PREFERENCE FOR NORMATIVE AND INFORMATIONAL SOCIAL INFLUENCE IN EVALUATION OF ACADEMIC INTEGRITY VIOLATION APPEALS

by

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This thesis was prepared under the direction of the candidate's thesis advisor, Dr. Andrzej Nowak, Department of Psychology, and has been approved by all members of the supervisory committee. It was submitted to the faculty of the Charles E. Schmidt College of Science and was accepted in partial fulfillment of the requirements for the degree of Master of Arts.

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ABSTRACT

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Social influence is sought to distribute information processing for decision-making when data is limited. Undergraduate students selected information with normative or informational wording to supplement a fabricated academic integrity appeal from their university and decided whether to affirm the charge. A novel measure, the Adaptive Scale of Preference for Normative Versus Informational Social Influence (ASPNVISI), was piloted in comparison with a Polish scale of influence preference, individual difference measures in motivation (e.g., Need for Closure), and behavioral measures of influence-seeking. Results did not support the hypotheses that psychological needs would predict behavioral social influence preferences, though Need for Cognition and Need to Belong predicted self-reported preferences. The ASPNVISI was correlated with the existing scale of influence preference, providing support for its continued

development. Contrary to the hypothesis, confidence in the decision on a charge of academic dishonesty was not related to selected influence; race and conservatism were related to confidence, and gender to the selections. Next steps include further pilot testing of the ASPNVISI and expansion of the behavioral task.

PREFERENCE FOR NORMATIVE AND INFORMATIONAL SOCIAL INFLUENCE IN EVALUATION OF ACADEMIC INTEGRITY VIOLATION APPEALS

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INTRODUCTION

Social influence involves both the pressure and assistance one receives from sources external to the self while in the process of making a decision. This influence comes in several forms, including normative – involving conformity to others' expectations – and informational – involving acceptance of others' information as truth (Deutsch & Gerard, 1955). The Regulatory Theory of Social Influence (RTSI) posits the agentic pursuit of social influence as a process of optimization, distributing the processing of information to others to improve the quality and efficiency of decisions (Nowak et al., 2019). This thesis seeks to combine these areas of influence research, piloting a measure of preference for normative versus informational social influence and examining students' selection of each type of influence via questions asked of an unknown peer in a decision-making scenario concerning another peer's charge of academic dishonesty. Both self-reported and behavioral measures of influence preference will be examined in relation to the psychological needs for cognition, belonging, and closure.

Influence as Interference: Wisdom of Crowds and Groupthink

Social influence appears across contexts, from personal consumer decisions such as what car or hair dye to purchase, to mathematical calculations or estimations, to policy and jury conclusions. Influence can sometimes be considered a flaw of the group decision-making process due to groupthink, whereby due to social influences, a group of

people converge on a conclusion that all parties would not necessarily agree with in isolation. In the wisdom of crowds, typically the average of a collection of singular responses is closer to the true answer than sampled individual responses, but when responses are collected from people engaged in exchanges about the answer, groupthink can reduce or eliminate the effect (Mavrodiev & Schweitzer, 2021a). This argument states that when individuals alter their decisions based on other individuals' differing conclusions, the mean that appears from isolated sampling to be centralized on the true answer becomes skewed by the loss of diversity in responding.

Social influence from even the sharing of a single individual's conclusions can act similarly to groupthink on the mean of responses; adjustment can reduce the diversity of responses without reducing error overall, range reduction can cluster responses further from the truth, and confidence can be increased by moving one's responses closer to another individual's regardless of whether the change in accuracy is positive or negative (Lorenz et al., 2011). This loss of accuracy is the topic of some debate in areas where decisions must be made by more than one person in tandem, and it has been suggested that diversity persists more in settings where one is among a group of people making individual decisions, as opposed to part of a group making a cooperative decision (Deutsch & Gerard, 1955).

People defer to groups over individuals when adjusting their beliefs, as suggested in the groupthink literature, but still weigh their own initial judgements higher than those of the group in adjustment (Mannes, 2009). This greater self-weight, attributed to confidence in one's initial decision, can be beneficial in reducing the impact of the social influence of erroneous information or groupthink on revised group means. Likewise,

there is an effect of the distance of provided social information from the individual's existing opinion; people tend to have a confirmation bias toward social information similar to their own, and revise decisions with similar opinions at a higher weight than distal opinions (Kao et al., 2018). One may also conform toward their own initial decision to avoid cognitive dissonance, reducing conformity to the norm of the group/others (Deutsch & Gerard, 1955). However, if the error exhibited in the average belief is initially high, social influence can improve rather than diminish the wisdom of crowds (Mavrodiev & Schweitzer, 2021a). The tendency to maintain one's opinion can be referred to as individual conviction, and the tendency to adjust according to the opinions of others as social influence (Mavrodiev & Schweitzer, 2021b).

Agentic Social Influence: Delegated Processing

The Regulatory Theory of Social Influence (RTSI) suggests that social influence is not only something imposed upon individuals by the targeted or automatic dispensation of information from others, but a source of reference material that is actively sought to reduce the load of processing required to make a decision on a given topic (Nowak et al., 2019). While information is more available and global than ever before thanks to the internet and other forms of connection between sources, there are more data than a single person could process, even if they only selected a single microcosm to focus on, and information varies widely in physical and cognitive accessibility. To avoid being overwhelmed by the sheer amount of data present, the responsibility of piecing it all together, or the declining quality of conclusions from decision fatigue and limits of time, one must disperse elements of the decision-making process at some level to others. This can occur at a lower-level construal of the process (Vallacher & Wegner, 1987) where

information about the topic is collected from other people to be considered by the decision-maker, or at a higher level where the solution itself is outsourced to a trusted other. RTSI has also shown the potential of collective influence-seeking to track (in a conformative mode considering prior decisions) or outperform (in an informative mode considering feedback about accuracy) the typical wisdom of crowds in a model of signal tracking (Pitt et al., 2020). These computational modes may abstractly be linked to the two types of social influence proposed by Deutsch and Gerard (1955), suggesting a utility for each in distributed processing.

Social Influence Types

In the context of social psychology, social influences are often categorized as normative or informational in type. While they have been studied more in the context of influencers acting on an influenced target, the applications of their content as pathways for decision-making suggest a natural integration with RTSI.

A normative social influence is effective in changing the behavior of a person due to their desire to appear correct, follow social norms, or fit in to some group or standard (Vallacher, 2020). It has also been defined as the compliance with others' expectations (Deutsch & Gerard, 1955). At times this influence is considered shallower than its informational counterpart because it is less likely to alter an individual's intrinsic beliefs without sustained exposure, but it can be a strong motivator for public behavior or discrete decision-making. A normative social influence may include an implicit dress code followed for a business or social occasion, a friend's thoughts about a film, or the opinion of the majority in a group project.

An informational social influence is effective in changing the behavior and often opinion of a person due to their desire to be correct and learn (Vallacher, 2020), and can also be defined as accepting information from someone as evidential of truth (Deutsch & Gerard, 1955). An informational social influence may include the testimony of a physician absorbed when deciding whether to take a certain medication, the statement of one party in a court case, or data shared by a labeled or perceived expert in the field of an issue. This differs from the normative shift in opinion or behavior due to the assumed objective (or relative) accuracy of the person or knowledge being considered (Nowak et al., 2019). Expert status, or the belief that a person is more qualified or knowledgeable than oneself about the topic at hand or in general, can be applied to an informational social influence source due to stated expertise (mention of a degree, experience in the area), relevant evidence (the person was shown to be correct previously), or authority (the person is in a management or other leadership position.

Trust for Messages and Sources

Trust in the source of influence is one of the major pillars of the Regulatory Theory of Social Influence (Nowak et al., 2019). Trust can involve a feedback loop of features of persons and ideas; the content of a message can be used to make inferences about the person relaying the message, which carry back over to the interpretation of the message's truthfulness.

Semantic prosody is present when a word is inherently linked to positive or negative valence through the context of its typical or primary use (Hauser & Schwarz, 2018). Prosodic adjectives can influence both impressions of and intentions toward the targets they describe. For example, "utterly" is shown to have more negative implications

than "totally," resulting in lower warmth and competence ratings as a descriptor of how someone has changed and more negative perceptions as a descriptor of a boss' unconventionality (Hauser & Schwarz, 2018). Warmth and competence are directly linked to trust, and their incidental perception through both content and presentation can bias recipients of influence toward or away from sources and their messages. These biases can also be manipulated intentionally in the wording of message stimuli to reduce trust toward a target acting as a witness or source of other information. As such, wording must be carefully considered in the preparation of materials intended to supply social influence to avoid artificially inflating or deflating trust toward one type of message.

When messages include information about other people, both the provider and the subject can serve as sources of trust. For example, norm nudging is a method of utilizing normative social influence to alter interdependent behaviors by presenting the beliefs and behaviors of a relevant reference group to a target. The effectiveness of this practice is, as suggested by RTSI, dependent on credibility and trust of the information provider, compatibility with existing preferences, and clarity of the point of reference (Bicchieri & Dimant, 2022; Nowak et al., 2019). When a reference group is abstract or vaguely defined, their actions may not translate to the target of influence as a concrete norm to be followed, especially if conformity and expectation are divorced (Bicchieri & Dimant, 2022).

Trust in a source can also be affected by the expression of emotion. In zero-acquaintance interactions (where there is no prior contact) the expression of happiness increases stereotypes of morality, competence, and sociability, and increases trust, while expressions of anger decrease each (Belkin & Rothman, 2017). Ambivalent expressions

also decrease morality and competence perceptions and trust. These effects are explained by perceptions of morality (Belkin & Rothman, 2017), suggesting that the perception of ill intent reduces trust and assumptions of competence. This illustrates that to retain an equal basal trustworthiness for different messages from a new source, verbal and nonverbal expression must be carefully balanced in valence to avoid unintentional attributions of intent.

There are some differences in social influence based on the medium of communication with an agent as well. For example, virtual agents are more effective at imposing informational than normative social influence (Lucas et al., 2019). However, this appears to be affected by perception of the agent as AI rather than human, which shows a trending greater persuasion, while normative influences do not show differences between perceived agent type and impact. This suggests that trust in a suspected non-human source is dependent on perceptions of competence due to the absence of warmth expectations, and that the competence of an AI may be estimated higher than that of a human due to a common perception of artificial intelligence as possessing a wide array of accurate information, or as a compensatory trade-off with the absence of warmth and emotion.

The perceived believability, warmth, and competence of a virtual agent are increased by the display of emotions appropriate to their context. However, believability is also greater for those exhibiting inappropriate (atypical or opposite the expected valence but possible for the context) or implausible (never expected for the context) emotions than no reaction at all, and inappropriate emotions are linked to lower warmth and competence than implausible emotions (Pelachaud & Niewiadomski, 2011). For

virtual agents, then, lack of emotional response, or less so a situationally inappropriate response, may imply a lack of social intelligence (or even humanity) which reduces trust. This balance in emotive content can be difficult to strike when arranging decision-making processes virtually, particularly when maintaining anonymity, or when communicators are diverse in culture, disability status, or other potentially unspoken identities that relate to communication style. One method of implying humanity in text-based communication may be to express the 'thoughts and opinions' of a virtual agent alongside the information they provide, using first-person language and manipulating semantic prosody.

As one of the identities typically present during communication, gender is also entwined with influence and trust. Often, men are deferred to in their opinions over women, who are regularly portrayed as less competent, and are generally a less effective influence on men than other men (Carli, 1999). There is a tendency for people to balance the perceptions of out-groups who display a trait in which they are stereotyped to be low, such as a man perceiving a competent woman as less warm, and thus a less effective influence (Cuddy et al., 2009). Competence displays can thus reduce women's social influence unless diluted with warmth or collectivism. The likeability and knowledge of expert witnesses, when high, show equally positive perceptions for men and women, but there are gender differences for those with low scores on these aspects, with expert men low in likeability and knowledge perceived as more credible than similar expert women (Neal et al., 2012). The gender gap in social influence is reduced in groups containing more than one girl or woman (Carli, 2001). This suggests that for virtual agents, who may be less trusted generally, gender can complicate the efficacy of influence, and in consideration of RTSI, what kind of influence is sought from whom. Additional research

is needed on the perception of individuals who utilize they/them and other non-binary pronouns in virtual communications to better categorize gendered motives in source selection and trust.

Psychological Needs

Social influences may be sought to optimize decision-making in a way that protects or fulfills other psychological needs. One such factor is the Need to Belong, which encompasses the need to build strong, positive, persisting relationships with other individuals and groups (Baumeister & Leary, 1995). While also involved in impression-making and presentation of a positive self-concept to others, this motivation may in part drive assent to normative influences, including conformity to norms and precedent, in order to create rapport, avoid conflict, or reinforce bonds with desired in-groups. As such, persons high in Need to Belong may hold a preference for normative influence, wanting to make decisions in a way that furthers relational goals rather than independent desires for accuracy. A common global measure of Need to Belong is the original 10 item Leary (2013) scale. However, some research has shown support for a single item scale asking directly about the perceived Need to Belong (Nichols & Webster, 2013). Need for Cognition surrounds the need for clarity, certainty, and thought in addressing situations (Cohen et al., 1955). Reduced frustration has been reported during mentally draining tasks in people with higher Need for Cognition (Cacioppo & Petty, 1982), which may suggest an ease of processing that allows for greater expense of mental energy without depletion at the cost of potential boredom with simpler tasks, or that satisfying a Need for Cognition in solving a particularly difficult problem outweighs the negative effects of cognitive labor. These findings could be linked to a preference for informational social

influence, such that those high in Need for Cognition are motivated either to delegate less/lower-level processing when making decisions in order to provide more opportunity for cognitive exercise, or to seek what is perceived as a more objective truth (unbiased by normativity) in order to substantiate a clearer cognition with which to make decisions. Need for Cognition has been measured with several iterations of scales as well, simplified from an original 34 item scale (Cacioppo & Petty, 1982) to a short form of 18 items (Cacioppo et al., 1984), to a more recent six-item version (Coelho et al., 2020). Need for Closure addresses the need for conclusions to be reached quickly and maintained indefinitely (Kruglanski & Webster, 1996). The initial Need for Closure Scale (NFCS) was 41 items (Webster & Kruglanski, 1994), and it has been condensed into a 15-item short form (Roets & Van Hiel, 2011). Need for Cognition has been negatively correlated with closed-mindedness (Cacioppo & Petty, 1992), which may signify a negative relationship between Need for Closure and Need for Cognition if the desire to maintain existing cognitions interferes with the desire to create newer and clearer ones, or if continued cognition delays closure. Alternatively, they could be linked more positively, due to shared elements of desire for clarity and certainty. The former possibility is explored for this study, considering the potential for Need for Closure to relate to normative preferences.

Jury Decision-Making and Influence

In a jury decision-making context, the 'true' response is the decision most appropriate based on evidence and precedent. This type of decision-making can be more taxing, open to influence, and subjective than estimation of objective fact due to the type and amount of information and discussion presented in court cases. Facts are offered, but

in a context suiting two opposing narratives, and the emphasis and conviction with which they are delivered and reiterated can sway opinion as much as their content. Some groupthink can also be expected in juries due to the pressure to agree on a conclusion to complete the process in a timely manner, and the availability of open discussion (Vallacher, 2020). Members of a jury tend to adjust their decisions toward the majority result of the initial vote. This tendency is related to openness to new information, though verdicts are not reliably related to individual differences (Baddeley & Parkinson, 2012). Compromise within a jury is also positively related to the proportion of strangers in the group (Baddeley & Parkinson, 2012). The degree to which this is true compromise versus conformity is not clear, but it is suggestive of the previously mentioned tendency to shift toward a group normative decision, particularly when not anchoring one's response on that of a singular close or trusted other. This may suggest that online jury formats, where personal information and identity are withheld, can reach decisions faster, but potentially at the cost of individual variance in responding that funnels decisions more restrictively.

In contrast, juries where members are acquainted (typically during a longer sit but potentially before the trial) may be more likely to deadlock due to satiated needs for approval and belonging necessitating less compromise. Priming some aspect of in-group status (peers, members of an institution) may thus have effects in both directions on the use of normative information (in that the assumption may be made that members are known, but their individual input may not be differentiated). Research on the social influence of different members of a jury group will assist in decomposing how individual differences affect initial decisions and relate to willingness to compromise.

Motives for and formats of jury decision-making may also affect the type of social influence sought or accepted. Normative influence is reduced when one's decision is anonymous, though people still reference others' responses to revise their own (Deutsch & Gerard, 1955). This motive may also be informational in part, as the other responses, while not forming a groupwide norm they can visibly follow, are a reference for correctness as well as agreement with others. When judging morality, normative over informational influence is elicited, while the reverse is observed when determining truth (Kaplan & Miller, 1987); this is particularly strong when unanimous (rather than majority) opinion is required for a decision to be accepted. A majority judgement condition results in the least satisfaction with the outcome and process as well, suggesting that normative influence, particularly when there are dissenters to the subjective majority conclusion, is less internalized by jury members. Likewise, the greatest change in decision preference occurs for unanimous judgements (Kaplan & Miller, 1987), possibly indicating the pressure to agree which drives jury deliberation, though the motives for judgement of truth versus morality may vary between members.

Virtual Juries

An online just format may be able to reduce some of the common influences on the process to focus on those of interest, as a researcher can control how and when participants can communicate with real or fabricated agents and how much personal information is available about them more strictly when not providing in-person interaction. Within juries there are two dimensions to be considered in converting to a digital format, whether it is to adjust for safety as during pandemic shutdowns or sensitive scenarios, or to reach a wider sample than an in-person medium. Scalability

refers to the ability to implement the interaction at scale, which is greater for asynchronous communication like voting and undirected comments; immersiveness refers to the medium's depth of communication, which is greater for synchronous chat or video communication (Fan & Zhang, 2020). Within a jury deliberation, blind voting versus interpersonal deliberation on the conclusion of the evidence given can be considered as providing scalability and immersion respectively (Fan & Zhang, 2020). For the following experiment, immersion was controlled and reduced to eliminate confounds of interpersonal judgements inherent to in-person communication like race/ethnicity, age, authority, and gender, and the potential for response contagion within groups.

Justice Decisions and Preferences for Types of Social Influence – The Current Study

This thesis applied theory on normative and informational social influence as distributed processing to the context of individualized jury decision making, placing the focus on the person seeking the influence as an agent rather than the entity or agent seeking to induce influence. The research included the development of a scale of preferences for normative and informational social influence using Likert measures with subscales for each type, based on the literature on social influence as well as a forced-choice Polish scale (Pietrzak, n.d.). Data was collected from university students on their perceptions of a supposed academic integrity violation, including selection of information through normatively and informationally framed queries, their conclusion on the student's culpability for the violation, and confidence in that decision. Self-reported variables of interest included social influence preferences, psychological needs (Need for Cognition, Need to Belong, Need for Closure), and demographics (gender, race, and conservatism). The current design examined how the responsibility for decisions which

impact strangers and lack a preexisting objective answer are diffused to unknown others in a binary vote-based decision-making context, and how preferences for types of social influence, psychological needs, and demographics are represented and related to each other and to decisions. Gender was systematically excluded for the current study via the use of neutral pronouns (they/them) for all parties, and the absence of names or visual representations of people referred to within the study; race of the influence provider and accused were likewise excluded. The salience of these identities was controlled during behavioral measures by delaying collection of demographics until decisions were submitted.

Hypotheses

It was hypothesized that participants high in Need to Belong and Need for Closure would show bias toward normative data, given potential motives to conform to or accept higher-level information such as others' explanations (Baumeister & Leary, 1995; Kruglanski & Webster, 1996), while participants high in Need for Cognition would show bias toward informational data due to desires to think on solutions rather than accept existing ones (Cacioppo & Petty, 1982). It was further hypothesized that participants who selected a majority normative queries would be more confident in their conclusions, as the implication of moral-based judgement, connected to norm-seeking in justice settings (Kaplan & Miller, 1987), may be linked to personal investment in the outcome and therefore less expressed neutrality about the decision. Relationships between individual differences and decisions to affirm versus void the charge were exploratory.

METHOD

Participants

Two-hundred and eleven students (162 women, 44 men, five nonbinary/other) at Florida Atlantic University were recruited through the SONA subject pool. The distribution of race, with 210 responses was 7.2% (16) Asian, 19.5% (41) Black, ~1% (two) Native American, 59% (124) White, 4.2% (9) Other, and 8.6% (18) Multiple/Mixed, representing the actual distribution of enrollment by race in the University well. Age, with 189 responses, ranged from 18-56 (M=19.65). Students were mostly undergraduate degree seeking (204) with three graduate, three non-degree-seeking, and one other. An additional 35 study responses were excluded due to being incomplete (without credit in the SONA system) or missing responses to one or more items on the Normative Informational Query portion of the study that could prevent the participant from having all the necessary information to complete the council task.

Materials

Instructions gave an overview of the task and set up the deception of an online student-faculty council, see Appendix A. A brief anonymized ‘case file’ detailed the respondent’s violation of Academic Integrity. This is a moderate level, and first affirmed, violation of cheating during an online exam, see Appendix B, intended to have no obvious ‘correct’ answer or emotional evocation. Four forced choices were presented

between queries about normatively and informationally framed aspects of the case, see Appendix C. For example, for the first query, on Respondus Monitor, a student could ask the informational query, “Did the evidence show clear use of outside materials?”, to which they would receive the response, “There was a reflection of a cell phone screen in the respondent’s glasses twice. What the phone was used for is not determinable from the video.” The information provided in the informational and normative versions of the questions was matched outside of the framing to prevent the amount of information in one condition from driving decisions.

In the decision stage, items included a decision on whether to affirm or void the charge of academic integrity violation, confidence in the decision on a Likert scale, and perceived efficacy and ease of the system to gauge perceptions of the process, see Appendix D.

Measures of demographics were collected post-test, see Appendix E, as were individual difference scales. Individual difference scales included: the 16 item Adaptive Scale of Preference for Normative versus Informational Social Influence, on a 5-point-scale of agreement, see Appendix F. For example, "Truth is objective and determined by facts and evidence." is an item on the informational subscale; the six item Subset of translated Polish scale of Social Influence preference (Pietrzak, n.d.), see Appendix G, a forced choice between informational and normative influence. For example, "Which statement better describes your approach? ‘In talking to people, I am more interested in trying to find out the truth than in what they think about it.’ OR ‘When talking to people, I am more interested in what they think about a topic than in trying to find out what is real.’"; the 10 Item Need to Belong Scale (Leary, 2013), see appendix H, on a 5-point-

scale of how true or characteristic of the self an item is. For example, "If other people don’t seem to accept me, I don’t let it bother me." is reverse-coded; the 15 item Adjusted Short Need for Closure Scale (Webster & Kruglanski, 1994; Roets & Van Hiel, 2011), see Appendix I, on a 5-point-scale of agreement. For example, "I don't like situations that are uncertain."; and The Six-Item Need for Cognition Scale (Cacioppo & Petty, 1982; Cacioppo et al., 1984; Sadowski, 1993; Coelho et al., 2020), see Appendix J, on a five-point scale of how characteristic of the self an item is. For example, "I would prefer complex to simple problems." The debrief document followed, see Appendix K.

Procedure

Variables in the study include pseudo-independent variables in the form of a subset of collected demographics (Race, Gender, Conservatism), individual differences (Need to Belong, Need for Closure, Need for Cognition, Preference for Informational Influence (ASPINVISI), and Preference for Normative Influence (Pietrzak, n.d.)), and the behavioral Normative over Informational Query (NIQ) selections. Dependent variables also include NIQ selections and ASPNVISI scores, the Decision to affirm or void the charge, and Confidence in the decision.

Instructions and Case File

When signing up for the study, participants were told they were participating in a test of a new online model of faculty-student council to answer appeals in code of academic integrity violations using an anonymized case. To reduce the impact of careless responding under the assumption that the case was fictional, they were told in the instructions that the study findings would be compared with an in-person format to

determine whether the effectiveness of a council is increased by avoiding open verbal discussion.

Participants accessed and consented to the survey online, estimated to take approximately 20-30 minutes to read, deliberate, and respond to all measures carefully.

Participants were presented with a short summary of case information about a student appealing a case where they were accused of violating the Code of Academic Integrity. No gendered terms, names, or identifiers were used.

Query Selection and Decision

After selecting evidence in the form of queries scripted toward a virtual 'agent' who served on the imitated council, participants independently made a decision on whether to affirm or void the charge of cheating, then reported their finding and how confident they were in that solution. After, they provided evaluations of the process to maintain and gauge deception.

Demographic and Individual Difference Measures

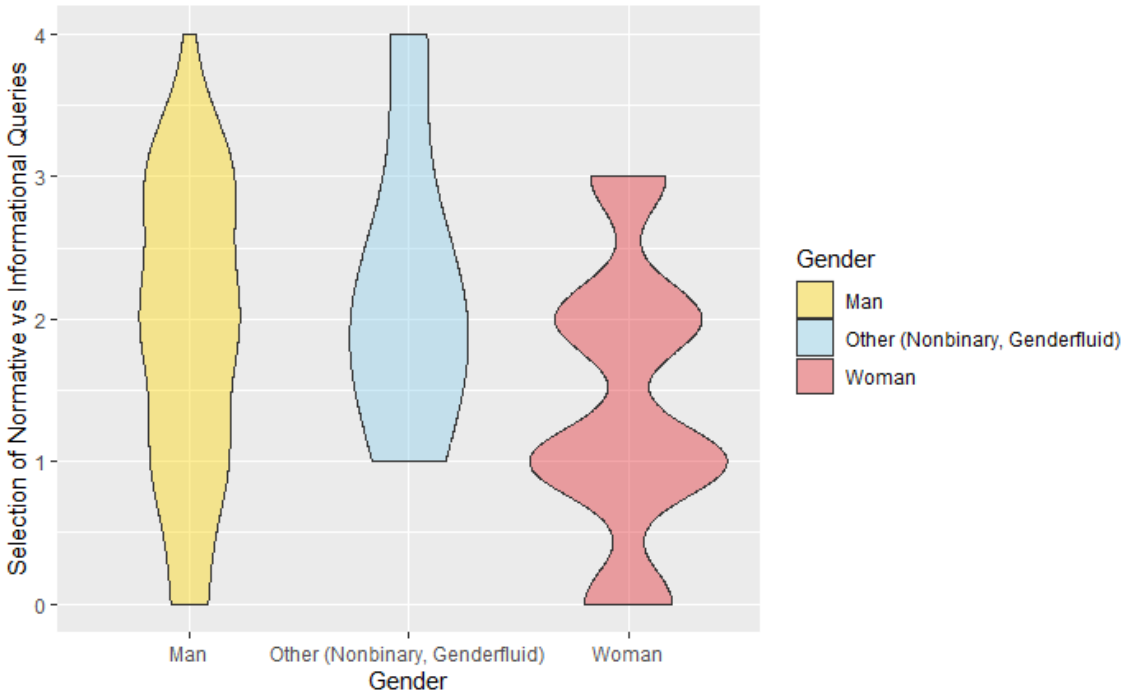
Participants then provided demographic information, including gender, age, ethnicity, student status, major, political orientation (conservatism), whether they had participated in a Conduct Board/Faculty-Student Council previously, and whether they themselves had ever been accused or convicted of violating the Code of Conduct/Code of Academic Integrity. They also responded to post-test measures of individual differences in Need to Belong, Need for Closure, Need for Cognition, and two scales of preference for social influence type. Debriefing followed, explaining the true purpose of the study and the deception, and they were thanked for their time and effort.

Participants' confidence (Likert) and decision (dummy coded, Affirm-Void) were compared by whether normative or informational data was sought. Individual differences were also examined for relationships to selected influence items and responses.

RESULTS

To test the first set of hypotheses, that Need to Belong and Need for Closure would relate to greater preference toward Normative data, and that Need for Cognition would relate to greater preference toward Informational data. a linear regression was run predicting Normative over Informational Queries (NIQ). Predictors included Need to Belong, Need for Closure, and Need for Cognition (the hypothesized predictors), and two exploratory demographics, Gender and Conservatism. The model accounted for a significant amount (~5.1%) of variance in selection of Normative over Informational Queries $F(6,167)= 2.539$, $p =.022$, $R^2_{adj}=.051$. Need to Belong was not significantly associated with Normative over Informational Queries, $\beta= -0.008$, $t(167)= -0.58$, $p =.561$. Need for Closure was not significantly associated with Normative over Informational Queries, $\beta= 0.014$, $t(167)= 1.29$, $p =.200$. Need for Cognition was not significantly associated with Normative over Informational Queries, $\beta= 0.011$, $t(167)= 0.564$, $p =.574$. Conservatism, an exploratory predictor, was not significantly associated with Normative over Informational Queries, $t(167)= -1.40$, $p =.163$. To explore NIQ as predicted by categorical Gender, a Type I ANOVA was run on the model, as a Type I Sum of Squares is sequential (Langsrud, 2003; Smith & Cribbie, 2014), and there were three main predictors entered in an order to be prioritized over the demographics. Gender was significantly associated with Normative over Informational Queries, $F(2,167)= 5.23$, $p =.006$, see Figure 1.

Figure 1 Selection of Normative over Informational Queries by Gender



To explore the needs hypotheses with self-reported influence preferences, a linear regression was run predicting Preference for Informational Social Influence (ASPNVISI scores), Predictors included Need to Belong, Need for Cognition, and Need for Closure. The model accounted for a significant amount (~21.7%) of variance in Preference for Informational Social Influence (ASPNVISI), $F(5,205)= 12.63$, $p <.001$, $R^2_{adj}=.217$. Need to Belong was significantly and negatively associated with Preference for Informational Social Influence, $\beta= -0.112$, $t(205)= -2.12$, $p =.035$, see Figure 2. Need for Cognition was significantly and positively associated with Preference for Informational Social Influence, $\beta= 0.269$, $t(205)= 3.50$, $p <.001$, see Figure 3. Need for Closure was not significantly associated with Preference for Informational Social Influence, $\beta= 0.045$, $t(205)= 1.090$, $p =.290$.

Figure 2 Preference for Informational Social Influence by Need to Belong

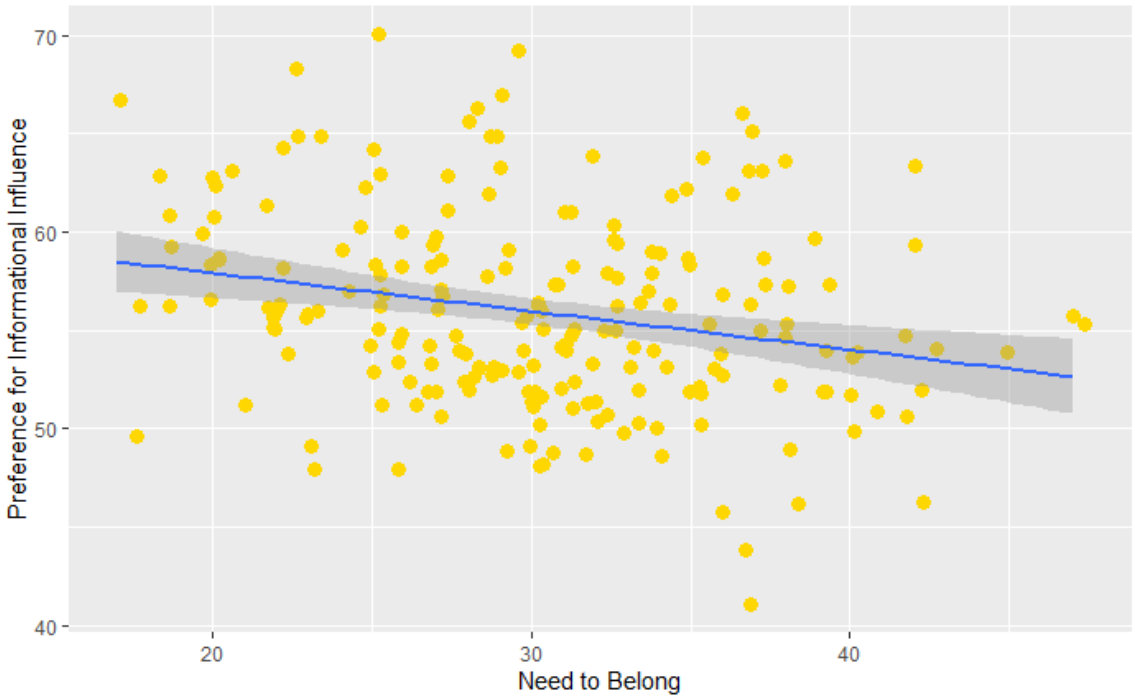
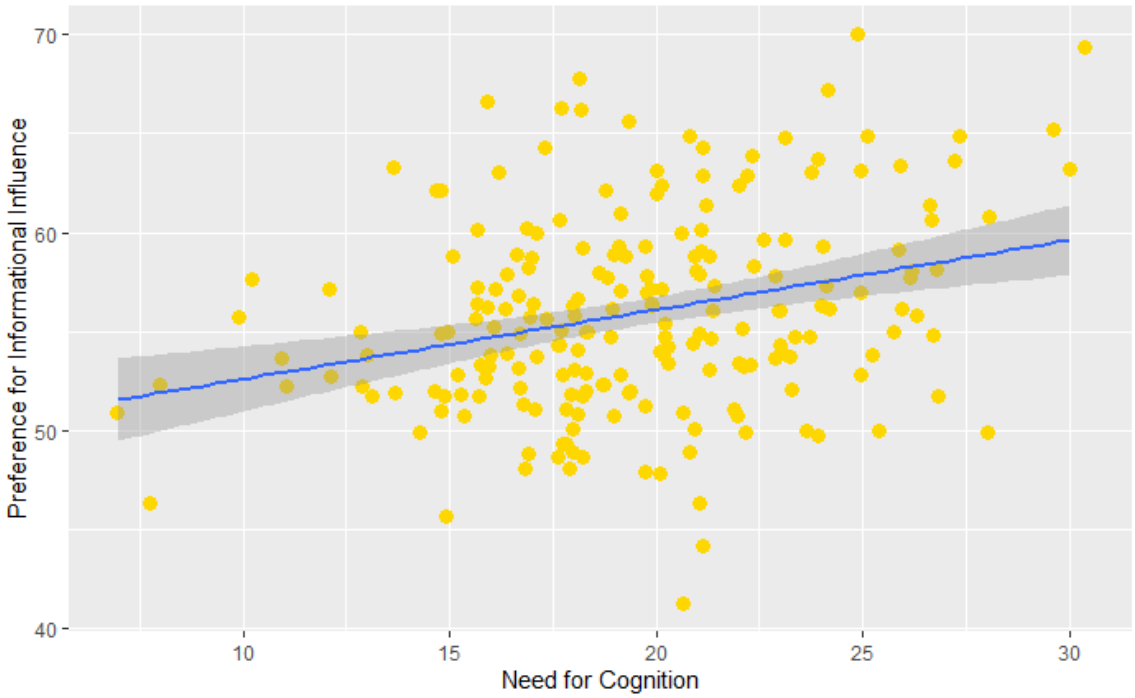


Figure 3 Preference for Informational Social Influence by Need for Cognition



To test the hypothesis that greater Normative over Informational Queries would relate to higher Confidence, and explore additional variables potentially related to expressed Confidence in decisions to affirm or void the charge, a linear regression was run predicting Confidence. Predictors included Normative over Informational Queries (NIQ), the Decision, Gender, Conservatism, and Race. The model accounted for a significant amount of variance (~6.1%) in Confidence, $F(10,161)= 2.113$, $p =.026$, $R^2_{adj}=.061$. NIQ was not significantly associated with Confidence, $\beta= 0.031$, $t(161)= 0.43$, $p =.429$. To examine the categorical predictors' relationships with Confidence, a Type II ANOVA was run, as a Type II Sum of Squares is incremental in its addition of effects (Langsrud, 2003; Smith & Cribbie, 2014) and there was not an a priori basis for sequentially considering the four exploratory variables and single predictor. Decision was not significantly associated with Confidence, $F(1,161)= 0.72$, $p =.398$. Gender was not

significantly associated with Confidence, $F(1,161)= 0.68$, $p =.510$. Conservatism was significantly associated with Confidence, $F(1,161)= 4.71$, $p =.031$, see Figure 4. Race was significantly associated with Confidence, $F(1,161)= 2.58$, $p =.028$, see Figure 5.

Figure 4 Confidence in Charge/Void Decision by Conservatism

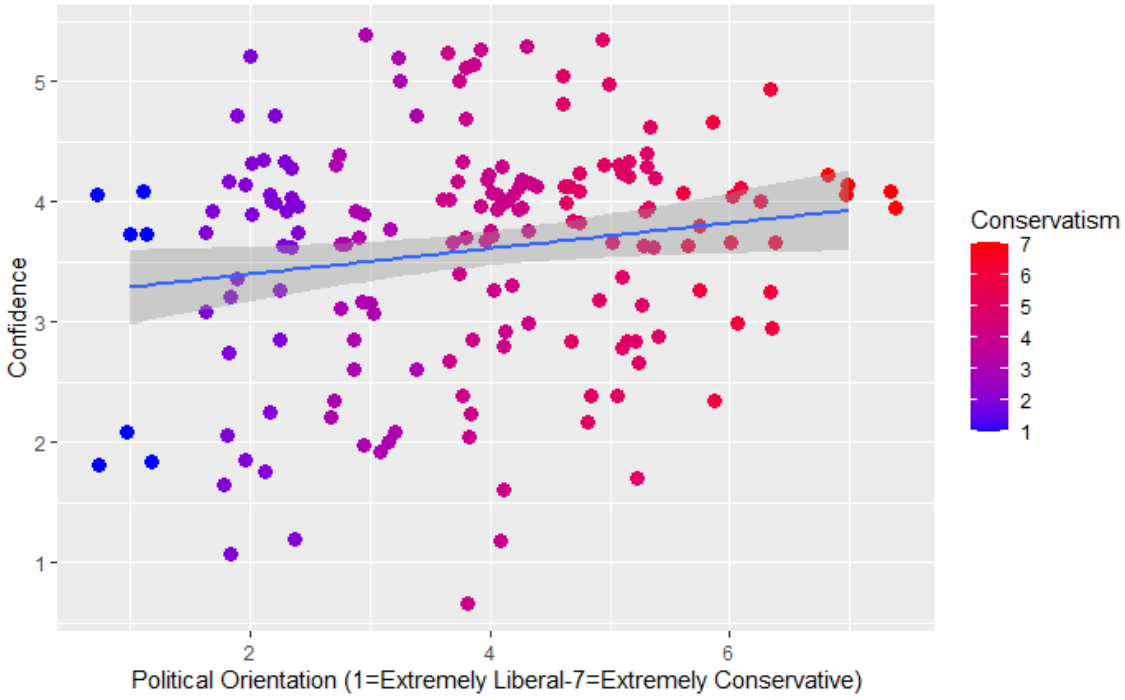
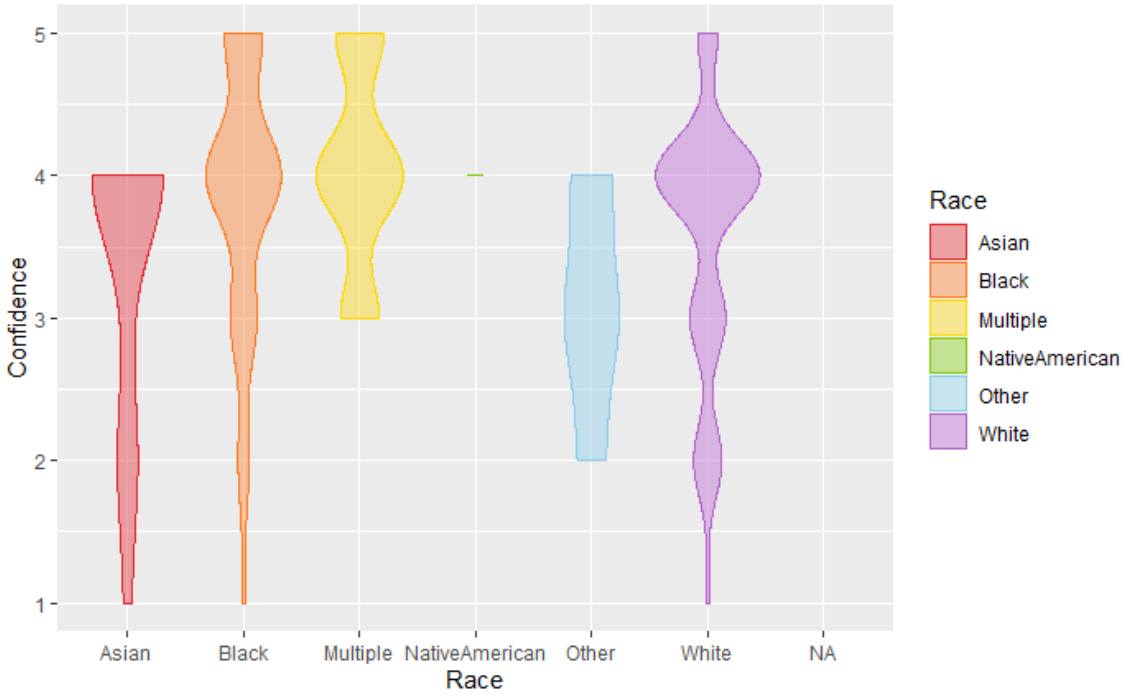


Figure 5 Confidence in Charge/Void Decision by Race



To explore variables potentially related to the Decision to affirm or void the charge, a binomial GLM was run predicting Decision. Predictors included the four Behavioral Normative or Informational (BehNI) selections from the NIQ, Conservatism, Gender, and Race. To examine the predictors' relationships with Decision, a Type II Analysis of Deviance was run. Selection on the first NIQ item was not significantly related to Decision, $\chi 2$= (1)= 0.143, p=.706. Selection on the second NIQ item was not significantly related to Decision, $\chi 2$= (1)= 1.428, p=.232. Selection on the third NIQ item was not significantly related to Decision, $\chi 2$= (1)= 3,395, p=.065, see Figure 6. Selection on the fourth NIQ item was not significantly related to Decision, $\chi 2$= (1)= 2.886, p=.089, see Figure 7. Conservatism was not significantly related to Decision, $\chi 2$= (1)= 2.246, p=.134. Gender was not significantly related to Decision, $\chi 2$= (1)= 0.776, p=.679. Race was not significantly related to Decision, $\chi 2$= (1)= 6.033, p=.303.

Figure 6 Decision to Affirm or Void the Charge by Query 3 Selection

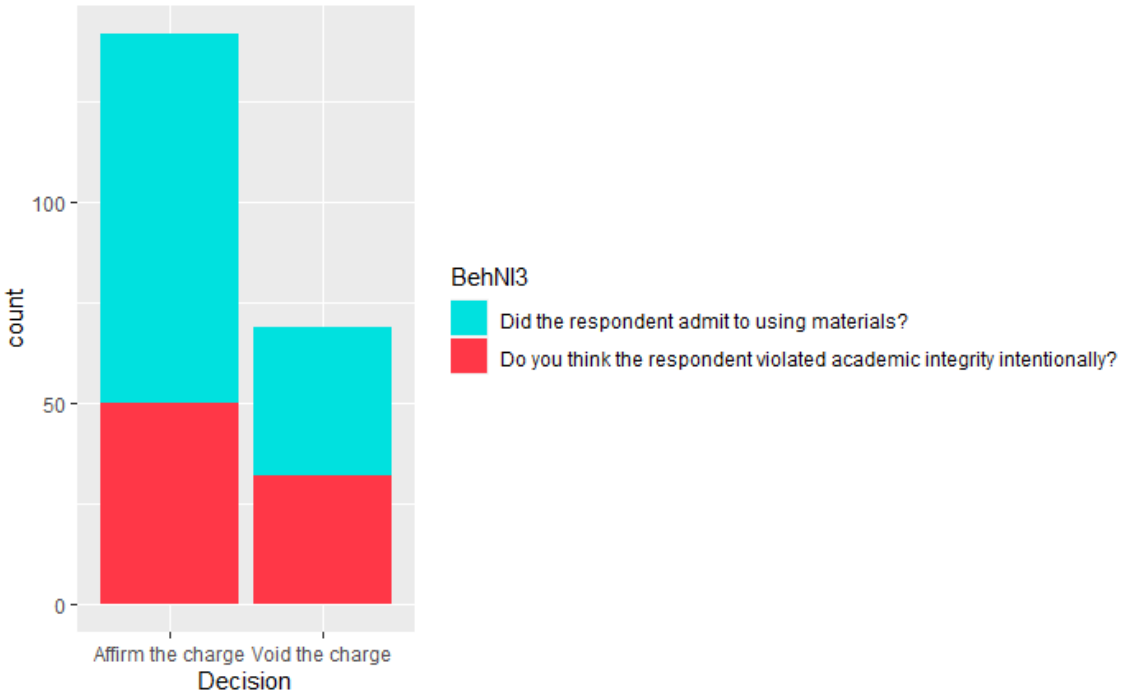
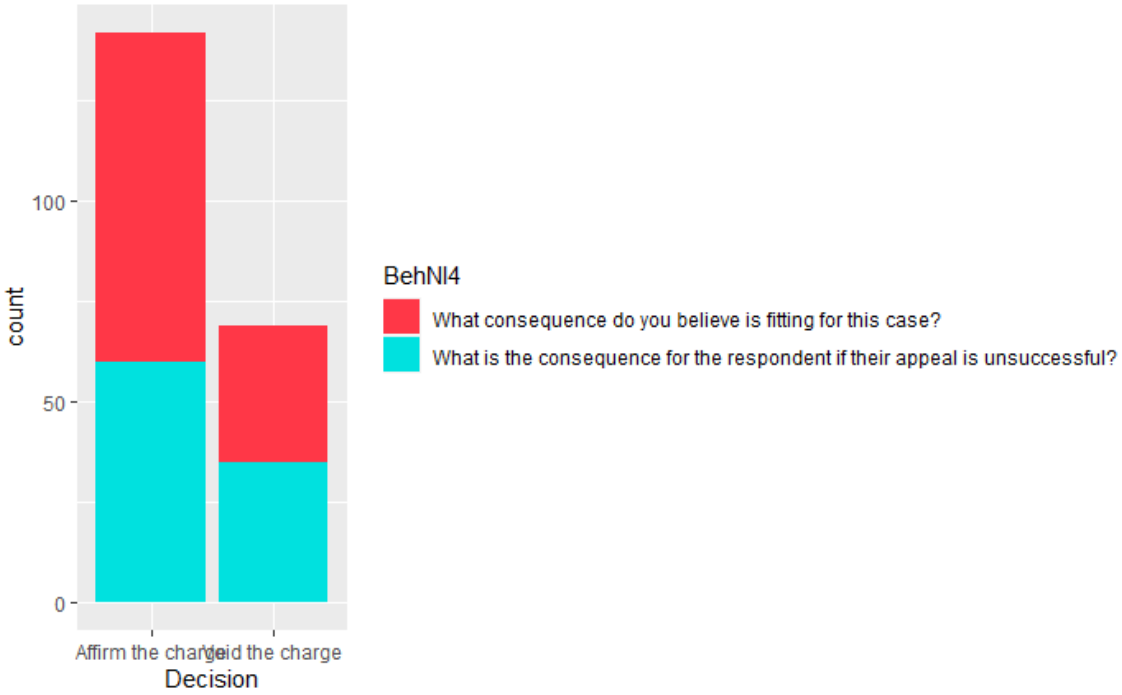


Figure 7 Decision to Affirm or Void the Charge by Query 4 Selection



The distribution of self-reported preferences for Informational Social Influence (depicted by the weighted score of ASPNVISI) is shown in Figure 8. To explore relationships between the measures of influence type preference, zero-order correlations were run. The Adaptive Scale of Preference for Normative Versus Informational Social Influence (ASPNVISI) was significantly and negatively correlated with the Pietrzak Scale of Normative Influence Preference, $r(209) = -.405$, $p < .001$, see Figure 9. The subscales of ASPNVISI were also significantly correlated with the Pietrzak Scale of Normative Influence Preference, both Normative, which was positively correlated with the Pietrzak scale, $r(209) = .324$, $p < .001$, and Informational, which was negatively correlated with the Pietrzak scale, $r(209) = -.196$, $p = .004$. ASPNVISI was not significantly correlated with Normative over Informational Queries, $r(209) = -.027$, $p = .700$. The Pietrzak Scale of Normative Influence Preference was not significantly correlated with Normative over Informational Queries, $r(209) = .055$, $p = .427$.

Figure 8 Histogram of Adaptive Scale of Normative Versus Informational Social Influence

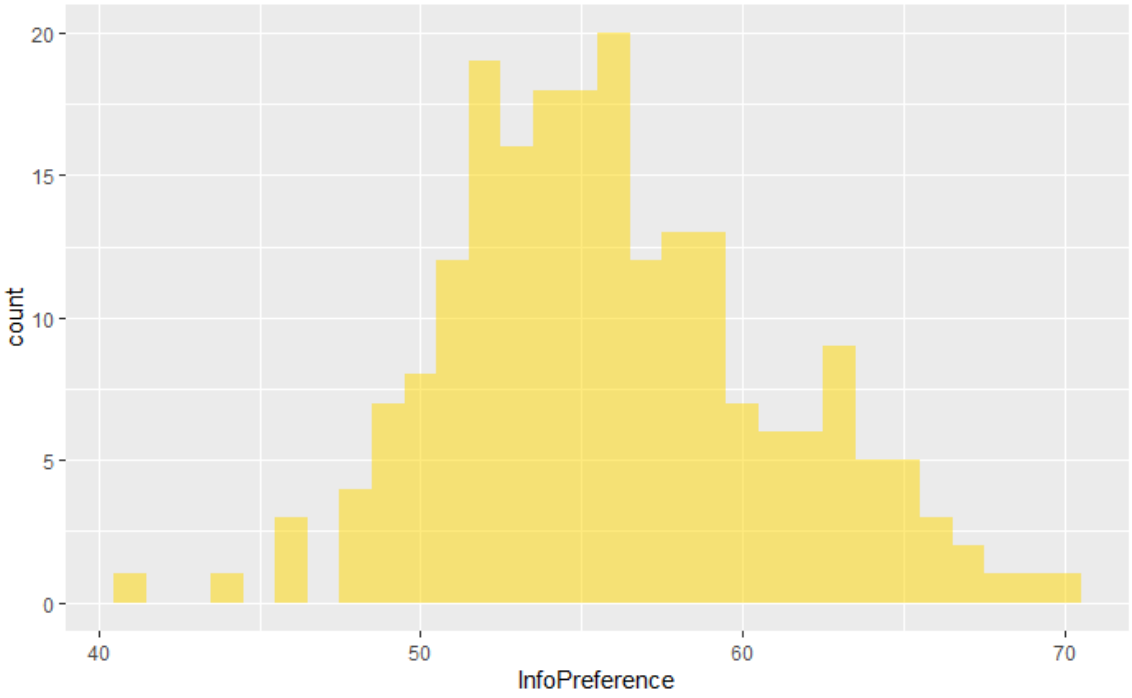
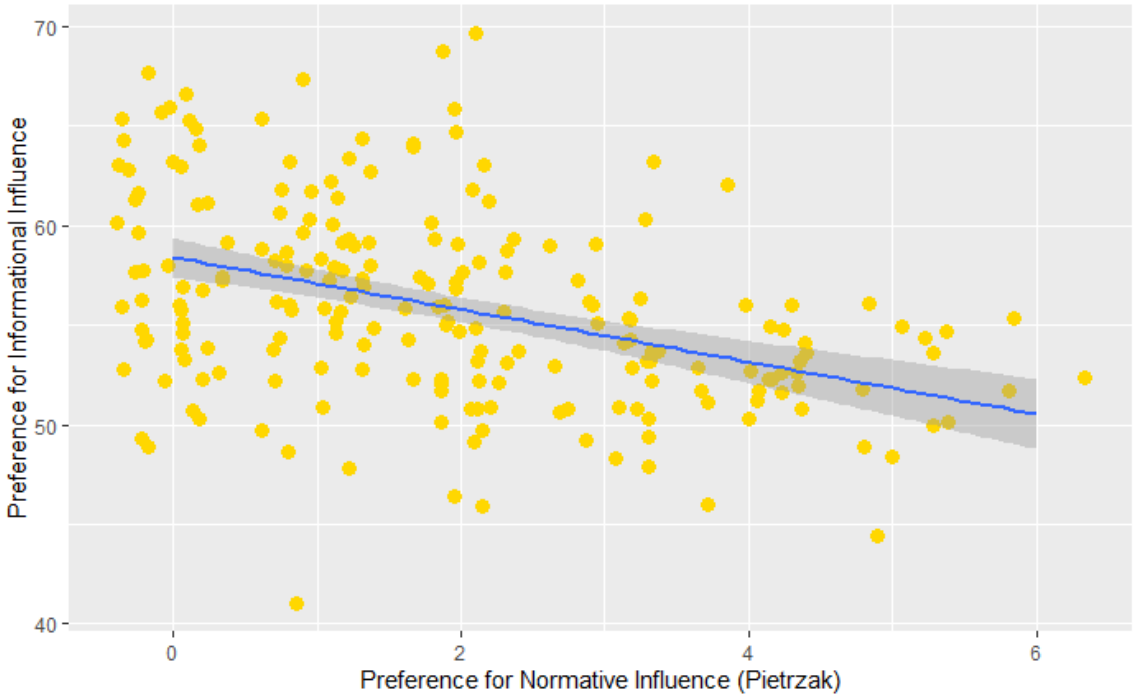


Figure 9 Adaptive Scale of Normative Versus Informational Social Influence by Pietrzak Scale of Normative Preference



DISCUSSION

The current study provides some support for the idea that psychological needs are related to preferences for types of social influence, specifically when preferences are self-reported, and highlights other individual differences relevant to the process of justice in students' consideration of academic integrity. The first set of hypotheses were not supported by the data; Need to Belong, Need for Closure, and Need for Cognition did not predict query selection in the data-gathering stage of the task. It is possible that the limited number of selection items did not allow for enough variance to compare groups at discriminant levels of behavioral influence preference. Only two participants selected four normative queries, for example. There may also be temporal oscillation, with participants shifting their selections between types over time as they gather more information, in a longer measure. Additionally, the isolation of participants in an online survey during a typically jury-based process may reduce tendencies toward normative influence due to perceptions of the council agent as distal or non-human, which may have guided data selection independent of preferences that would be expressed in live or synchronous online interpersonal contexts.

Selection of Normative over Informational Queries was, however, predicted by Gender, with women selecting fewer normative queries than men or nonbinary people on average, and no women choosing entirely normative queries. It is particularly interesting that zero women selected all four normative queries given that women made up over 75%

of the sample. This may suggest that when oriented in justice situations, university women are more skeptical of normative influences, or more motivated by the desire for truth, than their peers. While gender was not made salient before the behavioral measures, it is possible that there was a stereotype-threat-like motivation for women in higher-education to select informational items potentially perceived as the 'correct' options to suppress or avoid normative influence and perform 'well' on the task knowing that their responses would be analyzed (at least for the supposed comparison of online and live council formats). The greater variance in selection for men and nonbinary people may also suggest a larger effect of individual differences on behavior in those groups. In a larger sample with greater power to detect any effects of the other predictors on NIQ selection, gender could also be considered as a moderator. Additionally, the gender difference in selection is an interesting consideration in terms of the perceived (unspecified) gender and warmth/competence of the provider of information. Because there was no indication of peer vs authority status or background for the Faculty-Student Council member providing information, there was no clear statement on knowledge/competence, and the online dispensation of information collected outside of real-time and worded to exclude emotional valence or personal information is likely to yield no indication of likeability/warmth. Thus, it may be the case that a tendency to assume masculinity as a default led non-women to be more open to normative information from the stranger, assuming the communicator was credible in spite of low evidence (Neal et al., 2012) because they perceived them automatically as a man. These possibilities could be explored with post-test measures of perceptions if identity cues continue to be excluded from future iterations.

Although not found in regard to the behavioral measure, Need to Belong was found to negatively predict, and Need for Cognition to positively predict, scores on the Adaptive Scale of Preference for Normative Versus Informational Social Influence. This suggests that, in the hypothesized directions, preferences for type of influence are driven in part by needs to be part of a group or to be cognitively challenged and contemplative. While there was bias in responding, such that most participants responded more positively to informational than normative items, the patterns were still related to selections on the scales of needs. Greater Need for Cognition was associated with greater agreement with informational over normative statements, and greater Need to Belong was associated with less agreement with informational over normative statements. This highlights the motivational aspects of psychological needs: people high in need to belong seek more influence from close others, groups, and majority-norms, working to align themselves with others' perceptions and ideas; people high in need for cognition seek more influence from expert, perceived nonpartisan, and fact-based sources, distributing lower-level processes of decision-making and crafting the higher-level conclusions for themselves. As an expansion, it would be useful to examine preferences for and use of social influence, and the relevant psychological needs, in correlation with Action Identification in the topical areas in which influence is occurring.

In the exploratory analyses, none of the examined predictors were significantly related to the Decision to affirm or void the charge at $p<.05$. However, two of the Behavioral Normative or Informational (BehNI) selections from the NIQ, the third and fourth item, would have been significant at $p<.1$, showing a peculiar trend. These items had nearly opposite patterns of selection, with a majority of participants (and specifically

a majority who affirmed the charge) selecting the informational query on the item pertaining to Intent and the normative query on the item pertaining to the Consequence. It is possible that with a larger sample, a stronger relationship would be visible here. At present, it suggests a trend with several possible explanations; it may be that students who were inclined after the first two queries to affirm the charge were slightly more likely to ask about the student's expression of intent and the council member's opinion on the consequence due to order effects of the acquired information. Some students may have perceived the recording discussed in Item 1 and the voided prior charge mentioned in Item 2 as sufficient evidence and precedent supporting affirmation of the current charge, independent of their selected frame for the items, and then sought to confirm this by seeking an admission of guilt and the pseudo-authority's thoughts on the outcome of their likely decision to affirm. Additionally, the content of these options may be perceived as more suggestive of guilt than the alternatives based either on their framing, or the participants' motives in selecting those frames. As informational influence is sought for truth-seeking and normative for morality judgement (Kaplan & Miller, 1987), the skew may suggest that most students were not concerned with whether the respondent had done something wrong, but whether they had violated a rule. Controlling for exposure to the content of previous items or presenting them in a randomized order, and testing another condition where influence is assigned rather than selected, may assist in clarifying whether the bias is item-driven or participant-driven. This motivation toward informational influence selection, and the bias toward affirming the charge, may in part be specific to the cheating scenario used in this study. The purported charge for using a phone during an online exam may be interpreted as less nuanced or more severe by

current university students than newer or more normalized issues like using AI (otherwise a useful tool) without citation/too heavily on an assignment or discussing a lower-stakes assignment like a quiz or worksheet with classmates. Additional scenarios should be tested to determine whether the type of cheating and its perceived severity and normativity predict selections and decisions.

The hypothesis that greater Normative over Informational Queries would relate to higher Confidence in the decision to affirm or void the charge was not confirmed by the data. However, two demographic variables were related to Confidence: Race predicted confidence, such that black, white, and mixed-race participants were more confident in their responses; this may suggest limited range of responses in the racial groups that had less than 17 participants, or that groups who made up a larger portion of the sample, representing the majority groups at the University, were more comfortable expressing confidence in their decision in a supposed university process. Conservatism predicted confidence as well, such that greater conservatism was related to greater confidence. This may align with the tendency for conservatives to adhere more than liberals to the moral foundation of authority (Graham et al., 2009), potentially increasing subscription to the influence of the 'council member' as an authority and reducing questioning of the information's conclusion, or lower openness to new information and higher need for closure and certainty (Jost et al., 2007), making conservatives more intuitive than deliberative, and more likely to seize and freeze (Kruglanski & Webster, 1996), sticking firmly to a preferred conclusion from early on in the task.

In exploring the novel scale, ASPNVISI, it was negatively correlated with the translated Polish scale. This follows from their coding, as the order of the Pietrzak scale

items when dummy coding in order of presentation creates a scale of normative preference, while the combination of the subscales in the ASPNVISI creates a scale of informational preference. The correlation was moderate, and is reduced, though still present in the expected directions, when examining the subscales. These findings suggest that the scale development is moving in an appropriate direction to measure social influence preferences, and the separation of the subscales on a larger sample may illuminate differences between ambivalent and apathetic responding to the two types in a way that is difficult to capture in forced choice.

Limitations and Future Directions

The design and data collection were limited by the boundaries of the task's online and university contexts, and the need to minimize information that could bias decisions within or across choice conditions. As the study was built to be completed through a single online session linked to university research credit, priming and order effects may have shifted interpretations of the general measures of social influence preference and psychological needs to topical. The ordering of the survey prevented self-reports from affecting behavior, but it is possible that isolating the collection of demographics and self-report measures would heed a clearer picture of their relationships.

Additionally, as the deception for the task was a university process, the sample was limited to students within Florida Atlantic University; like a real jury, the use of a personally relevant violation (with student identity potentially made salient by the intra-university framing) without screening participants to examine the strength of their convictions about academic integrity may have skewed the charge decision toward affirmation independent of the information presented or the selected frames. The charge

was also a specific and potentially more severe violation to students due to the stakes associated with exams as opposed to other assignments. A broader set of judgement tasks could be formulated, and careless responding prevented by other means than self-relevance, to reduce the potential influence of pre-existing convictions. Additionally, the deception for the task was a trial of a new format to an existing university process, rather than the direct judgement to be passed down, so it is possible that the task was not perceived by all participants as having high enough stakes to warrant a careful process of consideration as to the most appropriate decision. Replicating the task with an implication that the consequence of the decision will directly affect a real person should eliminate such justifications insofar as the premise is believed. Other, less formal justice processes may serve in this capacity, such as inviting participants to the lab for an irrelevant task after measuring individual differences and asking them as an impartial observer to judge whether a previous participant was dishonest on the task. This style could also be used to test assigned influence types by making certain information about the task performance available, and features of trust of the provider of information by using confederates of different identities and reported backgrounds.

The framing of the questions toward a council member may also be less effective in an online format, as participants could have been dissatisfied with the forced choice options or suspicious of the information source. Interestingly, a majority of students (133) considered the task to be a moderately or very effective method of addressing academic integrity violation appeals. This suggests a lack of suspicion about the true nature of the study, and that the amount of information was deemed in most cases sufficient to make a determination about the respondent's culpability.

Finally, the four questions and answers provided to participants, though intended to communicate neutrality about the appropriate decision, may have been an inadequate amount or balance of influence and data. It is possible that the wording of the normative queries and responses need to be linked more to a palpable group or social entity for the response of a singular stranger to be treated as normative, or that the categories of informational vs normative were instead perceived as truth vs opinion and selected accordingly. The patterns of query selection suggest a tendency toward informational data everywhere except the consequence item, and a majority of participants elected to affirm the charge of academic dishonesty. This may suggest that the absence of alternative explanations is treated as confirmatory of guilt in the context of an academic integrity violation, or that the consequence item reduced dissonance about whether to affirm or void the charge by reducing concern about the consequence of their choice. Though the intention is to examine the agentic search for influence in justice decision-making, alterations could be made to the scenario to integrate manipulated influence and get a better look at responses to normative influence in isolation, and justice could be more broadly construed than concrete violations of formal contract to open the responses to greater variation. A more difficult task may also be useful to balance responses and allow for the inclusion of more behavioral items without skewing the conclusions toward a particular option.

To expand on the solutions above and the experiment in general, types of social influence could be manipulated following measurement of preferences on the general or topical ASPNVISI to match or mismatch with expressed preference rather than providing forced choice. This would also allow for the examination of preferred and non-preferred

information and sources and dissociate motive from exposure to determine whether preference drives interpretation without the priming of choice. For the Adaptive Scale of Normative Versus Informational Social Influence, additional piloting can be performed independent of behavioral measures, examining how contextual specificity in the wording of the scale affects the expression of preferences for each type of influence in different domains, and whether priming with contexts or behaviors influences responding. Further iterations of this design can also use adapted versions of the ASPNVISI to compare global and situational preferences' relationships with influence selection and decisions.

CONCLUSION

The current study provided some evidence of concurrent validity of the Adaptive Scale of Normative Versus Informational Social Influence through its moderate correlation with the Polish forced choice scale and linked the self-reported preference for informational social influence positively with Need for Cognition and negatively with Need to Belong. Data selection showed trending relationships with decision-making, and demographics were related to several steps in the case process. This study lays the groundwork for a more complex design introducing additional variables such as violation severity, influencer identity, and expanded selection or assignment of influence items. Suggested future directions include isolated pilot testing of the ASPNVISI under topical and global frames and examination of IRT to further specify the measure and additional forms, exploration of demographics of the information provider and their interaction with participant identities, and development of expanded justice tasks and influence selection/assignment to examine more closely the reception of normative versus informational social influence in varied decision-making contexts.

APPENDICES

Appendix A: Instructions

Appendix B: Case File

Appendix C: Normative and Informational Queries (NIQ)

Appendix D: Case Judgement Items

Appendix E: Demographic Survey

Appendix F: Adaptive Scale of Preference for Normative Versus Informational Social Influence

Appendix G: Pietrzak Scale of Preference for Social Influence

Appendix H: Need to Belong Scale

Appendix I: Adjusted Short Need for Closure Scale

Appendix J: Six-Item Need for Cognition Scale

Appendix K: Debrief Text

Appendix A

Instructions

You are about to read an account of the situation surrounding a current appeal, and then will be able to access additional evidence from a member of the Faculty-Student-Council involved in the appeal. Please read over the information carefully before proceeding to make your decision on whether the charge should be affirmed or voided. In order to reduce possible skew from awareness of identities or differences in willingness to discuss their reasoning, participants will not be in contact directly with or receive personal information about involved parties. To protect this lack of external influence, we ask that you do not discuss this study or your conclusions with other students until it is completed.

Appendix B

Case File

Cheating as defined in the Code of Academic Integrity:

1. The unauthorized use of notes, books, electronic devices, or other study aids while taking an examination or working on an assignment.

2. Providing unauthorized assistance to or receiving assistance from another student during an examination or while working on an assignment.

3. Having someone take an exam or complete an assignment in one's place.

4. Securing an exam, receiving an unauthorized copy of an exam, or sharing a copy of an exam.

The respondent is charged with cheating in the form of the use of study aids during an exam observed with Respondus Monitor.

Appendix C

Normative and Informational Queries – Dummy coded so that a higher number indicates more normative selections.

You have the opportunity to ask four (4) questions of someone who is serving on the student-faculty council. Select one question of each following pair to receive information about the case.

BehNI1: Respondus Monitor

Informational Query Option: Did the evidence show clear use of outside materials?

Answer: "There was a reflection of a cell phone screen in the respondent's glasses twice. What the phone was used for is not determinable from the video."

Normative Query Option: In your opinion, is the Respondus recording irrefutable?

Answer: "To me, the presence of a cell phone reflected in the respondent's glasses is clear- the reason it was open isn't."

BehNI2: Prior Cases

Normative Query Option: Is your decision on culpability affected by the presence or absence of prior offenses in precedent?

Answer: "Prior offenses affect the penalty of an affirmed charge. Cases with a previous voided allegation like the current respondent are treated as first offenses in the appeal process and tend to be affirmed or voided at similar rates to first accusations."

Informational Query Option: Has the respondent been suspected of cheating previously?

Answer: “They have had one previous allegation which was not affirmed, so officially this is their first offense.”

BehNI3: Intent

Normative Query Option: Do you think the respondent violated academic integrity intentionally?

Answer: “I believe the respondent was not intending to cheat on the exam, but the use of the cell phone is a violation.”

Informational Query Option: Did the respondent admit to using materials?

Answer: “The respondent maintains that they were not using the phone to access exam answers, but does not deny that they had the phone out during the exam.”

BehNI4: Consequence

Informational Query Option: What is the consequence for the respondent if their appeal is unsuccessful?

Answer: “Upon the affirmation of the charge, a notation of "Violation of Code of Academic Integrity" will be placed on the respondent's academic transcript and internal record which can be expunged from the transcript by an elective Academic Integrity Seminar in the next semester; the professor of the course in which the violation occurred will determine the grade penalty.”

Normative Query Option: What consequence do you believe is fitting for this case if affirmed?

Answer: “The professor of the course in which the violation occurred determines the grade penalty; I think the appropriate University penalty if this charge is affirmed is a notation of “Violation of Code of Academic Integrity” added to the respondent’s academic transcript and internal record, which can be expunged from the transcript by an elective Academic Integrity Seminar in the next semester.”

Appendix D

Case Judgement Items

Conclusion Question:

What is the appropriate conclusion to this appeal?

- Affirm the Charge
- Void the Charge

(Deception) Perceptions of Efficacy:

How confident are you in your decision?

- Likert scale 1-5 (1= Not at all confident, 5= Extremely confident)

How easy was it to comprehend the case in this format?

- Likert scale 1-5 (1= Extremely difficult, 5= Extremely easy)

How easy was it to input your decision in this format?

- Likert scale 1-5 (1= Extremely difficult, 5= Extremely easy)

How effective do you believe this format will be in future cases, based on your current experience?

- Likert scale 1-5 (1= Not effective at all, 5= Extremely effective)

Appendix E

Demographic Survey

What is your gender identity? (select all that apply).

- [agender, bigender, demigender, genderfluid, man, nonbinary, woman, other]

What are your pronouns? (select all that apply)

- [he/him, she/her, they/them, xe/xem, zi/zir, other]

What is your age?

- Scale ranging from 19-99

What is your race? (select all that apply)

- [Asian, Black or African American, Native American or Alaska Native, Native Hawaiian or Pacific Islander, White, Other]

What is your ethnicity? (select one)

- [Hispanic or Latine, Other]

What is your student status? (select one)

- [Undergraduate, Graduate, Non-Degree-Seeking, Other]

What is your major?

- [free response]

What is your political orientation?

- Likert scale 1-7 (1= Extremely Liberal, 7= Extremely Conservative)

Have you ever participated in the FAU Conduct Board or Faculty-Student Council proceedings?

- [No/Yes]

Have you ever been accused of or charged with violating the student code of conduct or academic integrity?

- [No/Yes]”

Appendix F

Adaptive Scale of Preference for Normative versus Informational Social Influence- 16 items. Scored by adding the informational subscale to the reverse-code of the normative subscale items for a range of 16-80, from total normative to total informational endorsement. Scale can be examined as the preference for one type over the other by summing with one type reverse-coded, or examining the subscales separately as endorsement of normative and informational influences.

On a scale from 1 (completely disagree) to 5 (completely agree), indicate your level of agreement with the following statements.

- Truth is objective and determined by facts and evidence. [informational]

- It is better to concur with peers than to rock the boat with additional ideas. [normative]

- The source of an idea is more important than its content. [normative]

- I value the opinions of experts on all sides of the issue. [informational]

- It is more important to consider the credibility of information than whether it is agreed-upon. [informational]

- The opinion of a friend or peer is the most important resource in making a decision. [normative]

- Hearing what someone else thinks is more helpful than being told objective facts. [normative]

- Truth is subjective and determined by belief. [normative]

- Context outweighs precedent. [informational]

- In a group, the majority opinion should be deferred to over any individual dissenter. [normative]

- In a new situation, it is best to take cues from what everyone else is doing. [normative]

- Researching is the best way to handle unfamiliar circumstances. [informational]

- In a group, the sum of knowledge about the topic should be considered regardless of the distribution of conclusions. [informational]

- An expert interview is a more useful resource than a poll. [informational]

- My social media feed tells me all I need to know about current events. [normative]

- Being right is more important than being liked. [informational]

Appendix G

Subset of translated Polish scale of Social Influence preference (Pietrzak, n.d.). 6 items. Dummy coded such that higher numbers indicate preference for normative over informational influence.

Which statement better describes your approach?

• In talking to people, I am more interested in trying to find out the truth than in what they think about it.

• When talking to people, I am more interested in what they think about a topic than in trying to find out what is real.

Which statement better describes your approach?

• It doesn't matter what people think / think about a given topic, only the objective truth counts.

• There is no objective truth, what really matters is what people think about it.

Which statement better describes your approach?

• If I learn that objective facts contradict my beliefs, I am willing to change my beliefs.

• If I find out that objective facts contradict my beliefs, even then I stick to my beliefs.

Which statement better describes your approach?

• I am looking for new information from various sources.

• I usually look for new information in my favorite sources.

Which statement better describes your approach?

• Figures, statistics and facts appeal to me more than what someone thinks about a given topic.

• Someone's views and what someone thinks about a given topic appeal to me more than statistics and numbers.

Which statement better describes your approach?

• It gives me satisfaction when it turns out that the information I have turns out to be true, even if it differs from that of people close to me

• I feel good when I have a similar opinion to people close to me.

Appendix H

Need to Belong Scale (Leary, 2013); Single Item Need to Belong Scale (Nichols & Webster, 2013). 10 Items. Scored such that a higher number is greater need to belong.

"Indicate the degree to which each statement is true or characteristic of you from 1 (not at all) to 5 (extremely)

- If other people don't seem to accept me, I don't let it bother me. [reverse-coded]
- I try hard not to do things that will make other people avoid or reject me.
- I seldom worry about whether other people care about me. [reverse-coded]
- I need to feel that there are people I can turn to in times of need.
- I want other people to accept me.
- I do not like being alone.
- Being apart from my friends for long periods of time does not bother me. [reverse-coded]
- I have a strong "need to belong." * Single-item version
- It bothers me a great deal when I am not included in other people's plans.
- My feelings are easily hurt when I feel that others do not accept me.

Appendix I

Adjusted Short Need for Closure Scale (Webster & Kruglanski, 1994; Roets & Van Hiel, 2011). 15 items. 5-point rating scale (1 = strongly disagree to 5 = strongly agree), scored such that a higher number is a greater need for closure.

Rate the following statements on how much you agree with them (1- strongly disagree to 6= strongly agree)

- I don't like situations that are uncertain.
- I dislike questions which could be answered in many different ways.
- I find that a well ordered life with regular hours suits my temperament.
- I feel uncomfortable when I don't understand the reason why an event occurred in my life.
- I feel irritated when one person disagrees with what everyone else in a group believes.
- I don't like to go into a situation without knowing what I can expect from it.
- When I have made a decision, I feel relieved.
- When I am confronted with a problem, I'm dying to reach a solution very quickly.
- I would quickly become impatient and irritated if I would not find a solution to a problem immediately.
- I don't like to be with people who are capable of unexpected actions.
- I dislike it when a person's statement could mean many different things.
- I find that establishing a consistent routine enables me to enjoy life more.
- I enjoy having a clear and structured mode of life.
- I do not usually consult many different opinions before forming my own view.
- I dislike unpredictable situations.

Appendix J

The Six-Item Need for Cognition Scale (Cacioppo & Petty, 1982; Cacioppo et al., 1984; Sadowski, 1993; Coelho et al., 2020). 6 items scored such that a higher number is greater need for cognition.

For each sentence below, please select how uncharacteristic or characteristic (5-point scale) this is for you personally, from 1 (extremely uncharacteristic of me)- 5 (extremely characteristic of me).

- I would prefer complex to simple problems.

- I like to have the responsibility of handling a situation that requires a lot of thinking.

- Thinking is not my idea of fun. [reverse-coded]

- I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. [reverse-coded]

- I really enjoy a task that involves coming up with new solutions to problems.

- I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.

Appendix K

Debrief

Thank you for participating in our study.

To debrief you on the purpose of the research and your participation, the scenario you just assessed was not a real, recently appealed academic integrity case- it was a hypothetical case created for the purpose of the study. Our goal is to examine preferences for types of social influences and the contributions of other individual differences in selecting information and reaching a conclusion in the evaluation of the actions of a peer.

As such, it was necessary to include a deception in the original description of the study's purpose. The focus on types of social influence was not mentioned to avoid priming selective responding based on the perceived type of influence being presented. Additionally, the fictionality of the academic integrity appeal was concealed in order to preserve investment in the outcome of decision-making and prevent careless responding in the experiment portion of the study.

Appendix L

IRB Approval Letter

Institutional Review Board
Division of Research
777 Glades Rd.
Boca Raton, FL 33431
Tel: 561.297.1383
fau.edu/research/researchint

Patricia Maslin-Ostrowski, Ed.D., Chair

DATE:	May 3, 2023
TO:	Andrzej Nowak
FROM:	Florida Atlantic University Social, Behavioral and Educational Research IRB
IRBNET ID #:	2019568-1
PROTOCOL TITLE:	Preference for normative and informational social influence in evaluation of academic integrity violation appeals
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	May 3, 2023
NEXT REPORT DATE:	May 3, 2024
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review category #7

Thank you for your submission of New Project materials for this research study. The Florida Atlantic University Social, Behavioral and Educational Research IRB has APPROVED your New Project. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission. NO CONTINUING REVIEW IS REQUIRED FOR THIS PROTOCOL. Please complete and upload "Form 02A - Progress Report for Minimal Risk Research" as a new package by the Progress Report Due Date.

- This study is approved for a maximum of 1,000 subjects.
- Please submit a progress report before the indicated date.
- It is important that you use the approved, stamped consent documents or procedures listed below:
  - Advertisement - D3 Recruitment Materials_ Olson Thesis2.pdf (stamped)
  - Consent Waiver - B_Exempt and Minimal Risk Research Waiver of Documentation Consent Olson Thesis.pdf (stamped)
  - Data Collection - Data Collection Survey Olson Thesis2.pdf (stamped)
- This project has been approved for alteration of Informed Consent under the provisions of 45CFR46.116(f)(3) and Waiver of Documentation of Informed Consent under the provisions of 45CFR46.117(c)(1)
- ****Please note that any revision to previously approved materials or procedures, including modifications to numbers of subjects, must be approved by the IRB before it is initiated.** Please use the amendment form to request IRB approval of a proposed revision.

- All SERIOUS and UNEXPECTED adverse events or unanticipated problems must be reported to this office. Please use the appropriate serious adverse event (SAE)/ Unanticipated Problems (UP) report form for this procedure. All regulatory and sponsor reporting requirements should also be followed, if applicable.
- Please report all NON-COMPLIANCE issues or COMPLAINTS regarding this study to this office.
- Please note that all research records for federally funded or non-funded investigator initiated studies must be retained for a minimum of three years after completion of the research. For multisite, international studies conducted under ICH Guidelines, records must be retained until notification by the sponsor that all marketing applications have been completed. Research records involving protected health information (PHI) must be retained for a minimum of six years.
- Please submit an IRB final report when the study is completed or discontinued.

If you have any questions or comments about this correspondence, please contact Donna Simonovitch at:

Institutional Review Board
Research Integrity/Division of Research
Florida Atlantic University
Boca Raton, FL 33431
Phone: 561-297-0777
researchintegrity@fau.edu

* Please include your protocol number and title in all correspondence with this office.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within our records.

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