical threat would lead to a more pronounced decrease in physical threat than intersecting with another, but non-opposing, category. For example, a gay Black man may be less physically threatening than a straight Black man because the gay stereotypes of femininity (Deaux & Lewis, 1984) and compassion (Jackson & Sullivan, 1989) should counter the hostile Black stereotypes of hostility and aggression (Devine, 1989).

Similar to the arguments of Cottrell and Neuberg (2005), the intersections necessary to mitigate threat will be distinct between threats. To clarify, the resource threat elicited by Asian stereotypes would likely not be reduced by combining Asian and gay identities because the stereotypes of gay people, which may elicit a value threat, do not counter the Asian stereotypes in the context of the economic threat. In order to reduce the economic threat, an identity that counters the Asian stereotypes of self-discipline and intelligence (e.g., high school dropout) would have to be intersected. Similarly, the value threat elicited by atheist stereotypes (Cook et al., 2015) would need to be countered with a group whose stereotypes oppose the value threat, such as a philanthropist or a housewife.

A reexamination of previous research from this perspective may offer support for the threat mitigation hypothesis. Livingston & Pearce (2009) found that of current and former Fortune 500 CEOs, more Black male CEOs had a "baby face" than White male and female CEOs. This suggests that being babyfaced – having large eyes, forehead and cheeks – as a White male or female is a negative characteristic to have because the stereotypes of babyfacedness

(e.g., high warmth and low competence) undermine White CEOs. However, being babyfaced was beneficial to the Black male CEOs because the babyface characteristic may mitigate the physical threat elicited by Black stereotypes.

Further, the process of threat mitigation is not additive. The consideration of a target with multiple identities whose threats *directly oppose each other* should decrease the perceived threat *more* than identities that merely contain fewer threats. For instance, if a Black man had a hypothetical threat rating of +3, a White man a threat rating of 0 and an old man a threat rating of -1, then we would expect an old Black man to still be more threatening (+2) than an old White man (-1). However, Kang and Chasteen (2009) provided evidence suggesting that old Black men are perceived to be happier and less angry than old White men and young Black men. I argue that the presence and removal of a specific threat has a more interactive than additive effect. Because the intersection of an old White man does not address a specific threat, there is no mitigation to be expected, so the combination of old and White is essentially a non-effect intersection. However, the intersection of an old Black man mitigates the physical threat elicited by Black stereotypes with the stereotypes associated with old people. Using the numbers from the previous example, the old White man would have a threat rating of -1, but because of the process of threat mitigation old Black men would have a threat rating *below* -1.

Research on expectancy violation theory (Jussim, Coleman, & Lerch, 1987) may offer some support for this non-additive effect. Expectancy violation theory posits that people who violate a certain expectation, such as not conforming to their group's stereotypes, will be judged differently than those who do conform to their groups' stereotypes. For example, Bettencourt, Dill, Greathouse, Charlton, and Mulholland (1997) investigated the role that different social categories play in expectancy violation. Participants read scenarios about skilled or unskilled



speeches given by a football player or a speech team member. They then rated targets on global likability (e.g., likable/unlikable, good/bad) and trait-capability (e.g., incapable/capable, resourceful/unresourceful) of the target. Participants also rated the typicality and stereotypicality of each scenario. Results showed that the speech team member was rated as more unexpected than the football player in the unskilled speech condition, and the football player was rated more unexpected than the speech team member in the skilled speech condition.

Further, participants rated the football player more favorably than the speech member in the skilled condition, and rated the speech member more negatively than the football player in the unskilled condition. These results support expectancy violation theory because when a target violated expectations (i.e., the football player giving a skilled speech) participants rated the target in a more extreme direction based on the violation.

Additionally, Kernahan, Batholow, and Bettencourt (2000) argued that people would judge those who violate their group expectations more extremely than those who conform to expectations. Kernahan et al. (2000) manipulated the race (White, Black or Asian) and academic scores (e.g., ACT and GPA scores) of a target applying for college. The Black applicant with strong scores was rated more favorably than both White and Asian applicants with strong scores. Similarly, Asians and Whites with poor scores were evaluated more negatively than Blacks with poor scores. These results demonstrate that people who violate expectations are evaluated more extremely than those who meet expectations.

The results of Bettencourt et al. (1997) and Kernahan et al. (2000) indicate that when a person violates expectations (e.g., unskilled speech team member, Black applicant with a high GPA, etc.), people will judge him or her differently than someone who meets expectations. In the case of threat mitigation, the counterstereotypical categories may violate participants'

expectations and lead them to rate the target differently than we would expect them to rate either category on its own, and differently than if the categories were simply added together. For example, a gay Black man may violate the expectations people have for gay men and/or Black men, which may result in different or more extreme ratings than ratings of gay or Black alone, and differently than if the threat of gay men and Black men was added together.

### **The Current Study**

The present work investigates two hypotheses. To test the Threat Enhancement Hypothesis of Intersectionality, I hypothesize that intersected social categories that represent the same threat will be rated as more threatening than either identity alone (1a), and will be more threatening than an intersected category that includes a combination of different threat profiles (1b). To test the Threat Mitigation Hypothesis of Intersectionality, I hypothesize that intersected counter-threatening social categories will be rated as less threatening than either identity alone (2a), and will be less threatening than an intersected category that includes a combination of different threat profiles (2b).

## **Method**

### **Focus Group**

To better understand which groups represent physical, economic, and value threats that college students perceive, 25 students (56% Female, 73% White, 12% Asian, 11% Mixed/Other, 4% Black) from Western Washington University participated in a short focus group discussion for extra credit in a summer course. Consistent with Cottrell and Neuberg (2005), physical threat was defined as a threat to personal or ingroup physical safety. Groups that would elicit a physical threat are stereotypically perceived as physically aggressive and hostile. Resource threat was defined as a threat to personal or ingroup economic well-being or livelihood. Groups that elicit

an economic threat are stereotypically perceived as having an economic advantage that others do not have, or take public resources for personal benefit. A value threat was defined as a threat to personal or ingroup beliefs. Groups that elicit a value threat are stereotypically perceived as believing their values are correct, while others are incorrect, and that they oppose ideas, beliefs or policies that others care about.

The researcher described three relevant threats (physical, resource, and value) to the focus group after obtaining their consent, and then asked participants to either say or write down groups they thought elicited specific threats and why. The students were instructed to think about groups in terms of the group level (i.e., not think about anecdotes or people they personally know). They were also instructed to respond in terms of what the average student at their university would think. This was done to reduce the possibility of socially desirable responses.

**Focus group results.** The focus group indicated that the homeless, police officers, drug users, and activists are physically threatening. Participants indicated these groups because they have had direct contact with one or more of these groups and have felt physically threatened in the past. Participants felt a resource threat from big corporations, Asians and undocumented immigrants because of their ability to acquire things the participants may not. Lastly participants felt that their values are threatened mostly by religious fundamentalists and conservative Republicans.

When asked about other possible groups (e.g., Black people for physical threat, Jews for resource threat, and Communists for value threat) most participants indicated no threat felt due to unfamiliarity, or, as the author assumes, pressure to not seem prejudiced in front of others. The current study used the groups gathered from the focus group, as well as others supported by research to test both the threat enhancement and threat mitigation hypotheses of intersectionality.

## Pilot Study

To assess whether the groups named by the focus group were indeed associated with specific threats, I conducted a pilot study to test the perceived physical, resource, and value threat levels of different groups. The groups in the pilot study were the groups indicated in the focus group (e.g., homeless, Asians, Conservatives, etc.), as well as additional theoretically-relevant groups (e.g., feminists, atheists, etc.).

Sixty-four students (79% Female, 69% White, 9% Asian, 9% Mixed, 6% Latino, 3% Black, 1% Native American and 1% Other) from Western Washington University completed an online survey for partial course credit. Participants were told about the different types of threat. For example, they were told that resource threat is when someone possesses an economical advantage that others do not have, or that they take financial resources from the public (Cottrell & Neuberg, 2005). Participants were then asked about the physical, resource and value threat levels of fourteen different groups (e.g., Homeless, Asians, Evangelical Christians, etc.) that were presented in a random order. Each group had three questions to assess the level of a particular threat (e.g., To what extent are Evangelical Christians physically threatening?). Participants responded to questions using a 7-point Likert scale (1 = Not at all, 7 = Very much so).

**Pilot study results.** I conducted a repeated-measures ANOVA with planned contrasts for each of the 14 groups. I used difference contrasts that compare a group's associated threat profile (2) to the other two threats combined (both -1). Table 1 and Figure 1 display which threat a group was theorized to have in bold and whether the planned difference contrast was statistically significant with an asterisk, while Table 2 indicates whether the omnibus ANOVA was statistically significant. The homeless, heroin addicts, people in prison and police officers were

the most physically threatening. Asians, undocumented immigrants, high school dropouts and the rich were the most resource threatening. The results obtained indicate the distinction between the groups associated with resource threat. Asian stereotypes of intelligence and hard-working ability (Butz & Yogeeswaran, 2011) are in contrast to those of undocumented immigrants and high school dropouts. Undocumented immigrants and high school dropouts may be seen as threatening to resources for taking resources from the bottom (i.e., getting government subsidies or allowances), whereas Asians may be seen as threatening to resources for having advantages toward the top (i.e., because they are Asian, they are more likely to get a good job that would otherwise go to people of other ethnicities). Evangelical Christians, conservatives and atheists were most threatening to peoples' values. The physically disabled and liberals did not fit their threat profile in relation to the other threats. Finally, feminists did not achieve a statistically significant threat rating on any threat type.

### **Intersectionality Study**

**Participants.** One hundred-seventy-two undergraduate students (81.8% Female, 72.1% White, 10.9% Asian, 9.7% Mixed, 1.8% Black, 1.2% Native American, 0.6 % Latino and 3.6 % Other) from the same university completed an online survey for partial course credit. Participants were gathered from the Psychology participant pool and completed a survey using SONA systems and Qualtrics. Eight participants were excluded from analyses. Two participants were excluded because they completed the survey outside an a priori interval with a response time under five minutes or over two hours. Four participants were excluded because they were not American citizens. Lastly, two participants were excluded because their age was more than three standard deviations from the mean.

**Procedure.** To test the hypotheses, an online survey was created and split into two parts. The first part assessed the threat levels associated from nine groups selected or modified from the pilot study. Assessing a baseline threat level for these groups was collected to replicate the results of the pilot study, as well as to compare to the perceived threat level of intersected groups. The second half of the survey consisted of 18 different group intersections to test whether perceived threat levels change based upon which groups are intersected.

Participants completed the online survey to get a baseline rating of threat for the nine selected groups across all three threat dimensions. Physical threat was defined as a group or person who threatens personal or ingroup safety (Cottrell & Neuberg, 2005). Resource threat was defined as a group or person who threatens personal or ingroup economic well-being, and may have an economic advantage that others do not have. A value threat was defined as a threat to personal or ingroup beliefs. Three questions assessing the three specific threat profiles were presented for each of the nine groups (e.g., To what extent are **homeless people** *physically threatening*). Participants answered questions using a 7-point Likert scale (1 = “not at all” and 7 = “very much so”).

All groups were then presented in a randomized order for each participant. The nine groups were separated into primary and secondary target groups. Primary targets (homeless, undocumented immigrants and the very religious) are groups that the secondary groups were intersected with to assess the change in threat perception. Secondary targets (heroin addicts, Asians, conservatives, the physically disabled, high-school dropouts and liberals) were used to test if and when perceived threat levels changed when groups were intersected. The planned pairings (e.g., Homeless heroin addicts, homeless physically disabled) were predetermined to

make logical sense (i.e., even if the physical threat level of homeless people changed when recategorized as a homeless police officer, a homeless police officer is illogical; Table 3).

Next, participants completed the second half of the survey, which combined the primary and secondary target groups to test the Threat Enhancement and Mitigation Hypotheses of Intersectionality. First a primary group was combined with a secondary group, then participants rated the intersected target on the three threat dimensions. For instance, participants already rated both the very religious and conservatives separately, but the threat level of very religious conservatives would then be established. To do so, both social categories were combined to assess whether the threat level of the group goes up or down relative to the groups that comprise the intersected target. Overall, participants made eighteen ratings of intersected groups (see Table 3), resulting in 27 total ratings, including the nine baseline ratings. All eighteen of the intersected groups were presented in a randomized order for each participant. After completing the survey participants were thanked and debriefed.

## **Results**

A Bonferroni correction of  $\alpha = .002$  was established to correct for inflated alpha levels, because there were 24 planned comparisons between different group combinations<sup>1</sup>.

### **Baseline Results**

Baseline ratings for the nine groups selected for this study were conducted to examine whether, and to what extent, changes in perceived levels of threat occurred between the individual and intersected groups. Additionally, the baseline ratings were conducted to compare to the pilot study, as well as to demonstrate that primary (e.g., homeless, undocumented immigrants, and the very religious) and enhancing (e.g., heroin addicts, high school dropouts,

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<sup>1</sup> Additional analyses were conducted to test for gender differences. All patterns held consistent when analyzing for gender differences.

and conservatives) groups are perceived highly with their specific threat. For example, the very religious and conservatives should be statistically significantly more value threatening than physically or resource threatening. Further, baseline results for the mitigating groups (e.g., the physically disabled, Asians and liberals) were conducted to examine whether mitigating groups had lower levels of perceived threat than the primary and enhancing groups on a particular threat. For example, Asians should be less resource threatening than undocumented immigrants and high school dropouts.

I first conducted nine repeated-measures ANOVAs with planned difference contrasts on the baseline threat levels of the groups selected from the pilot study. Results shown on Table 4 and Figure 2 indicate the same patterns observed in the pilot study for the difference contrasts, while Table 5 indicates whether the omnibus ANOVA for each group was statistically significant. All groups except liberals and the physically disabled were found to be statistically significantly higher in their respective predicted threat than non-predicted threats (all  $ps < .001$ )<sup>2</sup>. That is, the homeless and heroin addicts were statistically significantly more physically threatening than resource or value threatening, whereas undocumented immigrants and high school dropouts were statistically significantly more resource threatening than physically or value threatening. Likewise, the very religious and conservatives were statistically significantly more value threatening than physically or resource threatening.

Further, follow-up analyses shown on Table 6 indicate each baseline group's perceived threat rating across all dimensions. To clarify, a group's associated threat (e.g., homeless and physical threat) was compared to the other threat dimension ratings of that group (e.g., resource

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<sup>2</sup> Follow up analyses tested whether each threat's mitigation group (e.g., physically disabled, Asians and liberals) were statistically less threatening than the other groups with the corresponding threat. All mitigation groups were found to be statistically significantly less threatening than the other groups on their respective threat domain. See Table 12 for results.



and value). For example, the physical threat level of homeless people was compared to the resource threat of homeless people, then the physical threat level of homeless people was compared to value threat of homeless people, and finally value threat of homeless people and resource threat of homeless people was compared. These analyses were conducted to establish whether the group's associated threat was different than the other threats. Results of these analyses indicate that the the different threat profiles were perceived distinctly from one another for all groups in at least one of the comparisons.

### **Threat Enhancement Hypothesis of Intersectionality**

The Threat Enhancement Hypothesis of Intersectionality predicts that intersected social categories whose stereotypes belong to the same threat profile should result in a threat level above both social categories alone. To test this, I conducted three repeated-measures ANOVAs with a planned difference contrast comparing the perceived threat level of the threat-enhancing intersections (e.g., Homeless heroin addicts (2)) compared to their respective primary (e.g., Homeless (-1)) and enhancing groups (e.g., Heroin addicts (-1)). The top half of Table 7 displays the results of the physical, resource and value threat difference contrasts, while Table 8 indicates whether the omnibus ANOVA was statistically significant.

**Physical threat enhancement.** The difference contrast of the physically-enhancing intersection was statistically significant; however, the group means indicated that the threat enhancement hypothesis was not fully supported (Figure 3). Instead of homeless heroin addicts being perceived as more physically threatening than the homeless and heroin addicts, homeless heroin addicts ( $M = 3.94$ ) were less physically threatening than heroin addicts ( $M = 4.07$ ). Post-hoc pairwise analyses (Table 9) comparing homeless heroin addicts to the homeless and heroin addicts separately revealed that homeless heroin addicts are indeed more physically threatening

than homeless people; however, there was no statistical difference between homeless heroin addicts and heroin addicts, suggesting that heroin addicts are driving the effect of the intersection.

**Resource threat enhancement.** The difference contrast testing the resource-enhancing intersection did not achieve statistical significance which did not support the threat enhancement hypothesis (Figure 4). The results indicate that undocumented immigrant high school dropouts were not more resource threatening than undocumented immigrants and high school dropouts. Table 9 shows post-hoc pairwise analyses on resource threat that revealed undocumented immigrant high school dropouts ( $M = 2.79$ ), undocumented immigrants ( $M = 2.83$ ), and high school dropouts ( $M = 2.75$ ) did not differ on perceptions of resource threat (both  $p$ -values  $> .70$ ).

**Value threat enhancement.** Similar results were found in the value-enhancing contrast. The difference contrast testing the value-threatening intersection did not reach statistical significance because the test did not reach the *a priori* Bonferroni correction of  $\alpha = .002$ , which did not support the threat enhancement hypothesis (Figure 5). Very religious conservatives were not statistically significantly more value threatening than very religious people and conservatives. Further, post-hoc pairwise analyses on value threat, shown on Table 9, suggest that very religious conservatives ( $M = 4.19$ ) and conservatives ( $M = 4.30$ ) did not differ on perceived value threat; however, consistent with the threat enhancement hypothesis, very religious conservatives were more value threatening than very religious people ( $M = 3.55$ ). This shows value threat can be enhanced beyond a baseline rating, but not above and beyond both the primary and enhancing groups.

### **Threat Mitigation Hypothesis of Intersectionality**

The Threat Mitigation Hypothesis of Intersectionality predicts that intersected social categories whose stereotypes counter one another should result in a threat level below both social categories alone. The bottom half of Table 7 displays the results of the perceived threat level of the threat-mitigating intersections compared to their respective primary and mitigation groups (e.g., very religious liberals should be less threatening than very religious people and liberals).

**Physical threat mitigation.** The difference contrast of the physically-mitigating intersection was statistically significant; however, the group means indicate that the threat mitigation hypothesis was not fully supported (Figure 6). Instead of physically disabled homeless people being perceived as less physically threatening than the homeless and physically disabled, physically disabled homeless people ( $M = 1.59$ ) was higher than the physically disabled ( $M = 1.33$ ). Post-hoc analyses, indicated on Table 9, comparing physically disabled homeless people to the homeless and the physically disabled separately indicated that physically disabled homeless people were indeed perceived as less physically threatening than homeless people. Further, physically threatening homeless people were *more* physically threatening than the physically disabled, indicating that the physically disabled had disproportionately low effect in the context of physical threat.

**Resource threat mitigation.** The contrasts testing the resource-mitigating intersection was not statistically significant, which did not support the threat mitigation hypothesis. The results of the resource mitigating contrast indicated that undocumented Asian immigrant were not less resource threatening than undocumented immigrants and Asians because the test did not reach the *a priori* Bonferroni correction of  $\alpha = .002$  (Figure 7). Post-hoc pairwise analyses on resource threat shown on Table 9 revealed that undocumented Asians immigrant ( $M = 2.51$ ) were less resource threatening than undocumented immigrants ( $M = 2.83$ ), but more resource

threatening than Asians ( $M = 1.75$ ). The post-hoc results suggest that resource threat of a baseline rating can be mitigated, but not beyond the baseline ratings of a primary and mitigating group.

**Value threat mitigation.** The difference contrast testing the resource-mitigating intersection did not achieve statistical significance which did not support the threat mitigation hypothesis. Very religious conservatives were not statistically significantly less value threatening than very religious people and conservatives (Figure 8). Further, post-hoc pairwise analyses on value threat shown on Table 9 suggest that very religious liberals ( $M = 2.56$ ) were less value threatening than conservatives ( $M = 4.30$ ), but more value threatening than liberals ( $M = 1.76$ ).

### **Threat-Specific Tests**

The second half of both the Threat Enhancement and Mitigation Hypotheses of Intersectionality each proposed that theorized intersections would be more (enhancing) or less (mitigating) threatening on their specific threat profile than intersections that contained groups from different threat profiles. To test this, I conducted six repeated-measures ANOVAs with a difference contrast that compared the perceived threat level of a proposed intersection against the perceived threat level of four non-effect intersections on the primary category's specific threat profile (Table 3). There were three threat-enhancing contrasts (homeless heroin addicts on physical threat, undocumented immigrant high school dropouts on resource threat, and very religious conservatives on value threat) and three threat-mitigation contrasts (physically disabled homeless on physical threat, undocumented Asian immigrants on resource threat and very religious liberals on value threat). The threat-specific contrasts were conducted to test whether changes in threat perception were more pronounced when the groups from the same threat profile were combined than when groups from different threat profiles were combined. For example,

homeless heroin addicts (4) were compared to, and hypothesized to be more physically threatening than, homeless Asians (-1), homeless undocumented immigrants (-1), homeless liberals (-1) and homeless conservatives (-1) on physical threat.

Table 10 shows the results of the six difference contrasts separated by threat type, while Table 11 indicates whether the omnibus ANOVA of each test was statistically significant. When testing the second half of the Threat Enhancement Hypothesis of Intersectionality, homeless heroin addicts were statistically significantly more physically threatening than the four non-effect intersections (Figure 9). There was no difference between undocumented immigrant high school dropouts and the four non-effect intersections on resource threat (Figure 10). Lastly, very religious conservatives threatened people's values statistically significantly more than the four non-effect intersections (Figure 11). These results supported the second half of the Threat Enhancement Hypothesis of Intersectionality in the contexts of physical and value threat; however, these effects may be due to a distortion of perceived threat of heroin addicts and conservatives. Heroin addicts and conservatives may have contributed a disproportionate effect on their respective proposed intersections, as well as a possible influence in non-effect intersections.

When testing the second half of the Threat Mitigation Hypothesis of Intersectionality, physically disabled homeless people were statistically significantly less threatening than the four non-effect intersections (Figure 12). Similarly, undocumented Asian immigrants were statistically significantly less resource threatening than the four non-effect intersections; however, a review of the means indicate that there is no actual difference between undocumented Asian immigrants and two of the four non-effect groups (Figure 13). This may have been due to undocumented immigrant heroin addicts driving the effect found for the proposed threat

mitigation intersection of undocumented Asian immigrants. Lastly, very religious liberals were not statistically significantly less threatening to peoples' values than the four non-effect intersections because the test did not reach the *a priori* Bonferroni correction of  $\alpha = .002$  (Figure 14).

### **Follow-up Analyses**

Further analyses were conducted to test whether there was a linear effect of perceived threat between the primary, intersected and secondary groups because the six theorized effective intersections all had perceived threat levels between their respective primary and secondary groups (Figures 3 – 8). I conducted these analyses to test an alternative hypothesis such that the intersected categories may actually have ratings that are the *average* of the groups of which it is made. To test whether there was a linear trend between intersected groups and the groups of which it was made, polynomial contrasts were conducted for the 18 unique intersections (six theorized intersections and twelve non-effect intersections). Further, to establish if the intersected group was the average of the two individual groups, the primary group was given a contrast weight of -1, the intersected group was given a weight of 0, and the secondary group was given a weight of 1. If a statistically significant linear effect was detected, that would indicate that the intersected group is indeed the average of the two groups of which it is composed. Table 13 indicates that a linear trend was found for 15 of the 18 intersections between their respective primary and secondary groups. The three intersections that did not indicate a linear trend on perceived level of threat were undocumented immigrant high school dropouts, undocumented immigrant heroin addicts and very religious heroin addicts.

## Discussion

The purpose of this thesis was to examine the influence of intersected categories on perceived threat. Specifically, the current research sought to explain why certain intersected groups may be less threatening, or even more likable than a single category on its own (Kang & Chasteen, 2009; Remedios et al., 2011). To do so, two hypotheses were tested. I proposed the Threat Enhancement Hypothesis of Intersectionality to examine if social categories that share a threat profile would enhance perceived threat beyond either category alone when combined. Further, my first hypothesis was meant to more explicitly test the Double Jeopardy Hypothesis (Beale, 1979) and examine whether social categories would be perceived in an additive fashion in the context of threat. This hypothesis also predicted that intersected social categories that share a threat profile would be perceived as more threatening on that dimension than intersected social categories made of groups from different threat profiles.

Results indicated that the first half of the Threat Enhancement Hypothesis of Intersectionality was not fully supported across all threats. All threat-enhancing intersections (e.g., homeless heroin addicts, undocumented immigrant high school dropouts and very religious conservatives) had perceived threat levels that were not higher than the perceived threat levels of the groups of which they were made. For example, the perceived physical threat level of homeless heroin addicts fell between the perceived threat level of homeless and heroin addicts, showing no additive increase in perceived threat. These results indicate that combined social categories, even those combined in a specific way, are not perceived additively as the Double and Triple Hypotheses argue (Beale, 1979; Greene, 1997). Rather, it appears that participants may have put more emphasis on one of the categories over the other in an intersection, similar to the results of Macrae and Bodenhausen (2001). This trend can also be seen when people discuss

their own identities. For instance, Bowleg (2008) found that people would rank-order their identities such that one identity meant more to them than the others (e.g., a person could first consider themselves to be female, then Black). Therefore, participants may have thought that one part of the intersection, such as heroin addicts or conservatives, was more important when considering the threat level of homeless heroin addicts or very religious conservatives, respectively.

However, threat enhancement was found when comparing the primary groups and their respective intersections. The theorized enhancing intersections tested were all combined with one of three primary groups (top half of Table 3), and some of the theorized enhancing intersections were found to be more threatening than their respective primary groups. Threat enhancement was observed in the context of physical and value threat during post hoc pairwise analyses (Table 9) indicating that homeless heroin addicts were indeed more physically threatening than the homeless, and very religious conservatives were more value threatening than the very religious.

The second half of the Threat Enhancement Hypothesis of Intersectionality tested whether threat-specific intersections were more threatening than non-effect intersections was supported in the contexts of physical and value threat, but not resource threat (Table 10). Results of the threat-specific contrasts indicate that threat-specific intersections were indeed more threatening than non-effect intersections. For example, homeless heroin addicts were more physically threatening than the four groups with mixed threat profiles. Similarly, very religious conservatives were more value threatening than the four groups with mixed threat profiles.

I also proposed the Threat Mitigation Hypothesis of Intersectionality to examine if social categories whose stereotypes counter one another would mitigate a perceived threat beyond either category alone. This hypothesis also tested whether intersected social categories whose



stereotypes counter each other would be less threatening than intersected categories made of groups from different threat profiles. The Threat Mitigation Hypothesis of Intersectionality was meant to examine why intersected groups in prior research have more unexpected perceptions than individual groups. For example, elderly Black men were perceived to anger more slowly and become happier more quickly than young Black men *and* elderly White men (Kang & Chasteen, 2009), or that gay Black men are seen as more friendly and likable than straight Black men (Remedios et al., 2011).

However, threat mitigation was found when comparing the primary groups and their respective intersections. The theorized mitigation intersections tested were all combined with one of three primary groups (top half of Table 3), and all of the theorized mitigation intersections were found to be more threatening than their respective primary groups. Threat mitigation was observed during post hoc pairwise analyses (Table 9) indicating that physically disabled homeless people were less physically threatening than the homeless, undocumented Asian immigrants were less resource threatening than undocumented immigrants, and very religious liberals were less value threatening than the very religious.

Results indicated the first half of the Threat Mitigation Hypothesis of Intersectionality was not supported (e.g., physically disabled homeless were not less physically threatening than homeless people). Similar to the first prediction of the Threat Enhancement Hypothesis of Intersectionality, intersections comprised of groups whose stereotypes could counter one another (e.g., physically disabled homeless, undocumented Asian immigrants, and very religious liberals) had perceived threat levels that fell *between* the perceived threat levels of the groups of which they were made. For example, physically disabled homeless perceived level of physical threat fell between the perceived physical threat level of homeless and physically disabled people,

showing a mitigation effect of physical threat from homeless people, but no mitigation effect to reduce perceived physical threat below both homeless and physically disabled people.

The second half of the Threat Mitigation Hypothesis of Intersectionality that tested whether threat-specific intersections were less threatening than non-effect intersections was supported in the context of physical threat (Table 10). Physically disabled homeless were less physically threatening than the four groups with mixed threat profiles. The results of the threat-specific contrasts suggest that intersected groups whose stereotypes counter one another can be less physically threatening than intersected groups with mixed threats. This supports the findings of Bettencourt et al. (1997) and Kernahan et al. (2000) who found that groups that violated expectancies would garner more extreme ratings. For example, physically disabled homeless people were less physically threatening than homeless undocumented immigrants, homeless high school dropouts, homeless conservatives and homeless liberals. This suggests that physically disabled homeless people may have been more unexpected than the other combinations. Results of Bettencourt et al. (1997) and Kernahan et al. (2000) would suggest that people may already have a physical threat level assigned to homeless people and the physically disabled; however, because the physically disabled homeless may be a novel group, it violates the expectancy of physical threat level one may have for either the homeless or the physically disabled, leading to different and perhaps more extreme ratings than the non-effect intersections.

### **Implications**

The implications from the results of this study speak not only to intersectionality research, but stereotyping research as a whole. Specifically, intersectional research should focus on the interaction effects of intersected categories rather than an additive trend. Even when categories that share a threat, they cannot be combined in an additive fashion. Rather, the whole

is indeed *different* than the sum of its parts. . This is similar to the results of Fiske et al. (2002) work on subgroups (e.g., Black professionals) which showed that Black people and professionals are separated from one another on the SCM. Yet in another study, Black professionals fell between the ratings of Black people and professionals. The current work showed a similar finding on perceptions of threat; many intersected groups showed a linear trend between their respective primary and secondary groups (Table 13) indicating that when perceiving intersections, people may *average* the individual social categories together to gain a novel evaluation.

While intersecting groups may not necessarily be additive to a threat, it appears intersecting certain groups can mitigate threat. This finding could have profound effects on the criminal justice system. Freiburger and Hilinski (2013) found that Black men were given harsher sentences than White men for the same crime. Yet this research shows that if one takes a threatening group (e.g., Black man) and counters it with another whose stereotypes counter it (e.g., gay, parent, physically disabled), there may be altered perceptions by a judge and jury. Instead of just seeing a Black man on the stand, the jury could see a gay Black man which would could violate their expectancy (Jussim, Coleman & Lerch, 1987) of what a Black man is and they may judge him to be less physically threatening.

### **Limitations**

The first half of the Threat Enhancement Hypothesis of Intersectionality predicted that intersections from the same threat would result in a higher level of perceived threat than either group alone. Conversely, the first half of the Threat Mitigation Hypothesis of Intersectionality predicted that intersections whose stereotypes counter one another would result in a lower level of perceived threat than either group alone. One reason why these hypotheses were not fully

supported was that a certain group's stereotypes may have distracted attention away from another group's stereotypes when groups were intersected (Macrae & Bodenhausen, 2001). For example, homeless heroin addicts and very religious conservatives were not perceived as more threatening than heroin addicts or conservatives, respectively.

Additionally, an additive increase of threat may not have been perceived in the threat enhancement contrasts because certain groups may have had a previously existing overlap with one another group that participants had difficulty distinguishing. For example, it may not have been difficult for participants to think of a homeless heroin addict, or a very religious conservative simply because each specific intersection shares a similar threat and the combinations of social categories are so frequently paired together. To clarify, participants may have assumed, for example, that very religious people tend to also be conservatives by default, or vice versa. Furthermore, a decrease in perceived threat in an intersected category below the perceived baseline threats of its corresponding individual groups may not have occurred in the threat mitigation contrasts because expectancies were not adequately violated. Bettencourt et al. (1997) found that when expectancies are violated, people tend to rate a target more extremely. Despite the intersected groups including more detail and presenting intersections participants may not have previously thought of (e.g., physically disabled homeless people), the intersections may not have adequately violated expectancies to warrant more extreme perceptions of threat.

Another limitation of the current study is that certain groups (e.g., the physically disabled and liberals) did not originally register a threat with their respective baseline difference contrasts; This was originally seen as a positive result because they were not threatening on their respective associated threat (i.e., physically disabled people should rate very low on physical threat in order to mitigate the physical threat elicited by homeless people). However, when examining the

means on Table 4, both the physically disabled and liberals were more resource threatening than physical or value threatening. In fact, post-hoc analyses with a difference contrast comparing resource threat to physical and value threat showed that both the physically disabled and liberals were statistically significantly more resource threatening than physical and value threatening. Instead of looking for groups that were low on a specific kind of threat, groups that were low across all domains should have been selected.

In addition to the groups selected, the threats selected to test the hypotheses (Cottrell & Neuberg, 2005) may not have been very relevant to university students. In particular, resource threat may not have been very salient for students, because they are not currently in a competitive job market, and finishing classes and graduating is more salient than getting a job. Furthermore, given the demographics of the participants surveyed (mostly liberal, mostly millennial), results of value threat will differ between groups (i.e., some areas of the United States may see a group as value threatening, while at the same time that group would be celebrated in another area in the United States). The exception of the threats selected was physical threat, suggesting that the perception of a physical threat by participants is more salient and malleable than resource or value threat. A possible solution to making the threats more relevant would be to get more qualitative data to establish how relevant different threats are to participants before assessing them on preselected threats. Additionally, resource threat may have been more relevant to students if it had been put in terms of affirmative action and scholarships. If a participant realized that other students could have an economic advantage, he or she could feel more resource threatened than by reading the resource threat definition provided by Cottrell and Neuberg (2005).

## **Future Directions**

Some of the categories used in the current study were inherent social categories (e.g., Asians and physically disabled), whereas other categories were socially acquired (e.g., homeless, liberals, etc.). This is an important distinction to make because the acquired social categories may be seen as less permanent, or make up less of a person's identity than inherent social categories (i.e., people are born into their ethnicity, gender, sexual orientation and others which will be a permanent, seemingly fixed part of a person's identity). The perceptions of inherent social categories may be influenced by dispositional attributions; that is, because there was no situational context to the questions posed to participants in this study (e.g., To what extent are Asians physically threatening?), participants may have committed a fundamental attribution error (Ross, 1977). Further, results of previous intersectionality research (Kang & Chasteen, 2009; Remedios et al., 2011; Sesko & Biernat, 2010; Thomas et al., 2014) has primarily focused on inherent social categories (e.g., race, gender, age, sexual orientation) rather than acquired social categories. For example, Remedios, Snyder and Lizza (2015) found that people perceive a higher level of discrimination toward women of color when a complaint is logged that addresses both the complainant's gender and race.

Moreover, perceptions of acquired social categories may, in some cases, allow for justified blaming of target groups. For example, participants may presume that homeless heroin addicts made choices that led them to being homeless (e.g., gambling their money away, rather than being laid off in an area with little job prospects) and using heroin, and because of these choices, participants may feel more justified in their feelings and actions toward groups. Some of the intersected groups in this work were a combination of one inherent and one acquired category (e.g., homeless physically disabled, Asian undocumented immigrant). Further research

should not only look at the effects of inherent-specific and acquired-specific intersections, but also inherent-acquired intersections to examine the specific effects of combining acquired social categories with inherent social categories.

Additionally, research on intersectionality should consider the order in which different social groups are presented in an intersection. Iliev and Smirnova (2016) found that word order can affect people's perceptions of importance (e.g., Western/European American continents are mentioned before other continents). When applied to intersectionality research, the results obtained may be different depending on which social category is presented first. For example, when perceiving very religious liberals in the current study, participants may have had different perceptions of threat if that intersection had been presented as liberal very religious people. Results may differ from those found when the very religious category was modifying liberals (i.e., very religious liberals), because the liberal category would be modifying the very religious category (i.e., liberal very religious people).

While the current work focused on person perception, it cannot explain the results of Ambady et al. (2001) and Shih et al. (2006) which examined the effects on performance when different identities were made salient. However, understanding the effects of thinking of oneself in intersectional terms rather than single-category terms (e.g. White *or* female) may lead to improved performance. For instance, Gaither, Remedios, Sanchez and Sommers (2015) found that when multiracial people are primed to think of their ethnicities, or when monoracial people are primed think of the different social categories they belong to, they think more creatively when problem solving than people who think of themselves in a singular identity.

Lastly, as the follow-up analyses indicate (Table 13) the intersections tested were largely the average of the groups that composed it (e.g., homeless heroin addicts were the average of

homeless and heroin addicts). These analyses offer an alternative explanation of the effects observed but warrant a more direct examination. If intersectional identities are truly the average of its components, then it would not matter which and how many identities were combined on various domains. For example, the perceived threat level of Black atheists would have to be the average of both Black and atheist. Similarly, likability scores of Black lesbian single mothers would therefore have to be the average likability of Black people, lesbians, and single mothers (e.g. Black + lesbians + single mothers /3 = Black lesbian single mothers).

### **Conclusion**

While stereotyping research has primarily focused on the effects of one category of a person's full identity, there is a growing body of intersectionality research that allows researchers to examine the effects when multiple social categories are made salient. This shift in the literature is important because it goes beyond the perceptions and experiences of a single group. Instead of researching the perceptions and life experiences of a particular ethnic group, gender or political affiliation, researchers are now understanding the perceptions and life experiences of different combinations of these categories to get a more detailed picture of how people stereotype others with multiple identities salient, and how people who are being stereotyped are affected by different social categories of their full identities.



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**Table 1***Group Means and Contrast Weights for Pilot Data*

<u>Threatening Groups</u>	<u>Threat Type</u>		
	<u>Physical</u>	<u>Resource</u>	<u>Value</u>
Homeless	<b>3.03(2)*</b>	2.86(-1)	1.91(-1)
Asians	1.23(-1)	<b>1.64(2)*</b>	1.23(-1)
Evangelical Christians	2.28(-1)	2.42(-1)	<b>3.94(2)*</b>
Heroin Addicts	<b>4.25(2)*</b>	3.48(-1)	3.81(-1)
Undocumented Immigrants	1.91(-1)	<b>3.27(2)*</b>	1.95(-1)
Conservatives	2.45(-1)	4.06(-1)	<b>4.58(2)*</b>
High School Dropouts	2.00(-1)	<b>3.17(2)*</b>	2.66(-1)
Rich People	2.19(-1)	<b>4.70(2)*</b>	3.17(-1)
Police Officers	<b>4.13(2)*</b>	2.61(-1)	3.20(-1)
People in Prison	<b>4.70(2)*</b>	3.94(-1)	3.27(-1)
Atheists	1.55(-1)	1.44(-1)	<b>2.56(2)*</b>
<u>Non-Threatening Groups</u>			
Physically Disabled	<b>1.34(2)</b>	1.72(-1)	1.13(-1)
Liberals	1.69(-1)	2.30(-1)	<b>1.95(2)</b>
Feminists	1.52(-1)	1.55(-1)	<b>1.69(2)</b>

*Note.* Results are from a repeated measures ANOVA. Bold indicates which threat type each group was theoretically associated with. \* indicates a statistically significant ( $p < .05$ ) difference between the groups associated threat and the two other threats combined.

**Table 2***Omnibus F Test Results for Pilot Data*

Threatening Group	<i>F</i>	<i>df</i>	<i>p</i>
Homeless - P	16.99	2, 126	< .001*
Asians - R	7.98	2, 126	.001*
Evangelical Christians - V	35.53	2, 126	< .001*
Heroin Addicts - P	5.15	2, 126	.007*
Undocumented Immigrants - R	44.55	2, 126	< .001*
Conservatives -V	40.48	2, 126	< .001*
High School Dropouts - P	12.50	2, 126	< .001*
Rich People - R	64.43	2, 126	< .001*
Police Officers -P	33.12	2, 126	< .001*
People in Prison - P	14.40	2, 126	< .001*
Atheists - V	18.11	2, 126	< .001*
<u>Non-Threatening Groups</u>			
Physically Disabled - P	11.40	2, 126	< .001*
Liberals - V	7.95	2, 126	.001*
Feminists -V	0.93	2, 126	.398

*Note.* \* indicates a statistically significant omnibus test below .05. The capital letters next to the group names indicate the threat each group is associated with. P = physical threat, R = resource threat, and V = value threat.

**Table 3***Primary and Secondary Group Combinations*


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<u>Theorized Effective Intersections</u>		
<u>Primary Group</u>	<u>Enhancing Group</u>	<u>Mitigating Group</u>
Homeless	Heroin Addicts	Physically Disabled
Undocumented Immigrants	High-School Dropouts	Asians
Evangelical Christians	Conservatives	Liberals
<u>Non-Effect Intersections</u>		
Homeless	Undocumented Immigrants	Asians
	Conservatives	Liberals
Undocumented Immigrants	Heroin Addicts	Physically Disabled
	Conservatives	Liberals
Evangelical Christians	Heroin Addicts	Physically Disabled
	High School Dropouts	Asians

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*Note.* Theorized effective intersections are combinations expected to be statistically significantly different from the individual social categories that comprise them. Non-effect intersections are combinations that are not expected to be statistically significantly different from the individual social categories that comprise them. Only one primary target group and one secondary target group will be combined at a time.



**Table 4**Group means, *standard deviations* and (contrast weights) for the nine selected groups

Associated Threat	Baseline Groups	Physical	Economic	Value	<i>F</i>	<i>df</i>	<i>p</i>	$\eta^2_p$
Physical Base	Homeless	<b>2.83 1.18 (2)*</b>	2.73 1.75 (-1)	1.76 1.10 (-1)	23.88	1, 164	< .001	.13
Physical Enhance	Heroin Addicts	<b>4.07 1.75 (2)*</b>	3.22 1.92 (-1)	3.59 2.07 (-1)	22.01	1, 164	< .001	.12
Physical Mitigate	Physically Disabled	<b>1.33 0.63 (-2)</b>	1.78 1.17 (1)	1.13 0.46 (1)	3.46	1, 164	.065	.02
Resource Base	Undocumented Immigrants	1.76 1.14 (-1)	<b>2.83 1.82 (2)*</b>	1.64 1.09 (-1)	103.01	1, 164	< .001	.39
Resource Enhance	High School Dropouts	1.74 1.05 (-1)	<b>2.75 1.85 (2)*</b>	2.24 1.56 (-1)	37.88	1, 164	< .001	.19
Resource Mitigate	Asians	1.31 0.80 (1)	<b>1.75 1.29 (-2)*</b>	1.19 0.59 (1)	30.89	1, 164	< .001	.16
Value Base	Very Religious People	2.21 1.44 (-1)	2.20 1.56 (-1)	<b>3.55 2.05 (2)*</b>	92.81	1, 164	< .001	.36
Value Enhance	Conservatives	2.23 1.43 (-1)	3.86 1.94 (-1)	<b>4.30 2.08 (2)*</b>	112.23	1, 164	< .001	.41
Value Mitigate	Liberals	1.46 0.91 (-1)	2.03 1.42 (-1)	<b>1.76 1.34 (-2)</b>	0.05	1, 164	.816	< .001

*Note.* Bold indicates which threat type each group was theoretically associated with. \* indicates a statistically significant ( $p < .05$ )

difference contrast test between the threat each group was associated with and the other threat types combined. Base = The primary group to which other groups will be combined, Enhance = the group theorized to enhance a threat when combined with its respective base group, Mitigate = the group theorized to mitigate a threat when combined with its respective base group.

**Table 5***Omnibus F Test Results for the Nine Selected Groups*

Baseline Groups	<i>F</i>	<i>df</i>	<i>p</i>
Homeless - P	39.29	2, 328	< .001*
Heroin Addicts - P	14.83	2, 328	< .001*
Physically Disabled -P	32.53	2, 328	< .001*
Undocumented Immigrants - R	74.03	2, 328	< .001*
High School Dropouts - R	31.63	2, 328	< .001*
Asians - R	24.00	2, 328	< .001*
Very Religious People - V	64.03	2, 328	< .001*
Conservatives - V	125.61	2, 328	< .001*
Liberals - V	17.89	2, 328	< .001*

*Note.* \* indicates a statistically significant omnibus test below .05. The capital letters next to the group names indicate the threat each group is associated with. P = physical threat, R = resource threat, and V = value threat.

**Table 6***Paired-Samples t-tests within the nine baseline groups on differences between threats and means*

Group	Physical v Economic	Physical v Value	Economic v Value	<i>t</i>	<i>df</i>	<i>p</i>
Homeless	<b>0.10</b>			<b>0.62</b>	<b>164</b>	<b>.538</b>
		<b>1.07</b>		<b>9.77</b>	<b>164</b>	<b>&lt; .001*</b>
			0.97	7.55	164	< .001*
Heroin Addict	<b>0.85</b>			<b>5.38</b>	<b>164</b>	<b>&lt; .001*</b>
		<b>0.48</b>		<b>2.96</b>	<b>164</b>	<b>.004</b>
			-0.37	-2.49	164	.014
Physically Disabled	<b>-0.45</b>			<b>-4.62</b>	<b>164</b>	<b>&lt; .001*</b>
		<b>0.21</b>		<b>3.68</b>	<b>164</b>	<b>&lt; .001*</b>
			0.66	7.27	164	< .001*
Undocumented Immigrant	<b>-1.07</b>			<b>-8.79</b>	<b>164</b>	<b>&lt; .001*</b>
		0.12		1.49	164	.139

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			<b>1.19</b>	<b>10.31</b>	<b>164</b>	<b>&lt; .001*</b>
High School Dropout	<b>-1.01</b>			<b>-7.23</b>	<b>164</b>	<b>&lt; .001*</b>
		-0.50		-4.59	164	< .001*
			<b>0.51</b>	<b>3.91</b>	<b>164</b>	<b>&lt; .001*</b>
Asian	<b>-0.44</b>			<b>-4.44</b>	<b>164</b>	<b>&lt; .001</b>
		0.12		1.91	164	.058
			<b>0.59</b>	<b>6.20</b>	<b>164</b>	<b>&lt; .001*</b>
Very Religious People	0.01			.06	164	.955
		<b>-1.34</b>		<b>-8.81</b>	<b>164</b>	<b>&lt; .001*</b>
			<b>-1.35</b>	<b>-9.16</b>	<b>164</b>	<b>&lt; .001*</b>
Conservatives	-1.63			-11.78	164	< .001*
		<b>-2.07</b>		<b>-13.82</b>	<b>164</b>	<b>&lt; .001*</b>
			<b>-0.44</b>	<b>-3.58</b>	<b>164</b>	<b>&lt; .001*</b>
Liberals	-0.57			-5.68	164	< .001*

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	<b>-0.30</b>		<b>-3.24</b>	<b>164</b>	<b>.001*</b>
		<b>0.27</b>	<b>2.90</b>	<b>164</b>	<b>.004</b>

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*Note.* The predetermined Bonferroni correction of  $\alpha = .002$  was put into effect for post hoc analyses. \* indicates a p-value less than .002. Bold indicates threats that were theorized to be different from each other in regards to a group's stereotypes (i.e., For homeless people, physical threat and resource threat, and physical threat and value threat were theorized to be statistically significantly different from one another).

**Table 7***A Priori Difference Contrast Tests, Means and (Weights)*

Threat Combination	Intersected Group	Primary Group	Secondary Group	<i>F</i>	<i>df</i>	<i>p</i>	$\eta_p^2$
Physical Enhancing	HO:HA 3.94 (2)	HO 2.83 (-1)	HA 4.07 (-1)	25.97	1, 164	< .001*	.14
Resource Enhancing	UI:HS 2.79(2)	UI 2.83 (-1)	HS 2.75 (-1)	< 0.01	1, 164	.971	< .01
Value Enhancing	VR:CO 4.19 (2)	VR 3.55 (-1)	CO 4.30 (-1)	6.88	1, 164	.010	.04
Physical Mitigating	HO:PD 1.59 (-2)	HO 2.83 (1)	PD 1.33 (1)	58.17	1, 164	< .001*	.26
Resource Mitigating	UI:AS 2.51 (-2)	UI 2.83 (1)	AS 1.75 (1)	7.33	1, 164	.007	.04
Value Mitigating	VR:LI 2.56 (-2)	VR 3.55 (1)	LI 1.76 (1)	0.82	1, 164	.366	< .01

*Note.* All six theorized effective intersected target groups with primary and secondary groups, and corresponding contrast weights.

Contrast weights indicate the intersected groups are being compared to the primary and secondary groups combined. The direction of the contrast weight (e.g., 2 and -2) indicates the predicted threat level pattern and direction between the intersected, and primary and secondary groups combined. HO = Homeless, HA = Heroin Addicts, PD = Physically Disabled, UI = Undocumented Immigrants, HS = High School Dropouts, AS = Asians, VR = Very Religious, CO = Conservative, LI = Liberal. \* indicates a statistically significant difference contrast with a *p*-value below the *a priori* Bonferroni correction of  $\alpha = .002$ .

**Table 8***Omnibus Repeated Measures ANOVA Tests for the A Priori Groups*

Threat Combination	Intersected Group	Primary Group	Secondary Group	<i>F</i>	<i>df</i>	<i>p</i>	$\eta_p^2$
Physical Enhancing	HO:HA 3.94	HO 2.83	HA 4.07	64.16	2, 328	< .001*	.28
Resource Enhancing	UI:HS 2.79	UI 2.83	HS 2.75	0.20	2, 328	.822	< .01
Value Enhancing	VR:CO 4.19	VR 3.55	CO 4.30	15.93	2, 328	<.001*	.09
Physical Mitigating	HO:PD 1.59	HO 2.83	PD 1.33	145.71	2, 328	< .001*	.47
Resource Mitigating	UI:AS 2.51	UI 2.83	AS 1.75	41.50	2, 328	< .001*	.20
Value Mitigating	VR:LI 2.56	VR 3.55	LI 1.76	60.217	2, 328	< .001*	.27

*Note.* . HO = Homeless, HA = Heroin Addicts, PD = Physically Disabled, UI = Undocumented Immigrants, HS = High School Dropouts, AS = Asians, VR = Very Religious, CO = Conservative, LI = Liberal. \* indicates a statistically significant difference contrast with a *p*-value below the *a priori* Bonferroni correction of  $\alpha = .002$ .

**Table 9***Means and Contrast Weights of Difference contrasts of Theorized Intersections and Primary or Secondary Groups*

Associated Threat	Predicted Intersection	Primary Group	Secondary Group	<i>F</i>	<i>df</i>	<i>p</i>	$\eta^2_p$
Physical	HO:HA 3.94 (1)	HO 2.83 (-1)		82.38	1, 164	< .001*	.33
Physical	HO:HA 3.94 (1)		HA 4.07 (-1)	1.51	1, 164	.221	.01
Physical	HO:PD 1.59 (-1)	HO 2.83 (1)		145.90	1, 164	< .001*	.47
Physical	HO:PD 1.59 (-1)		PD 1.33 (1)	16.97	1, 164	< .001*	.09
Resource	UI:HS 2.79 (1)	UI 2.83 (-1)		0.13	1, 164	.716	< .01
Resource	UI:HS 2.79 (1)		HS 2.75 (-1)	0.12	1, 164	.734	< .01



Resource	UI:AS 2.51 (-1)	UI 2.83 (1)	11.26	1, 164	.001*	.06	
Resource	UI:AS 2.51 (-1)		AS 1.75 (1)	40.20	1, 164	< .001*	.20
Value	VR:CO 4.19 (1)	VR 3.55 (-1)	20.41	1, 164	< .001*	.11	
Value	VR:CO 4.19 (1)		CO 4.30 (-1)	0.82	1, 164	.367	.01
Value	VR:LI 2.56 (-1)	3.55 (1)	44.29	1, 164	< .001*	.21	
Value	VR:LI 2.56 (-1)		LI 1.76 (1)	35.32	1, 164	< .001*	.18

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*Note.* Contrast weights indicate how the test was predicted to go in relation to the hypotheses. Homeless, HA = Heroin Addicts, PD = Physically Disabled, UI = Undocumented Immigrants, HS = High School Dropouts, AS = Asians, VR = Very Religious, CO = Conservative, LI = Liberal. \* indicates a statistical significance level below an *a priori* Bonferroni correction of  $\alpha = .002$ .

**Table 10***Means, (Contrast Weights) and Difference Contrasts Results for Threat-Specific Contrasts*

Threat Type	Predicted Intersections	Non-Effect Intersections	<i>F</i>	<i>df</i>	<i>p</i>	$\eta_p^2$
Physically Enhancing	HO:HA (4) 3.94	HO:UI (-1) 2.06	249.83	1, 164	< .001*	.60
		HO:AS(-1) 1.75				
		HO:CO (-1) 2.19				
		HO:LI (-1) 1.89				
Resource Enhancing	UI:HS (4) 2.79	UI:HA (-1) 3.40	0.01	1, 164	.945	< .01
		UI:PD (-1) 2.52				
		UI:CO (-1) 2.75				
		UI:LI (-1) 2.52				
Value Enhancing	VR:CO (4) 4.19	VR:HA (-1) 3.76	110.93	1, 164	< .001*	.40
		VR:PD (-1) 2.25				
		VR:HS (-1) 3.03				
		VR:AS (-1) 2.17				

Physically Mitigating	HO:PD (-4) 1.59	HO:UI (1) 2.06	28.49	1, 164	< .001*	.15
		HO:AS(1) 1.75				
		HO:CO (1) 2.19				
		HO:LI (1) 1.89				
Resource Mitigating	UI:AS (-4) 2.51	UI:HA (1) 3.40	11.62	1, 164	.001*	.07
		UI:PD (1) 2.52				
		UI:CO (1) 2.75				
		UI:LI (1) 2.52				
Value Mitigating	VR:LI(-4) 2.56	VR:HA (1) 3.76	4.05	1, 164	.046	.02
		VR:PD (1) 2.25				
		VR:HS (1) 3.03				
		VR:AS (1) 2.17				

*Note.* Difference contrasts between theorized-effective intersection to be more (4) or less (-4) threatening than all four non-effect intersections (-1 or 1, respectively). The direction of the contrast weight (e.g., 4 and -4) indicates the predicted threat level pattern and direction between the theorized-effective intersections and the non-effect intersections. Homeless, HA = Heroin Addicts, PD = Physically Disabled, UI = Undocumented Immigrants, HS = High School Dropouts, AS = Asians, VR = Very Religious, CO = Conservative, LI = Liberal. \* indicates a p-value below the *a priori* Bonferroni correction of  $\alpha = .002$ .

**Table 11***Means, (Contrast Weights) and Omnibus ANOVA Results for Threat-Specific Tests*

Threat Type	Predicted Intersections	Non-Effect Intersections	<i>F</i>	<i>df</i>	<i>p</i>	$\eta_p^2$
Physically Enhancing	HO:HA (4) 3.94	HO:UI (-1) 2.06	126.28	4, 656	< .001*	.44
		HO:AS(-1) 1.75				
		HO:CO (-1) 2.19				
		HO:LI (-1) 1.89				
Resource Enhancing	UI:HS (4) 2.79	UI:HA (-1) 3.40	18.28	4, 656	< .001*	.10
		UI:PD (-1) 2.52				
		UI:CO (-1) 2.75				
		UI:LI (-1) 2.52				
Value Enhancing	VR:CO (4) 4.19	VR:HA (-1) 3.76	132.51	4, 656	< .001*	.33
		VR:PD (-1) 2.25				
		VR:HS (-1) 3.03				
		VR:AS (-1) 2.17				

Physically Mitigating	HO:PD (-4) 1.59	HO:UI (1) 2.06	13.31	4, 656	< .001*	.08
		HO:AS(1) 1.75				
		HO:CO (1) 2.19				
		HO:LI (1) 1.89				
Resource Mitigating	UI:AS (-4) 2.51	UI:HA (1) 3.40	21.03	4, 656	.001*	.11
		UI:PD (1) 2.52				
		UI:CO (1) 2.75				
		UI:LI (1) 2.52				
Value Mitigating	VR:LI(-4) 2.56	VR:HA (1) 3.76	45.86	4, 656	< .001*	.22
		VR:PD (1) 2.25				
		VR:HS (1) 3.03				
		VR:AS (1) 2.17				

*Note.* Homeless, HA = Heroin Addicts, PD = Physically Disabled, UI = Undocumented Immigrants, HS = High School Dropouts, AS = Asians, VR = Very Religious, CO = Conservative, LI = Liberal. \* indicates a p-value below the *a priori* Bonferroni correction of  $\alpha = .002$ .

**Table 12***Follow up analyses testing mitigation categories*

Threat	Mitigation Group	Primary Group	Enhancing Group	<i>F</i>	<i>df</i>	<i>p</i>	$\eta_p^2$
Physical	Physically Disabled (-2)	Homeless (1)	Heroin Addicts (1)	351.76	1, 164	< .001*	.68
Resource	Asians (-2)	Undocumented Immigrants (1)	High School Dropouts (1)	56.71	1, 164	< .001*	.26
Value	Liberals (-2)	Very Religious (1)	Conservatives (1)	137.16	1, 164	< .001*	.45

*Note.* Results of a difference contrast comparing the mitigation group to its respective primary and enhancing groups. \* indicates a statistically significant results below the *a priori* Bonferroni correction of  $\alpha = .002$ . See relevant means on Table 4.

**Table 13***Follow up Analyses Testing for a Linear Trend between Intersections and Comprising Group*

Associated Threat	Primary Group	Intersected Group	Secondary Group	<i>F</i>	<i>df</i>	<i>p</i>	$\eta_p^2$
Physical	HO (1)	HO:HA (0)	HA (-1)	91.94	1, 164	< .001*	.36
Physical	HO (1)	HO:PD (0)	PD (-1)	186.44	1, 164	< .001*	.53
Physical	HO (1)	HO:UI (0)	UI (-1)	112.26	1, 164	< .001*	.41
Physical	HO (1)	HO:AS (0)	AS (-1)	110.42	1, 164	< .001*	.40
Physical	HO (1)	HO:CO (0)	CO (-1)	21.29	1, 164	< .001*	.12
Physical	HO (1)	HO:LI (0)	LI (-1)	131.37	1, 164	< .001*	.45
Resource	UI (1)	UI:HS (0)	HS (-1)	0.27	1, 164	.602	< .001
Resource	UI (1)	UI:AS (0)	AS (-1)	55.64	1, 164	< .001*	.25
Resource	UI (1)	UI:HA (0)	HA (-1)	4.96	1, 164	.027	.03
Resource	UI (1)	UI:PD (0)	PD (-1)	63.08	1, 164	< .001*	.28
Resource	UI (1)	UI:CO (0)	CO (-1)	27.60	1, 164	< .001*	.14
Resource	UI (1)	UI:LI (0)	LI (-1)	36.20	1, 164	< .001*	.18

Value	VR (1)	VR:CO (0)	CO (-1)	20.48	1, 164	< .001*	.11
Value	VR (1)	VR:LI (0)	LI (-1)	80.42	1, 164	< .001*	.33
Value	VR (1)	VR:HA (0)	HA (-1)	0.05	1, 164	.819	< .001
Value	VR (1)	VR:PD (0)	PD (-1)	238.26	1, 164	< .001*	.59
Value	VR (1)	VR:HS (0)	HS (-1)	48.94	1, 164	< .001*	.23
Value	VR (1)	VR:AS (0)	AS (-1)	216.98	1, 164	< .001*	.57

*Note.* Contrast weights within parentheses next to group initials indicate how each group was rated in a linear contrast. The linear contrast tested whether the intersected group fell between its respective primary and secondary groups. Homeless, HA = Heroin Addicts, PD = Physically Disabled, UI = Undocumented Immigrants, HS = High School Dropouts, AS = Asians, VR = Very Religious, CO = Conservative, LI = Liberal. \* indicates a p-value below the *a priori* Bonferroni correction of  $\alpha = .002$ .



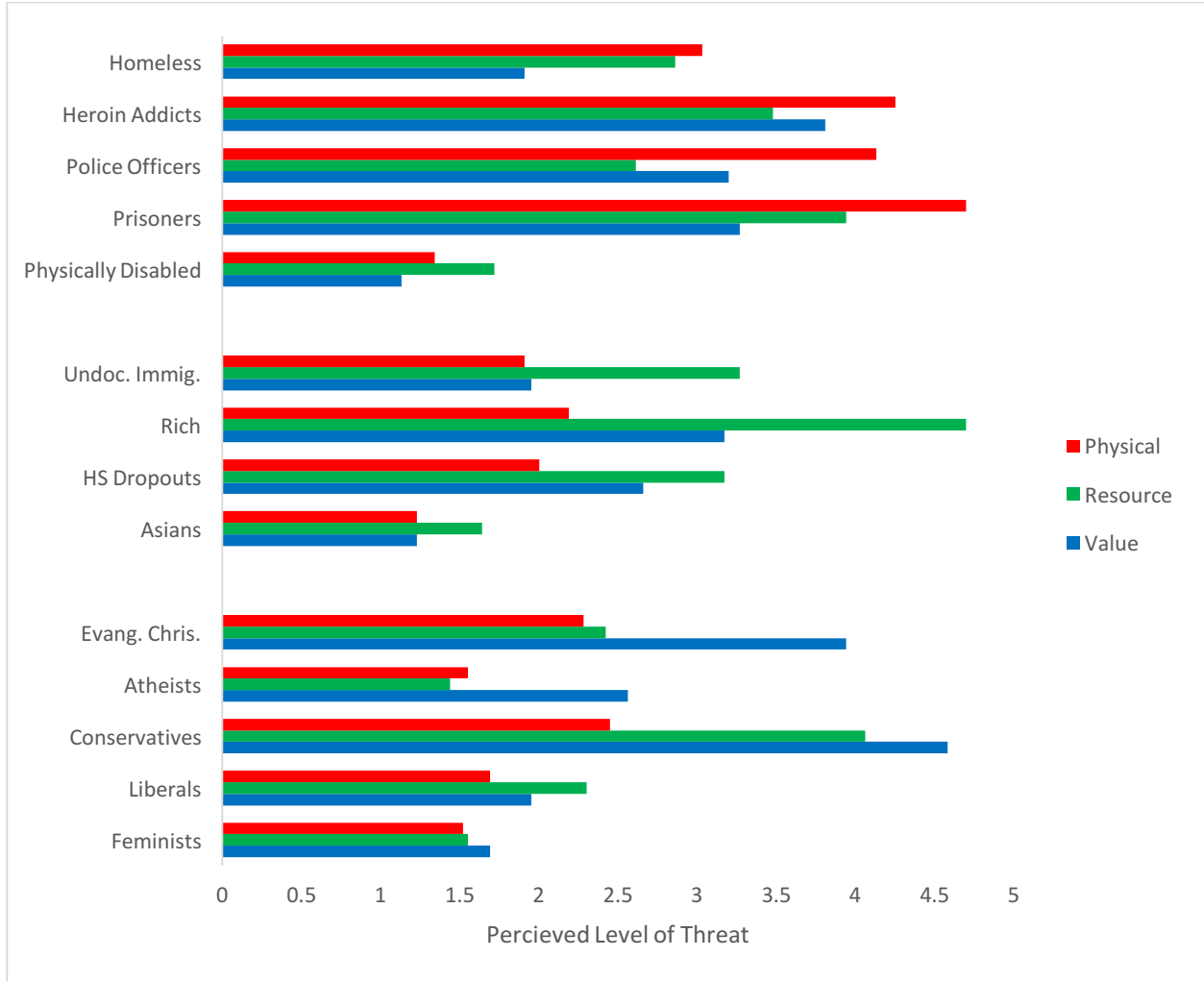


Figure 1. Pilot study results of repeated measures ANOVAs. The top cluster of groups is associated with physical threat, the middle cluster is associated with resource threat, and the bottom cluster of groups is associated with value threat. Undoc. Immig. = Undocumented Immigrant, HS Dropouts = High school dropouts, Evang. Chris.= Evangelical Christians.

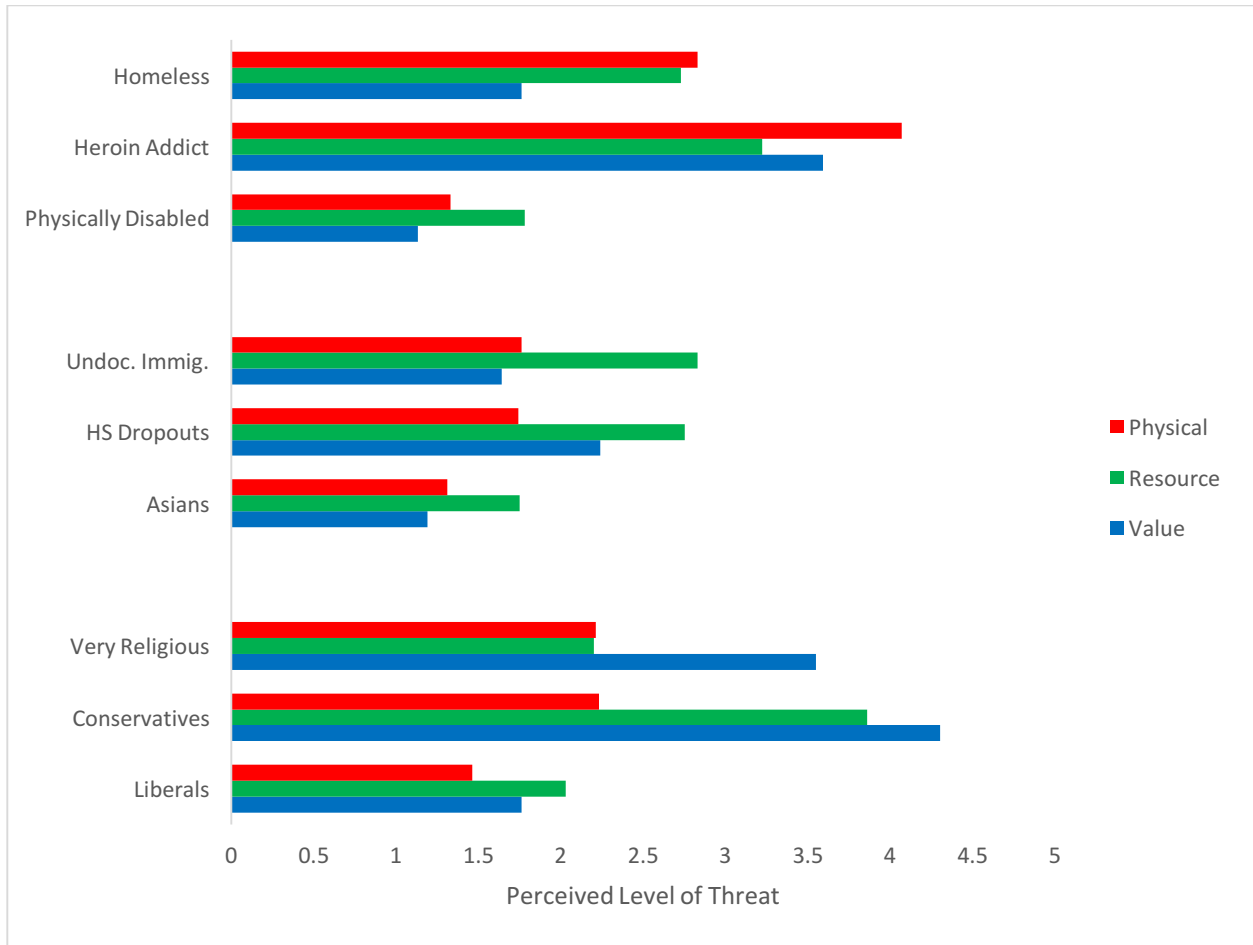


Figure 2. Baseline mean threat levels of each group. The top cluster of groups is associated with physical threat, the middle cluster is associated with resource threat, and the bottom cluster of groups is associated with value threat. Undoc. Immig. = Undocumented Immigrant, HS Dropouts = High school dropouts.

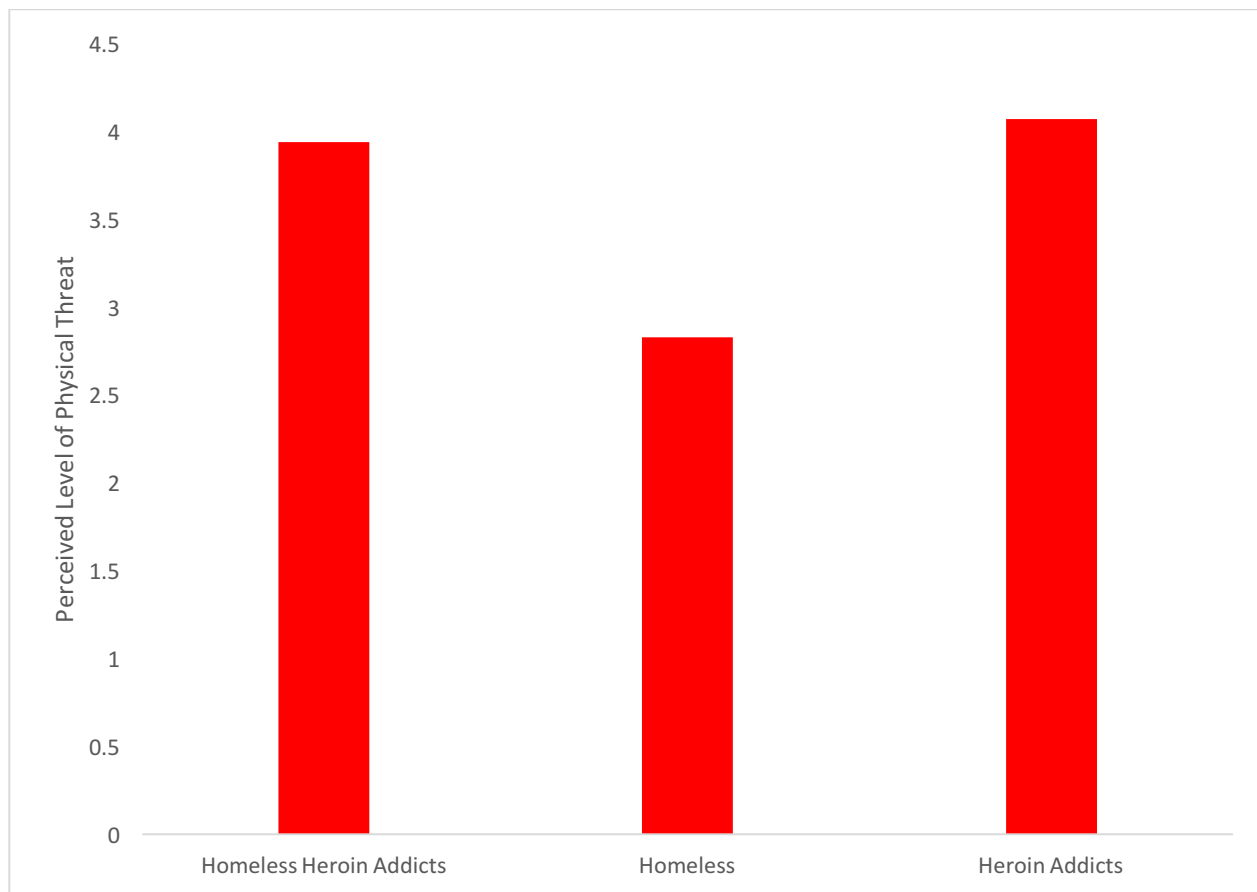


Figure 3. Physical threat-enhancing contrast comparing homeless heroin addicts to the homeless and heroin addicts.

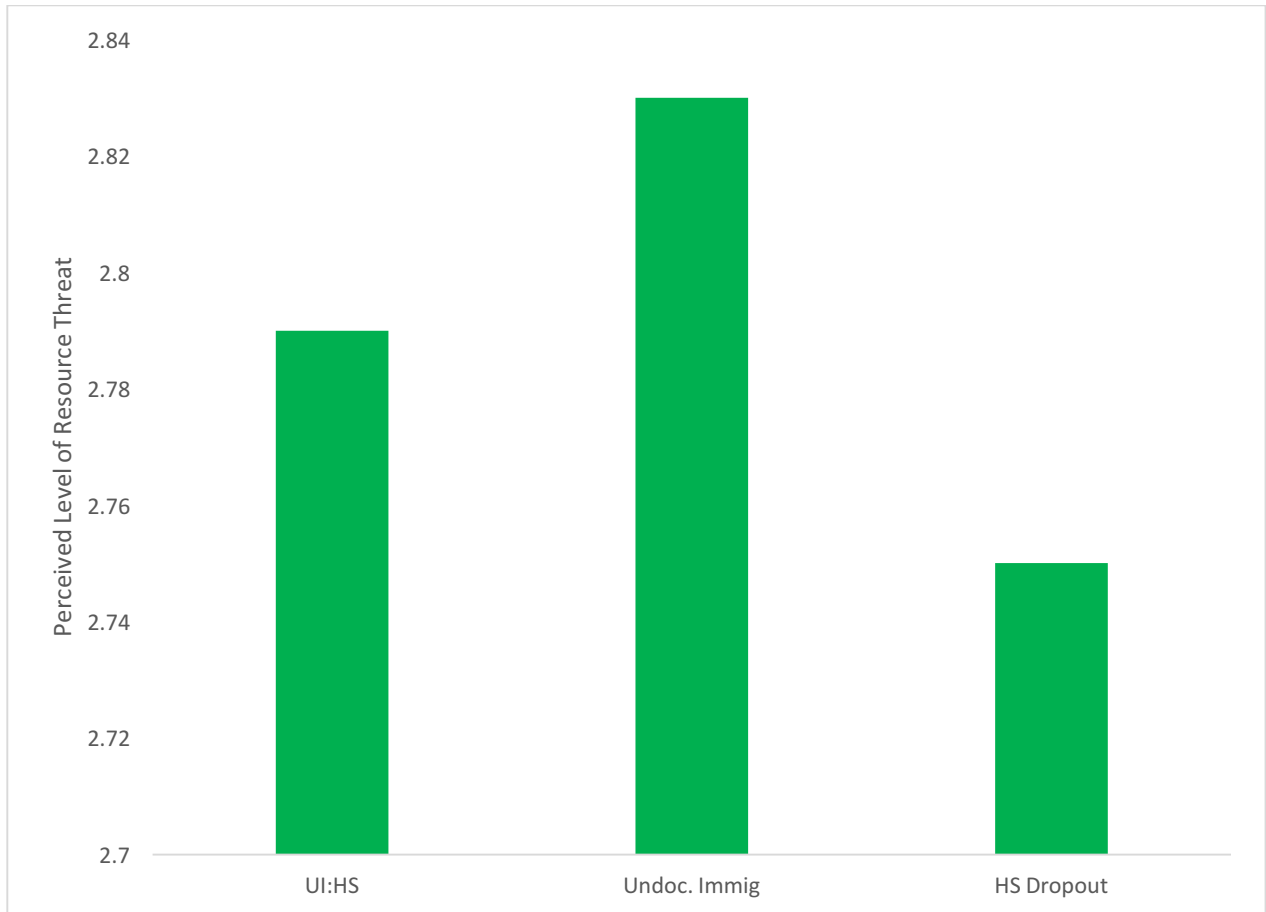


Figure 4. Resource threat-enhancing contrast comparing undocumented immigrant high school dropouts to undocumented immigrants and high school dropouts. UI:HS = undocumented immigrant high school dropouts, Undoc. Immig = Undocumented immigrant, HS dropout = high school dropouts.

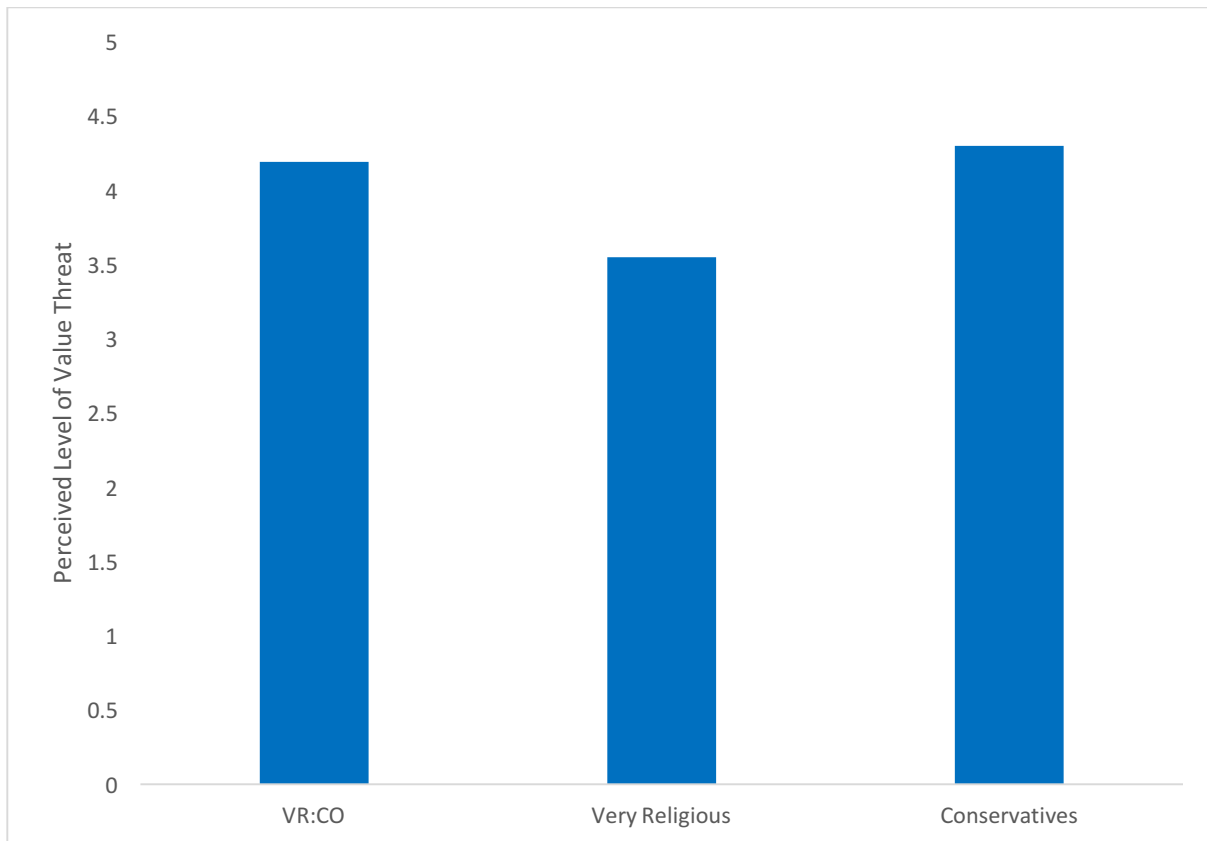


Figure 5. Resource threat-enhancing contrast comparing very religious conservatives to the very religious and conservatives. VR:CO = Very religious conservatives.

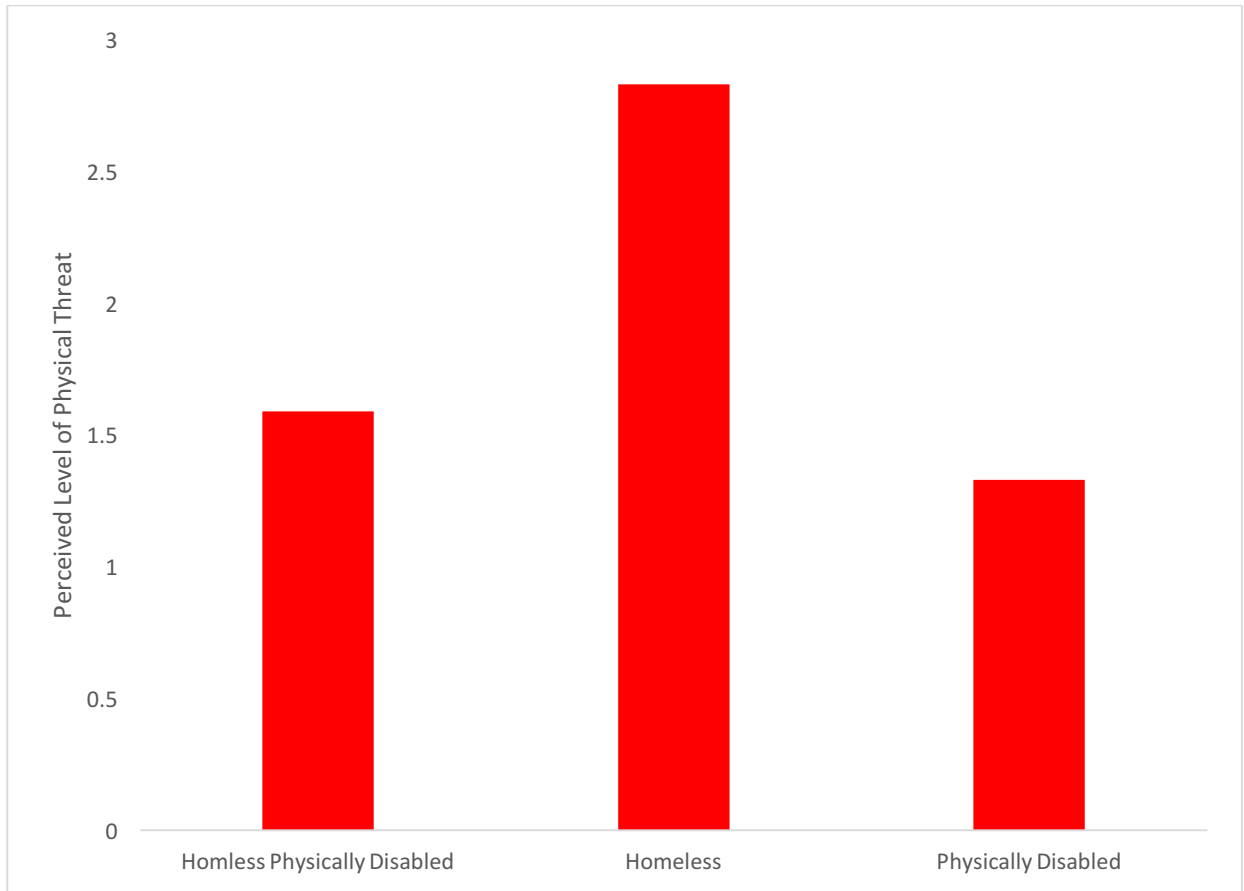


Figure 6. Physically threat-mitigating contrast comparing homeless physically disabled to the homeless and the physically disabled.

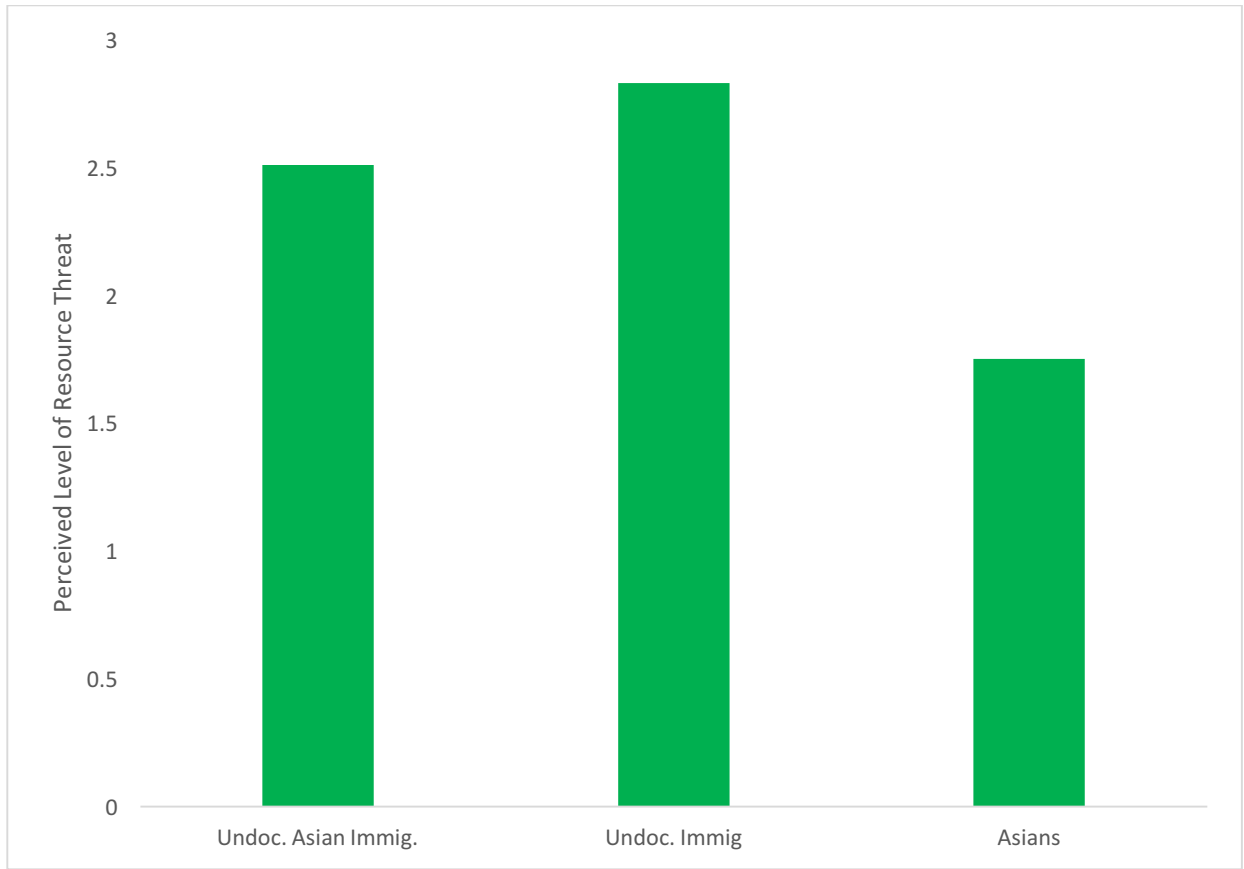


Figure 7. Resource threat-mitigating contrast comparing undocumented Asian immigrants, undocumented immigrants and Asians. Undoc. Asian Immig = Undocumented Asian immigrants, Undoc. Immig = undocumented immigrants.

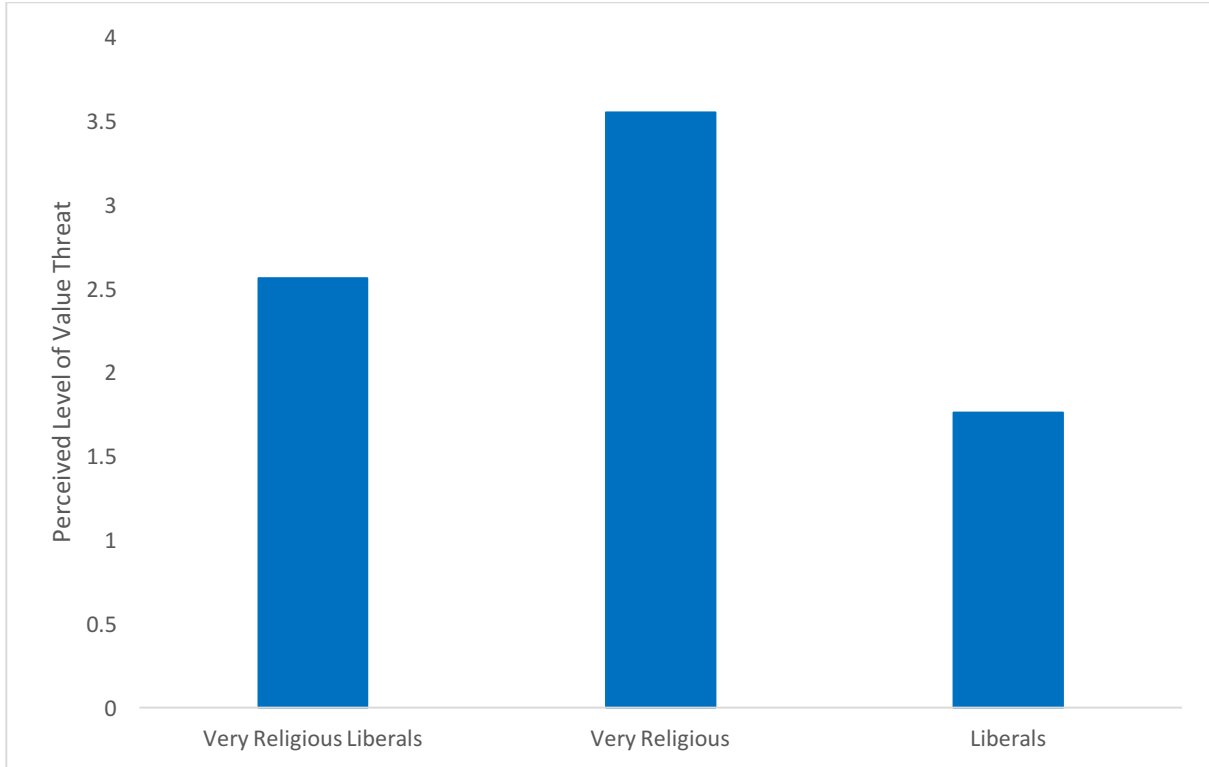


Figure 8. Value threat-mitigating contrast comparing very religious liberals to the very religious and liberals.



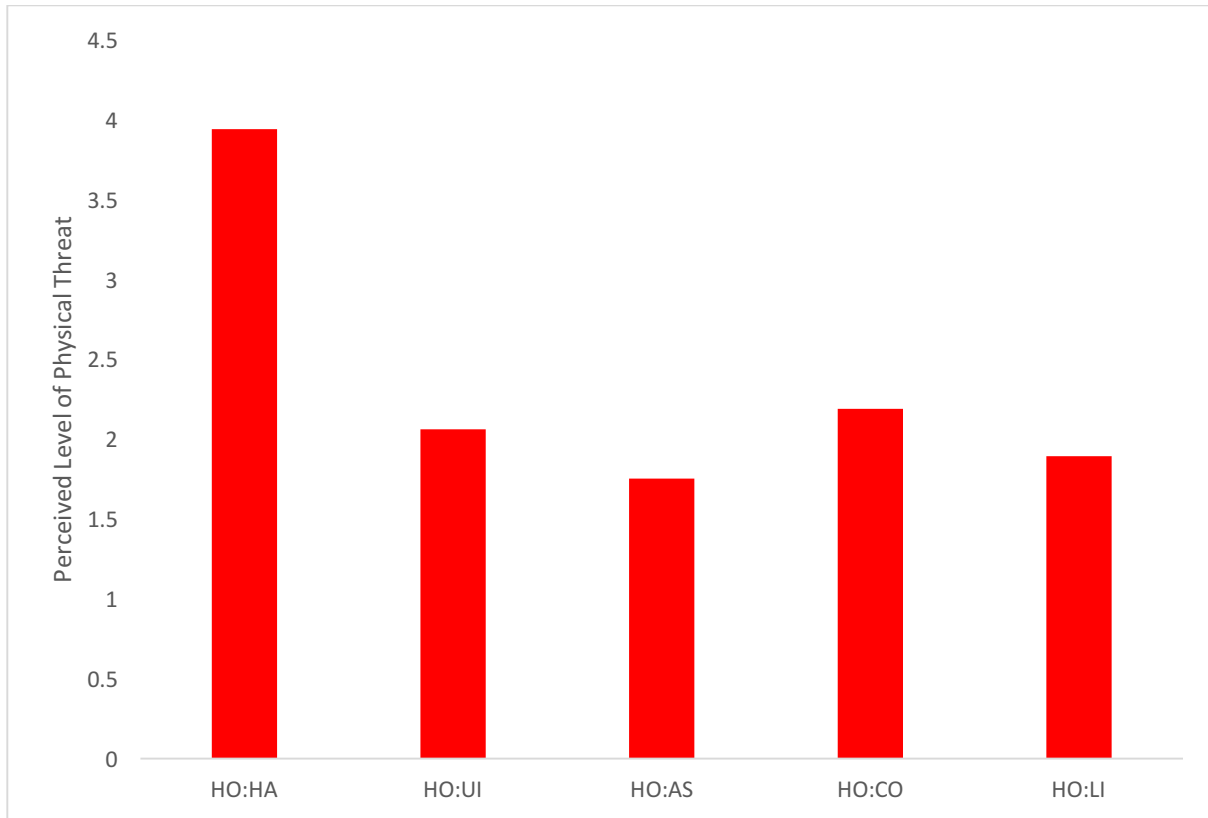


Figure 9. Physical threat-enhancing specific contrast. This contrast compares homeless heroin addicts to homeless undocumented immigrants, homeless Asians, homeless conservatives and homeless liberals. HO:HA = homeless heroin addicts, HO:UI = homeless undocumented immigrants, HO:AS = homeless Asians, HO:CO = homeless conservatives, HO:LI = homeless liberals.

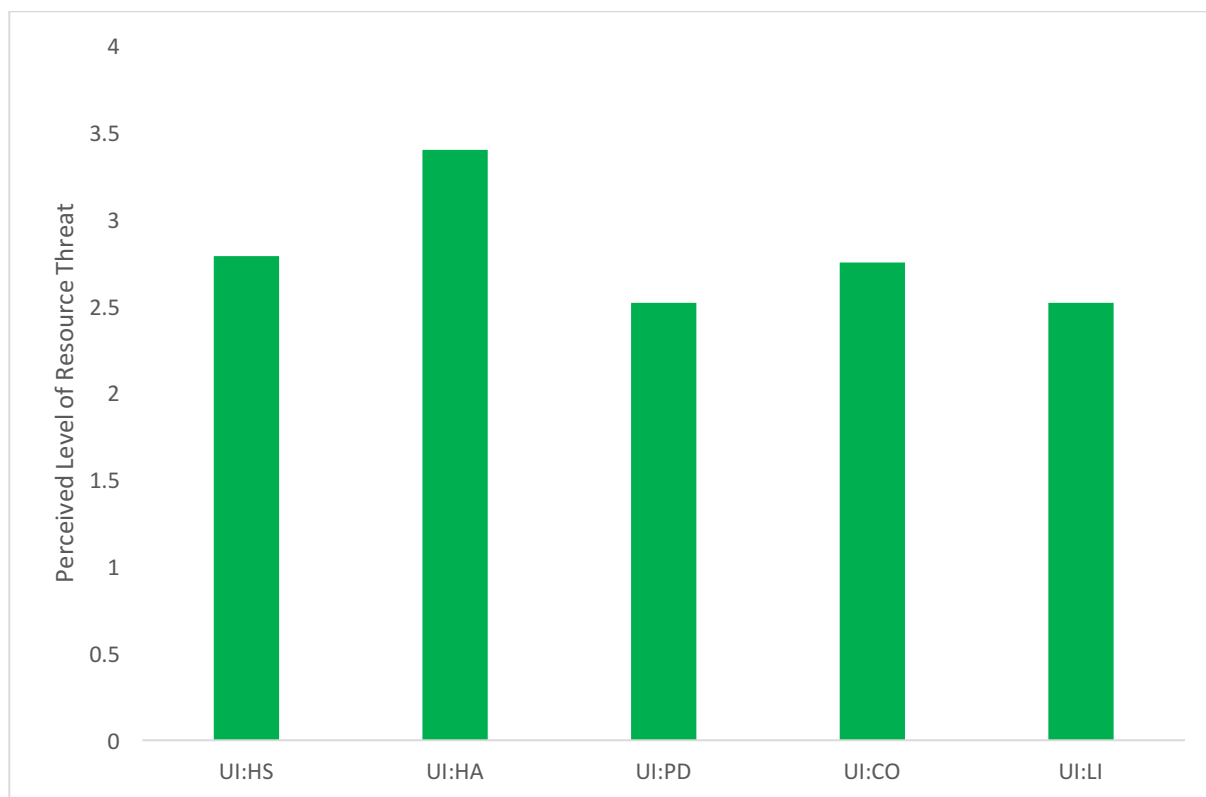


Figure 10. Resource threat-enhancing specific contrast. This contrast compares undocumented immigrant high school dropouts to undocumented immigrant heroin addicts, physically disabled undocumented immigrants, undocumented immigrant conservatives and undocumented immigrant liberals. UI:HS = undocumented immigrant high school dropouts, UI:HA = undocumented immigrant heroin addicts, UI:PD = physically disabled undocumented immigrants, UI:CO = undocumented immigrant conservatives, UI:LI = undocumented immigrant liberals.

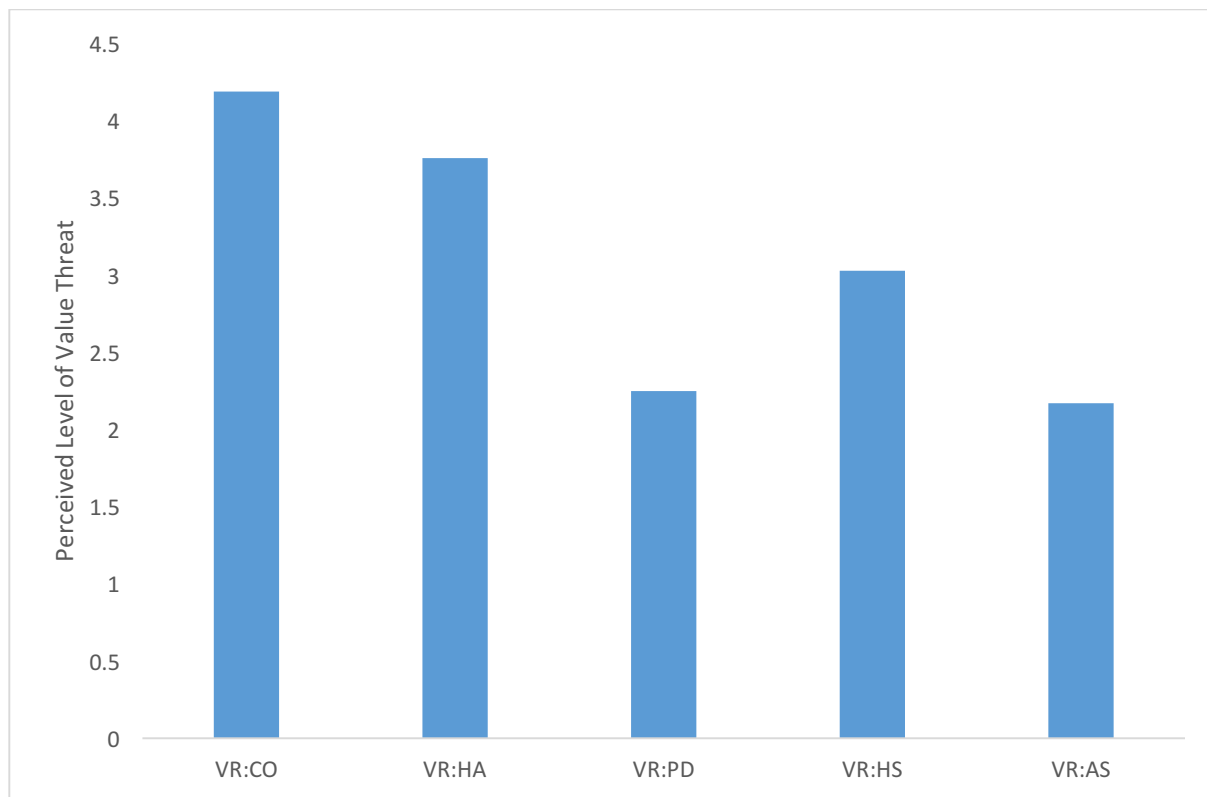


Figure 11. Value threat-enhancing specific contrast. This contrast compares very religious conservatives to very religious heroin addicts, very religious physically disabled people, very religious high school dropouts and very religious Asians. VR:CO = very religious conservatives, VR:HA = very religious heroin addicts, VR:PD = very religious physically disabled, VR:HS = very religious high school dropouts, VR:AS = very religious Asians.

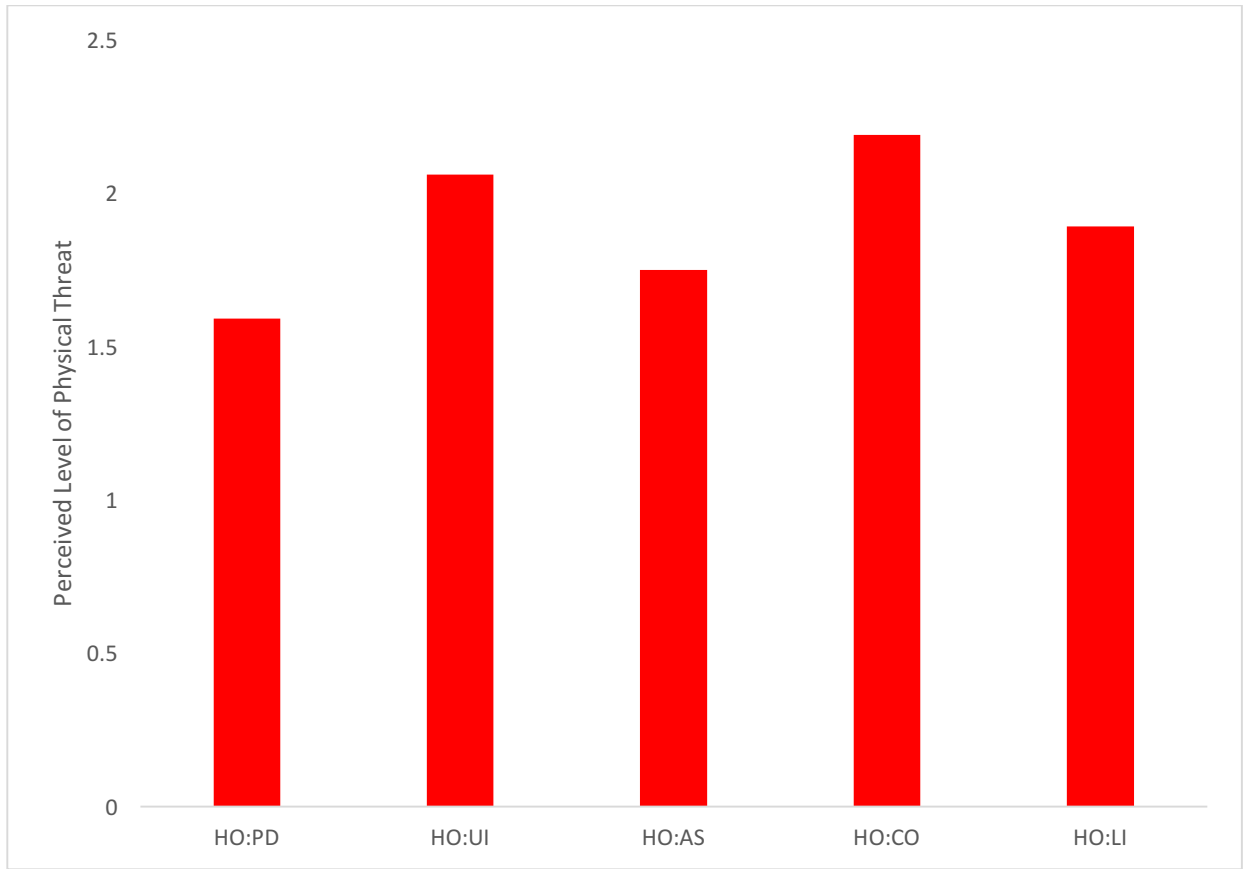


Figure 12. Physical threat-mitigating specific contrast. This contrast compares physically disabled homeless to homeless undocumented immigrants, homeless Asians, homeless conservatives and homeless liberals. HO:PD = physically disabled homeless, HO:UI = homeless undocumented immigrants, HO:AS = homeless Asians, HO:CO = homeless conservatives, HO:LI = homeless liberals.

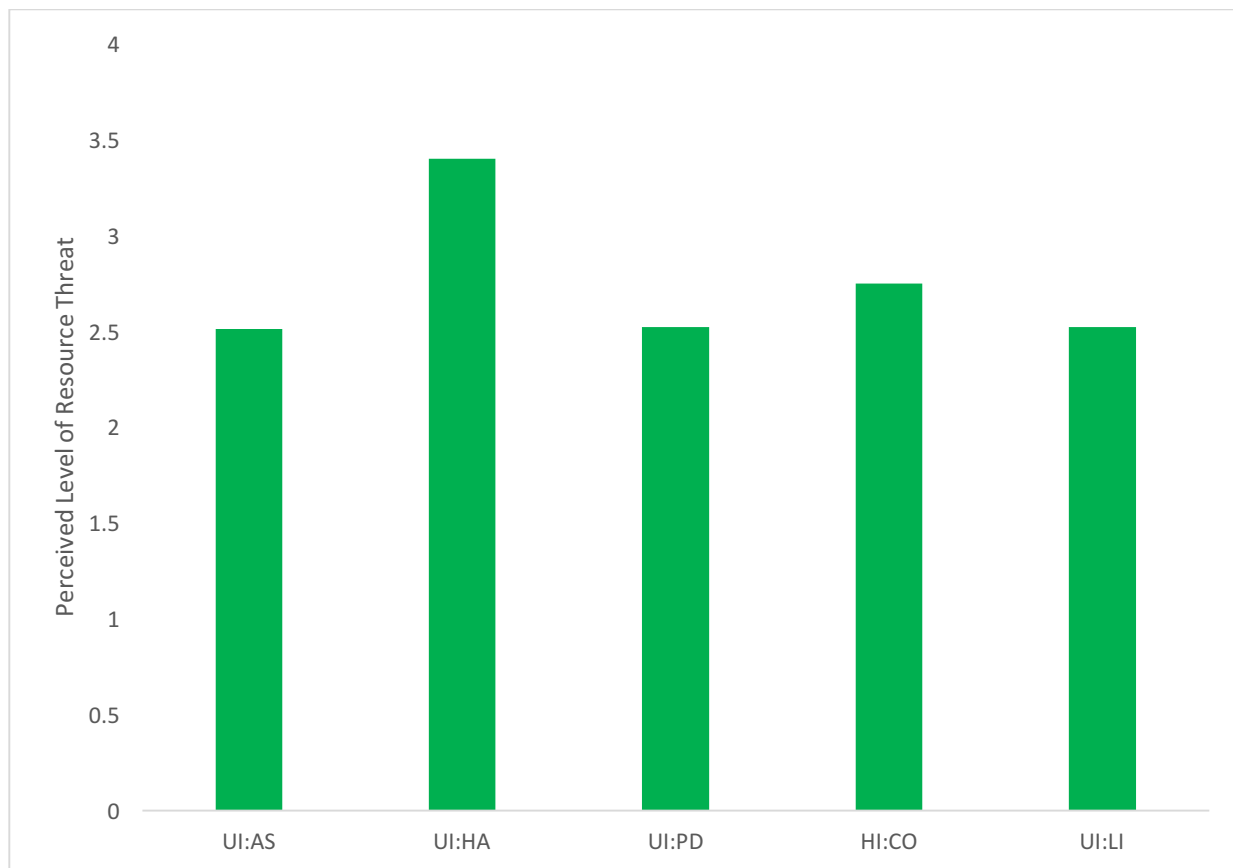


Figure 13. Resource threat-mitigating specific contrast. This contrast compares undocumented Asian immigrants to undocumented immigrant heroin addicts, physically disabled undocumented immigrants, undocumented immigrant conservatives and undocumented liberals. UI:AS = undocumented Asian immigrants, UI:HA = undocumented immigrant heroin addicts, UI:PD = physically disabled undocumented immigrants, UI:CO = undocumented immigrant conservatives, UI:LI = undocumented immigrant liberals.

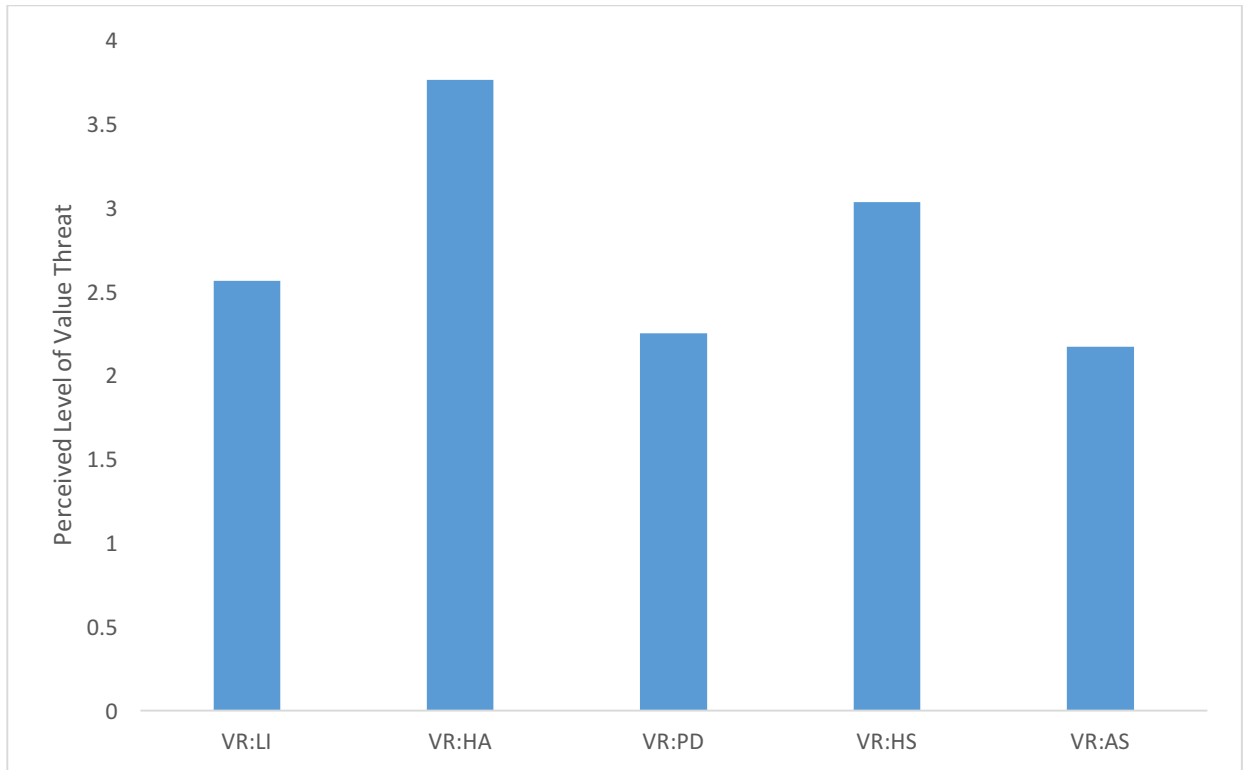


Figure 14. Value threat-mitigating specific contrast. This contrast compares very religious liberals to very religious heroin addicts, very religious physically disabled people, very religious high school dropouts and very religious Asians. VR:LI = very religious liberals, VR:HA = very religious heroin addicts, VR:PD = very religious physically disabled people, VR:HS = very religious high school dropouts, VR:AS = very religious Asians.