PRIMING A VOLUNTEER STEREOTYPE: DO VOLUNTEERS TOLERATE MORE AMIBGUITY?

Steven August Hirsch Jr.

A thesis submitted in partial fulfillment of
the requirements of the degree of
Master of Arts

Department of Psychology

Central Michigan University
Mount Pleasant, Michigan
August 2016

ACKNOWLEDGEMENTS

I wish to thank the members of my thesis committee: Dr. Terry Beehr, Dr. Mathew Prewett, and Dr. Bryon Gibson. These faculty members provided valuable direction when this project began, reviewed the draft of the document, and made many contributions to the final product. Throughout the process, these faculty members drew on their experiences of working with many graduate students as professors, dissertation advisors, and dissertation committee members.

ABSTRACT

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This study explored if tolerance for ambiguity (TA) was a stereotype of being a volunteer. Stereotype threat and boost literature suggests that individuals would react differently to volunteer primes depending on the salience of volunteering. Blatant and subtle priming techniques activated either the TA or volunteer stereotype using an online platform. Participants were randomly assigned into five priming groups: blatant TA prime, blatant volunteer stereotype prime, subtle TA prime, subtle volunteer stereotype prime, and a blatant neutral prime as a control group. Participants in the blatant priming conditions wrote an essay, and those in the subtle priming conditions completed a sentence scramble task. Independent samples t-tests were used to compare mean differences between conditions. Analysis of 489 individuals recruited by mTurk found no support for the ability to prime TA in the sample. Having a strong volunteer self-concept did not produce any significant findings regarding the volunteer prime. Participants with a weak volunteer self-concept receiving the blatant volunteer prime were more willing to accept ambiguous volunteer roles than those who received the subtle volunteer prime and were primed for TA. These findings suggest that managers of volunteer organizations should clarify volunteer role responsibilities to novice volunteers in order to lessen volunteer burnout and intentions to quit. These findings lay the groundwork for further research on priming of TA and stereotype boost effects of the volunteer stereotype.

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INTRODUCTION

American volunteers do not always know what they are supposed to be doing. Volunteer management research has identified the adverse effects of ambiguity in volunteer work (Doherty & Hoye, 2011; Farmer & Fedor 1999; Studer & Schnurbein, 2013), which is linked to volunteers' burnout and intentions to quit (Allen & Mueller, 2013; Studer & Schnurbein, 2013). Ambiguity in volunteers' tasks is pervasive even while nonprofit research and best-practice literature recommend detailed volunteer position descriptions (Studer & Schnurbein, 2013). Yet Americans continue to volunteer in great numbers. National reports find that 62.8 million or 25.3% of adult Americans volunteered in 2014 (Bureau of Labor Statistics [BLS], 2015). These volunteers contributed an estimated 8.1 billion hours of labor in 2013, representing approximately $163 billion worth of work (Urban Institute, 2014). American volunteers served in a variety of roles: for example, collecting, preparing, distributing, or serving food; fundraising; and tutoring or teaching (BLS, 2015). Individuals spent a median of 50 hours conducting volunteer work in 2014 (BLS, 2015).

A range of national survey data is available to measure the prevalence of ambiguity in volunteer work. Ireland conducted a nation-wide survey of 221 volunteer organizations, including questions involving role clarity. They reported that 22.2% of respondents did not issue written position descriptions, and just over half, 53.8%, did not have a handbook for volunteers (Volunteer Ireland, 2013). In the United Kingdom, a 2007 survey of 2,705 people reported that 81% of volunteers did not receive position descriptions (Institute for Volunteering Research, 2007). Individuals who volunteered regularly indicated that they received position descriptions more often than occasional volunteers, however (24% vs 13%). A 2006 Australian national

survey questioned 373 volunteers and 341 volunteer organizations (Volunteer Australia, 2006). They found that 42% of volunteers did not receive clear, written position descriptions. Also, 20% felt they did not receive the information and support necessary to perform the position. Those who did not receive position descriptions were more likely to report feeling unsupported in their work, inadequately trained, and without opportunities to participate in decisions that affect them and their volunteer work (Volunteer Australia, 2006). They also reported more uncertainty, conflict, or confusion between paid workers and volunteers in their organization. No national survey data has been collected concerning volunteer position descriptions in the United States.

There are many possible sources for ambiguity in volunteer positions. A volunteer organization's structure can range from highly-structured with paid staff supervision, to an entirely volunteer-run organization. The interpersonal dynamics between paid and unpaid workers has been the focus of some research (Doherty & Hoye, 2011; Merrell, 2000), but it is questionable if these findings can be applied to volunteer-only organizations. Volunteer organizations' missions vary in scope from large national issues, such as curing cancer, to local projects such as operating a youth baseball team. Research has generally recognized the range restrictions of their findings, that is findings from one volunteer setting may not generalize to all other volunteer settings (e.g., Allen & Mueller, 2013; Doherty & Hoye, 2011). Many American nonprofits provide a vertical volunteer power structure allowing volunteers to manage one another. This creates a diverse set of roles that volunteers may fill. Some research has focused on the impact of ambiguity on volunteer performance at the board-level (Doherty & Hoye, 2011; Millesen 2008). Although this research offers insight into top volunteer management, it overlooks the experience of the rank-and-file volunteer. Lastly, there is a line of research exploring the motivations for volunteering such as fulfilling a need for social interaction, an

interest in a mission such as preserving the environment, or enacting a religious conviction (Gronlund, 2011; Ho & O'Donohoe, 2014). This will be reviewed at greater depth in a later section.

It is clear that there is one consistent factor that exists across all situations, the use of the term volunteer. This study is concerned with how the label of a volunteer may be associated with a stereotype of tolerating ambiguous situations. Situational cues may activate this stereotype through priming, which influences an individual's behavior and emotional reactions to ambiguous situations. Towards this end, we will review the available volunteer stereotype research to explore trends. Classical role theory will then be reviewed along with notable research concerning role ambiguity for volunteers. Next, we will catalog the research on trait tolerance for ambiguity (TA), from its beginnings in the 1940's to current findings. Stereotype priming research will be discussed as a mechanism for trait activation. This study is particularly interested in how TA as a trait may influence how an individual apprises a situation. We will look for evidence that people who volunteer are more accepting of ambiguity by comparing the role ambiguity and cognitive appraisal outcomes when primed for TA and primed for volunteer stereotype.

Volunteer Stereotype Research

Currently no research has been conducted regarding stereotypes of volunteers. The closest line of inquiry has been regarding reasons why some age groups do not volunteer and how volunteering contributes to an individual's self-concept. A blend of social psychology and marketing research has produced volunteer archetypes suggesting a range of traits that a volunteer could stereotypically possess.

Ho and O'Donohoe (2014) have completed the only comprehensive study of volunteer stereotypes based on marketing research on stereotypes of volunteers from a youth's perspective. These researchers aimed to capture physical and personality stereotypes from young volunteers and non-volunteers. Thirty-nine Scottish subjects participated in group and individual discussions about volunteering, and completed drawings of a stereotypical volunteer. All volunteers, and most non-volunteers, described volunteers as caring, dedicated, and considerate. The interviews and drawings were synthesized into five stereotypical profiles using a qualitative approach.

The first profile, the "older charity shop worker," depicted a middle-age, widowed or empty-nester woman who operates a charity thrift store. This profile was defined by its frumpy appearance and engaging in volunteer work to establish social connections. Although mostly negative, this profile was associated with the positive attributes of being friendly, warm, patient, and compassionate. The second profile, the "sweet singleton," depicted a financially secure and well-educated volunteer in their late 20s to mid-30s, usually female. The most notable characteristic was their single relationship status and perceived obsession towards their favored charity. The obsessive characteristic was viewed unfavorably by non-volunteers, as they believed the sweet singleton traded their relationships with others for focusing on their volunteer work. Positive attributes included being vibrant, enthusiastic, joyful, caring, and kind. The third profile, the "environmental protestor," was characterized by being a social outcast, living a "hippy" lifestyle, being dirty, and pursuing environmental issues with fanatic zeal. This profile generated the most vivid image for a profile; subjects depicted this person as having deadlocks, wearing home-made clothes, cooking everything from scratch, maintaining low personal hygiene, smoking roll-up cigarettes, and possibly living in a tree. Volunteers, even those engaged in

environmental movements, and non-volunteers described this as the most undesirable of the stereotype profiles and identified no unique positive attributes. The fourth profile, the "ordinary volunteer," was the most nebulous of the profiles. Drawings portrayed normal-looking people, with no preference for age or gender. Only volunteer subjects mentioned this profile. The ordinary volunteer were described as a normal person with a job, a house, friends and family, who felt strongly about a cause but managed their volunteer work with the rest of their lives. Only the general characteristics of caring, dedicated, and considerate were used to describe this group. The last profile, the "non-volunteer," generated two descriptions, one from each of the subject groups. Volunteers generally regarded non-volunteers as unkind, inconsiderate and sometime lazy. Non-volunteers categorized themselves as younger, more sociable, cool, and whose time was too valuable for volunteer work. Both groups did not ascribe any physical characteristics to this profile.

The Ho and O'Donohoe's 2014 article provides several useful findings pertaining to volunteer stereotypes. First, there is more than one representation of a volunteer. Unlike demographic-based stereotypes, stereotypes regarding social categories may have a wide range of representations. This range in description was present even within subjects who self-identified as volunteers. This brings to question what stereotypical profile is activated within an individual when volunteering is made salient, which will be discussed in a later section. Second, most of the volunteer profiles possessed both positive and negative trait characteristics. While the methods of the study did focus on physical appearance and personality, it is notable that participants did not consider the tasks performed by volunteers or their outcomes. None of the descriptions included examples of behavioral performance (i.e. volunteers could not perform a task better/worse than a comparison group). Third, the non-volunteer profile was stereotyped with

negative traits by the volunteers. Non-volunteer subjects had to justify why they did not volunteer, a behavior the investigators reasoned was to maintain a positive social identity. This suggests that individuals may resist categorizing themselves as non-volunteers so as to not appear unkind or lazy. Lastly, while there were different profiles describing volunteers, the subjects were able to clearly identify if they were a volunteer group member and compare their volunteer self-identify with the stereotype profiles. It should be noted that these findings are based on 39 young Scottish subjects, and so the resultant stereotype profiles have questionable generalizability. The four above observations, though, seem to echo general findings in the youth volunteer recruitment literature (see Ho & O'Donohoe, 2014 for review).

Some volunteer research has examined the relevance of volunteer role identity with an individual's self-identity. In short, volunteering becomes a mechanism to enact values central to a person's identity. Gronlund (2011) offered a direct exploration of this phenomenon using life course-themed interviews of 24 Finnish subjects, age 21 to 36 years old. Interview questions elicited unstructured discussion about the subjects' volunteering experience (i.e., how they got started, motivation, rewards) and about different stages of the subjects' lives (from childhood to plans for the future). Of the 24, seven subjects were excluded from the study because volunteering was not integral to their identity. The remaining 17 subjects followed five distinct identity types.

First, the "influencer," focused on values of universalism, concern for the welfare of all humankind, self-direction, and stimulation. These volunteers took part in activities that fought against perceived injustices and made the world a better place. They took great pride in the effects of their work and looked down on those who volunteered for fun. Second, the "helpers," held benevolence as their central value. Helpers' volunteer activities were very personal, usually

people-oriented, such as supporting people through trauma they themselves had experienced in past. These identities were so strong that they wanted to express them constantly; the values not only influenced their volunteer activities but often their career choices as well. Third, the "faith-based identity," represented a strong volunteer identity related to religion. These individuals relayed life stories about receiving guidance from God, how they found their religious community, accepted their faith, or how they serve God through their volunteer work. This profile contrasted with others, as their core identity was not related to principles defined in value theories (Schwartz, 1992; Schwartz, 2007) but by adherence to their religion. For these individuals, volunteering was a means to engage in their religious community. They might stop volunteering if they found some other way to fulfill that need (Gronlund, 2011). Fourth, the "community identity," had family values and benevolence as their central ideals. Universalism was not principal for them, because they volunteered primarily only for their in-groups and communities rather than causes unrelated to their group. For example, a community identity volunteer would coach a youth sports team as an activity with their children and help other families in the neighborhood. The degree that their lives overlapped with the community (i.e. hobbies, work place, social activities) defined how they volunteered. Lastly, the "success identity," focused on being active and successful. Ambition, being a good citizen, and social order were valued, but inefficiency and daydreaming were criticized (Gronlund, 2011). Volunteering offered an avenue to utilize their talents and put their energy into action. This allowed them to connect their career-acquired skills with their personal need for achievement. However, volunteering could be replaced by another activity if it became less rewarding or beneficial.

Several findings can be extracted from this study. First, much like Ho and O'Donohoe's 2014 findings, there are several distinct types of volunteers. Although many of the types valued concepts like benevolence, universalism, and obligations to a community, either to a religious community or the community-at-large, the blend of core values created different distinct behavioral outcomes. Second, interviewees from each profile spoke harshly of those who did not volunteer and defined them as having characteristics that were opposite of their own. This suggests that there are multiple profiles of non-volunteers, each possessing different negative values such as being selfish, unkind, or being unfair. Non-volunteers may avoid being labeled so as to not be associated with these negative connotations. Third, all of the identified types engage in volunteering because they considered it the best way of adhering to internal values. Lastly, seven of the 24 subjects indicated that their volunteering was not intertwined with their identity. This suggests that there are unidentified types of volunteers who enact their internal values through other activities. It should be noted that these profiles were derived from a small sample, 24 Finnish young adults, using qualitative analysis of interviews. While the specific findings are of questionable generalizability, the general findings have parallels to Ho and O'Donohoe (2014).

The above studies provide a range of physical characteristics, personality traits, and motivations for individuals who do or do not volunteer. These profiles decidedly focus on the characteristics of individuals, opposed to how they interact with other people or exist within a volunteer system. Role theory is reviewed in the next section to explore how the external factors of interacting with others and working within an organizational system combine with personality variables to create ambiguity.

Role Theory

The 1964 book by Kahn, Wolfe, Quinn, Snoek, and Rosenthal introduced the first comprehensive model of how role theory could describe role ambiguity in organizations. Although role theory appeared in organizational psychology research in the late 1950's, Kahn et al.'s (1964) book was the first to streamline terminology, translating the concepts from its clinical and social beginnings to work within organizations. Role ambiguity starts at the most basic level of the interaction between two people, called the role episode. Imagine a supervisor needs to assign a task to a subordinate. The supervisor, called the role sender, conceptualizes the task and communicates the task, or sent role, to the subordinate, known as the focal person. The focal person then interprets the role and behaves according to their understanding of the task(s). The role sender observes the focal person's behavior and responds appropriately, thus completing the role episode.

Role theory includes other variables that interact with the role sender and focal person, seen in Figure 1. The organizational factors circle represents both the setting of the role episode and the source of expectations exerted on the role sender. In our example, this may be supervisor's boss telling them that the subordinate needs to do something. The attributes of the person circle in the model represents personality factors within the focal person. Personality in Kahn et al.'s (1964) model is defined broadly as "his motives and values, his sensitivities and fears, his habits, and the like" (p. 32). These personality factors can influence the role sender in how they communicate the sent role. For example, maybe the subordinate has a bad temper, and so the supervisor communicates the role in a way to avoid arousing anger. Personality can also influence how the message is received by the focal person. If the focal person is prone to self-criticism, they may then perceive sent roles as critiques of their personality.

The interpersonal factors circle symbolizes the interpersonal relationship between the role sender and receiver. Much like personality, this influences both how the role sender communicates and how the role is received by the focal person. For example, if there is great power distance between the supervisor and the subordinate, the sender may authoritatively demand the focal person to complete a task. Understanding the formal power of the role sender, the subordinate would likely comply with the demand. Lastly, the personal attributes and interpersonal factors circles are affected by the focal person's response. Not only does the focal person behaviorally respond to the sent role, but they also adjust their interpersonal relationships and internalization of the task. If the supervisor delivers a scathing performance review to the subordinate, this may both lower the focal person's self-esteem (attributes of the person) and damage the relationship with the role sender (interpersonal relationships).

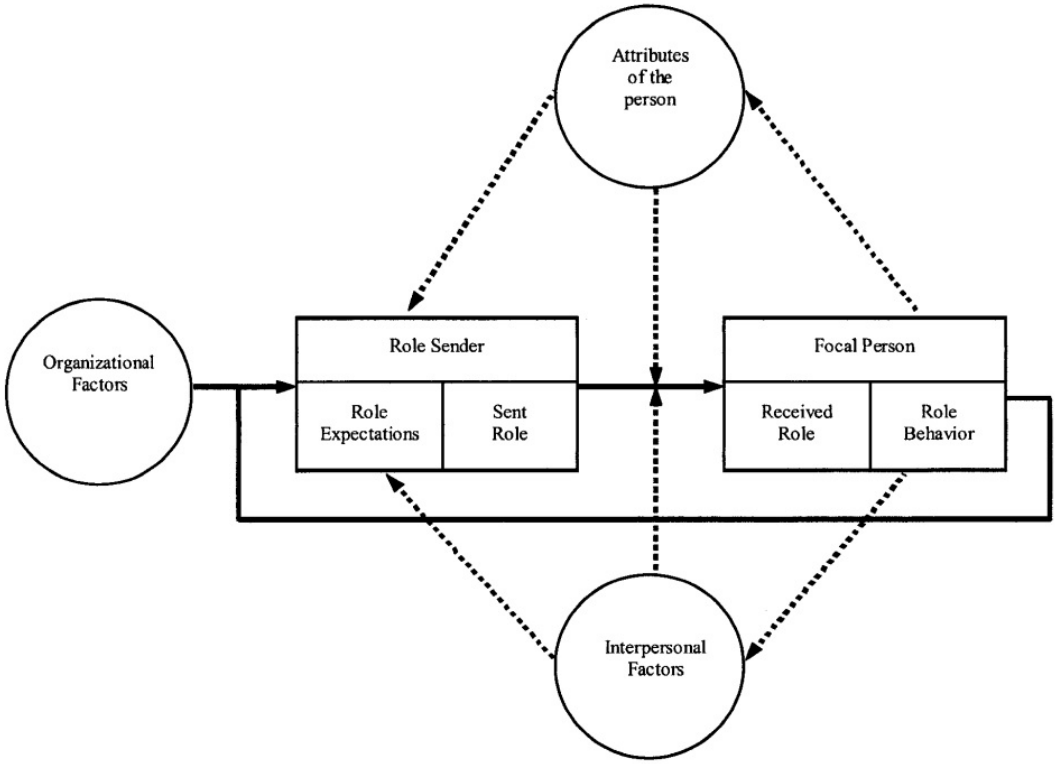


Figure 1. *Kahn, Wolfe, Quinn, Snoek, & Rosenthal (1964) Role Episode Model*

Kahn et al.'s role episode model helps define three specific types of role stressors that occur within organizations: role conflict, role overload, and role ambiguity. These are created by breakdowns in the role episode. Role conflict occurs when the content from multiple transmitted roles conflict with one another, making it difficult for the focal person to complete each task. Role overload occurs when the number or difficulty of tasks overwhelms the focal person. Role ambiguity, a topic in this study, occurs when the role episode causes the focal person to be uncertain about what behaviors are necessary to fulfill a role.

Along with defining role ambiguity, Kahn et al. outlined three methods for increasing clarity in a role episode. First, the focal person must be able to anticipate with fair accuracy the consequences of his or her own actions. For example, the role sender could outline the goal and the performance measurements of the task. Second, the focal person "needs to be aware of the determinants of relevant events which they do not produce and the likelihood of their occurrence" (Kahn et al., 1964, p. 72). Third, they must be able to depend on the stability of a host of other surrounding conditions with that they deal directly.

Role theory is critical to the basic theoretical structure for this study through its explanation of role ambiguity, which manifests from the intersection of three factors: the sent role, interpersonal factors, and attributes of the person. As seen in Figure 1, the sent role originates from organizational factors communicated by a role sender. Volunteering positions occur in a wide variety of organizational designs, including professionally coordinated volunteer systems with a guided mission (e.g. nonprofits like the Boy Scouts of America), purely volunteer-managed organizations that focus on mutually accepted goals (i.e. local rotatory clubs), or neighbors helping one another. As the national research shows, volunteers routinely accept positions without receiving a position description (Institute for Volunteering Research,

2007; Volunteer Australia, 2006), and burnout has been recognized as a perennial problem (Allen & Mueller, 2013). Along with the wide range of organizational factors, the interpersonal factors vary also. The nonprofit recruitment literature routinely identifies best practices for recruiting volunteers, recommending engaging invested current volunteers to take on roles that focus entirely on recruiting (Hager & Brudney, 2011). Lastly, there are attributes of the person that may influence their willingness to accept ambiguity. This study is interested in TA and how possessing higher levels of TA may be a stereotype of volunteers.

Research on Role Ambiguity with Volunteers

In regards to volunteering and role ambiguity, a wide range of studies have been conducted looking at sources of ambiguity. Merrell (2000) studied differences between paid and volunteer workers at a British well-woman clinic as well as ambiguity originating between these two positions. She observed that organizations utilizing volunteer labor had to balance the leisure expectations of volunteers and the derivation of personal satisfaction from volunteering with the ability to offer reliable services. Merrell (2000) concluded that managing volunteer role ambiguity and having a volunteer coordinator were important for bridging between the organization's administration and the volunteer workforce. Farmer and Fedor (1999) tested the application of the social contract theory to describe volunteer participation and departure within a large national nonprofit. Their theory contrasted structural and role-related expectations between volunteer and paid employees. Some notable differences include the power to enforce role expectations, the division of labor in task allocation, level of role uncertainty, and status as a member of the organization. Their study found that perceived organizational support influenced how well volunteers' expectations were met. They concluded that volunteers may be willing to

overlook particular unmet expectations in their work as long as the organization supported their efforts.

Doherty and Hoye (2011) studied role ambiguity and volunteer board member performance across several nonprofit thoroughbred horse-racing clubs. They found that the detrimental effects of role ambiguity on performance observed in paid settings existed within nonprofit boards. Wright and Millesen (2008) looked at role ambiguity in 100 nonprofit boards who hired a chief executive to manage day-to-day operations. They compared self-report surveys between board members and their chief executive. Their findings suggest that chief executives do not believe board members understand their roles as board members whereas board members reported experiencing low role ambiguity. These findings suggest that although board members may not experience the detrimental effects of role ambiguity, they may not be performing their roles as chief executives would define them.

Studer and Schnurbein (2013) conducted a sizable literature review focused on organizational factors affecting volunteer coordination. They devoted a subsection to reviewing role conflict, ambiguity, and the differing conceptualizations of the "volunteer role." Low role ambiguity was related to tenure status, productivity, organizational commitment, and lower likelihood for burnout (Studer & Schnurbein, 2013). Their recommendations for reducing role ambiguity mirror best practices offered in other sources (Australia Volunteer Australia, 2006; Institute for Volunteering Research, 2007; Volunteer Ireland, 2013) such as establishing clearly defined volunteer roles, maintaining written guidelines outlining the position and scope of the volunteer's role, training, and having a person responsible for volunteer coordination within the organization (Studer & Schnurbein, 2013).

In general, research has supported the detrimental impact of role ambiguity on volunteer outcomes. Volunteer burnout, a popular topic in the nonprofit and volunteer management literature, has been correlated with decreased task performance, increased intention to quit, and disengagement (Allen & Mueller, 2013; Studer & von Schnurbein, 2013). Allen and Mueller (2013) created a model linking perception of having input in decision-making processes and role ambiguity with intentions to quit, mediated by burnout. They reasoned that lack of input and role ambiguity exhausted an individual's coping resources as conceptualized in the conservation of resources theory (Hobfoll, 1989). Resources that were once directed towards task-oriented behavior are appropriated to cope with role ambiguity and lack of participation in the decision making process. There findings demonstrate that role theory, formulated from paid workers, could be applied to volunteers.

There are many factors that influence role ambiguity. Organizational structure, interpersonal relationships, and especially personality factors have received little research consideration within the volunteer context. To date, no traits have been explored as possible mechanisms for coping with volunteer role ambiguity, even though TA as a personality trait could possibly reduce experienced role ambiguity.

Early Research on Tolerance for Ambiguity

The concept of TA began with Frenkel-Brunswik's (1949) research on the rigidity of children. Franken began with the psychoanalytic idea of ambivalence as defined as "the co-existence, in the same individual, of love- and hate-cathexis toward the same object" (Frenkel-Brunswik, 1949). She observed that psychoanalytical ambivalence arose in children with what we now call authoritarian parents. Although some children were flexible in how they described

their parents as alternatingly good or bad, those she had labeled as rigid conceptualized their parents as entirely good or entirely bad. Throughout her study she found that authoritarian parents instilled in their children a dichotomized view of the world so that external phenomena were either all good or all bad, clean or dirty, complete or incomplete. The rules parents established in their household would further reinforce this global dichotomization. Coupled with these strong rules were also punishments for breaking the rules, leading children who lived with authoritarian parents to be in constant fear of physical harm. The fear of receiving punishments pushed children to adhere to rules through quick action, leading to concrete results. This rigid adherence to norms was the key idea behind Frenkel-Brunswik's concept of rigidity.

Once norms were established, they created a closed gestalt personality system that could not be altered, thus creating rigidity. Children with a dichotomized view of the world would primarily use two coping strategies. First, they had a preference to escape toward whatever was definite, to avoid coping with the ambiguity inherent in evolving situations. The second was to pervasively over-simplify or to distort the world through glaring omission of facts that were not congruent with their internal view of the world.

Budner (1962) worked towards a more balanced perspective by separating the idea of rigidity from the intolerance of ambiguity, previously seen as interchangeable at times. Budner (1962) defined intolerance of ambiguity as "the tendency to perceive (i.e. interpret) ambiguous situations as sources of threat," and tolerance of ambiguity as "the tendency to perceive ambiguous situations as desirable" (p. 29). The theory identified three environmental sources of ambiguity: the "novelty" of a situation that lacks familiar behavioral cues; the "complexity" of a situation, when the environment creates a great number of cues that the person needs to take into

account; and the situation's "insolubility," when different elements in the environment present different cues that contradict one another.

In response to these various challenging environments, individuals assess and cope with these situations differently. Budner (1962) identified four axes that individuals can be evaluated regarding how they assess challenging situations. First are conscious or unconscious goals or values. This is how personality traits or drives within a person correspond to the details of the situation. Second is the person's concept of reality. These are global assessments of whether the situation is fair or unfair. Their concept of reality could also be a self-assessment such as being capable or incapable of resolving the situation. Third is the person's pre-existing coping strategies, or the ways they have handled situational stressors in the past. Fourth is their ability to manipulate the environment.

Budner (1962) also put forth two coping devices used by individuals in ambiguous situations. First, individuals submit, realizing that it is impossible to confront the situation and that they cannot meet the situational demands. This can be seen as the beginning of the stressor-strain relationship that is the main research focus of role ambiguity in industrial and organizational psychology. The second coping mechanism is denial, where a person alters their perception of the situation using methods such as stereotyping, delusion, or omission of facts. These individual aspects are important because they explain the interaction between the internal states and external situation and show how individuals can engage with the external world to help cope with ambiguity. Budner's theory continues to be influential in the TA literature and is still cited today.

Recent Research on Tolerance for Ambiguity

Since Frenkel-Brunswik (1949) and Budner (1962), Furnham and associates have outlined the most notable developments in TA research (Furnham & Marks, 2013; Furnham & Ribchester, 1995). TA has been measured across many psychological disciplines including social, clinical, cognitive, industrial/organizational, developmental, and neuropsychology. Because of the broad appeal, the research has neglected focused efforts on construct development. Within clinical psychology, TA has been studied as tolerance of uncertainty (TU) and is researched in relationship to anxiety disorders, most notably generalized anxiety disorder. The focus of TU is the anxiety that arises from a future uncertain situation. This concept is seen as fundamentally different from TA, which is regarded as a trait encompassing an individual's reaction to an ambiguous situation in the present (Furnham & Marks, 2013).

Although there has been debate if TA is a trait, a context-specific construct (Durrheim & Foster, 1997), or as a contextualized measure (Herman, Stevens, Bird, Mendenhall, & Oddou, 2010), it is typically measured as a personality trait or cognitive style on a one-dimensional scale. Those scoring low in TA neglect reality by resorting to black-and-white solutions, whereas those high in TA see ambiguity as interesting, challenging, and desirable (Furnham & Marks, 2013). This study considers TA to be a personality trait that influences cognitive appraisal so an individual's appraisal of ambiguity is similar across situations.

Little research has explored TA as a potential moderator for role stress, specifically the role ambiguity component. Frone (1990) conducted a meta-analysis on what he termed intolerance of ambiguity (IOA) using seven available studies spanning from 1960 to 1985. IOA is the functional opposite of TA. Results showed strong evidence supporting IOA as a moderator for role ambiguity, particularly that high IOA employees showed a stronger stressor-strain

relationship than low IOA employees. The IOA term has been used rarely since this analysis. O'Driscoll and Beehr (2010) found evidence for this moderation when they measured need for clarity as a moderator between role stressors and employee affective reactions. A meta-analysis examining main and moderating effects between job demand stressors and job performance made only a passing mentioning of the potential for TA to act as a moderator for the stressor-performance relationship (Gilboa, Shirom, Fried, & Cooper, 2008). While O'Driscoll and Beehr (2010) and Gilboa et al. (2008) identified the need for further research on the potential TA moderating effect, little structured research has been conducted since Frone (1990).

A recent theory paper by McLain, Kefallonitis and Armani (2015) explores current neurological findings as potential mechanisms for TA. Departing from the typical TA construct definition, McLain and colleagues (2015) built their argument on TA and general ambiguity: "Ambiguity is a perception and is a function of the information received regarding a focal stimulus. Ambiguity tolerance is an individual's systematic, stable tendency to react to perceived ambiguity with greater or lesser intensity" (p. 2). Sensory information is transmitted to the brain from the tactile, auditory, visual, olfactory, or taste sensors. The dorsolateral prefrontal cortex, the area of the brain governing executive functioning, receives and processes this information. The information is incorporated into mental models from which the choices of actions are based (Hsu et al., 2005). When this information is insufficient for clear interpretation, the brain experiences either fear or anxiety due to the perceived ambiguity (Hirsh, Mar, & Peterson, 2012). From there McLain, Kefallonitis and Armani (2015) concluded:

> The degree that anxiety is generated in response to an indefinite collection of data received about a situation is ambiguity tolerance and is a stable trait of the individual.

> The intensity of the reaction to perceived ambiguity is the individual's ambiguity tolerance. (p. 2)

The situational characteristics that create ambiguity come from Budner's novelty, complexity, and insolubility model. Ambiguous situations are regarded adversely as long as the situation presents the possibility for tangible, negative consequences. Curiosity and attraction to ambiguity are more likely to occur when the potential for harm is absent (McLain, 2009). Most ambiguous situations create fear or anxiety because ambiguity increases the difficulty of identifying harmful alternatives from a set of options (Hirsh et al., 2012).

Measuring Tolerance for Ambiguity

Several self-report scales have been developed for TA. Many of these scales have accumulated evidence of validity, but they often contain elements of poor psychometric design (Furnham & Marks, 2013; Furnham & Ribchester, 1995). Budner (1962) developed a 16-item scale based on measuring an individual's acceptance of novelty, complexity, and insolubility of ambiguous situations. Its initial validation study showed a strong test re-test reliability of 0.85 after two months but a low alpha of 0.49. Despite the low internal consistency, Budner's scale continues to be used frequently in TA research (Furnham & Marks, 2013). Positive correlations with the scale have been found with authoritarianism, idealization of and submission to parents, Machiavellianism, career choice in medical students, and many others (see Furnham & Ribchester (1995) for more examples). Norton (1975) developed the *MAT-50*, a 61-item scale that showed a test-retest reliability of 0.86 after 10 to 12 weeks and an alpha of 0.89. This scale is rarely used, though there is evidence of content and construct validity (Furnham & Marks, 2013).

In 1993 McLain published the 22-item *Multiple Stimulus Types Ambiguity Tolerance Scale* (MSTAT-I). This unidimensional measure of TA utilizes Budner's three environmental sources of ambiguity, ambiguity as a term of second-order probability, and TA as a link to the authoritarian family (Furnham & Marks, 2013). Their validation study found an alpha of 0.86, factor analysis supported the unidimensional model, and they addressed concurrent validity through significant positive correlations with other TA scales. The *MSTAT-I* has become a popular scale due to its development using modern psychometric theory and validation evidence. McLain refined the scale in 2009, the *MSTAT-II*, shortening the length to 13 items. While it showed similar internal consistency and validation findings, it did not correlate significantly with Budner's scale. Furnham and Marks (2013) recommended using the *MSTAT-II* over the *MSTAT-I* when testing space is limited or when participants could potentially become cognitively overloaded by the longer scale. Lastly, Herman, Stevens, Bird, Mendenhall, and Oddou (2010) adapted Budner's scale to be used for international management research. The 12-item *Tolerance for Ambiguity Scale* (*TAS*) improved the internal consistency of Budner's scale to 0.73. This scale is used heavily in cross-cultural settings.

National survey data and role theory research suggest a prevalence of role ambiguity for volunteers (Institute for Volunteering Research, 2007; Volunteer Australia, 2006; Volunteer Ireland, 2013). TA is a measurable trait that influences how individuals appraise ambiguous situations. This study is interested in TA as part of a stereotype of being a volunteer. The next section reviews research concerning how environmental cues, or priming, can activate traits associated with gender, age, social group, or racial stereotype.

Trait Priming

The terms used to define priming methods vary widely in the research. The priming methods described in this study fall within the following three categories. The first are primes that depend on the participant being more or less consciously aware of the content. The terms blatant or explicit primes have been used to describe these manipulations. This study uses the term blatant priming due to its more prevalent usage in recent research. The second are primes that depend on the participant not being consciously aware of the content. Subtle, implicit, and supraliminal primes have been used to describe these manipulations. This study uses the term subtle priming because it is the logical opposite of blatant. Lastly, there are primes that operate below the threshold of consciousness. These subliminal primes can be sensed but not perceived. We do not explore subliminal priming in this study's experimental design.

Priming has been used successfully to activate a myriad of human traits. Zhong and DeVoe (2010) conducted an experiment concerning how fast food logos can activate impatience by increasing participant preference for immediate gain over greater future return. Participants were asked to rate the aesthetics of four company logos. In the fast food condition, two of the logos were from recognizable fast food franchises. In the control condition, the fast food logos were replaced with logos for two inexpensive diners. Participants were then asked to choose between receiving $3 today or X in one week (the X ranged from $3.05 to $7.00). Those in the fast food condition required higher interest rates than the control group in order to be willing to delay payment (17% versus 11% interest rate). Put another way, mere exposure to fast food logos primed participants to be "much more likely to accept a smaller payment now rather than wait for a larger payment in a week" (Zhong & DeVoe, 2010).

The present study will attempt to prime trait tolerance for ambiguity. There is a question whether a personality trait can be primed, but some other research has done so successfully. Priming has been effective in activating other traits including hostility (Carver, Ganellen, Froming, & Chambers, 1983), rudeness and politeness (Bargh, Chen, & Burrows, 1996), helpfulness (Macrae & Johnson, 1998), as well as conformity and non-conformity (Epley & Gilovich, 1999).

Stereotype Priming of Demographic Groups

Stereotype threat and, more recently, stereotype boost research are relevant to the priming of social categories. Stereotype threat was coined in 1995 by Steele and Aronson as "being at risk of confirming, as self-characteristic, a negative stereotype about one's group." This came out of concern about academic achievement gaps between African Americans and Caucasians, and gaps in mathematic testing scores between males and females. By comparison, stereotype boost enhances an individual's performance due to a positive stereotype. Most stereotype boost literature has focused on demographic-based stereotypes such as the stereotype that Asians excel at math (Shih, Pittinsky, & Ho, 2012). Stereotype threat and boost now focuses primarily on demographic-based social identities of race, gender, and age.

Stereotype threat occurs when individuals identify themselves with the situationally relevant group, are invested in demonstrating their ability, and perceive a stigma with the group's stereotype (Schmader & Beilock, 2012). The individual gauges their abilities against what the situations requires, resulting in ego involvement with the ability domain. For example, an individual may fully engage with their course exam because they believe it measures their ability, yet take their car to a repair shop because they do not care about their ability to fix a car

engine. The individual then compares their conceptual representations of the group, or stereotype, with the abilities required by the situation. This can result in stigma that is a negative appraisal due to a mismatch between group membership and the abilities needed in a given situation.

The relevance of the group's identity to the individual's self-concept is referred to as salience. Salience can range from strong relevance of being a group member to partial relevance. When their stigmatized group membership becomes salient, individuals enter a vigilance phase (Murphy & Taylor, 2012). During this phase, individuals focus their attention on environmental cues to determine if their identity is a liability. For example, Murphy, Steele, and Gross (2007) found that female college math, science, and engineering students remembered more environmental cues (posters and magazines depicting male scientists) in a testing location when their gender was made salient. After this vigilance phase, stigmatized individuals begin to ruminate on their group membership (Schmader & Beilock, 2012). They cope with the rumination by regulating their thoughts and emotions. Automatic behaviors not dependent on cognitive resources become deliberately and consciously controlled, step-by-step, in hopes of disproving the stereotype. Research has shown that this coping strategy consumes working memory that may be vital to task performance (Schmader & Johns, 2003).

Salience dictates how an individual is affected by a stereotype. Research defines a person who has high salience with a stereotype as a target of that stereotype. An individual who has low salience with a stereotype has been characterized by terms like other-stereotypes (Dijksterhuis & Knippenberg, 1998; Wheeler & Petty, 2001), "non" followed by the specific group name (Dijksterhuis & Bargh, 2001; Shih, Ambady, Richeson, Fujita, & Gray, 2002), non-group members (Dijksterhuis & Bargh, 2001) and non-targets (Marx, 2012; Shih et al., 2002; Shih et

al., 2012). This paper refers to individuals who identify volunteering as highly salient to their self-concept as "high-volunteers" and those who identify volunteering with low salience as "low-volunteers."

Whereas stereotype threat is a conscious process, stereotype boost operates through automatic processes. Dijksterhuis and Bargh (2001) observed that humans have an unconscious tendency to imitate the social behavior of others. Using adaptive perception, people alter their behavior to conform to environmental cues as explained by the common coding theory in cognitive psychology (Prinz, 1990). Common coding theory states that there are shared cognitive representations of linked perceptions and behaviors. People theoretically respond to these cues by one of two models: the facilitator-model where people alter their behavior through conscious effort, or an inhibitor-model in which behaviors automatically react to cues but a person may consciously suppress this reaction. The inhibitor-model of the common coding theory is the foundation of the ideomotor theory (Dijksterhuis & Bargh, 2001).

The ideomotor theory is concerned with how perceiving an action can cause an individual to mimic that action. Observables are behaviors that individuals can perceive, such as facial expressions, the accent or tone of voice, and movement. Once an individual perceives observables from others they generate assumptions, called trait inferences, based on the observables. People surmise that others could be angry or helpful by interpreting the present behaviors in the current environment. Studies have shown that trait inferences occur spontaneously upon perceiving the observable act (Gilbert, 1989; Winter & Uleman, 1984). These assumptions activate related personality traits within the observer, leading them to behave in ways corresponding to these activated traits (Dijksterhuis & Bargh, 2001). Several trait inferences can become associated with a particular social group, creating a social stereotype.

These social stereotypes are activated through identifying obvious features of a social group. Identifying a person as a member of a social group triggers social stereotypes that activate personality traits within the observer, whether or not they are part of that social group. Trait activation can occur without the observables that originally generated the trait inferences through the stereotype.

The storage bin theory explains how trait inferences and social stereotyping can prime future behavior. Wyer and Srull (1980a, 1980b) compared the brain's method of processing new information to that of a storage bin. Newly encoded information, or primed information, is placed at the top of the cognitive storage bin. As new information is processed it is compared against the most recent item added to the bin, unless the new information is neither relevant nor applicable to this item (Herr, 1986). This comparison can promote behavior that is either consistent or inconsistent with the prime, known as an assimilation effect or contrast effect, respectively (Wheeler & Petty, 2001). The assimilation effect is the way that trait inferences and social stereotypes promote mimicry as described by the ideomotor theory.

A significant difference between stereotype threat and stereotype boost is the type of cognitive processing involved. The ideomotor theory, which employs automatic, "cool" cognitive processes, is dissimilar from the conscious "hot," cognitive process involved in the emotionally-driven stereotype threat (Wheeler & Petty, 2001). When salience pushes a cool automatic process to a hot vigilance phase, the stereotype boost effect outcomes are reduced and appear similar to stereotype threat. Shih, Ambady, Richeson, Fujita, and Gray (2002) experimented on the stereotype boost effect of Asians and mathematic competency. Their results showed that when Asian students were blatantly primed with their race, Asian participants preformed just as well as a non-primed Asian control group. Participants who received the subtle

prime scored significantly better than both the Asian blatant primed and Asian control groups. They theorized that blatantly primed Asians had an added expectation to perform, that they had to live up to their stereotype. This mechanism is not stereotype threat but similar to the choking effect described in Baumeister (1984) where self-consciousness caused decreased performance during skillful tasks. This evidence suggests that even when the stereotype is positive the conscious management of a stereotype tends to decrease performance, however stereotype threat only occurs with negative stereotypes (Shih et al., 2002).

In order for targets of a positive stereotype to experience stereotype boost, the exposure to the stereotype must remain unconscious, for if they are conscious of it, the anxiety to live up to the performance expectation of the positive stereotype results in the choking effect. In an experiment, Shih et al. (2002) explored the stereotype boost effect of the Asian's stereotypical mathematic ability using Asian and Caucasian participants. Asians who received a subliminal prime, flashing stereotypical Asian words (e.g., ASIA, WOK, CHOPSTICKS) for 80 ms during a computer vigilance task, outperformed Caucasian subjects. Prior research had shown that 80 ms prime exposures are unconsciously sensed by target subjects but not by non-targets. Thus, Shih et al. (2002) was able activate the positive stereotype boost of Asians with mathematic capability, circumventing the anxiety produced by expectations to conform to stereotyped characteristics, while also not priming non-targets. Non-targets, however, must be conscious of the stereotype in order for it to activate the autonomic process described by the ideomotor theory resulting in a stereotype boost. In the same 2002 study, Caucasians in a subtle prime condition, flashing stereotypical Asian words for 1000 ms during a computer vigilance task, scored significantly better than their neutrally primed counterparts (Shih et al., 2002). A 1000 ms prime

is visible long enough to be perceived by the non-targets. They concluded that subtle priming activated the Asian superior math ability stereotype even in Caucasians.

Research has found various moderators that affect the strength of the automatic ideomotor process. This occurs in various ways by pushing the perception-to-behavior process to a hot conscious level, allowing for inhibition of behaviors. If an automatic behavior comes into conflict with the current goals or purpose of the individual, the person may inhibit or overrule the automatic processing. Similarly, individuals learn the costs of performing some behaviors due to past experience called disincentives. These costs dissuade individuals from performing actions through the threat of consequences, overriding the automatic behaviors (Bargh & Ferguson, 2000). Individuals also have the opportunity to inhibit behaviors when they have increased self-focused attention, defined as acting consciously (Dijksterhuis, Bargh, & Miedema, 2000). Lastly, an individual's liking of the person portraying the stereotype can strengthen the ideomotor process.

Stereotype Priming of Social Categories

Trait activation through stereotype priming has been observed not just for demographic groups but also for social categories. A majority of stereotype threat and boost research has focused on racial or gender stereotypes (Wheeler & Petty, 2001 for a literature review). This is understandable when recognizing the origins of stereotype threat in academic testing of African Americans and women. There has also been an interest in age stereotypes due to the seminal findings of Levy's (1996) research with priming college students to walk slower by priming with words related to aging and the elderly. Despite this trend, Dijksterhuis and his colleagues have conducted several experiments priming either for professions or social groups. In 1998,

Dijksterhuis and van Knippenberg primed college students with social categories of professor, secretary, or soccer hooligan. Participants were asked to imagine either a professor or secretary for five minutes and then to write down descriptions of their behaviors, lifestyles, and appearance on a blank sheet of paper. They were then asked to answer 42 questions from the game Trivial Pursuit. A pretest found that college students could answer 50% of the questions on average. Results of their first experiment showed that participants primed for the professor stereotype scored significantly higher than control and secretary primed groups (59.5%, 49.9%, and 46.4% correct answers). Interestingly, they also observed that secretary-primed participants completed the task quicker than the other groups. They attributed this to the stereotype of secretaries having to manage a great amount of paperwork efficiently and operating under tight deadlines. In another experiment, they re-ran their study comparing the control group to participants primed with soccer hooligans and adjusting the time subjects were exposed to the prime (either two or nine minutes). They found significant differences in performance between the no prime and nine-minute prime for the soccer hooligan group (51.3% versus 43.1% correct). This suggests that longer priming led to stronger behavioral changes (Dijksterhuis & van Knippenberg, 1998). Lastly, participants were primed with either trait intelligence or stupidity, taking five minutes to develop a list describing synonyms and behavioral characteristics, or the stereotype of a professor or soccer hooligan. After priming, the participants answered 20 Trivial Pursuit questions. Results supported that participants primed for intelligence through either the intelligent trait prime or the professor stereotype prime outperformed those primed to be stupid either through the trait prime or the soccer hooligan stereotype prime. These outcomes demonstrate that non-target college students (i.e., they were neither professors nor soccer hooligans) primed with social categories behave in stereotypical ways.

Kawakami, Dovidio, and Dijksterhuis (2003) conducted a study concerning how priming college students with either a demographic or a social category would impact their perceptions of others. In one experiment half of the participants were primed with a picture of a skinhead and given five minutes to describe the picture. The other half received no priming. Both groups then completed a 14-item questionnaire about their attitudes regarding general opinion questions ("I think a family with both a mother and a father is the best"). Within the questionnaire were three items from the *Modern Racism Scale* (McConahay, 1986) that were directly associated with skinheads (i.e. "I think that minorities ask too much in their demands for equal rights"). They found that participants primed with skinheads were significantly more prejudiced in responding to these three items than the control group. Kawakami, Dovidio, and Dijksterhuis (2003) concluded that priming only affected those specific items associated with the social category of skinheads and its associated prejudices on social issues.

There are several issues pertinent to the volunteer stereotype that are not captured in the demographically driven stereotype threat or boost research. A majority of research focuses on visually recognizable stereotype groups. Being a volunteer is not defined by physical attributes and does not have any prototypical visual representations such as the shaved head with skinheads. An individual's volunteer social group membership would only be known by others if either they were observed volunteering or the individual self-identified themselves as a volunteer. Membership within demographic-based stereotypes is rigid in comparison to social categories. Most demographic attributes studied in stereotype threat and boost literature, besides age, do not change in an individual's lifetime. Unlike demographic-based stereotypes, social categories like being a volunteer are easily adopted and can take many forms. There is also significant ambiguity about what makes someone a member of a social category as compared to

a demographic based stereotype. Gender, racial, and age group membership is primarily identified through physiological attributes. On the other hand, social categories can be made up of a mixture of physical attributes, behaviors, and social cues (Hugenberg, & Bodenhausen, 2004). As seen in the Ho and O'Donohoe (2014) volunteer marketing research, there can be a range of profiles that make up a volunteer stereotype. The word "volunteer" could represent a range of groups or behaviors: someone engaging in "freely chosen and deliberate helping activates" (Snyder and Omoto, 2008, p, 3), someone who just donates materials such as money or blood, or, even, a fan of University of Tennessee football. Because this study is interested in the broad use of the word volunteer within many contexts, this has the potential of increasing the ambiguity for what individuals or behaviors conform to the volunteer social category.

Lastly, it is prudent to recognize that stereotype threat and boost research has focused on outcomes of cognitive tasks such as intelligence and mathematics testing. There are a few examples of studies measuring motor outcomes such as candidate walking speed (Levy, 1996) and successful basketball free throws (Krendl, Gainsburg, & Ambady, 2012). To date, there are no stereotype threat or boost studies concerned with appraisal of ambiguous situations and perceived role ambiguity. This study hopes to bridge this gap by applying well-established observations for stereotype threat and boost to this new area of interest. The willingness to accept ambiguous volunteer positions is referenced using the shortened variable name "ambiguity acceptance."

Hypotheses

Blatant and subtle priming influences human behavior. Recently activated information influences how new information is processed and encoded via the storage bin theory of category

priming (Wyer and Srull, 1980). Examples of primed traits that have successfully influenced behavior include hostility (Carver, Ganellen, Froming, & Chambers, 1983), rudeness and politeness (Bargh, Chen, & Burrows, 1996), helpfulness (Macrae & Johnson, 1998), and conformity and non-conformity (Epley & Gilovich, 1999). Regarding TA, priming has not been attempted before. Therefore two types of priming (blatant and subtle) were tried for TA, because it was uncertain which method of priming would be the most effective specifically for priming TA. There were no hypotheses about differences in the acceptance of ambiguous volunteer positions or role ambiguity results regarding the different methods of priming TA.

Hypothesis 1: Priming for trait tolerance for ambiguity results in more willingness to accept ambiguous volunteer situations (ambiguity acceptance) and less perceived role ambiguity than a neutrally primed control group.

Little attention has been given towards priming stereotypes of social groups compared to demographic groups like race or gender. Notable exceptions are Dijksterhuis and van Knippenberg (1998) and Kawakami, Dovidio, and Dijksterhuis (2003), who looked at the effects of priming for professor, secretaries, soccer hooligan, and skinhead social groups. These social categories are restricted to those who occupy an occupation or belong to a well-defined social group. Soccer hooligans and skinheads have decidedly negative social stereotypes within our culture, and so individuals identifying with either social group would likely do so intentionally. Volunteering, in comparison, is a less defined social group.

Volunteer stereotypes can differ widely concerning the age, gender, social-economic status, and marriage status of a typical volunteer, depending on the respondent's perception. Volunteer stereotypes involve an ill-defined social group, unlike the stereotype threat literature that utilizes clearly defined self-identity characteristics like gender or race. Because of this, it is

unclear whether subjects primed to be volunteers will exhibit target or non-target behavioral outcomes. This study followed both possibilities via separate hypotheses.

If subjects consider volunteering highly salient to their self-concept, they would be considered targets for stereotype priming. Primed targets were expected to yield stereotype boost effects as have been observed with Asians and mathematic performance (Shih et al., 2002), the elderly on a memory task when primed for wisdom (Levy, 1996), and males with negotiating outcomes in mixed gender dyads (Kray, Thompson, & Galinsky, 2001). However, blatant priming has been shown to generate anxiety for targets, arising from the concern to meet the expectations of the stereotype (Baumeister, 1984; Shih et al., 2002). A 2002 study by Shih, Ambady, Richeson, Fujita, and Gray showed that this provoked anxiety functionally nullified the stereotype boost effect for Asians' mathematic performance. It is unclear if the anxiety effect would occur for the cognitive appraisal of ambiguous situations or role ambiguity. Reason would suggest that high-volunteers would experience increased anxiety, compared to low-volunteers, due to expectations to conform to the volunteer stereotype of accepting ambiguous volunteer positions. This anxiety would influence high-volunteer's experienced role ambiguity (Jackson & Schuler, 1985) and also, logically, increase the perceived ambiguity in their cognitive appraisal of the volunteer position. The present study accounted for this anxiety effect by distinguishing high-volunteers from low-volunteers through two sets of hypotheses. In regards to high-volunteers:

> Hypothesis 2a: High-volunteers who are primed for trait tolerance for ambiguity or subtly primed for volunteer stereotype will report more willingness to accept ambiguous volunteer situations (ambiguity acceptance) and less perceived role ambiguity than other groups.

Research Question 1: Will high-volunteers who are blatantly primed for volunteer stereotype report more or less willingness to accept ambiguous volunteer situations (ambiguity acceptance) and perceived role ambiguity than the neutrally primed control group?

Subtle priming of stereotype boost effects has been shown to enhance a target's performance beyond that of trait priming (Shih et al., 2002). According to the ideomotor theory, stereotype priming has a direct effect on a subject's behavior by both a perceiving-behaving pathway and through trait activation (Dijksterhuis & Bargh, 2001). The ideomotor theory suggests that the effects of subtle stereotype priming, avoiding anxiety produced by expectations to conform to the volunteer stereotype, will have a stronger behavior affect than trait priming. Therefore:

Hypothesis 2b: High-volunteers who are subtly primed for volunteer stereotype will report more willingness to accept ambiguous volunteer situations (ambiguity acceptance) and less perceived role ambiguity than high-volunteers who are primed for trait tolerance for ambiguity.

A low-volunteer is considered a non-target for stereotype priming. Research has shown that blatantly priming non-targets with a skinhead social stereotype can increase their prejudice (Kawakami, Dovidio, and Dijksterhuis, 2003). Other studies have shown that both blatant and subtle priming of non-target stereotypes causes trait activation (Shih et al., 2002). Therefore, if subjects react as non-targets, research suggests:

Hypothesis 3a: Low-volunteers who are primed for trait tolerance of ambiguity or volunteer stereotype will report more willingness to accept ambiguous volunteer

situations (ambiguity acceptance) and less perceived role ambiguity than the neutrally primed control group.

Non-targets have been shown to have a higher threshold of sensitivity to priming than targets. Shih, Ambady, Richeson, Fujita, and Gray (2002) found that Asians could be subliminally primed by flashing stimulus words for 80 ms during a standard computer vigilance task. Non-targets showed no response to the 80 ms primes, but they were influenced when the word exposures were slowed to 1,000 ms. Kawakami, Dovidio and Dijksterhuis (2003) were able to prime non-target subjects to the elderly social group with stimulus words (e.g., old and gray) shown for 17 ms. Because of these conflicting findings and the unknown relevance of the volunteer stereotype to low-volunteers, subjects would likely require stronger, blatant priming for the TA to be activated, thus:

Hypothesis 3b: Low-volunteers who are primed for trait tolerance for ambiguity or blatantly primed for volunteer stereotype will report more willingness to accept ambiguous volunteer situations (ambiguity acceptance) and less perceived role ambiguity than subtly primed volunteer stereotype group.

Lastly, the outcomes for trait priming and blatant stereotype priming should be similar because the stereotype priming in non-targets has been shown to affect behavior via trait activation (Shih et al., 2002).

Research Question 2: Will low-volunteers who are blatantly primed for volunteer stereotype report more or less willingness to accept ambiguous volunteer situations (ambiguity acceptance) and perceived role ambiguity than low-volunteers who are primed for trait tolerance for ambiguity?

CHAPTER II

METHODOLOGY

Participants and Design

The final 489 participant sample was recruited using mTurk for monetary compensation. The sample was 62% female and 38% male, ranging in age from 18 to 78 (M = 34.74, SD = 11.69). The majority (81.8%) of participants self–identified as European American, 6.4% as African American, 4.2% Asian, 3.5% Latino/a, and 4.0% as Bi-racial. In regards to education, 8.0% had a high school degree or less, 32.4% had some college experience, 34.7% graduated from college, and 25% had educational experience beyond a four year degree. The majority (61.0%) were employed full time, 19.6% part time, 10.9% self-employed, and 8.5% were unemployed. Almost half of the participants were single (48.7%), with 38.6% being married, and 12.6% divorced/widowed/separated. More than half (59.4%) of participants did not have children, while 31.2% had children living at home, and 9.4% no longer had children living at home.

Participants who were identified as high-volunteers mirrored general demographic trends found in US national survey data (BLS, 2015). Females volunteered more often than males (50.0% vs 48.8%). Older participants were more likely to volunteer compared to those in younger age groups, with the shift occurring in the mid-thirties. White participants were more likely to volunteer compared to all other racial groups (White: 51.1%, Black: 40.5%, Asian: 50.0%, Hispanic: 35.0%, and Bi-racial: 47.8%). The rate of volunteering increased with higher levels of education, especially after receiving a college degree. Those who had kids who still lived at home were more likely to volunteer then those without children (56.1% vs 43.1%).

Lastly, although married participants were more likely to volunteer than singles (54.3% vs 43.1%), those who identified with other marital statuses (divorced, widowed, or separated) reported higher rates of volunteering (60.7%, 57.1%, and 60.0%). This deviated from the national trends, as married individuals report the highest rates of volunteering, following by singles and then other marital statuses (BLS, 2015).

The investigator only recruited participants who were accessing the website from the United State of America. Because stereotypes may differ between cultures, this restriction helped intentionally focus this study on the American volunteer stereotype and control for cultural differences. Once recruited by mTurk, participants completed a survey administered by SurveyMonkey. Participants were randomly assigned to one of four manipulation conditions or a control group. The independent variable groups are shown in Figure 2. The dependent variable of ambiguity acceptance was analyzed at the state level.

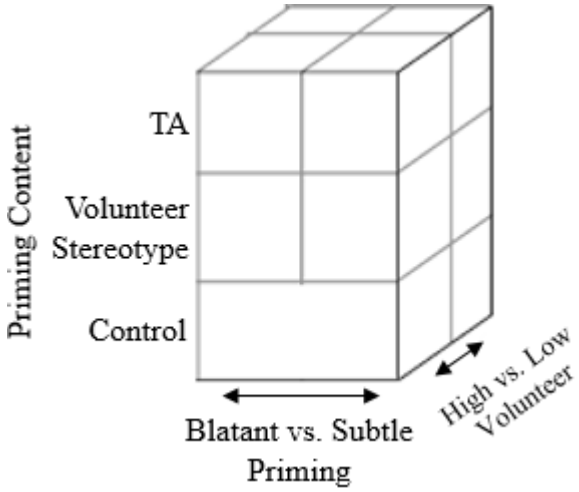


Figure 2. *Independent Variable Groups*
NOTE: TA is Tolerance for ambiguity

Manipulations

The blatant stereotype priming condition was an adaption of the Wheeler, Jarvis and Petty (2000) priming procedure. Participants were prompted to write a 150-word essay about the last time they volunteered. Wheeler, Jarvis and Petty's (2000) original procedure asked non-African American participants to write about the day in the life of a certain individual (either a person with a typical African American name or with a typical Caucasian American name). They found that participants who wrote their essay in the first person showed stronger priming effects than subjects who wrote in the third person. This current study takes advantage of their findings by requiring all participants to write their essay in the first person. See Appendix A for the priming instructions.

The blatant TA priming condition parallels the above manipulation. There is no research to date regarding priming TA. Instead of writing about a volunteer experience in 150 words, participants were asked to write about a time they had been patient in an ambiguous situation. See Appendix A for the priming instructions. This procedure was adopted to take advantage of the Wheeler, Jarvis and Petty (2000) findings and to make it parallel to the blatant stereotype priming task.

The subtle stereotype priming condition was adapted from the "Scrambled Sentence Test" used in Bargh, Chen, and Burrows (1996) study, that primed the elderly stereotype in college students. For each of the 30 items (see Appendix B), participants were to use the five words listed to construct a grammatically correct four-word sentence as quickly as possible. The five words presented in a given scrambled sentence were in random order, such as "shinny the river look across." Fifteen of the 30 items contained a volunteer priming word. The volunteer priming words were charitable, giving, caring, compassionate, helpful, generous, involved,

community, thoughtful, kind, cause, positive, well-intentioned, selfless and service. The remaining 15 scrambled-sentence items were neutral in the sense that they contain no volunteer priming words.

The 15 subtle priming words were identified through a pilot study. Fifty-seven participants recruited from mTurk both wrote an essay describing volunteers and rated 117 words on their relatedness to the volunteer stereotype. See Appendix C for the pilot study items. Two raters, a graduate student and a masters level social worker, coded the essays for the frequency of adjectives used to describe volunteers (i.e. kind) and references to major beneficiaries of volunteer work (i.e. community). The initial inter-rater reliability was 0.65 between the raters. Raters identified 155 total adjectives and beneficiaries in the essays, 91 items were only identified by one of the raters. When these words were excluded from analysis, inter-rater reliability increased to 0.93. The essay coding and word rating procedures produced nearly the same results. The final volunteer priming list was derived by identifying the highest average rated words and used the essay coding results to resolve ties.

The subtle TA priming condition used the scrambled sentence test detailed above with one notable change: the entire four-word sentence served as the prime. This differed from the subtle stereotype prime that depended on a one-word prime. Scrambled sentences containing a subtle TA prime were developed using a pilot study. Thirty four-word sentences were rated by six graduate students on how attractive the sentence would be to someone with high TA. See Appendix D for the pilot study items. The 15 highest average rated sentences from the pilot study were used for the TA subtle priming manipulation in the main study. See Appendix E for the complete manipulation.

The control condition parallels the blatant priming manipulation to maintain internal consistency. Participants were asked to write about the last time they visited or spent time with a friend. See Appendix A for the priming instructions. This represented a neutral situation that should not have primed for TA nor volunteer stereotype.

Finally, each participant completed an awareness check at the end of the study to measure if the priming manipulations achieved their intended effect. Those who completed an essay writing manipulation were asked to identify the theme of the essay. Those who completed the sentence scramble were asked if they noticed a theme to the sentence and, if so, to identify the theme. See Appendix F for the complete awareness check.

Measures

Role Ambiguity. The role ambiguity scale developed by Rizzo, House, & Lirtzman, (1970) was used to measure the dependent variable role ambiguity. This six-item scale asked participants to rate statements on a seven-point Likert scale (e.g. I know what my responsibilities are). While internal consistency was not computed in Rizzo et al. (1970), researchers have reported alphas around 0.80 across multiple samples (Ganzalez-roma & Lloret, 1998; Kelloway & Barling, 1990). The full scale is in Appendix G. The Rizzo et al. (1970) scale has been criticized in role theory research as possessing poor psychometric qualities, mainly being unable to differentiate role ambiguity from role conflict (McGee et al., 1989; Tracy, & Johnson, 1981). Some investigators have demanded a moratorium be placed on the scale (McGee et al., 1989). Other researchers have defended the scale through conducting successful validation studies (Ganzalez-roma & Lloret, 1998; Kelloway & Barling, 1990). Outside of this discussion the Rizzo et al. (1970) scale continues to be the most prevalent measure for role ambiguity within

the research. In our study, the Role Ambiguity scale produced a range from 1.00 to 7.00 (M = 5.39, SD = .95), and showed evidence of good reliability (α = .87).

Trait Tolerance for Ambiguity. The *MSTAT-I* (McLain, 1993) was used to measure TA as a control variable. This 22-item scale asked participants to rate a phrase on a seven-point Likert scale (example: I try to avoid situations which are ambiguous). Research has shown an internal consistency of α = 0.86 (McLain, 1993). Eleven of the items are reversed-scored. See Appendix H for the full scale. The *MSTAT-I* and Role Ambiguity scales demonstrated good psychometric properties. The *MSTAT-I* results ranged from 1.41 to 6.73 (M = 4.27, SD = .89) and exhibited exceptional reliability (α = .92). The *MSTAT-I* correlated moderately with the Role Ambiguity scale (r = .26, p < .001).

Ambiguity Acceptance/Appraisal of Ambiguity. Five vignettes were constructed to measure the cognitive appraisal of ambiguity in an ambiguous situation as a dependent variable. The primary investigator wrote ten vignettes set in implicit volunteer situations. Each vignette concluded with a request for help concerning an ambiguous task. Six graduate students rated the vignettes on their representation of a volunteer setting and the ambiguity of the request. The five most ambiguous vignettes were further revised by the primary investigator and reviewed by the six graduate students to enhance their task ambiguity and implicit volunteer setting. Study participants rated each vignette in regards to the likelihood they would (1) agree to the request and their (2) comfort with agreeing to the request. Responses for both ratings were made on a seven-point Likert scale from extremely unlikely/uncomfortable to extremely likely/comfortable. See Appendix I for the vignettes.

Volunteer Survey. There is no formal measure for assessing the salience of volunteering for an individual. A series of questions were asked to identify if participants were a target or non-

target of the volunteer stereotype, that is, the extent to that can be considered high- or low-volunteers. This volunteer survey included the frequency of volunteering, total number of times volunteered in the past two years, and how important volunteering is to their self-identity. Refer to Appendix J for the list of the survey items.

Procedure

Participants were recruited through mTurk to participate in this study for compensation. Once recruited, mTurk provided a web address to the survey on SurveyMonkey.com. All instructions, scales, and responses were administered and recorded through the SurveyMonkey web portal. Participants were presented with a consent form before beginning the study. Participants were told that this study was concerned with impact of verbal intelligence on volunteering behavior and coping with frustration. This was to mask the presence of the priming manipulation. They were then asked if they were born and raised in the United States of America. This study is concerned with a specific American stereotype. Participants who identified as not being born and raised in the United States of America were withdrawn from the study. Next, participants were randomly assigned to one of five experimental groups: blatant stereotype priming, blatant TA priming, subtle stereotype priming, subtle TA priming, or a neutrally prime control group. The manipulation was administered through an on-screen prompt, and participants responded using blank textboxes. SurveyMonkey enforced a 150-word minimum for both blatant priming and control groups, so participants had to exceed the 150 word count to proceed. A four-word minimum was set for the sentence scramble test in the subtle prime groups. This study utilized minimum word requirements to ensure participants exerted effort during the priming tasks. Each participant was then presented with five vignettes

and asked to rate each on how likely they would accept the stated request and their comfort with accepting the stated request. Next, participants completed the Rizzo et al. (1970) scale, *MSTAT-I* scale, and the volunteer survey. Participants were then asked the average number of paid work hours they perform each week. Working status (full-time, part-time, and unemployed) was measured due to its potential effect on volunteer involvement. Participants reported their demographic details (See Appendix K) and completed an awareness check to measure if the priming manipulations achieved their intended effect. Participants were given debriefing information concerning the true purpose of the study and asked to sign a second consent form, extending permission to analyze their data gathered under false pretenses. Lastly, participants were asked to create a unique ID so they can be compensated by mTurk for participating in the study. The unique ID name was made up of the first three letters of their mTurk user name and the year they were born using numerals (example: tev1986). The sequencing of the study components was to eliminate the potential priming confounds each measure may have on one another.

Data Clean up

Using MTurk, the investigator recruited 976 participants to the study. Of the 976 participants, 379 (39% of participants) did not competed the survey in its entirety. The majority of these participants, 67%, self-selected out of the study when presented with the short essay activity in the blatant priming manipulation conditions. Fewer participants self-selected out of the sentence scramble task, 19%, or before being assigned to a group, 14%. Data from these participants could not be included in the final analysis because they did not provide consent for the use of their data, which came at the end of the survey. Of the remaining 597 cases, seven

were excluded because multiple responses originated from the same IP address. Although it is conceivable that different individuals completed the study using the same computer, the investigator decided to include only the first set of responses from each duplicate IP address. Additionally, six participants requested their data be excluded from analysis during debriefing. These decisions lowered the sample size to 584.

The investigator utilized a qualitative approach to screen the remaining participant data. Essays and word scramble responses were reviewed for meaningfulness. Essays were rejected if they contained the same short string of words repeated to exceed the word count requirement (example: When I was in a meeting yesterday. When I was in a meeting yesterday…). Word scramble answers were rejected if participants copied the prompt, wrote words that were not included in the prompt, or responded with random characters (example: jhb fd fd fd). A total of seven participants were disqualified due to non-purposeful responding, reducing the sample size to 577.

Five graduate students rated applicants' open responses for the awareness check. Each rater completed a worksheet (Appendix L) that included a scoring rubric for each priming manipulation and all participant responses. Blatant priming manipulations were scored using a three-point rubric. Subtle priming manipulations were rated on a four-point scale to account for the greater range of responses offered by participants. Table 1 details the response anchors. Rater agreement was exceptional (ICC = .93). A conservative approach was adopted for developing inclusion criteria for analysis. Only participants who correctly identified the theme of the blatant prime, a score of 3 on Table 1, or were unaware of the subtle prime, a score of 1 on Table 1, were considered during hypothesis testing. Eighty-eight participants did not meet this criterion for inclusion, making the final sample for analyses n = 489, 50.1% of the initial 976 participants.

Table 1. *Scoring Anchors for Rating the Awareness Check*

Prime	Scoring and Anchors
Blatant	3 = They correctly identified the theme as addressing an ambiguous situation 2 = They identified the theme as the content of their essay (example: a proposal) 1 = They were incorrect or did not respond
Subtle	4 = They **explicitly** stated that the theme had to do with volunteering 3 = They were mostly aware that the theme had to do with volunteering 2 = They were slightly that the theme had to do with volunteering 1 = They were unaware that the theme had to do with volunteering or had no response.

Scale Construction and Validation

Ambiguity Acceptance/Appraisal of Ambiguity. The ambiguity acceptance scale was analyzed for reliability using the pre-awareness check participant sample, $n = 577$, because the outcomes of the awareness check should not impact the psychometric properties of the scale. Strong correlations were found between likelihood to accept the request to volunteer and expectation of comfort in response to each vignette (from vignette one through five in Appendix H: $r = .78, .81, .79, .82, .79$). The measure of ambiguity acceptance was therefore constructed as the mean of these two items (likelihood to accept the request and comfort) into a composite score for each vignette and then averaging the composite scores across the vignettes for each person. Between-vignette correlations were moderate, as shown in Table 2. The resulting scale's mean was 5.13, ranging from 1 to 7, and a standard deviation of .95. The scale showed sufficient reliability ($\alpha = .79$).

Table 2. *Descriptive Statistics and Correlations for Ambiguity Acceptance Scale Across Five Vignettes*

Vignette	*M*	*SD*	1	2	3	4	5
1 Soup Kitchen	5.67	1.08	_				
2 Baseball	4.97	1.39	.39	_			
3 Clean-up	4.86	1.32	.53	.42	_		
4 Elderly	5.58	1.17	.52	.44	.50	_	
5 Painting	4.56	1.49	.34	.42	.47	.32	_
Final Scale	5.13	.95					

NOTE: $n = 577$. Vignette labels detail the main setting or topic of the passage. All correlations were significant, $p < .001$.

Volunteer Survey. The volunteer survey was adapted to identify participants as high- or low-volunteers. The first item ("How significant is being a volunteer to how you view yourself?") showed characteristics of normal distribution ($M = 3.74$, $SD = 1.60$, range 1 to 7, Skew = -.03, Kurtosis = -.63). Item two ("How many times have you volunteered in the past two years?") possessed notable positive skew and severe kurtosis (Kline, 2005) ($M = 11.99$, $SD = 28.05$, range 0 to 324, Skew = 5.76, Kurtosis = 48.30). Item three ("How often do you perform your most regular volunteer activity?") showed characteristics of normal distribution ($M = 4.13$, $SD = 1.85$, range 1 to 6, Skew = -.39, Kurtosis = -1.37). Item four ("Using the above definition, have you ever volunteered?") was eliminated from the scale because this dichotomous variable produced little variance (94% of participants responded yes). The remaining three items showed reasonable correlations with each other (median $r = .46$; Table 3).

Table 3. *Descriptive Statistics and Correlations for Items in the Volunteer Survey*

Item	*M*	*SD*	Significance	Frequency	Rate
Significance	3.74	1.60	-		
Frequency	12.00	28.05	.27	-	
Rate	4.13	1.85	.50	.46	-

NOTE: $n = 577$. Item labels are key words of what was tested. Item 3 was reversed coded. All correlations were significant, $p < .001$.

These three volunteer survey items were transformed into six-point scales so that they would have the same number of scale points before combining them into a single measure. Item one was originally on a seven-point scale and was algebraically transformed into a six-point scale by changing the distance between each scale point from 1.00 to .83 (example: 2.00 transformed to 1.83 and 3.00 to 2.66). Item two's open responses were converted into a six-point scale by dividing responses into six equally sized groups. That is, the number of times the participant had volunteered in the past five years was grouped as follows: zero (19.2%) as one, one and two (23.4%) as two, three (9.9%) as three, four through six (16.6%) as four, seven through thirteen (13.9%) as five, and the remaining responses, ranging from 15 to 324 (17%), as six. The above transformations improved the distribution of item two (M = 3.33, SD = 1.77, Skew = .16, Kurtosis = -1.37) and also enhanced the correlations between items (Table 4). The volunteer survey showed evidence of good reliability for these transformed items (α = .81). The volunteer survey weakly correlated with the *MSTAT-I* (r = .19, p < .001); this suggests that individuals high in TA are slightly more likely to engage in volunteer activities. The volunteer survey was very weakly correlated with the Role Ambiguity scale (r = .09, p < .05).

Table 4. *Descriptive Statistics and Correlations for Revised Volunteer Survey*

Item	*M*	*SD*	Significance	Frequency	Rate
Significance	3.28	1.33	_		
Frequency	3.33	1.77	.48	_	
Rate	2.85	1.85	.50	.78	_

NOTE: n = 577. Item labels are key words of what was tested. Item 3 was reversed coded. All correlations were significant, p < .001.

Finally, there was a possibility that priming (especially the blatant priming) participants about their volunteer experiences would cause them to report more volunteering than they

otherwise would, thereby contaminating the measure of high-low volunteering. Therefore, two chi-squares were calculated to test this possibility. A 2 x 2 chi-square (blatant volunteer priming x high-low volunteer status) was not significant, $\chi^2(1, N = 227) = .14$, $p = .71$; likewise, a 2 x 3 chi-square (blatant volunteer priming x hi-low volunteer status or control group) was not significant, χ^2 $(2, N = 330) = .41$, $p = .82$). Therefore, there was no evidence that the priming caused participants to report more or less volunteering in their past.

CHAPTER III

RESULTS

The correlations among the four continuous variables in the study are in Appendix M. The volunteer status of the person as measured by the three items in the volunteer survey was correlated with ambiguity acceptance (r = .25) and role ambiguity (r = .09). To identify salience of volunteering to the participant's self-concept (i.e., as high- or low-volunteers), a median split of the volunteer survey results (median = 3.11) was performed to separate participants into two similarly sized groups. Participants with scores above the median were considered to be targets of the volunteer priming manipulation (i.e., they were high-volunteers, or at least they volunteered more and identified as a volunteer more than people below the median), while those below the median were treated as non-targets of the volunteer priming manipulation. Because of multiple scores at the median, this produced an uneven distribution of each group for each experimental condition (Table 5), but the sample sizes were close to equal and sufficient in size to conduct analyses for each hypothesis.

Table 5. *Sample Distribution Across Priming Conditions*

		Blatant Prime		Subtle Prime		
Item	*n*	TA	Vol	TA	Vol	Control
High-volunteer	247	31	58	36	68	54
Low-volunteer	242	47	44	45	57	49

NOTE: TA = tolerance for ambiguity. Vol = volunteer stereotype.

Independent samples t-tests were used to analyze the hypotheses. Participants were randomly assigned to experimental conditions. Levene's test for equality of variance was conducted with every t-test. The only significant difference of variance, $F(1, 163) = 5.63$, p = .02, occurred in hypothesis 3a for the ambiguity acceptance between stereotype primed and low-

volunteer in the control group. A Welch's corrected unpaired t-test was used in this instance. Cohen's d was calculated for significant findings to show effect size between the groups.

The first hypothesis compares the mean differences for role ambiguity and ambiguity acceptance between participants in a combined blatant TA and subtle TA prime group and the control group that received a neutral prime. There was no significant effect from priming TA on role ambiguity ($t(328) = .61$, $p = .55$) or ambiguity acceptance ($t(328) = .86$, $p = .86$). The results were also non-significant when comparing the control group with the blatant TA priming (role ambiguity: $t(217) = .21$, $p = .83$, ambiguity acceptance $t(217) = -.08$, $p = .94$) or the subtle TA priming group (role ambiguity: $t(223) = .82$, $p = .41$, ambiguity acceptance $t(223) = .35$, $p = .73$). There was no evidence of support for the first hypothesis.

The second hypothesis was tested by examining the mean difference for ambiguity acceptance and role ambiguity for high-volunteers across several priming conditions. Relatedly, the first research question explored the potential mean difference for ambiguity acceptance and role ambiguity between the blatant stereotype prime condition and control group. High-volunteers did not produce significantly different mean scores when comparing the combined blatant stereotype priming condition and control group with those who received subtle stereotype priming (role ambiguity: $t(178) = .32$, $p = .75$, ambiguity acceptance : $t(178) = -.164$, $p = .10$). Nor were the mean scores significantly different when comparing the combined blatant stereotype priming condition and control group with those in the TA priming condition (role ambiguity: $t(177) = -1.35$, $p = .18$, ambiguity acceptance : $t(177) = -1.07$, $p = .29$). Recall, research suggests that anxiety arising from expectations to conform to a given stereotype would neutralize any stereotype boost that the blatant stereotype primed group would experience, and thus the two groups were combined to test hypothesis 2a. Also, mean score differences were not

significant for high-volunteers receiving the subtle stereotype prime versus TA prime for either scale (role ambiguity: $t(133) = 1.33$, $p = .19$, ambiguity acceptance: $t(133) = -.55$, $p = .58$). Lastly, no significant difference was observed between high-volunteers who received blatant stereotype priming versus the control group (role ambiguity: $t(110) = -.99$, $p = .33$, ambiguity acceptance: $t(110) = -.27$, $p = .79$). Taken together, no support was found for hypothesis two or the first research question.

The third hypothesis concerned the mean differences for role ambiguity and ambiguity acceptance for low-volunteers across all priming conditions. There were no significant mean differences for low-volunteer participants when comparing the control group with the combined results of both stereotype priming conditions (role ambiguity: $t(67.1) = -.52$, $p = .61$, ambiguity acceptance: $t(86.4) = .96$, $p = .34$). There was also no significant mean differences for the low-volunteer participants when comparing the control group with the TA priming condition (role ambiguity: $t(139) = -.10$, $p = .92$, ambiguity acceptance: $t(139) = -.10$, $p = .92$). Significant mean differences were found between low-volunteers who were blatantly ($M = 5.23$, $SD = .70$) and subtly primed ($M = 4.82$, $SD = .88$) for ambiguity acceptance ($t(99) = -2.58$, $p < .01$, $d = .372$), but not for role ambiguity ($t(99) = -.25$, $p = .80$). Low-volunteer mean differences between TA priming and subtle stereotype priming groups were not significant (role ambiguity: $t(147) = -.60$, $p = .55$, ambiguity acceptance: $t(147) = -1.36$, $p = .18$). These findings provide no support for hypothesis 3a and partial support for hypothesis 3b.

Research question two concerns mean differences between low-volunteer participants receiving blatant stereotype priming and TA priming. Nearly significant mean differences were observed for low-volunteer participants between the blatant stereotype priming condition ($M = 5.23$, $SD = .70$) and the TA priming condition ($M = 4.91$, $SD = 1.00$) for ambiguity acceptance

($t(134) = -1.92$, $p = .057$, $d = .525$), but not for role ambiguity ($t(134) = .93$, $p = .35$). The finding of only near significance may be due to lack of sample size. To explore the influence of sample size, we compared the mean differences between the blatant stereotype prime and TA priming groups with broader inclusion criteria for the awareness check, which resulted in a larger sample size. We re-ran the analysis with low-volunteer participants including those who were rated a 2 or more on the blatant priming awareness check (see Table 1) and those scoring 2 or less on the subtle priming condition awareness check (see Table 1). These inclusions increased the sample sizes from 44 to 45 for the blatant stereotype prime and from 92 to 110 for the TA priming groups, and resulted in only a slight change in means and standard deviations (Table 6). The expanded group means were significantly different for ambiguity acceptance ($t(153) = -2.09$, $p < .05$, $d = .392$), suggesting that a reason for lack of significance (the $p = .057$) is low sample size. Thus, there may be some support for research question two, that low volunteers who are blatantly primed for volunteering versus receiving a TA prime produce differences in ambiguity acceptance.

Table 6. *Change in Descriptive Due to Expanding Inclusion Criteria*

				Change in		
Prime	*n*	*M*	*SD*	*n*	*M*	*SD*
Blatant Stereotype	45	5.21	.71	+1	-.02	-.01
TA	110	4.87	1.00	+18	-.04	-.02

NOTE: TA stands for tolerance for ambiguity.

Summary Analyses

In addition to analyses testing specific hypotheses, some more global summary analyses were computed. First, two 1 x 5 analyses of variance were conducted. Referring to Figure 2, an

analysis of variance for the back half of the figure (blatant and subtle priming for TA and for volunteer stereotype, and control group—for low volunteers only) was not significant for either of the dependent variables, role ambiguity $F(4, 237) = .549$, $p = .70$, or ambiguity acceptance, $F(4, 237) = 1.37$, $p = .245$. Thus, for the low-volunteer group, there was no overall effect of the predictor variables on the criteria. Similarly, for the front half of Figure 2 (high volunteers), analyses of variance also were not significant for either criterion variable, $F(4, 242) = 1.49$, $p = .207$ for role ambiguity, and $F(4, 242) = 1.05$, $p = .380$ for ambiguity acceptance. Therefore, these two global analyses showed no effects for either variable for either high or low volunteers.

Finally, we explored the effects of the revised volunteer survey as a continuous variable, as opposed to the dichotomized variable used during hypothesis testing, and the potential interaction effect of the priming manipulation and volunteer survey results as a moderator using hierarchical linear regression. The interaction effect was computed by first centering the priming manipulation group assignment and the revised volunteer survey variables, and then multiplying these variables together.

Analyses with the volunteer survey as a continuous variable had a minimal effect on role ambiguity ($b = .06$, $t(576) = 2.14$, $p < .05$), and a weak effect on ambiguity acceptance ($b = .17$, $t(576) = 6.09$, $p < .001$). These results suggest that role ambiguity and ambiguity acceptance increased as participants scored higher on the volunteer survey. The priming manipulation had no significant effect on either role ambiguity or ambiguity acceptance ($b = .01$, $t(576) = .19$, $p = .85$; $b = -.01$, $t(576) = -.19$, $p = .85$). There was no significant interaction between the priming manipulation and the revised volunteer scores for both role ambiguity ($b = -.001$, $t(576) = -.07$, $p = .95$) and ambiguity acceptance ($b = .03$, $t(576) = 1.56$, $p = .12$). Also, including the interaction

term did not enhance the variance explained by the regression model for both role ambiguity ($F(1,573) = .01$, $p = .95$, $\Delta R^2 = .00$) and ambiguity acceptance ($F(1,573) = 2.44$, $p = .95$, $\Delta R^2 = .004$). The full results of the hierarchical regression are shown in Table 7 for role ambiguity and Table 8 for ambiguity acceptance.

Table 7. *Changes in Role Ambiguity by Priming Manipulation and Volunteer Survey*

Predictor	ΔR^2	*b*	SE	β
Step 1	.008			
Prime		.01	.03	.01
Vol		.06*	.03	.09
Step 2	.000			
Prime		.01	.01	.01
Vol		.06*	.09	.09
Group x Vol		.00	.02	.00

NOTE: $n = 577$. Prime stands for priming manipulation. Vol stands for revised volunteer survey.
* $p < .05$

Table 8. *Changes in Ambiguity Acceptance by Priming Manipulation and Volunteer Survey*

Predictor	ΔR^2	*b*	SE	β
Step 1	.062*			
Group		-.01	.03	-.01
Vol		.17*	.03	.25
Step 2	.004			
Group		-.01	.03	-.01
Vol		.17*	.03	.25
Group x Vol		.03	.02	.06

NOTE: $n = 577$. Prime stands for priming manipulation. Vol stands for revised volunteer survey.
* $p < .05$

CHAPTER IV

DISCUSSION

The majority of the conceptual foundation for this study was not supported by the data collected. Most manipulation groups showed no significant mean differences with the control group. These null findings suggest that although research of stereotype priming of demographic groups is conceptually related to the priming of social groups, social group stereotypes may operate through different mechanisms. These results may help inform nonprofit managers of how personality traits and environmental cues can influence an individual's decision to accept ambiguous volunteer positions. Our conclusions should be considered with caution due to limitations with sampling, research design, and questionable psychometric properties of key variable measures.

None of the manipulations caused significant mean differences between experimental conditions in regards to role ambiguity. This study proposed that role ambiguity is theoretically related to TA and the ambiguity acceptance scale through role theory. We expected the role episode model to operate similarly to priming: A sent role would influence the attributes of the person, or traits, which then influence how future sent roles are interpreted (Kahn et al., 1964). Our lack of significant findings suggest that volunteer stereotype and TA priming did not operate as predicated by the role episode model. Further research should explore the effects of priming on activating personal attributes within a role episode.

Priming TA did not produce significant mean differences from the control group at any point in this study. This is notable because TA was compared to the control group within three groupings of participants: high-volunteers, low volunteers, and the full sample. These findings are counter to numerous examples of traits that have been successfully primed in past research.

The inability to prime TA compromised the experimental design across each hypothesis, limiting our ability to fully support any hypothesis. As a result, the only remaining functional experimental groups were the blatant and subtle stereotype priming conditions.

The rejection of the second set of hypotheses suggests that conceptual models used in stereotype threat research do not apply when priming for the volunteer stereotype. The ideomotor theory predicts that priming the volunteer stereotype would indirectly activate TA due to the proposed volunteer stereotype of tolerating ambiguous situations. The sequence of group comparisons posed in hypothesis two demonstrated that no combination of priming for TA or stereotype priming produced significant mean differences in role ambiguity or accepting a volunteer position. The study found that TA was not only unresponsive to direct priming, but also that stereotype priming failed to impact participant ratings on criterion measures of ambiguity acceptance and role ambiguity.

Another theoretical consideration for high-volunteers was the impact of anxiety, arising from expectation to conform to a given stereotype, on behavioral outcomes. Past research has shown the performance enhancement effect from the activated stereotyped trait can be suppressed by the anxiety to fulfill the stereotyped performance expectation (Shih et al., 2002). Although the initial null finding supports the expected outcome for this anxiety effect, this requires the successful activation of the relevant trait and the generation of anxiety about meeting expectations. The failure to prime TA combined with the non-significant findings for either stereotype priming conditions suggests an alternative explanation. The null finding for the first research question likely arises not from the hypothesized anxiety effect but from the failure of the blatant stereotype prime to impact participants' reported role ambiguity or ambiguity acceptance.

We found that low-volunteers who were blatantly primed for the volunteer stereotype were significantly more willing to accept ambiguous volunteer situations than the subtle stereotype priming conditions. This suggests there is a stimulus strength threshold for the prime to successful activate a trait within low-volunteers (Shih et al., 2002). For our study, this means that the blatant stereotype prime was strong enough to overcome this threshold and the subtle stereotype prime was too weak to influence participant behavior.

Contrary to expectations, blatant stereotype priming produced significantly different results from TA priming in participants' ambiguity acceptance. We theorized that TA was the most relevant trait for predicting role ambiguity and ambiguity acceptance across the study. For low-volunteers, priming TA directly should therefore have a similar effect as blatant stereotype priming, because the stereotype, theoretically, activates TA indirectly. The findings from research question two however suggests that blatant stereotype priming enhanced participants' ambiguity acceptance more than priming for TA did. Volunteer priming may activate a third unconsidered variable instead of TA.

The lack of findings for priming TA may be due to inadequacies in the priming procedure. This study used priming procedures from stereotype threat research. Priming procedures from the trait priming literature may have been more successful for activating TA. It should be noted that there is no research for priming TA. Although TA is comparable to traits that have been successfully primed, our findings suggest that TA functions differently from other traits. Further research is necessary to understand the mechanisms involved in activating TA.

The priming procedures may also be responsible for the null findings observed for high-volunteers. The blatant and subtle priming procedures are from studies that primed non-targets of a demographic based stereotype. These priming procedures differ from target priming procedures

in two notable ways. First, blatant priming procedures directed at targets of the stereotype typically state the stereotype explicitly to the participant (e.g. Kray et al., 2001; Shih et al., 2002). By contrast, the blatant priming procedure used in this study did not state the hypothesized stereotypical trait of ambiguity acceptance. Second, subtle priming procedures for targets activate stereotypical traits by emphasizing clearly defined features of the stereotyped group. Volunteers do not have prominent characteristics like demographic groups, so we relied on words that are commonly associated with volunteering. Even though the volunteer subtle priming words were developed through a rigorous content generation process, some recipients of the prime were misled by the priming task. A few of the rejected participant responses from the subtle stereotype prime awareness check identified the manipulation's theme to be about kindness, altruism, and similar concepts. A more refined list of volunteer adjectives may have produced stronger findings for high-volunteers.

The general lack of significant findings may be due to our broad operationalization of the volunteer stereotype. Past studies that successfully primed social group stereotypes focused on occupations or well-defined groups such as soccer hooligans and skin heads (Dijksterhuis & van Knippenberg, 1998; Kawakami, Dovidio, & Dijksterhuis, 2003). The theoretical foundation of those studies was that social stereotypes operate through autonomic processes of mimicking behavior. Although there is a coherent understanding of what makes someone a volunteer, there are many representations and behaviors exhibited by this social group. Volunteer marketing research has identified multiple volunteer profiles, each with a unique set of stereotypes (Ho and O'Donohoe, 2014). With this in mind, perhaps the colloquial use of "volunteer" was too broad to uniformly activate traits associated with the volunteer stereotype. Priming a specific volunteer profile may be a better method for activating stereotypical traits.

The lack of significant findings may have occurred due to a lack of experimental control in the testing environment. Participants engaged in this experiment from equipment and environments independent from research control. It is possible that participants were engaged in multiple activities, not focusing entirely on the study's manipulation. Future studies that use essays or word scrambles to the volunteer stereotype should consider administering their study in a laboratory environment to reduce systematic error by controlling the testing environment.

The null findings suggest that alternative theories may better describe why volunteers are seemingly more tolerant of ambiguous situations. For example, self-concept theory offers a multi-dimensional approach to explain changes in behavior. Individuals may change their behaviors when they perceive discrepancies between their current image of themselves and their desired image (Sirgy, 1982). Self-concept theory would predict that individuals could desire the positive personal attributes associated with volunteers and would be more active in engaging in volunteer activities. High-volunteers may have already integrated the positive attributes of volunteering into their self-concept, so they do not experience any discrepancy between their actual and ideal self-concept. Thus, they would not be motivated to agree to more volunteer positions. This would explain why the priming effect returned null findings for the high-volunteer participants. Future studies interested in incorporating the self-concept theory into volunteer research could measure subjective difference between the actual and ideal self-concept instead of relying on an objective measurement of volunteering.

The lack of theorized effect observed in this study is likely due to a misevaluation of the required credentials for being a volunteer. Stereotype threat and boost research concerning demographic stereotypes, and social group membership to a lesser extent, assume that group membership is defined by observable characteristics. Typically, an individual's group

membership remains constant throughout their life and is easily identified by others, especially when group membership is based on physical characteristics. Non-group members do not have access to group members' experience of self-concept because of the fixed credentials for group membership. Thus, non-group members develop inferences, stereotypes, about group members' traits by observing group member behavior (Dijksterhuis & Bargh, 2001). By comparison, the current study and past research suggests that the credentials for being a volunteer are minimal. Most individuals have direct experience with being a volunteer. Stereotype threat and boost theory are likely inappropriate for predicating volunteer outcomes because, conceptually, priming would activate past memories of volunteering instead of a general volunteer stereotype. Future studies should utilize a theoretical framework based on fluid components within an individual's experience and identity, like self-concept theory, opposed to theory predicated on concrete differences between group and non-group members, like stereotype threat.

Applications

The findings from this study have several implications regarding mechanisms involved with TA and how volunteers respond to ambiguous situations. Our study provides initial evidence that priming for TA does not influence an individual's ambiguity acceptance or experience of role ambiguity. Secondary interventions that utilize TA or similar constructs to cope with ambiguity in volunteer roles may not be effective. Practitioners should resolve ambiguous volunteer positions directly by establishing written job descriptions, providing realistic job previews during the recruitment process, and training volunteers for their role.

The stereotype priming did not influence the ambiguity acceptance for high-volunteers. This suggests that volunteer organizations' recruitment methods that focus purely on the

volunteer image may not engage veteran volunteers. It is important to note that our priming activity functioned by either evoking a past memory of volunteering or injecting priming words into a neutral task. We recommend that recruitment processes directed towards veteran volunteers should include more than simply evoking past volunteering experiences. Volunteer coordinators should instead focus on clarifying the role description or outline the direct benefits of accepting a volunteer position.

The study provides initial evidence that low-volunteers may respond favorably to blatant stereotype primes when being recruited for ambiguous volunteer positions. The success of our blatant priming condition suggests that cues evoking past memories of volunteering cause unexperienced volunteers to overlook ambiguity when accepting positions. Although volunteer coordinators may incorporate this finding into their volunteer recruitment processes, we emphasis that priming effects are short-lived. This means unexperienced volunteers may agree to positions that involve more ambiguity than they would normally tolerate. However, prolonged exposer to role ambiguity may lead to burnout and greater intentions to quit (Allen & Mueller, 2013; Doherty & Hoye, 2011; Farmer & Fedor 1999; Studer & Schnurbein, 2013).

Limitations

Random assignment to experimental groups was a strength of the study that allows strong inference about causality when significant results are found. Nevertheless, a few limitations should be considered when utilizing the results of this study. First, ambiguity acceptance and the volunteer survey variables were measured using scales developed for this study. Although we conducted a rigorous content creation process, some scales may require further replication before they can be considered valid. Both dependent variable scales showed good evidence for

reliability using Cronbach's alpha. Second, recruiting participants from mTurk may have caused range restriction in our sample. For example, over 50% of participants had a four-year degree or higher. These demographic similarities may have attenuated mean differences throughout the study.

Third, the cross-sectional design of the study allows for the priming manipulation to influence independent variables, notably the volunteer survey. It is possible that the volunteer priming conditions contaminated the participant self-report answers, which would explain why there were sample size difference between groups in Table 5. We conducted chi-squared testing to compare the estimated outcomes of high/low-volunteer status by both volunteer priming conditions (2x2), and high/low-volunteer status by both volunteer priming conditions and the control group (2x3). Both analyses reported non-significance, providing evidence that the manipulations did not contaminate the independent variable (2x2: X^2 (1, N = 227) = .14, p = .71; 2x3: X^2 (2, N = 330) = .41, p = .82). Regardless, administering the survey and collecting independent variable data during separate time points would prevent the priming manipulation from contaminating independent variables. Fourth, there was no measurement of the strength of the prime effect in the sample. It is possible that participants were not fully engaged in the manipulations or self-report measures at the time of data collection. Conducting the study in a controlled laboratory setting would reduce the influence of environmental confounds.

Fifth, as noted earlier, a broad definition for volunteer and procedural differences in the priming manipulation from prior studies may have resulted in the null findings. Sixth, role theory concerns employee stress responses in a work environment. Role theory and the role ambiguity scale may be irrelevant in a volunteer context. This may account for the null findings regarding role ambiguity across the study. Lastly, role ambiguity was measured as a proxy for anxiety.

Future studies should consider measuring anxiety as it is theoretically more relevant to stereotype threat than role ambiguity.

Future Research

Our outcomes suggest several avenues for future research topics. This study marks the first attempt to prime TA. A within-subject research design could test the effectiveness of different priming procedures for activating TA. TA shares a strong conceptual link to role ambiguity, and further research on TA's activation may offer role ambiguity researchers a new trait predictor variable. Low-volunteers were more willing to accept ambiguous volunteer situations without evidence of TA activation. Future research could look at other traits that could be activated such as altruism or agreeableness. Lastly, there is a dearth of research concerning the extent that individuals internalize their volunteer roles. Not only should future research look at further defining the stereotypes of volunteers, but also quantify the significance of the volunteer role in an individual's self-concept.

CHAPTER V

CONCLUSION

In summary, our study provides initial findings regarding the impact of environmental cues on a volunteer's behavior. High-volunteers were unaffected by blatant or subtle priming manipulations when reporting their ambiguity acceptance and role ambiguity. Low-volunteers were influenced by blatant priming of the volunteer stereotype to be more accepting of ambiguous volunteer requests compared to a control group. Our priming procedures were unsuccessful in activating TA, suggesting that TA may operate differently from traits that have been successfully primed in the past. Together, these findings can inform the recruitment practices for volunteers and help prevent volunteer burnout due to ambiguity.

APPENDICES

APPENDIX A

Blatant Stereotype Priming Instructions:

Write a 150-word essay about the last time you volunteered, using the text box provided below. This can include describing what you did and/or how you felt about the experience. Please write in the first-person, using 'I' to refer to yourself, as appropriate.

Blatant TA Priming Instructions:

Write a 150 word essay about the last time you successfully worked through an ambiguous situation, using the text box provided below. This can include describing what you did and/or how you felt about the experience. Please write in the first-person, using 'I' to refer to yourself, as appropriate.

Blatant Neutral Priming Instructions:

Write a 150 word essay about the last time you visited or spent time with a friend, using the text box provided below. This can include describing what you did and/or how you felt about the experience. Please write in the first-person, using 'I' to refer to yourself, as appropriate.

APPENDIX B

Subtle Stereotype Sentence Scramble Task

* items contain the prime.

1. are / charitable / they / steam / people
(They are charitable people)*

2. is / nurse / compassionate / the / over
(The nurse is compassionate)*

3. giving / support / where / orange / needed
(Giving support where needed)*

4. out / helpful / the / reward / neighbor
(Reward the helpful neighbor)*

5. generous / be / with / compliments / metal
(Be generous with compliments)*

6. involved / she / box / very / was
(She was very involved)*

7. loop / center / paint / the / community
(Paint the community center)*

8. are / service / turn / buses / in
(Buses are in service)*

9. women / those / them / elderly / selfless
(Those selfless elderly women)*

10. soul / that / caring / a / such
(Such a caring soul)*

11. this / thoughtful / stump / is / gift
(This gift is thoughtful)*

12. respect / kind / children / deserve / flexible
(Kind children deserve respect)*

13. in / the / believe / cause / observe
(Believe in the cause)*

14. plant / positive / a / maintain / attitude
(Maintain a positive attitude)*

15. were / note / there / was / well-intentioned
(There note was well-intentioned)*

16. are / high / winds / the / sticky
(The winds are high)

17. going / the / park / among / to
(Going to the park)

18. uncomfortable / are / the / yarn / seats
(The seats are uncomfortable)

19. I / music / like / their / two
(I like their music)

20. young / too / narrow / she / died
(She died too young)

21. was / archetype / into / an / he
(He was an archetype)

22. garden / about / read / history / state
(Read about state history)

23. final / duck / my / eggs / four
(My final four eggs)

24. eyes / their / were / dirt / tired
(Their eyes were tired)

25. has / been / shirt / today / cloudy
(Today has been cloudy)

26. the / is / of / setting / sun
(The sun is setting)

27. shinny / the / river / look / across
(Look across the river)

28. stars / stay / home / from / work
(Stay home from work)

29. falling / pry / is / rain / the
(The rain is falling)

30. build / wooden / beavers / a / dams
(Beavers build wooden dams)

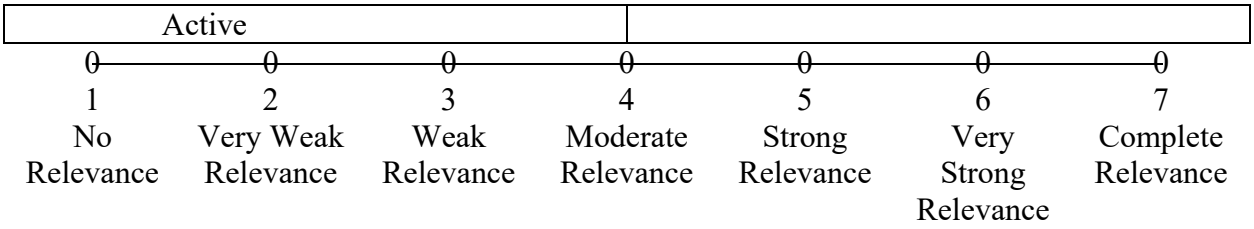
APPENDIX C

For the purpose of this study, a volunteer is someone who freely chooses to engage in an activity intended to directly benefit a person, group of people, or cause without expectation for compensation.

Free Response Prompt: In approximately 150 words describe your idea of a typical volunteer. Focus on the personality or characteristics of someone who is a volunteer.

Subtle Prime Prompt: Rate each of the following words on their relevance to a typical volunteer from 1 to 7. A 1 represents no relevance and a 7 great relevance.

Subtle Prime Rating Example:



The 117 adjectives used in the Subtle Volunteer Stereotype Prime rating task.

Active	Activist	Affectionate	Agreeable	Altruistic
Ambitious	Amicable	Aspiration	Benevolence	Boring
Carefree	Caring	Charitable	Charity	Community Member
Citizenship	Cohesive	Committed	Community	Conscientious
Compassionate	Concerned	Connected	Considerate	Curious
Dedicated	Determined	Do-gooders	Dorky	Dowdy
Eager	Easily Led	Easy Mark	Empathetic	Engaged
Enthusiastic	Follower	Forced	Friendly	Frumpy
Generous	Give-away	Giving	Grace	Group-oriented
Happy	Helpful	Hippy	Honest	Hopeful
Hospitable	Humanitarian	Humanity	Initiative	Initiator
Intimated	Involved	Joyful	Kind	Kind-hearted
Lonely	Loser	Loud	Magnanimity	Minimally Talented
Moral	Munificence	Naive	Neurotic	Nice
Obsessive	Old	Open	Outgoing	Passionate
Patient	Patsy	Pawn	Peace	Persevering
Philanthropy	Plain	Polite	Positive	Principled
Privileged	Protester	Purposeful	Pushover	Reciprocity

Red Cross	Religious	Righteous	Sap	Selfless
Service	Single	Smart	Sociable	Softy
Solicitousness	Solidarity	Sucker	Tenacious	Thoughtful
Trust	Uncool	Understanding	Uninterested	Unremarkable
Unselfish	Vibrant	Warm	Wealthy	Well-intentioned
Worldly	Young			

APPENDIX D

Tolerance for Ambiguity is an individual difference representing a range, from rejection to attraction, of reactions to **stimuli perceived as unfamiliar, complex, dynamically uncertain, or subject to multiple conflicting interpretations.**

Please rate on a 1 to 7 scale how negative or positive the four-word sentence is towards ambiguity. That is, if the item refers to a situation that someone with a high tolerance for ambiguity would find attractive, mark strongly positive; if it is something someone with a high tolerance for ambiguity would dislike or disagree with, mark strongly negative; and so forth. Indicate your rating in the highlighted parentheses, (), using the appropriate number. Please email the completed form to hirsc1sa@cmich.edu.

Thank you for your help.

Subtle Prime Rating Example:

1. murder mysteries are fun						
1	2	3	4	5	6	7
Strongly Negative	Somewhat Negative	Slightly Negative	Neutral	Slightly Positive	Somewhat Positive	Strongly Positive
Response ()						

The 30 phrases used in the Subtle Tolerance for Ambiguity Prime rating task.

murder mysteries are fun	they solved the mystery
The unknown is thrilling	the familiar is boring
she enjoys the unfamiliar	familiarity impedes personal growth
not knowing is fine	clarity means no choice
curiosity defines that person	the uncertain is exotic
he solved the puzzle	she opened the present
manage the unpredictable situation	uncharted waters spur adventure
not knowing causes curiosity	he expects the unexpected
they seek out novelty	they avoid excessive clarity
she treasures surprise parties	secrets keep things interesting
take comfort in uncertainty	uncertainty allows for choice
what will happen next	surprises can be nice
sometimes uncertainty hides possibility	mysterious characters are interesting
enigmas can be solved	find the concealed treasure
she loves completing puzzles	he tolerated doubt well

APPENDIX E

Subtle TA Sentence Scramble Task

* items contain the prime.

1. steam / the / thrilling / is / unknown

(the unknown is thrilling)*

2. orange / be / can / uncertainty / enjoyable

(uncertainty can be enjoyable)*

3. secrets / interesting / over / keep / things

(secrets keep things interesting)*

4. out / enjoys / unfamiliar / she / the

(she enjoys the unfamiliar)*

5. interesting / metal / characters / are / mysterious

(mysterious characters are interesting)*

6. are / mysteries / fun / them / murder

(murder mysteries are fun)*

7. fine / is / not / knowing / loop

(not knowing is fine)*

8. surprise / parties / turn / he / adores

(he adores surprise parties)*

9. uncertainty / always / box / in / comforting

(uncertainty is always comforting)*

10. encourage / that / adventure / waters / uncharted

(uncharted waters encourage adventure)*

11. uncertainty / choice / allows / stump / for

(uncertainty allows for choice)*

12. flexible / out / novelty / they / seek

(they seek out novelty)*

13. can / surprises / be / observe / nice

(surprises can be nice)*

14. personal / familiarity / plant / limits / growth

(familiarity limits personal growth)*

15. excessive / were / avoid / I / clarity

(I avoid excessive clarity)*

16. are / high / winds / the / sticky

(The winds are high)

17. going / the / park / among / to
(Going to the park)

18. uncomfortable / are / the / yarn / seats
(The seats are uncomfortable)

19. I / music / like / their / two
(I like their music)

20. young / too / narrow / she / died
(She died too young)

21. was / archetype / into / an / he
(He was an archetype)

22. garden / about / read / history / state
(Read about state history)

23. final / duck / my / eggs / four
(My final four eggs)

24. eyes / their / were / dirt / tired
(Their eyes were tired)

25. has / been / shirt / today / cloudy
(Today has been cloudy)

26. the / is / of / setting / sun
(The sun is setting)

27. shinny / the / river / look / across
(Look across the river)

28. stars / stay / home / from / work
(Stay home from work)

29. falling / pry / is / rain / the
(The rain is falling)

30. build / wooden / beavers / a / dams
(Beavers build wooden dams)

APPENDIX F

Blatant and Control Group Awareness Check:

Think back to the essay writing exercise. What was the theme of the essay you wrote?

(They respond by typing into a free-response text box)

Subtle Priming Awareness Check:

Think back to the sentence scrambling exercise. Did you notice a theme to the scrambled sentences?

Yes/No

(If they indicate yes)

What theme did you notice in the sentence scrambled exercise?

(They respond by typing into a free-response text box)

APPENDIX G

Dependent Variable: Perceived Role Ambiguity (Rizzo, House, & Lirtzman, 1970).

1. I feel certain about how much authority I have.

2. There are clear, planned goals and objectives for my job.

3. I know that I have divided my time properly.

4. I know what my responsibilities are.

5. I know exactly what is expected of me.

6. Explanation is clear of what has to be done.

Subjects respond on a seven-point Likert scale: 1 strongly disagree, 2 disagree, 3 somewhat disagree, 4 neutral, 5 somewhat agree, 6 agree, 7 strongly agree.

APPENDIX H

Control Variable, Trait Tolerance for Ambiguity: *Multiple Stimulus Types Ambiguity Tolerance* (*MSTAT-I*; McLain, 1993).

1. I don't tolerate ambiguous situations well.**
2. I find it difficult to respond when faced with an unexpected event.**
3. I don't think new situations are any more threatening than familiar situations.
4. I'm drawn to situations which can be interpreted in more than one way.
5. I would rather avoid solving a problem that must be viewed from several different perspectives.**
6. I try to avoid situations which are ambiguous.**
7. I am good at managing unpredictable situations.
8. I prefer familiar situations to new ones.**
9. Problems which cannot be considered from just one point of view are a little threatening.**
10. I avoid situations which are too complicated for me to easily understand.**
11. I am tolerant of ambiguous situations.
12. I enjoy tackling problems which are complex enough to be ambiguous.
13. I try to avoid problems which don’t seem to have only one "best” solution.**
14. I often find myself looking for something new, rather than trying to hold things constant in my like.
15. I generally prefer novelty over familiarity.
16. I dislike ambiguous situations.**
17. Some problems are so complex that just trying to understand them is fun.
18. I have little trouble coping with expected events.**

19. I pursue problem situations which are so complex some people call them "mind boggling."

20. I find it hard to make a choice when the outcome is uncertain.**

21. I enjoy an occasional surprise.

22. I prefer a situation in which there is some ambiguity.

NOTE: ** are reversed-scored items.

Subjects respond on a seven-point Likert scale: 1 strongly disagree, 2 disagree, 3 somewhat disagree, 4 neutral, 5 somewhat agree, 6 agree, 7 strongly agree.

APPENDIX I

Dependent Variable, State Willingness to Work in Ambiguous Volunteer Situations:

Instructions: Imagine yourself in each of the following situations. Use the provided scales to indicate your likelihood of agreeing to the stated request and how comfortable you would be committing to the request.

How likely would you agree to the request based on the following description?						
1	2	3	4	5	6	7
Extremely Unlikely	Unlikely	Somewhat Unlikely	Indifferent	Somewhat Likely	Likely	Extremely Likely

How comfortable would you be agreeing to the request based on the following description?						
1	2	3	4	5	6	7
Extremely Uncomfortable	Uncomfortable	Somewhat Uncomfortable	Indifferent	Somewhat Comfortable	Comfortable	Extremely Comfortable

1. The soup kitchen staff were bustling with activity. The less fortunate were lined up ready to receive their food. “That was a great job you did today,” said the head chief of the kitchen after the kitchen had closed for the evening. “We could really use a person like you to help out with other things. Would you consider giving me a hand?”

2. Your child’s baseball team was celebrating with ice cream sundaes at the local malt shop. “What a great season we had this year,” the coach toasted to us, “I can hardly believe how much we won the championship by.” “While I know each of you put in considerable effort to play through the play-offs, I need one parent to give me a hand closing out the season. Would anyone help me out?”

3. Twice a year the family arranges with the local transit authority office to clean up a stretch of highway. Lately, friends and neighbors have been joining in. We have built up quite a bit of comradery around the activity. “You folks do such a great job supporting our highway system,” said the director of community relations, the last time we scheduled a cleanup. “Can you help us in other ways?”

4. The elderly home hosted many activities for its residents. A group of friends decided to help out around the facility for the afternoon. After seeing how well they interacted with the residents,

the program director approached the group. “The residents really enjoyed spending time with each of you,” the director said, “we get outside help so infrequently… Would any of you consider coming in every so often?”

5. Some high schoolers thought it would be fun to spray paint their names onto the side of the school. Although the guilty party had been dealt with, the wall needed to be repainted. A group of parents and neighbors were now repainting the wall under the hot summer sun. The principal came out to express thanks once they were done. “The school is understaffed nowadays,” said the principal, “we appreciate any help we can get. There are a few other odd jobs that our facilities staff do not have time to address but would be appreciated by all. Would any of you consider helping the school?”

In developing the list of five vignettes above, subject matter experts rated vignettes on the following two scales:

How related is the passage to what you consider to be a volunteer situation?						
1	2	3	4	5	6	7
Strongly Unrelated	Somewhat Unrelated	Slightly Unrelated	Neutral	Slightly Related	Somewhat Related	Strongly Related
Response ()						

How ambiguous is the requested task or role?						
1	2	3	4	5	6	7
No Ambiguity	Minor Ambiguity	Slightly Ambiguous	Somewhat Ambiguous	Mostly Ambiguous	Very Ambiguous	Extremely Ambiguous
Response ()						

APPENDIX J

Volunteer Questions to Determine Participant's Status as a Target (a Volunteer):

How significant is being a volunteer to how you view yourself?

1	2	3	4	5	6	7
No Significance	Very Weak Significance	Weak Significance	Moderate Significance	Strong Significance	Very Strong Significance	Great Significance

How many times in the past two years have you volunteered?

(They respond by typing the number into a free-response text box)

How often do you perform your most regular volunteer activity?

- At least once a week
- At least once a month
- At least once every three months
- At least once every six months
- At least once a year
- With no regularity

A volunteer is someone who freely chooses to engage in an activity intended to directly benefit a person, group of people, or cause without expectation for compensation.

Using the above definition, have you ever volunteered?

Yes/No

APPENDIX K

Demographic Survey

1) Gender

- o Male
- o Female

2) Age ___ (Text box)

3) Which of the following do you consider yourself to be?

- o White/Caucasian or European American
- o Black/African American, Caribbean
- o Asian American, Pacific Islander
- o Hispanic/Latino(a)
- o Native American
- o Arab/Middle Eastern background
- o Bi-racial

4) Highest level of formal education completed?

- o Some High School
- o High School Diploma or GED
- o Some College or Technical School
- o Bachelor's Degree
- o Some Graduate School
- o Master's Degree
- o Doctoral Degree

5) What is your current marital status?

- o Married
- o Single
- o Separated
- o Divorced
- o Widowed

6) Do you have any children?

- o No
- o Yes, children living in my home
- o Yes, but not living in my home

APPENDIX L

Awareness Check Rater Worksheet

This study utilizes manipulations that either prime participants blatantly (they are consciously aware of the priming content) or subtly (they are not consciously aware of the priming content). Your task is to review an awareness check that participants completed near the end of the experiment. The purpose of the awareness check is to confirm the prime functioned as intended.

Example case:

	Essay	Condition	Response	Score
2	I was in an ambiguous situation when I had a speeding ticket. I went to court to try to fight it, and I was very afraid of how much money it would cost me. I went to court and talked to the prosecutor, who reduced it to a less severe offense. While I still had to pay a few of $243 and got two points on my license, I would say that it didn't go as badly as I had thought. I was glad that I went and had it reduced, rather than simply mailing in the ticket with payment. That would have cost a lot more and there would have been more points on my license. Going to court to fight a ticket is often an unsure scenario. I felt very nervous, scared, and upset by it. However, after all was said and done, I had a sense of relief. I was also glad to have it out of the way.	Essay about Ambiguity	An ambiguous situation	

Using the rating spreadsheet:

- The Condition column indicates which task they performed. Use this to determine which scoring guide to use.
- The Response column shows the participant's free response answer to the manipulation check.
- The Score column is where you record your score.
- The Essay column contains the participant's essay in case you need to reference what they wrote.

Your task is to score participants responses to the awareness check. Participants were asked to indicate the main theme of their experimental condition.

Scoring Guide

Condition	Essay about Ambiguity
Participant Instructions	Write a 150 word essay about the last time you successfully worked through an ambiguous situation, using the text box provided below. This can include describing what you did and/or how you felt about the experience. Please write in the first-person, using 'I' to refer to yourself, as appropriate.
Essay Theme	Addressing an ambiguous situation
Scoring	3 = They correctly identified the theme as addressing an ambiguous situation 2 = They identified the theme as the content of their essay (example: a proposal) 1 = They were incorrect or did not respond

Condition	Essay about volunteering
Participant Instructions	Write a 150 word essay about the last time you volunteered, using the text box provided below. This can include describing what you did and/or how you felt about the experience. Please write in the first-person, using 'I' to refer to yourself, as appropriate.
Essay Theme	Volunteering
Scoring	3 = They correctly identified the theme as volunteering 2 = They identified the theme as the content of their essay (example: animal rescue) 1 = They were incorrect or did not respond

Condition	Essay about friend
Participant Instructions	Write a 150 word essay about the last time you visited or spent time with a friend, using the text box provided below. This can include describing what you did and/or how you felt about the experience. Please write in the first-person, using 'I' to refer to yourself, as appropriate.
Essay Theme	Spending time with a friend
Scoring	3 = They correctly identified the theme as spending time with a friend 2 = They identified the theme as the content of their essay (example: bike ride along the river) 1 = They were incorrect or did not respond

Condition	Volunteer word scramble
Participant Instructions	Instructions: For each set of words below, make a grammatical four word sentence and enter it into the text box.
Definition of volunteering	**A volunteer is someone who freely chooses to engage in an activity intended to directly benefit a person, group of people, or cause without expectation for compensation.**
Scoring	4 = They **explicitly** stated that the theme had to do with volunteering 3 = They were mostly aware that the theme had to do with volunteering 2 = They were slightly that the theme had to do with volunteering 1 = They were unaware that the theme had to do with volunteering or had no response.
Note	The preceding question asked if they noticed a theme in the word scramble task (Yes/No). Those who said "No" did not respond to this item.

Condition	Tolerance for ambiguity word scramble
Participant Instructions	Instructions: For each set of words below, make a grammatical four word sentence and enter it into the text box.
Definition of high tolerance for ambiguity	Someone with high tolerance for ambiguity is attracted or responds positively to stimuli perceived as unfamiliar, complex, dynamically uncertain, or subject to multiple conflicting interpretations.
Scoring	4 = They **explicitly** stated the theme of high tolerance for ambiguity 3 = They were mostly aware of high tolerance for ambiguity 2 = They were slightly aware of high tolerance for ambiguity 1 = They were not aware of the theme of high tolerance for ambiguity or had no response.
Note	The preceding question asked if they noticed a theme in the word scramble task (Yes/No). Those who said "No" did not respond to this item.

APPENDIX M

Correlations of Continuous Control and Dependent Variables

Variable	1	2	3	4
1 Role Ambiguity	-			
2 Ambiguity Acceptance	.33**	-		
3 TA	.26**	.25**	-	
4 Volunteer Survey	.09*	.25**	.19**	-

NOTE: n = 577. TA = Tolerance for Ambiguity.

* $p < .05$

** $p < .001$

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