AMBIENT DISCRIMINATION AND OBSERVER TASK PERFORMANCE

by

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ABSTRACT

NICOLE THURMOND HARRINGTON. Ambient discrimination and observer task performance. (Under the direction of DR. ENRICA RUGGS)

Research shows that being a target of workplace incivility is related to negative outcomes for both the individual and the organization. According to the theory of selective incivility, stigmatized groups such as women or people of color experience a higher number of rude, uncivil behaviors than do males or whites. Consequently, it is likely that these behaviors are more commonly observed than are other 'general' acts of incivility. While the negative effects of more subtle forms of prejudice on performance has largely focused on the target or the perpetrator the purpose of this study is to examine if bystanders to these ambient behaviors experience similar consequences as well. In particular this study examines the effects of ambient incivility in the form of ambient discrimination (e.g. rude or discriminatory comments) on bystander task performance. A sample of 89 participants from University at North Carolina at Charlotte completed a math related task while listening to one of four scenarios where subtle discriminatory conversation was present or not. Participants were also instructed to take the Stroop Color Naming Test both before and after the math task. Although results did not fully support hypotheses, ambient incivility negatively affected task speed but not task accuracy. Implications and future directions are discussed.

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In the United States, the law has become increasingly sensitive to matters of harassment and discrimination related to sex and race. As a result, there has been a decline in the more overt acts of discrimination such as direct racial slurs that are obviously intended to harm. Unfortunately, the same biases still exist and it can be argued that that these same laws and regulations may actually create a colorblind ideology that reinforces more modern and ambiguous forms of discrimination not protected by law (Pager & Shepherd, 2008; Offermann, Basford, Grahner, Jaffer, De Graaf & Kaminsky, 2014.) For example, although law protects against open threats based on one's race, more subtle and ambiguous remarks based on one's group membership are not as easily addressed. These forms of racism are obscure in that both the perpetrator and target may not recognize the act as being racist. Recent work implies that these subtler forms of discrimination have the potential to harm not only those immediately involved but also bystanders of the incident (Basford, Offermann, & Behrend, 2014). Although subtle, the consequences of such behaviors may be just as damaging as those inflicted from more overt forms of discrimination witnessed in the past (Kabat-Farr & Cortina, 2014). Not surprisingly, social and organizational psychologists alike realize the need to better understand the effects of these more "modern" or "contemporary" forms of discrimination.

One form of this behavior is what Andersson and Pearson (1999) coined incivility, which they define as "the exchange of seemingly inconsequential words and deeds that violate conventional norms of conduct" (Pearson & Porath, 2009, pg. 12). Such behaviors are rude, impolite, and/or discourteous and include actions such as

avoiding eye contact, gossiping, and using demeaning languages. These actions are often unintentional and perpetrators are often unaware of the negative effects that their action may cause. Cortina (2008) argues that this general rude behavior or 'general incivility' is more focused or 'selective' in that it disproportionately targets stigmatized groups such as women or people of color. According to Cortina 'selective incivility' represents a mechanism through which covert discrimination can result in gender and racial disparities in society (Cortina, 2008; Kabat-Farr & Cortina, 2014). As with other forms of discrimination, findings show that individuals who experience selective incivility experience negative job-related consequences such as lower levels of job satisfaction, creativity, cooperation, and commitment as well as higher rates of distraction and withdrawal behaviors (Cortina, Magley, Williams, & Langout, 2001; Lim, Cortina, & Magley, 2008).

In light of this, it is important to note that there are other terms used to describe similar subtle forms of discrimination. For example, covert forms of discrimination have been described using the terms racial microaggression (Sue, 2010) and interpersonal discrimination (Hebl, Foster, Mannix, & Dovidio, 2002). Despite different terminology, these behaviors have many similarities in that they focus on subtle forms of behavior directed toward others that are generally not committed in an intent to cause harm (Ruggs, Martinez, & Hebl, 2011). These behaviors may be difficult to interpret in terms of intent and may also be difficult to regulate from a legal or policy perspective. Rather than focusing on differences between these terms, the current research is constructed through the lens of incivility and incorporates research from similar areas where appropriate.

Of the previous research on selective incivility, the majority has focused in its effects on the targets of this behavior. Accordingly, less is known about how bystanders of such behavior are affected. A growing number of research suggests that ambient forms of harassment, defined as witnessing or being aware of negative interactions, can be just as harmful to the bystander as the target. For example, both bystander ethnic harassment (Low, 2007) and ambient sexual harassment (Glomb et al., 1997) have been found to have similar negative consequences for both the victim and the witness. Although a different form of harassment, ambient incivility, defined as indirect exposure to the incivility is likely to have a similar effect. The current study plans to investigate how ambient (selective) incivility, in the form of discriminatory remarks, affects bystanders' task performance. Using research on selective incivility as well as negative affect and cognitive depletion, I examine bystander consequences of overhearing ambient incivility in the form of ambient discrimination.

Workplace Incivility

Incivility differs from other acts of workplace mistreatment (e.g., bullying, victimization) in a number of ways. First, incivility is described as "low-intensity." Although these behaviors may be frustrating or offensive, they often are not perceived as being threatening (Glomb, 2002). Second, incivilities violate organizational norms for mutual respect, displaying a general lack of regard towards others. Third, incivility is ambiguous in that it is not clear if its intent is to harm the target. For example, a coworker might think that they are being ignored when in reality they were just not heard. It is this ambiguous nature that presents a challenge for human resources, as these behaviors are often able to go unnoticed by upper level managers (Cortina, 2008).

As laws and regulations have led to a decrease in overt displays of discrimination in the workplace, researchers of discrimination have started to move their focus onto its subtler forms. Cortina (2008) argues that incivility may provide a covert manifestation of prejudice that perpetrates gender and race disparities in organizations. In fact, numerous studies have suggested that in many organizations women and people of color experience more subtle uncivil treatment than do men or whites (Cortina, 2008; Kabat-Farr & Cortina, 2012). Additionally, a study by Reio and Ghosh (2009) found that younger males engage in uncivil behavior more so than others.

It is therefore not surprising that minority employees report experiencing more of the negative effects associated with incivility. Such negative effects include experiencing lower job satisfaction and more negative health outcomes than do those belonging to the majority group (Lim, Cortina & Magley, 2008). In addition, both empirical and longitudinal studies have repeatedly tied incivility to increased withdrawal behavior amongst minority members (Cortina et al., 2013; Glomb, Richman, Hulgin, Drasgow, Schneider, & Fitzgerald, 1997; Sims et al., 2005). Singletary (2009) found that even small, subtle forms of discrimination have negative effects on task performance for stigmatized individuals. Specifically, she found that the experience of interpersonal discrimination, a construct parallel with selective incivility, impairs task performance just as much as does the experience of formal (overt) discrimination. Such negative consequences are intensified when the targets perceive these actions as discriminatory (Madera, King & Hebl, 2012).

Although the effect of selective incivility to the target remains a concern, less is understood as to the consequences of selective incivility to third-party observers.

Understanding the effects of witnessing negative social interactions is relevant to both social and organizational researchers alike in order to understand how these interactions affect not only the interaction partners but a third party as well. A growing body of research suggests that simply witnessing different forms of mistreatment can have damaging effects similar to those experienced by the target (Glomb et al., 1997; Jones, Peddie, Gilrane, King & Gray, 2013, Kabat-Farr & Cortina, 2012; Totterdell, Hershcovis, Reich, & Stride, 2012) For example, Porath and Erez (2007) conducted a series of three experimental studies investigating how rudeness affects task performance. They found that rude behavior in general harms task performance and helpfulness for both innocent bystanders and the intended target. In a follow up study they extended their results demonstrating that rude behavior harmed bystander performance on both routine and creative tasks (Porath & Erez, 2009). In addition, they conclude that even one-time exposure to rudeness, a form of incivility, can have detrimental consequences on objective performance.

The small amount of existing research on observing incivility is surprising given that research by Glomb (2002) found that over half of negative interpersonal interactions in organizations occur in the presence of coworkers. In addition, the Internet is experiencing a surge of activity from those who witness what could be considered subtle forms of discrimination. Examples include websites such as “Overheard at Gettysburg” and “Overheard by Whom-Yale Daily,” where college students report incidents of perceived injustices and discrimination that they have witnessed. Although these websites may use different terms to refer to discrimination, they all indicate that there are practical phenomena occurring that suggest that the target and perpetrator are not the only parties

affected by these interactions. Greater empirical research can help to clarify the situations under which such phenomena negatively influence observers, as well as how and why this influence occurs.

Of the few studies that have empirically tested the effects of more specific forms of incivility on observers, the majority has largely focused on sexual harassment. For example, two studies by Miner-Rubino and Cortina (2007, 2012) found that observed incivility towards female employees had a negative effect for both men and women on subsequent job satisfaction, commitment and performance. Similar studies suggest bystander sexual harassment (defined as indirect exposure to sexual harassment) is related to bystander stress (Schneider, 1996), more team conflict, less team cohesion, declines in financial performance (Raver & Gelfand, 2005), and reduced health satisfaction (Miner-Rubino & Cortina, 2004). Importantly, Glomb et al. (1997) found that the negative outcomes for women facing ambient, or indirect, sexual harassment in the workplace are equal to those experienced when facing direct sexual harassment. Glomb et al. (1997) defines these incivil acts as "the general or ambient level of sexual harassment in a work group as measured by the frequency of sexually harassing behaviors experienced by others in woman's work group (pg.309)."

As previous research has found similar negative consequences across marginalized groups, it is probable ambient or indirect harassment directed towards any marginalized group results in similar negative results to bystanders as well. For example, Low et al. (2007) argued that bystander ethnic harassment, defined as directly observing or having knowledge of incidents of ethnic harassment, has the same damaging effects as does being the direct target of ethnic harassment (i.e., those who experience ambient

ethnic harassment). This study found that 36.2% of its participants admitted to witnessing or having direct knowledge of some form of racial harassment in their workplace (Low et al., 2007). These and similar studies are of concern as most research has ignored the wider social context in which social interactions occur. Tying together Glomb et al.'s (1997) theory of ambient sexual harassment and Low et al.'s research on bystander racial harassment, I believe that any form of ambient incivility will likely result in negative consequences for observers. In the workplace task performance may suffer, as those who are trying to complete job tasks are distracted by and uncomfortable with overhearing or seeing ambient forms of discrimination. Thus:

Hypothesis 1: Witnessing ambient incivility will result in lower task performance compared to those who do not observe the act.

Similar research suggests that witnessing uncivil behaviors leads to psychological distress and negative emotional affects (Cortina et al., 2001; Glomb, 1997; Pearson & Porath, 2005). For example, Glomb et al. (1997) found that ambient sexual harassment in one's workgroup was associated with decreased job satisfaction and increased psychological distress. Similarly, Andersson and Pearson (1999) argued that observing uncivil behavior in organizations increases negative affect and fear in witnesses. Barling (1996) aptly refers to said observers as 'secondary victims," meaning those who either witnessed or heard second hand occurrences of such behavior.

This is in line with Affective Events Theory, which states that events have an influence on behaviors and attitudes via their influence on emotion (Weiss & Companzano, 1996). More specifically, all parts of the environment (i.e., what is going on around you) affect emotions that create both long and short-term emotional responses

that in turn can influence subsequent performance. Important to note is that research suggests that negative reactions influence behavior more strongly than do positive reactions (Baumeister et al., 2001; Reich & Hershcovis, 2015). Weiss and Companzano (1996) theorize that negative emotions affect performance because they indicate that something is not right in the environment. In order to appraise the situation, people invest limited cognitive resources, which in turn disrupts their work. In addition, the reduction in cognitive functioning is likely higher for emotions that involve a high degree of arousal such as anger (Smith, 2014). These peaked emotions can then work to narrow and inhibit cognition (Zillermann, 1994). However, this is only true in cases where behaviors elicit negative emotions.

Research suggests that increased negative affect associated with unpleasant experiences can impair self-regulation leaving one feeling emotionally and cognitively drained (Baumeister, Zell, & Tice, 2007). Further, negative interpersonal reactions are considered as one of the most influential organizational stressors and result in regulatory behavior that can impair task performance (Gross, 1998; Totterdell et al., 2012). For example, Totterdell et al. (2012) found that participants who witnessed unpleasant coworker interactions (relative to pleasant interactions) felt significantly more emotionally drained than those who did not. Similar research shows that individuals prompted with negative affect exhibit more selective processing, lower self-control, and a reduced ability to comprehend and use prior information (Meier & Spector, 2013; Porath & Erez, 2007). Hence, observing unpleasant behavior may alter an individual's mood, resulting in reactions that deplete limited cognitive resources. That is, witnessing unpleasant acts at work triggers negative emotions, which in turn requires employees to

engage in emotion regulation behaviors that require cognitive resources. As a result, one could expect those who experience ambient incivility to be cognitively depleted as well.

If this lost energy is not restored, this depletion may result in lower performance on tasks that require self-control and attention. For example, Baumeister, Bratslavsky, Muraven, and Tice (1998) found that when individuals were asked to suppress their affective responses they were later able to complete fewer solvable anagrams than those who were not asked to suppress. In a similar study, Singletary (2009) found that participants subject to both interpersonal and formal forms of discrimination displayed poorer performance on hard tasks than did those who were not affected by negative stimuli.

In line with this research, it is expected that witnessing ambient incivility in the form of ambient incivility will negatively affect observer performance through the negative emotions it elicits wherein those who experience higher levels of negative affect when experiencing ambient incivility should experience greater negative consequences relative to those who experience less negative affect. Thus:

Hypothesis 2: Witnessing ambient incivility will result in greater cognitive depletion than in those who do not observe the act.

Hypothesis 3: Negative affect will mediate the relationship between ambient incivility and task performance.

Hypothesis 4: Negative affect will mediate the relationship between ambient incivility and cognitive depletion.

PRELIMINARY ANALYISIS

To test the hypotheses, ambient incivility was manipulated through the use of prerecorded audio files in which confederates used language that either might be perceived as discriminatory (i.e., the ambient discrimination conditions) or neutral (i.e., the control condition). Two ambient discrimination conditions were created, one in which there was a direct target of the discriminatory language (i.e., the confederates were using negative stereotypical language to describe a person whom they knew), and one in which there was not a direct target but discriminatory language was still used (i.e., the confederates used negative stereotypical language). In both conditions, the discriminatory language was related to Black people. This group was chosen because many people are familiar with and can therefore recognize stereotypes about this group and because people generally also know that there are social norms associated with not expressing potentially prejudicial attitudes about this group.

Pilot Study

Preliminary data were collected to test the methodology and performance measures. For the pilot study, participants were asked to come into the laboratory one by one to complete the experiment. Participants interacted with either an undergraduate lab assistant or myself. After signing a consent form, participants were then asked to complete the Stroop Color Naming Task through InQuisit software. Upon completion of the Stroop task participants were told to pretend that they were in a coffee shop and had some work emails to which they needed to respond. The emails were made up of four "spam" like emails and four in-basket, work-related emails. The experimenter then started the background noise for the respected condition: control (no discriminatory

conversation), target (discriminatory conversation towards a specific racial minority member), and non-target discriminatory conversation towards a racial minority as a whole). Upon completion, of the emails participants completed the Stroop task once more before filling out a Qualtrics survey that included both mediator variable scales and demographic information.

Results from 56 undergraduate UNCC students revealed that the manipulations were effective. A one-way ANOVA revealed significant differences between groups on the extent that participants perceived the conversations as discriminatory, $F(2, 48) = 8.39$, $p = .001$ (see Figure 1). However, the in-basket email tasks showed to be an ineffective measure of task performance. For example, given the context, there was no way to objectively measure performance on a question that asked participants to choose between two marketing magazine advertisements for "the company" based on aesthetic judgements. In addition, one question asked participants to count the number of blue shirts in an ad that included a picture of marathon runners. In this case objectivity was too difficult to measure as the range in responses was so large. As a result, the performance task was replaced for the current study.

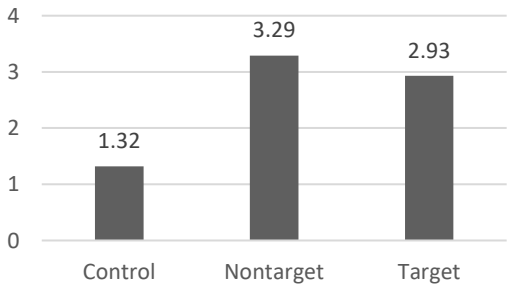

Figure 1: Pilot: Perceived levels of discriminatory language
Note: Responses were measured on a 1 to 5 Likert type scale where higher numbers represented higher perception

Pre-Test Study

Prior to data collection, an Mturk survey was launched to ensure that the recorded audio stimuli to be used as the background conversation were realistic. This study was intended to examine whether ambient discrimination was detected for the target and non-target conditions. Participants listened to one of the audio files and then they were asked the following, “did you hear any offensive or discriminatory language.” Participants were then asked to rate the degree the conversation was a) offensive, b) discriminatory, and c) distracting on a 5-point rating scale (1 = Not at all to 5 = Very much). Finally, participants were asked to provide any comments about the audio.

The study consisted of 99 participants after removing incomplete surveys, failed audio accounts, and participants who failed to hear any conversation in the background. Qualitative results indicated the need to alter the volume of the background noise. In particular, these results led to a slight increase in the volume of the background conversation and a decrease in the ambient noise (which was silverware clinking in the background to resemble the feel of being in a coffee shop). More importantly one-way ANOVAs were significant for detected offensive language, $F(3, 95) = 8.91$, $p = .00$ and the extent of offensiveness, $F(3, 95) = 10.67$, $p = .00$. Additional analysis also found group differences in the extent participants perceived the conversation as discriminatory, $F(3, 95) = 19.40$, $p = .00$. As seen in Figure 2, participants who received the non-target and target conditions perceived the audio as more offensive and discriminatory than did others. Despite there being group differences in the expected directions the extent of offensiveness and discrimination is still relatively low in the groups subject to the

discrimination. This suggests that the manipulation is reaching the subtler, lower level of discrimination that is desired.

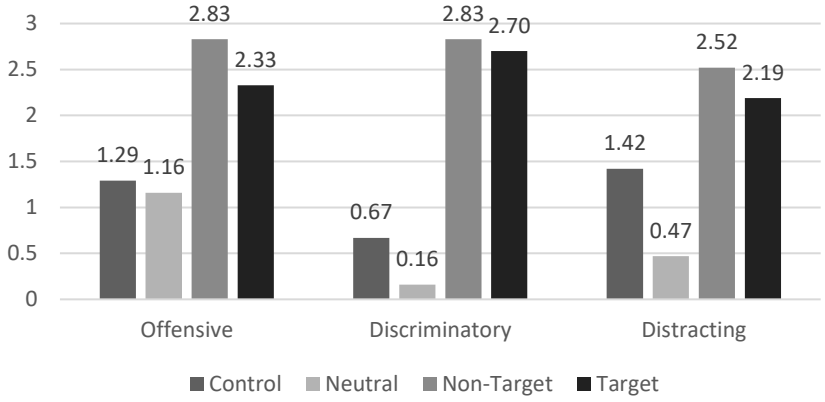

Figure 2: Pre-Test: Perceived levels of the manipulation
-Note: Responses were measured on a 1 to 5 Likert type scale where higher numbers represented higher perception.

METHODS

Participants.

Participants were recruited through UNC Charlotte's SONA system as well as through extra credit incentive for one sociology and psychology course. A total of 123 undergraduate students participated in the study. Of the 123 participants, four were removed for incomplete data, seven were removed for being extreme outliers on performance scores, and 23 were removed for failing one of the 2 manipulation tests (failing to hear background noise or incorrectly indicating if they heard rude or discriminatory language or not). The final sample consisted of a total of $n = 89$ participants largely made up of Caucasian (50%) and African American (34.4%) participants with only 14 of the 89 identifying as Hispanic (7.8%), Native American (3.3%), Pacific Islander (1.1%), or Multiracial/Other (3.3%); (see Figure 3). Forty-nine percent of the sample identified as male, 50% of the sample identified as female, and 1% indicated gender as other or chose not to answer. The sample as a whole was relatively young ($M = 20.46$, $SD = 4.04$).

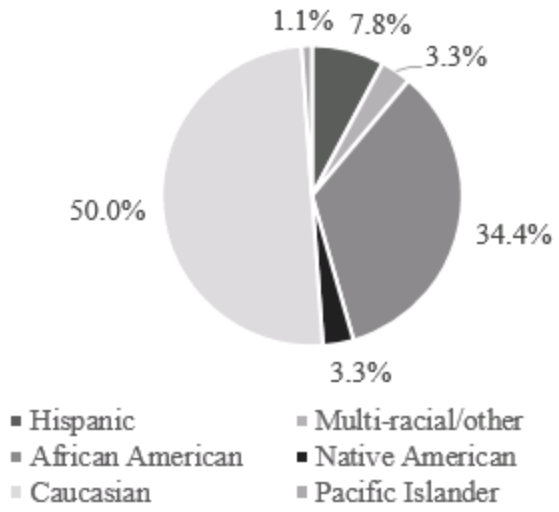

Figure 3: Participant ethnicity

Procedure:

The study took place in a university laboratory. Data were collected through an experimental procedure conducted by UNCC undergraduate lab assistants as well as myself. Participants were asked to come into the laboratory one by one to complete the experiment. Prior to the participant's arrival, the experimenter pulled up the study materials used through Qualtrics, InQuisit, and PEBL software. After signing a consent form, participants were asked to complete the Stroop task using the InQuisit software. Upon completion of the Stroop task participants were told that they were to pretend that they were in a coffee shop and had about five minutes to get work done on an assignment. The experimenter then started the background noise for the respected condition and the participant started to work on math problems via PEBL software. All four conditions lasted five minutes. Upon completion, participants completed the Stroop

task once more before filling out a Qualtrics survey that included both mediator variable scales and demographic information.

Manipulations

Participants were randomly assigned to four conversation conditions: control (no discriminatory conversation), target (discriminatory conversation towards a specific racial minority member), and non-target discriminatory conversation towards a racial minority as a whole), and neutral (no discriminatory conversation but different conversation topic). The previously recorded conversations from the pilot study were used as the manipulation for each condition.

Measures

Objective Performance: Objective performance was measured using the total number of math problems correctly completed, the number of incorrectly completed problems, and the mean reaction time spent on each problem. Reaction time was measured in milliseconds. Higher correct indicate higher performance scores. Longer reaction times across groups may indicate decreased performance. The math problems varied in levels of difficulty. Easy problems were defined as simple addition and subtraction with one and two digit numbers as well as multiplication and division between single digit numbers or the number 10. Hard problems were characterized by addition and subtraction between three digit numbers and multiplication and division between two digit numbers.

Affect: Affect was measured using 35 items adopted from Monteith's (1993) self-directed vs. other affect scale. Participants were asked to rate how much each item describes how they feel (i.e., fearful, friendly, bothered) on a scale from one to seven 1=

"Does not apply at all" to 7 = "Applies very much." The original scale formed five factors: Discomfort, Negative Affect towards Self, Positive Affect, Negative Affect towards Others, and Depressed.

A confirmatory analysis was run to determine whether the original five factors were proposed by Monteith (1993) were evident in the current data. Results indicated a poor fit (see Table 1). Since the primary concern of the study was Negative Affect, an exploratory analysis was then run after removing all items in the positive affect subscale. After removing any items loading under .7, this resulted in a two-factor model retaining the Negative Affect towards Self and Negative Affect towards Others factors.

Table 1: Factor analysis for affect model fit indices

	CFI	X^2	*Df*	RMSEA	SRMR
Five-factor Monteith	.80	216.38*	64	.16	0.09
Two-factor NAself NAothers	.88	195.47*	76	.13	0.07

Note: n= 89. CFI= comparative fit index; RMSEA= root-mean-square error of approximation; SRMR=standardized root mean square residual. *p<.001

Cognitive (Attentional) Resource Depletion: Participants completed a Stroop Color Naming Test both before and after the PEBL math task. This test embodies a cognitive task commonly used in experimental research (Salvatore & Shelton, 2007). Participants were asked to name the color of the word or control block presented to them. There were three categories: 1) neutral condition, in which participants saw a colored box, 2) congruent condition, in which participants were presented a color word in the representative color (e.g., the word "red" written in the color red), and 3) the incongruent condition, in which participants saw a color word in a color different from the color word (e.g., the word "red" written in the color green). All participants saw 28 items from each

condition for a total of 84 items. The Stroop Color Naming Test was taken twice. The first time it was taken prior to the PEBL math test in order to introduce participants to the test (Jensen, 1965). The second was administered directly after completing the PEBL math task. Scores from the second Stroop were used to calculate depletion to try and eliminate slower speed due to learning the task. Depletion was measured by the difference in the mean response time (measured in milliseconds) on incongruent items and the mean response time on neutral items. Neutral items are easier to process than are incongruent and should therefore have faster reaction times. The more cognitively depleted one is the greater this difference may be expected to be due to the extra work required to process incongruent items.

RESULTS

The means, standard deviations, and correlations for all study variables are presented in Table 2. Because there were so few participants after cleaning the data based on manipulation checks, outliers, and incomplete data, the control condition (n=18) and the neutral condition (n=21) were combined into a single control group (n=39) and the non-targeted condition (n=31) and targeted condition (n=20) were combined into a single manipulation group (n=51). T-tests further supported this merger showing no significant differences on the dependent variables of interest between the neutral and control groups or the targeted and non-targeted groups. Analyses found there to be no significant differences for the mean reaction time between the two control conditions, $t(37) = 1.67$, $p = .10$, or the two manipulation conditions, $t(49) = .19$, $p = .85$, nor the total number of answered questions between the control conditions, $t(37) = .1.81$, $p = .25$, and the two manipulation conditions, $t(49) = 1.12$, $p = .25$. This remained to be the case for both the number of correctly answered math problems between the control conditions, $t(37) = 1.05$, $p = .30$, and the manipulation conditions, $t(49) = 1.42$, $p = .16$, as well as the number of incorrectly answered math problems between the control conditions, $t(37) = .58$, $p = .57$, and the manipulation conditions, $t(49) = -.86$, $p = .39$.

Table 2: Descriptive statistics and correlation matrix of study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Ambient Incivility	-	-											
2. P-Comp	-.25*	-											
3. P-RT	.28**	-.89**	-										
4. P-NC	-.25*	.96**	-.84**	-									
5.P-NE	-.02	.25*	-.27*	-.03	-								
6. P-RT Hard	.19	-.76**	.81**	.68**	.38**	-							
7. P- NC Hard	-.21*	.78**	-.71**	.84**	-.16	-.60*	-						
8. P-NE Hard	-.02	.27*	-.29**	.05	.82**	-.36**	-.16	-					
9. NA- Others	.16	.04	-.08	.04	.01	-.13	.13	-.06	(*.92*)				
10. NA-Self	.14	-.02	-.02	-.07	.19	-.08	-.08	.12	.56**	(*.92*)			
11. CogDep	-.00	-.13	.08	-.14	-.01	.03	-.10	-.06	-.02	-.10	-		
12. Task Effort	.06	-.20	.18	-.16	-.18	.15	-.11	-.20	.05	.14	.23*	(*.84*)	
13. Likeability	-.23*	-.12*	-.09	.19	-.24*	-.08	.27**	-.23*	-.04	-.08	.16	.24*	-
Mean	.57	40.71	6569.52	34.53	6.18	9045.68	13.38	1.61	2.19	2.19	209.89	5.79	4.73
SD	.50	14.03	2535.93	13.61	3.82	4002.20	5.24	1.00	1.30	1.30	210.71	1.04	1.63

** p<.01, *p<.05

Note: P=Performance; Comp; completed; RT= reaction time; NC= number of PEBL math problems correct; NE= number of PEBL math problem errors; Hard refers to performance on only the hard math problems; NA= negative affect; CogDep= cognitive depletion; Cronbach's alpha reliabilities are indicated diagonally in brackets.

Hypothesis Testing

Hypothesis 1: Hypothesis one predicted that ambient incivility would impair task performance. More specifically, participants who were presented with ambient incivility were expected to perform poorer on the PEBL math problems than were those who were not presented with the manipulation. Results revealed significant differences between groups for total number of problems completed, $t(88) = 2.43$, $p = .02$, $d = .52$, as well as the number of correctly answered math problems, $t(88) = 2.46$, $p = .02$, $d = .52$. This remained to be the case when comparing the total number correct for only the harder math problems, $t(88) = 2.00$, $p = .05$, $d = .42$. When using the number of errors, results remained insignificant, $t(88) = .17$, $p = .87$. This remained to be the case when considering only the number of hard problems incorrect, $t(88) = .18$, $p = .86$. However, these results indicate that overall, participants presented with ambient incivility ($M = 6.12$, $SD = 3.54$) answered more problems incorrectly than did those who were not ($M = 6.26$, $SD = 4.20$).

Results comparing the average time spent on the math problems between groups were significant, $t(88) = 2.68$, $p = .01$, $d = .59$. As seen in Figures 4 and 5 participants in the combined control condition not only completed more correctly answered math problems than in the combined manipulation group but also completed problems at a faster rate. Although not significant, differences in the mean reaction time spent on hard problems trended in the right direction, $t(88) = 1.79$, $p = .08$. Taken together, H1 was largely supported.

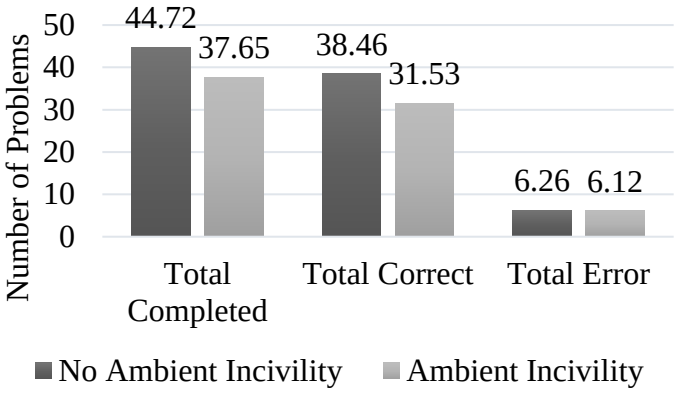

Figure 4: The effect of ambient incivility on the number of problems completed problems.

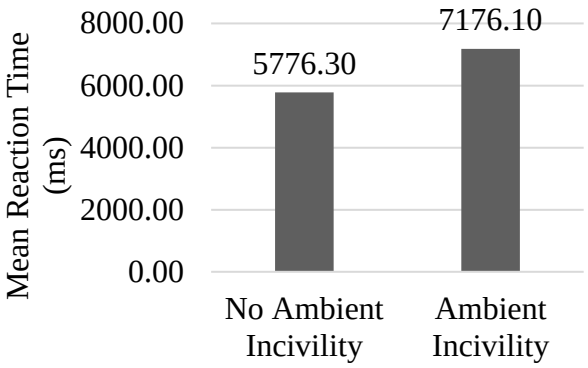

Figure 5: The effect of ambient incivility on performance reaction time

Hypothesis 2: Hypothesis two predicted that witnessing ambient incivility through ambient incivility would lead to an increase in cognitive depletion. Prior to analyzing these data, I examined frequencies for the Stroop measure and found that 11 participants had negative scores. Of these 11, 5 were removed from the neutral group, 0 from the control group, (Combined Control *N*= 34) and 6 from the targeted group and 0 from the non-targeted group (Combined Manipulation *N*= 45). Negative scores indicate that these participants reacted faster to the incongruent task than the neutral task, which is not indicative of depletion. Therefore, these participants were removed from analyses for hypotheses two and four. A t-test revealed no significant differences in cognitive

depletion between those who witnessed ambient incivility and those who did not, $t(77) = .32$, *n.s.* Therefore, H2 was not supported.

Hypothesis 3*:* Hypothesis three predicted that negative affect would mediate relationship between witnessing ambient incivility and task performance. More specifically it was hypothesized that this would differ based on whether negative feelings were directed at one's self or at others. In order to examine this both negative affect towards self and others were centered. I then ran eight separate mediation analyses using Hayes's PROCESS macro model 4 in SPSS to account for the four performance measures. The results are presented in Table 3. As seen in the table, ambient incivility was not a significant predictor to the mediator negative affect towards self, *b*= .36, *SE*= .27, *p*=.19, or others, *b*= .32, *SE*= .21, *p*=.13.

Using the number of problems completed, neither negative affect towards self, *b*= .22, *SE*= 1.13, *p*=.84 or others *b*= 1.16, *SE*= 1.47, *p*=.43 was significantly related to performance. A bootstrap estimation approach with 5000 samples indicated that the indirect effect was not significant for negative affect towards self, *b*= .08, *SE*= .43, 95% CI= -.55, 1.31, or towards others, *b*=.37, *SE*= .51, 95% CI= -.29, 1.85.

This remained to be the case for the total number of correct problems as the measure of performance for negative affect towards self *b*= -.36, *SE*= 1.10, *p*=.74, and others, *b*= 1.10, *SE*= 1.42, *p*=.44. A bootstrap estimation approach with 5000 samples indicated that the indirect effect was not significant towards negative affect towards self, *b*= -.13, *SE*= .42, 95% CI= -1.39, .47, or towards others, *b*= .35, *SE*= .46, 95% CI= -.23, 1.75.

Using the total number of errors as the measure of performance neither negative affect towards self, *b*= .58, *SE*= .31, *p*=.07, or others, *b*= .06, *SE*= .41, *p*=.88 was

significantly related to performance. A bootstrap estimation approach with 5000 samples indicated that the indirect effect was not significant to negative affect towards self, *b*= .21, *SE*= .21, 95% CI= -.05, .89, or towards others, *b*= .02, *SE*= .12, 95% CI= -.19, .34.

When mean reaction time is used as the measure of performance, neither negative affect towards self, *b*= -113.14, *SE*= 203.22, *p*=.58, or others, *b*= -316.52, *SE*= 262.61, *p*=.23 was a significantly related to performance. Bootstrap estimation revealed no significant indirect effects of ambient incivility on mean reaction time for negative affect towards self, *b*= -40.83, *SE*= 79.72, (95% CI= -300.73, 49.05) or others, *b*= -101.61, *SE*= 103.43, (95% CI= -391.13, 28.68). Thus findings do not support hypothesis 3.

Table 3: Bootstrapped mediation analysis for the effect of ambient incivility on task performance through negative affect

	Est.MX	Est.YM	Direct Effect	Indirect Effects	95% Confidence Interval	
					Lower	Upper
Total Completed						
NA -Self	.36(.27)	.22(1.13)	-7.15(2.95)*	.08(.43)	-.55	1.31
NA-Others	.32(.21)	1.16(1.47)	-7.44(2.95)	.37(.51)	-13.31	-1.58
Total Correct						
NASelf	.36(.27)	-.36(1.10)	-6.80(2.86)*	-.13(.42)	-1.39	.47
NA-Others	.32(.21)	1.10(1.42)	-7.29(2.86)*	.35 (.46)	-.23	1.75
Total Errors						
NA-Self	.36(.27)	.58(.31)	-.35(.81)	.21(.21)	-.05	.89
NA -Others	.32(.21)	.06(.41)	-.16(.83)	.02(.12)	-.19	.35
Reaction Time						
NA-Self	.36(.27)	-113.14(203.22)	1440.62(528.74)**	-40.83(79.72)	-300.73	49.05
NA-Others	.32(.21)	-316.52(262.61)	1501.41(527.02)**	-101.61(102.85)	-391.13	28.68

n=89; Est.MX = bootstrapped estimate of path from ambient incivility to mediators; NA = Negative Affect; Est.YM = bootstrapped estimate of path from mediators to performance measures; standard errors of the bootstrapped estimates appear in parentheses; 5000 bootstrap samples.
*p < .05 **p<.01.

Hypothesis 4: Hypothesis four predicted that negative affect, towards self or others would mediate the relationship between ambient incivility and cognitive depletion. Two more analyses were conducted using the PROCCESS macro model 4 in SPSS. Results are presented in Table 4. After removing negative Stroop scores, ambient incivility marginally predicted cognitive depletion for both negative affect towards self, *b*= .56, *SE*= .30, *p*=.06, and others, *b*= .45, *SE*= .22, *p*=.04. However, neither negative affect toward self, *b*= -6.96, *SE*= 17.10, *p*=.59, or others, *b*= 16.93, *SE*= 23.04, *p*=.46 was related to cognitive depletion. Bootstrap analysis using a sample of 5000 revealed that there was no significant indirect effect on cognitive depletion through negative affect towards self, *b*= -3.87, *SE*= 8.54, 95% CI= -26.65, 8.92, or others, *b*= 7.64, *SE*= 13.30, ,95% CI= -7.96, 46.19.

Table 4: Bootstrapped mediation analysis for the effect of ambient incivility on cognitive depletion through negative affect

					95% Confidence Interval	
	Est.MX	Est.YM	Direct Effect	Indirect Effects	Lower	Upper
Cognitive Depletion						
NA towards self	.56(.30)	-6.96(17.10)	-10.26(45.47)	-3.87(8.54)	-26.65	8.92
NA towards others	.45(.22)*	16.93(23.04)	-21.77(45.56)	7.64(13.30)	-7.96	46.19

Note: n = 78; NA= negative affect; Est.MX = bootstrapped estimate of path from ambient incivility to mediators; Est.YM = bootstrapped estimate of path from mediators to performance measures; standard errors of the bootstrapped estimates appear in parentheses; 5000 bootstrap samples.
*p < .05.

Exploratory Analysis

Although ambient incivility did not appear to have a large effect on task performance in this study, additional exploratory analyses were conducted to examine whether ambient incivility may negatively influence people in other ways. Specifically, I examined the extent to which participants in the ambient incivility versus control conditions expressed liking toward the task and exerted effort toward the task. Task likeability was measured using a single item, which asked participants to rate the extent to which the task was enjoyable on a seven-point Likert-type scale, (1 = Not at all, 7 = Very Much). Task effort was also measured using a seven-point Likert-type scale, (1 = Not at all, 7 = Very Much) using three items. Participants were asked the extent to which they: a) worked hard, b) made an effort to do well, c) were motivated to dlo well, and d) put in a lot of effort, alpha = .84.

Results showed significant group differences for task likeability, $t(88) = 2.18$, $p = .03$, $d = .46$. As seen in Figure 6, participants in the control condition viewed the task as more enjoyable ($M = 5.15$, $SD = 1.57$) than did those who were subject to ambient incivility ($M = 4.41$, $SD = 1.63$). No significant differences were seen in level of effort exerted based on condition, $t(88) = -.56$, $p = .58$.

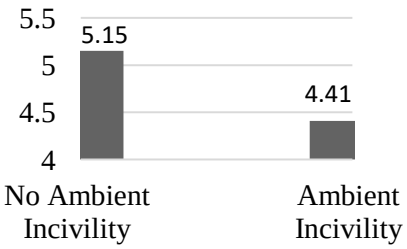

Figure 6: Level of task likeability expressed by participants based on discrimination condition

DISCUSSION

Though overt racism is largely documented in its relation to performance, research is increasingly expanding to consider how previously overlooked ambivalent forms of discrimination may also affect bystanders. Such forms of discrimination may be manifested through what Cortina (2008) has described as selective incivility. Despite the intent to harm incivil behaviors that can be perceived as rude or offensive disproportionately target stigmatized groups. Unfortunately, these behaviors often occur in public spaces and may affect bystanders as well. Overhearing what could be internalized as a discriminatory or stereotypical comment can manifest as one form of such ambient incivility. The present research sought to extend the work in this area by examining ambient incivility's influence, in the form of ambient discrimination (e.g. overheard subtle racial remarks), on bystander task performance.

Results from hypothesis one indicate that overhearing ambient incivility in the form of ambient discrimination significantly impairs task performance speed but not accuracy. Regardless of the difficulty, participants in the control group displayed a faster reaction time than those in the manipulation group. Reasonably they also were able to complete more problems correctly than others. However, there were no significant differences in the number of errors between the groups which would be expected if accuracy was also affected. This suggests that even if ambient incivility does not affect the ultimate outcome, it does affect and distract bystanders in some manner that results in impaired reaction time. One potential reason for this could be the ambiguous nature of these more covert forms of discrimination. Consistent with this thought research suggests that when information is not consistent, more cognitive resources are needed in order to

form an impression of the situation (Carter, Perry, Richeson & Murphy, 2015). Participants in the manipulated condition may have reacted slower because they were unable to make a decision whether or not what they were overhearing should be considered as a threat.

Literature in speed and accuracy may also help to explain this finding. For example, research on procrastination finds that those high in procrastination experience heighted levels of negative reactions such as lower self-confidence, a negative emotion, in time limited situations (Ferrari, 2001). A study by Ferrari (2001) found that chronic procrastinators completed fewer problems than did non-procrastinators in a time-induced situations consisting of both "low" and "high" cognitive loads. However, there was a difference in accuracy between chronic procrastinators when presented with the "high" cognitive load group compared to chronic procrastinators presented with the "low" cognitive load and non-procrastinators in general. The subtle nature of the ambient incivility in the study may act in a similar manner to the "low" cognitive load in chronic procrastinators. While lower levels of negative stressors may inhibit reaction time, accuracy may not be effected until higher levels of a negative stressor are present. Thus, had a blatant discrimination condition been included, differences in accuracy may have been found.

In addition to examining objective performance, I also examined the effect of ambient incivility on cognitive depletion. Contrary to Hypothesis two, no significant differences in depletion were seen between participants in the ambient incivility and control condition. One reason for the null results could be that many of the participants were not in the targeted group (i.e., not black), and therefore they were not as sensitive to

the discrimination as a target group member who may be more aware of any subtle biases and find the situation as stressful. Indeed, some research has shown differences in the way target and non-target group members perceive subtle forms of discrimination. For instance, Basford, Offermann, and Behrend (2014) found that although both women and men were able to detect discriminatory behavior against women, women perceived subtle forms of this behavior as more explicit than did men. Thus, the sample may have been less sensitive to the manipulation of discrimination. It could also be that participants simply did not find the conversation as anything to be overly concerned with due to its subtle nature.

Another potential factor that may have influenced this null result is the scoring method used for the Stroop task. In this study, cognitive depletion was measured by taking the difference in reaction time between the incongruent and neutral conditions. Although this is a widely used method to measure depletion using the Stroop Task, the best way to score the Stroop Color Naming Test is varied (Homack & Riccio, 2004). It could be that a different scoring rubric or different measure all together would have been a better fit for measuring this construct. Finally, the results showed no significant mediation effects of negative affect on these relationships. These findings are not completely surprising given that there were little to no effects of negative affect towards performance seen in this study.

Although there were not huge decrements seen in task performance based on the mediating effects of negative affect, findings from exploratory analyses suggest that there may be other negative consequences to overhearing or witnessing discrimination. The findings showed that participants in the ambient incivility condition reported finding the

task less enjoyable than those who did not experience this negativity. Although this experiment did not take place in an actual work environment, it is possible that employees who witness ambient forms of discrimination in their organization may react in a similar manner. The environment simulated in the experiment is not unlike that in which many perform work tasks on a daily basis. Many people engage in work tasks in places outside of the office such as coffee shops and restaurants and may overhear conversations from various strangers. If ambient incivility is present in an organization, it may slow down the time it takes to complete work related tasks and also may lead to less enjoyment and satisfaction with one's job. My findings suggest that it is possible that overhearing negative conversations may have some influence on people's job attitudes. It is well documented that lower job satisfaction is related to higher turnover intention, increased stress, reduced health, and higher rates of job burnout (Lim et. al., 2008; Miner-Rubino et al., 2004; Nyberg, 2010). As such organizations should be concerned especially as research shows that only one-time exposure of subtle uncivil behavior can affect bystanders (Porath & Erez, 2007).

Not only can ambient discrimination be harmful to the individual employee, but if prevalent or continued it can permeate organizational culture as well creating an uncomfortable work environment. No matter how rare the occasion, workplaces pervaded by ambient discrimination will likely mirror the negative workplace climate pervaded by ambient sexual harassment, which Glomb et al. (1997) found to be related to higher psychological distress, low job satisfaction, and poor health. Another study by Oyeleye, Hanson, O'Connor, and Dunn (2013) found that continued general workplace incivility among nurses over time was significantly related to stress, turnover intentions, and

burnout. It could be that negative affective reactions, such as less enjoyment of tasks, slowly build and lead to greater problems such as decrements on task performance. Continued exposure to ambient forms of discrimination can wreak havoc on organizations through not only lower performance but through higher turnover rates and healthcare concerns that can be costly for organizations.

Limitations and Future Research

Although hypothesized results were not fully supported, this should not discount further research in this field. Individual math ability is highly varied between individuals and other measures of task performance should be considered. An examination of the frequencies for percentage correct showed that most participants scored well on the math problems. Specifically, the mean frequency for percentage correct was 84% (*SD* = 9.91). Only nine participants scored below 70% correct, which is typically seen as the average score. Thus, it may be that the task might not have been difficult enough to show an effect if one does indeed exist. It may be the case that even if people were more distracted or offended in the discrimination condition (vs. control), the task was not hard enough to require high levels of cognitive attention or to disrupt cognitive attention. Future research should consider using different measures of task performance that allow for greater variability and span multiple skill types.

Alternatively, there were no significant differences in the number of incorrect items between groups despite reaction time. Although insignificant, participants in the control condition averaged more errors than did those in the manipulation condition. It could be that results will be the similar for harder and or different measures of task performance as well. Future research might also benefit from considering the differential

effects of ambient incivility on resulting task speed and accuracy. In addition to examining the effect of ambient discrimination on bystander performance, an initial goal of this study was to investigate if performance differed if the ambient discrimination was directed towards a specific member of a stigmatized group (i.e., "Jonathan, who is Black") or towards a stigmatized group as a whole (i.e., "Blacks"). However, due to the small sample size the four conditions were combined into two comprised of the control (no ambient discrimination) and the manipulation (ambient discrimination towards a specific member or towards the group as a whole). Future research should look more deeply into the potential different outcomes that occur when discrimination is targeted at an individual versus a group. For instance, it could be argued that participants may find the targeted case ("Jonathan, who is Black") as more offensive because "Jonathan" has been given a name the derogatory comments are now directly prejudiced to an actual person. It is undeniable that stereotypical beliefs based on social groups are influential in forming judgments about others especially when there is little contact or attentional capacity (Pratto & Bargh, 1991). Through this category-based process of impression management we form opinions of others based on social group. However, impressions can also be formed through individuating processes where in individual characteristics and behaviors are also taken into account (Fiske & Neugberg, 2013). Because category-based processes require less cognitive resources and time they are likely used before individuating processes.

On the other hand, target members who relate closely with "group" belonging might be more affected by the non-targeted comments. Individuals who more strongly identify themselves with stigmatized groups may be more likely to perceive comments as

discriminatory and as being motivated by prejudice. For example, women who highly identify themselves with their gender are more likely to perceive subtle forms of sexism as discriminatory (Operario & Fiske, 2001; Hebl & Singletary, 2009). Future research using a larger sample size may glean more light on how individual differences can affect differential reactions to ambient discrimination.

Relatedly, other potential differences may be seen if there was a greater examination of differences in reactions based on participant race. It may be that participants in the same group as the one being targeted may have stronger negative reactions than those outside the target group. One reason this may be the case is that those in the target group feel a stronger sense of belonging to the group than those outside of the group. Some anecdotal evidence of this may be seen with the current protests in the US regarding racial tensions between the Black community and law enforcement. It is not the case that people outside of the Black community are not involved; however, there appears to be a stronger presence of and reaction by people in the Black community calling for action. Additionally, there is research that suggests that those who more strongly identify themselves as belonging to the stigmatized group are more likely to perceive unintentional or subtler forms of discrimination as discriminatory. For example, Chrobot-Mason, Ragins, and Frank (2013) found that Blacks are more aware of the occurrence of ambient racial harassment at work than are Whites, however both groups experienced negative job attitudes and increased psychological strain when they were aware of its occurrences.

Future research would benefit from having not only a larger sample but also a sample that includes a more diverse participant pool. Evidence suggests that multiple

minority belonging (e.g., the intersection of multiple marginalized identities) might generate an interaction effect that increases the negative effects of being a minority member. For example, one study found women of color reported more uncivil organizational treatment than did employees of color or women in general (Cortina, Kabat-Farr, Leskinen, Huerta, & Magley; 2013). Future research should consider the potential detrimental consequences of belonging to more than one minority group.

Conclusion

The purpose of the study was to examine how subtle forms of discrimination affect bystander performance. Despite non-significant results, findings do not discount the potential consequences to bystanders of these subtle discriminations. The current research suggests that ambient incivility in the form of ambient discrimination may have negative effects on people's attitudes, which can be harmful to both the individual employee and organization as a whole. With the recent escalations in racial tension, understanding the effects subtle, "ambient" forms of discrimination on bystanders is more important than ever. More research is needed in order to fully understand how these acts effect bystanders as well as to explore possible interventions that may help buffer any negative consequences.

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APPENDIX A: BACKGROUND SCRIPTS

Neutral Script (Condition 1)

Person 1 – Ugh, that test we just took was so impossible!

Person 2 – I know! The professor was so misleading on what we should have studied! I read through all of my notes and reread the chapters twice and still had no idea what I was being asked. You would think we were expected to have a photographic memory – he even said it was supposed to be easy.

Person 1 – Well at least it seemed like others in the class agreed. Maybe there will be a curve.

Person 2 - Huh, yeah if he didn't lie about being open to that in the syllabus too. That and there is always that one over achiever in the class that has to ruin it for the rest of us.

Person 1 – Oh well, its done with for now. Maybe I will go talk with him next week.

Person 2 – True, let me know how it goes if you do. So what are your plans for the weekend?

Person 1 – I am actually going home. My parents are throwing a surprise party for my grandmother and my mom actually paid for a plane ticket to make sure I came back.

Person 2 – ha so I take it you don't go home much then?

Person 1 – Nah, I can't afford the plane ticket and driving isn't really much cheaper as home is eight hours away. Plus I hate taking off work on the weekends because that's when I get the best tips.

Person 2 – That makes sense but I can't imagine being that far from my family. The drive for me is only 45 minutes so it's not that big of a deal for me to go for a visit. That must be hard.

Person 1 – It's not so bad, actually it has allowed me to get out of family get-togethers I would gladly do anything to avoid.

Person 2 – Good point, I can see where that could be an advantage.

Person 1- But anyways, what are your plans for the weekend?

Person 2 – Well I was going to go to the lake with my roommates but we decided to go another weekend since it is supposed to rain. I've told myself that I am going to get a start on that term paper but we both know that isn't going to happen so I will probably

just veg out on the couch. One of my roommates mentioned wanting to go see some new movie that was just released so I might do that. I guess I will just go with the flow. When do you come back?

Person 1 - Unfortunately the party is not scheduled until Sunday night. Of course my mom booked the earliest flight possible on Friday. She said it was the cheapest but I am pretty sure that wasn't her reasoning. But anyways the first flight I could catch after the party was not until Monday morning so I will have to miss class. Which reminds me, could you text me if the professor says anything about the test?

Person 2 - Yeah that should be no problem, although I doubt he will. It normally takes over a week for him to grade the tests even though it is all on a scantron. .

Person 1 - Good point (Pause). But hey I almost forgot. I have a friend playing at a local bar tonight and I told her I would try to make it and bring some friends along. She told me that she would be able to get us in for free. Would you want to come?

Person 2 – That could be fun, I have some work to do but it shouldn't take too long to do. What time are you going?

Person 1 - She starts at 8 but one of my roommates is also going, actually its Aaron so you have already met. But we were thinking about grabbing dinner around 6 before we go if you want to join.

Person 2 - I haven't gotten out in awhile so that sounds good but I may or may not be able to make it for dinner depending on how much work I have gotten done by then.

Person 1 - Sounds good, I've got to run though, my next class starts in 15 minutes and I don't want to be late. This professor does not take that well. Let me know about dinner and I will text you with more details about tonight.

Person 2 - Will do, I will go ahead and start on this work so I can hopefully join you for dinner. Hope you aren't late!

Person 1 - Thanks, see you soon!

Control Script (Condition 2)

Person 1 – Hi. Can I get a regular coffee?

(Pause for about 5 seconds)

Person 2 – Same for me please.

(Pause for about 5 seconds)

Person 1 – Hold on. I'm gonna get sugar.

Person 2 – Hey, get me some packets; I'll get a table.

Person 1 – Sure.

(Pause for about 5 seconds)

Person 2 – Man, I hope it doesn't rain today. I really wanted to go biking after this.

Person 1 – I'd go with you, but I have to work on some extra credit for my economics class.

Person 2 – What do you have to do?

Person 1 – Not much, just read an article about the economy of a country that isn't about the United States and write up a 2 page summary and analysis on it.

Person 2 – That doesn't sound too bad. Wait I thought you got a good grade on the final. Weren't going to finish with an A?

Person 1 – I was… But you won't believe what happened while we were working on our group project at the library yesterday. We found out Jonathan made a calculation error that screwed up our data significantly. All of our initial projections were off by 30%, and we had one night to try to fix three weeks' worth of work before our presentation. We didn't have enough time to get everything right.

Person 2 – That reminds me – I have a final group project due next week. Our team's gotten along pretty well though and everyone's pulling their own weight.

Person 1 – Just be glad you don't have to fix this huge error.

Person 2 – Yeah, but mistakes happen and I'm pretty sure he didn't mean it. Math isn't the easiest subject after all.

Person 1 – Yeah, he kept apologizing cause he messed up the graphs, plus the group decided that I would be in charge of the calculations, so I HAD to stay up to fix the calculations.

Person 2 – Man that sucks, but it happens.

Person 1 – Tell me about it. Hey – speaking of mistakes, how's that French course you decided to take because "it sounded fun?"

Person 2 – Terrible – not fun at all. I have forgotten *everything* I learned from high school.

Person 1 – Oh well, it's almost over anyway. What do you think you're going to get in it? I might have to take it next semester.

Person 2 – A C. Our professor is not very forgiving when it comes to grades.

Person 1 – Sheesh, sounds bad. I'm hoping my Economics professor isn't as tough.

Person 2 – Did everybody in your class get the same grade or is there peer grading and stuff, so you're not as penalized?

Person 1 –Everybody in the group gets the same grade, which sucks cause of the calculation error. Jonathan didn't even show up to our final meeting before we had to turn in our project. At least I fixed some of the data and we didn't completely bomb the project.

Person 2 – Hey, something is always better than nothing, right? I'm pretty sure Jonathan has a reasonable excuse for not showing up, he's human after all.

Person 1 – Oh, true, I texted him and wished him luck for the next semester. He didn't really text me back, he's probably busy doing his project for his other course. It must suck having two projects due at the end of the semester.

Person 2 – Yeah, I'd probably mess up on those calculations too. He's probably under a lot of stress and not a lot of sleep. I wouldn't be surprised if he was a wreck during the presentation.

Person 1 – We gave him a bunch of coffee so he would be focused. We also tried covering some of his part of the project so he wouldn't burn out from all the stress. It would've been bad if he fell asleep while we were working on the project.

(Laughter)

Person 1 – Hey, you doin' intramurals this year?

Person 2 – Sure, they only play games like once or twice a week so it's not a huge commitment.

Person 1 – Yeah, you're right. I did soccer last year and had 4 classes and a part-time job. I still had some free time.

Person 2 – I'm only doing basketball and soccer this year though. Flag football and ultimate Frisbee are no longer fun.

Person 1 – Why's that?

Person 2 – There's this dude in the league that nobody wants to have in their game. He just comes and ruins the fun for everyone.

Person 1 – Damn, I'd hate that. Does he not know how to play or something?

Person 2 – Mhmm. We tried teaching him how to play, but it's no use, he just doesn't get it! The team just gave up on him…. Aw man! It's raining outside!

Person 1 – Dude, that sucks. I guess you're not going biking.

Person 2 – Well now I don't know what I'm going to do today.

Person 1 – I do, this article assignment just for a few lousy extra credit points.

Person 2 – Well, I'm going over to Adam's.

Person 1 – And do what?

Person 2 – I don't know, but I don't know what else to do now that the semester's pretty much over.

Person 1 – Suck it up! I start work in a few days while you get to enjoy your break.

Person 2 – Don't forget to finish any extra credit because of that error.

Person 1 – Rub it in…

Person 2 – Haha, alright, I'm leaving.

Person 1 – Alright man, see you later.

Non Targeted Script (Condition 3)

Person 1 – Hi. Can I get a regular coffee?

(Pause for about 5 seconds)

Person 2 – Same for me please.

(Pause for about 5 seconds)

Person 1 – Hold on. I'm gonna get sugar.

Person 2 – Hey, get me some packets; I'll get a table.

Person 1 – Sure.

(Pause for about 5 seconds)

Person 2 – Man, I hope it doesn't rain today. I really wanted to go biking after this.

Person 1 – I'd go with you, but I have to work on some extra credit for my economics class.

Person 2 – What do you have to do?

Person 1 – Not much, just read an article about the economy of a country that isn't about the United States and write up a 2 page analysis on it.

Person 2 – That doesn't sound too bad. Wait I thought you got a good grade on the final. Weren't you going to finish with an A?

Person 1 – I was… But you won't believe what happened while we were working on our group project at the library yesterday. We found out that our black group members made a calculation error that screwed up our data significantly. All of our initial projections were off by 30%, and we had one night to try to fix three weeks' worth of work before our presentation. We didn't have enough time to get everything right.

Person 2 – That reminds me – I have a final group project due next week. Our team's gotten along pretty well though and everyone's pulling their own weight.

Person 1 – Just be glad you don't have a bunch of black kids in your group to screw everything up.

Person 2 – Oh black people are never good at math. You should've known they would screw it up.

Person 1 – Yeah, they got really aggressive when we called them out on their mistake. I can't stand when they get ratchet. All we needed was for the math to be done correctly the first time! I had to stay up ALL night trying to fix their mistakes.

Person 2 – Man, that sucks. I hate having to cover up someone else's mistakes.

Person 1 – Tell me about it. Hey – speaking of mistakes, how's that French course you decided to take because "it sounded fun?"

Person 2 – Terrible – not fun at all. I have forgotten *everything* I learned from high school.

Person 1 – Oh well, it's almost over anyway. What do you think you're going to get in it? I might have to take it next semester.

Person 2 – A C. Our professor is not very forgiving when it comes to grades.

Person 1 – I'm hoping my Economics professor is.

Person 2 – Do all the members in your group get the same grade? Or is there peer grading and stuff so you're not penalized by their errors?

Person 1 –Everybody in the group gets the same grade. I'm pissed off mostly because they always went to play basketball when we had group meetings, and then they screwed up their part. They didn't even show up to our final meeting before we had to turn in our project.

Person 2 – Well, where were they? Didn't you tell me they was in charge of calculating the results in the first place?

Person 1 – Oh, of course, they were at the gym when they were supposed to work on it. Apparently playing ball is more important than school to them.

Person 2 – They're just like every jock here on an athletic scholarship; you know there's no way they got in this school because they actually did their work. They're always saying, "ball is life."

Person 1 – That's so like them. They're not smart enough to work with us. Every time we have a test in that class they're always trying to cheat, and each time we invite them to study, they blow us off to go to Bojangles with their other athletic friends.

(Laughter)

Person 1 – Hey, you doin' intramurals this year?

Person 2 – Sure, they only play games like once or twice a week so it's not a huge commitment.

Person 1 – Yeah, you're right. I did soccer last year and had 4 classes and a part-time job. I still had some free time.

Person 2 – I'm only doing basketball and soccer this year though. Flag football and ultimate Frisbee are no longer fun.

Person 1 – Why's that?

Person 2 – There's this dude in the league that nobody wants to have in their game. He just comes and ruins the fun for everyone.

Person 1 – Kind of like your black group members, right?

Person 2 – Mhmm. Including them is more trouble than it's worth. Except they're a problem because they're so obnoxious when they plays sports. If they didn't act so ghetto all the time we wouldn't mind having them around.

(pause for a couple of seconds)

… well it looks like it just started raining.

Person 1 – Dude, that sucks. I guess you're not going to get to go biking.

Person 2 – Well now I don't know what I'm going to do today.

Person 1 – Me neither. My next exam isn't until Tuesday.

Person 2 – We could go over to Adam's.

Person 1 – And do what?

Person 2 – I don't know, but I don't know what else to do now that the semester's pretty much over.

Person 1 – Suck it up! I start work in a few days while you get to enjoy your break.

Person 2 – Don't forget not having to finish any extra credit because your group members never screwed me over.

Person 1 – Rub it in…

Person 2 – C'mon, let's go!

Person 1 – Fine.

Targeted Script (Condition 4)

Person 1 – Hi. Can I get a regular coffee?

(Pause for about 5 seconds)

Person 2 – Same for me please.

(Pause for about 5 seconds)

Person 1 – Hold on. I'm gonna get sugar.

Person 2 – Hey, get me some packets; I'll get a table.

Person 1 – Sure.

(Pause for about 5 seconds)

Person 2 – Man, I hope it doesn't rain today. I really wanted to go biking after this.

Person 1 – I'd go with you, but I have to work on some extra credit for my economics class.

Person 2 – What do you have to do?

Person 1 – Not much, just read an article about the economy of a country that isn't about the United States and write up a 2 page summary and analysis on it.

Person 2 – That doesn't sound too bad. Wait I thought you got a good grade on the final. Weren't going to finish with an A?

Person 1 – I was… But you won't believe what happened while we were working on our group project at the library yesterday. We found out Jonathan made a calculation error that screwed up our data significantly. All of our initial projections were off by 30%, and we had one night to try to fix three weeks' worth of work before our presentation. We didn't have enough time to get everything right.

Person 2 – That reminds me – I have a final group project due next week. Our team's gotten along pretty well though and everyone's pulling their own weight.

Person 1 – Just be glad you don't have a Jonathan to screw everything up.

Person 2 – Wasn't Jonathan that black kid that went to our high school? He's never been good at math to begin with. You should've known he would screw it up.

Person 1 – Yeah, he got really aggressive when we called him out on his mistake. I can't stand when he gets ratchet. All we needed was for the math to be done correctly the first time! I had to stay up ALL night trying to fix his mistakes.

Person 2 – Man, that sucks. I hate having to cover up someone else's mistakes.

Person 1 – Tell me about it. Hey – speaking of mistakes, how's that French course you decided to take because "it sounded fun?"

Person 2 – Terrible – not fun at all. I have forgotten *everything* I learned from high school.

Person 1 – Oh well, it's almost over anyway. What do you think you're going to get in it? I might have to take it next semester.

Person 2 – A C. Our professor is not very forgiving when it comes to grades.

Person 1 – I'm hoping my Economics professor is.

Person 2 – Does everybody including Jonathan get the same grade? Or is there peer grading and stuff so you're not as penalized?

Person 1 –Everybody in the group gets the same grade. I'm pissed off mostly because he always went to play basketball when we had group meetings, and then he screwed up his part. He didn't even show up to our final meeting before we had to turn in our project.

Person 2 – Well, where was he? Didn't you tell me he was in charge of calculating the results in the first place?

Person 1 – Oh, of course, he was at the gym when he was supposed to work on it. Apparently playing ball is more important than school to him.

Person 2 – He's just like every jock here on an athletic scholarship; you know there's no way he got in this school because he actually did his work. He's always saying, "ball is life."

Person 1 – That's so like him. He's not smart enough to work with us. Every time we have a test in that class he's always trying to cheat, and each time we invite him to study, he blows us off to go to Bojangles with his other athletic friends.

(Laughter)

Person 1 – Hey, you doin' intramurals this year?

Person 2 – Sure, they only play games like once or twice a week so it's not a huge commitment.

Person 1 – Yeah, you're right. I did soccer last year and had 4 classes and a part-time job. I still had some free time.

Person 2 – I'm only doing basketball and soccer this year though. Flag football and ultimate Frisbee are no longer fun.

Person 1 – Why's that?

Person 2 – There's this dude in the league that nobody wants to have in their game. He just comes and ruins the fun for everyone.

Person 1 – Kind of like Jonathan, right?

Person 2 – Mhmm. Including Jonathan is more trouble than it's worth. Except he's a problem because he's so obnoxious when he plays sports. If he didn't act so ghetto all the time we wouldn't mind having him around.

(pause for a couple of seconds)

… well it looks like it just started raining.

Person 1 – Dude, that sucks. I guess you're not going to get to go biking.

Person 2 – Well now I don't know what I'm going to do today.

Person 1 – Me neither. My next exam isn't until Tuesday.

Person 2 – We could go over to Adam's.

Person 1 – And do what?

Person 2 – I don't know, but I don't know what else to do now that the semester's pretty much over.

Person 1 – Suck it up! I start work in a few days while you get to enjoy your break.

Person 2 – Don't forget not having to finish any extra credit because Jonathan never screwed me over.

Person 1 – Rub it in…

Person 2 – C'mon, let's go!

Person 1 – Fine.

APPENDIX B: EXPERIMENTER OUTLINE

Ambient Incivility Study Outline

Prior to participant arrival:

Set up Programs on double screen computer

1. Fill out the sign-in sheet (this assigns both the ppt # and condition but is not seen by ppt.)
    - Conditions
        - 1 – Neutral
        - 2 – Control
        - 3 – Non-target
        - 4 – Target
2. Qualtrics
    i. Survey Name: *Ambient Noise*
    ii. Go ahead and activate the survey (Qualtrics might automatically "time-out" if you don't) → It got a little confusing last time with going ahead and entering the ppt number as there would be duplicates with "no-shows" if you forgot to manually delete so I would just wait to enter survey id until later.
3. InQuisit
    a. Pull up the Stroop task- this file is located in the "Ambient Noise" folder in dropbox
        i. After you have downloaded it once it will be faster to find in InQuisit (Files→ open recent → StrropWithControlKeyboard)
    b. Go ahead and enter subject id and Group # (1) and have the instructions page pulled up.
        i. Be sure to enter the **CORRECT** <u>subject ID</u> (ppt. #) and <u>group #</u> (Time 1 Time 2)
        ii. For group # make sure to use **"1" for the first stroop** and **"2" for the second Stroop**

1. If it turns out there is not time b/w sessions it is fine to do this while they read the informed consent or at the time

4. PEBL:

    a. Open up Pebl and find the Math Test that corresponds to the condition in the battery

        i. Enter in the ppt # and your initials but do not start it yet.

5. Go ahead and have a consent form and pen pulled out and ready to go

When the participant arrives:

6. Have them sit at the main table first:

    a. Give them the informed consent form and let them read and sign it and ask if they have any question. Be sure to store in folder (should be easy to do while they complete the Stroop task or questionnaire)

        i. You have to sign this as well

Stroop Task 1:

7. You will then move the participant to the computer station for the first Stroop task:

    a. If you did not have time to enter in the id or group before you can enter it or watch them enter the fields now depending on how you feel more natural/comfortable

    b. "You are about to complete what is known as the Stroop task which you will complete an addition time later on. Go ahead and read through the instructions. Let me know if you have any questions but if not you can go ahead and Let me know when you are finished."

        i. The instructions tell them to let you know as well but it can't hurt to tell them as well as it will make it easier for you to get the average times for the congruent, incongruent, and control items).

            1. The more specific results (e.g. Right/wrong) will be stored so that you can go back into the file and record these if they accidently went too far. *(Note:* it may take a minute or so for InQuisit to update the more detailed results so don't freak out if they are not there at first)

    c. Don't EXIT InQuisit, just minimize it

PEBL Math Problems

8. Following the 1st Stroop explain to them what they are to do

    a. *"During this procedure you are to pretend that you are currently at a busy coffee shop and have about 5 minutes until you need to leave. However you have about 5 minutes to work on an assignment before you go. Please carefully consider each problem as you would for any important task. "*

        i. If you have not already done so make sure to put the correct ppt# number (in participant code) and your initials in

    b. Instruct them to contact you when they are done with the task.

        i. E.g.: "*When you are through, you will be told to stop and let me know that you have completed the task. (I will be sitting…)"*

* I *think* I have correctly embedded the audio files in the PEBL script but if it turns out I did not you may have to open an audio file prior to the participants arrival and just start that right before starting the PEBL task.

Stroop Task 2:

9. When they come to you after they are done with the task, go back to InQuisit

        i. Make sure to use the **same ID** and to use ***"2"* as the group number** this time

            1. Again you can enter this yourself or just tell them the values but watching to make sure that they enter them correctly

            2. Again tell them to let you know when they are through.

Qualtrics

10. Open Qualtrics

    a. *"Thank you so much for your time, before you leave there are a few more questions that we would like to ask you. Please let me know when you are done.*

    b. Either have them or you enter in their PPT#

Finished

11. Hand them a debriefing form and ask if they have any questions.

    a. Thank them and tell them they are free to go.

After the participant leaves

12. Go into InQuisit and transfer data to both the hard paper copy as well as the Google Drive excel document for the Stroop task results (if doing multiple can do this after everyone is done if you need time to set up for next participant).

13. Give SONA credit to the participant. If there was a no show, indicate this in SONA as well.