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## Language Choice on Psychological Reactance in Instructor/ Student Email Exchanges

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Language Choice on Psychological Reactance in Instructor/Student Email Exchanges

Christiana A. Robey

Thesis submitted  
to the Eberly College of Arts and Sciences  
at West Virginia University

in partial fulfillment of the requirements for the degree of

Master of Arts in  
Communication Studies

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## ABSTRACT

### Language Choice on Psychological Reactance in Instructor/Student Email Exchanges

Christiana A. Robey

This thesis investigated undergraduate students' perceptions and interpretations of language cues used within instructor email requests. Guided by Psychological Reactance Theory (PRT; Brehm, 1966; Brehm & Brehm, 1981), this thesis examined whether instructor email requests, containing different levels of powerful language and verbal immediacy cues, would impact students' willingness to follow through with instructor requests. Two hundred thirty-four undergraduate students participated in the four-condition experiment which consisted of the email manipulation conditions containing varying levels of an instructors' powerful language (e.g. "must;" Miller et al., 2007) and verbal immediacy (e.g., "our class;" Witt & Wheelless, 2001) cues. After reading an email, students completed a post-test measuring their thoughts (Quick & Stephenson, 2007), source credibility (McCroskey & Teven, 1999), state reactance (Dillard & Shen, 2005), intention to follow through (Ajzen, 1991; Moore & Richards, 2019), basic needs satisfaction (autonomy; Gagné, 2003), and email expectancy (Gorham, 1988; Miller et al., 2007; Witt & Wheelless, 2001). Results revealed significant correlations between instructor credibility and intention to follow through with requests, as well as significant relationships between these variables and the two dimensions of PRT. Finally, an indirect effect of verbal immediacy on both dimensions of psychological reactance was revealed. These findings provide practical and theoretical implications on the subject of language choice in persuasive messages both in and outside of the instructional communication context. Future research should continue to examine language choice decisions in mediated communication within hierarchical relationships and explore the role PRT plays in relationships both initially and as time elapses.

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## CHAPTER ONE

### **Introduction**

Outside the classroom, instructors communicate with their students in a variety of ways from scheduled or unscheduled office hours visits, student-led discussions occurring before or after class, and impromptu meetings around the campus. However, the most popular choice among students for communicating with their instructors outside of class is via email (Bippus et al., 2003; Hinkle, 2002; Martin & Myers, 2006; Waldeck et al., 2001). Indeed, the use of email as a means of extra class communication is perceived positively by students who value the medium's unique affordances when communicating with instructors outside of class (Hinkle, 2002; Waldeck et al., 2001). Extra class communication via email provides access to easily exchanged instructor-student communication messages which present the opportunity for both positive and negative consequences on the instructor-student relationship. For this reason, it is necessary to examine the elements used in this form of communication and to recognize how deliberate consideration of such aspects can provide insight on maximizing the benefits of these interactions. Additionally, it is essential that deliberation during message formation include the avoidance of negative reactions from students. To better understand how to craft a functional message, this thesis uses Psychological Reactance Theory as a lens to consider the influence of both positive and negative consequences of email-based communication exchanges in the academic environment.

Email allows for instructor-student communication to occur asynchronously, providing both the opportunity to reflect and formulate responses that address their specific concerns (D'Souza, 1992; Ehrmann, 1999). Additionally, email presents users with a convenient and easy method of reaching out to their desired audiences in a non-threatening matter that does not

require face-to-face communication (D'Souza, 1992; Waldeck et al., 2001). Like students, instructors also find the use of email to be satisfactory as a means of communicating outside the classroom (Finn et al., 2011). Instructors reap the benefits from using this mediated channel to communicate with their students because it allows for faster and more personalized interaction with students, catering to their specific questions, and offers an alternative outlet for interaction with students who participate less actively during the class (Gilbert, 1995).

Despite the positive aspects derived from the use of email to communicate outside of the classroom, these same affordances can also lead to negative outcomes based on the language crafted within the email. If the language in an email is too casual, the recipient of the message is more likely to interpret the message source as less credible and less likable, which is related to lower compliance with requests posed within the message (Stephens et al., 2009). Alternatively, if the message is too aggressive, message recipients report more negative affect towards the message source and lower motivation due to the negative manner of the communication (Finn et al., 2011). Furthermore, similar to aggressive messaging, the use of controlling language reduces the receiver's autonomy, or their perceived ability to make their own choices, which in turn could trigger a phenomenon called psychological reactance (Brehm, 1966; Miller et al., 2007).

While psychological reactance has been researched primarily in the context of persuasion and health communication (Burgoon et al., 2002a; Rains, 2013; Ratcliff, 2019), the topic has begun to garner the attention of instructional communication scholars through their exploration of the role psychological reactance plays in the academic context (Ball & Goodboy, 2014; Zhang & Sapp, 2013). This thesis aims to further such research by examining the use of powerful versus powerless language in instructor email requests, and the extent to which students' experience of psychological reactance impacts their perception of the instructor. Further, this thesis aims to

explore whether verbal immediacy could mitigate the effects of reactance triggered by the controlling language used in instructor email requests.

The following is a review of literature relevant to students' evaluations of their instructors' credibility, the capacity of powerful or controlling language within electronic communication to elicit psychological reactance in students, and how the inclusion of immediacy-focused language could reduce negative emotions resultant of triggered reactance. Based on established research, the proposed experiment in this thesis tests how language manipulations and the inclusion of verbal immediacy cues may mitigate the negative affect and consequential freedom restoration techniques used by students when presented with controlling and powerful language in emails from instructors. This thesis intends to provide further insight on the function of psychological reactance in effective messaging between instructors and their students and hopes to govern possible language choice decisions in an academic environment where computer-mediated communication is a predominant form of communication used by both students and instructors.

### **Source Credibility**

It is important to note that the power of the language used by a source can impact how the audience perceives the communicator's credibility. Credibility has been operationalized in previous research at the intersection of three dimensions: competence, trustworthiness, and goodwill (McCroskey & Teven, 1999). The first dimension, competence, relates to perceptions of the source's expertise and intelligence on a given concept. In an instructional context the source, or instructor, is typically seen to be higher on this dimension when deemed credible by their students. The second dimension, trustworthiness, is conceptualized as the receiver's evaluation of the source's character especially regarding honesty and morality, instructors high

in trustworthiness are seen as credible due to their perceived morality and sincerity (McCroskey & Teven, 1999; Teven & McCroskey, 1997). Finally, the third dimension, a receiver's perception of a source's goodwill, is dependent on the extent to which the source appears to care or empathize with them in a given situation. Goodwill focuses on how much an instructor is perceived to be understanding and cares about their students' wellbeing, which has been found to be an important predictor of students' credibility ratings of their instructors (McCroskey & Teven, 1999; Teven & McCroskey, 1997). When taken together, each of these dimensions evaluate a separate, but important factor of the overall credibility rating of an instructor and provides further insight on what constitutes a credible source of information.

In the instructional context, instructor credibility is a function of competence, trustworthiness, and caring (McCroskey & Teven, 1999), which has been found to reduce the effects of reactance in students when instructors have higher credibility (Zhang & Sapp, 2013). Myers (2004) found that higher evaluations of credibility were related to whether a student reaches out after class to communicate with their instructor. Similarly, Finn et al. (2009) found that credibility is pivotal in reinforcing student-instructor interactions and in the students' involvement in their own learning and participation in class. When students perceive their instructor as more credible they are more likely to interact with them both in and outside of class (Myers, 2004), but also, they are more likely to be evaluated more positively if the student perceives them as credible. With a strong affinity for interaction, the student is more likely to follow through with instructors' requests within the bounds of the classroom through activities and assignments as higher credibility is associated with higher willingness and intention to follow through with requests outside of class (Myers, 2004).

Likewise, Zhang et al. (2011; Zhang & Sapp, 2013), found that when instructors are perceived as more credible, students are less resistant to instructor requests and their requests result in less reactance compared to less credible instructors. Zhang and Sapp (2013) also found that when instructors were deemed more credible, their requests were less likely to trigger reactance, and thus it is likely that requests from non-credible instructors will impact the level of reactance a student feels towards their email response. Therefore, it is predicted that a student will be more likely to follow-through with an instructor's request as the perceived credibility of the instructor increases.

H1: Instructor credibility will be positively related to students' intention to follow through with the instructor's request.

### **Powerful/ Powerless Language**

A source's credibility can be affected by a number of factors, including the style with which they communicate. For example, powerful communicators who employ explicit and direct messages are perceived as more credible speakers due to their use of shorter words and phrases, making their message and their intent, more interpretable (Bradac et al., 1981; Miller et al., 2007). Conversely, powerless language is more ambiguous and less precise, which results in less clarity about the speaker's intentions (Dillard & Shen, 2005; Miller et al., 2007), ultimately impacting the credibility of the communicator due to the perceived ambivalence of their appeal. When communicators are perceived to be ambivalent, their persuasive appeals and requests may fall short, lowering credibility due to uncertain and weak argument support from the communicator with less power (Dillard, 2014; Hosman, 1989).

Language has been described as a "powerful technique we have for controlling other people" (Miller, 1973, p. 5), and its power directly aids the act of persuasion and how the

audience reacts to a given message (Burgoon et al., 1975). Powerful speech is defined as language that expresses certainty, explicitness, and is delivered in a concise manner (Bradac et al., 1979; Bradac et al., 1981; Dillard, 2014). This speech is identified through imperatives such as “must,” “should,” and “have to” which are explicit, but may be perceived as controlling or coercive especially if directed at an audience through a persuasive appeal (Brehm, 1966; Lanceley, 1985; Miller et al., 2007). Alternatively, powerless speech is more uncertain, containing more hesitations like “uh” and “um,” hedges such as “I guess” or “kind of”, and inexplicit statements like “maybe” and “possibly” (Bradac et al., 1979; Bradac et al., 1981; Dillard, 2014; Miller et al., 2007). Although less powerful, this lower-intensity messaging can also be perceived as less threatening to an individual’s autonomy (Miller et al., 2007; Vansteenkiste et al., 2006). The execution of either style by a speaker or author has the capability to impact a variety of evaluation criteria such as their competence, or credibility, as well as their attractiveness to the audience, and their overall social power (Bradac et al., 1981; Bradac & Mulac, 1984).

In the instructional context, Haleta (1996) found that the power of an instructor’s speech is used as a judgement tool by students to assess the power and credibility of their instructor (Bradac & Mulac, 1984). When individuals use powerless language, they are perceived as less certain and are deemed to have a lack of control over the situation they are currently within (Hosman, 1989). Additionally, Bradac and Mulac (1984) found adverse effects from the use of powerless language in scenarios where the speaker should hold an authoritative role (e.g. within the classroom). Likewise, Haleta (1996) found that instructors who utilized a powerless style were rated as less credible and made less favorable impressions compared to instructors who implemented a more powerful language style. When instructors do not match the expectations of

a competent and credible authority figure, students may form negative impressions of these instructors finding these instructors to be unorganized, unprepared, and unsure of their abilities (Haleta, 1996).

Similar results were found in the use of casual language in email exchanges between instructors and their students. Stephens et al. (2009) found that overly casual language in emails from students (e.g., containing spelling errors, no subject line, and abbreviations such as “RU” in place of “are you”) resulted in instructors evaluating their message as less credible and resulted in lower willingness to follow through with students’ requests in the message. Stephens et al. (2009) demonstrated that overly casual emails result in a violation of power differential norms where instructors expect their students to respond formally and respectfully.

In this vein, language expectancy theory (Burgoon, 1995; Burgoon et al., 1975) states that language is rule-driven and thus individuals develop norms and expectations around how and why language is used in specific situations (Burgoon et al., 2002b). This framework is used to explain the impact of variables such as source, message content, and receiver characteristics have on the extent a message is perceived to be persuasive. Further, when an individual uses persuasive language that negatively violates said cultural norms, their language becomes less persuasive typically resulting in either no change in audience behavior or may even result in a “boomerang” effect in which the audience engages in the opposite behavior or position posited by the persuasive message. Important to note, language expectancy is not unique to specific individuals but instead is attributed to specific groups (i.e., physicians, instructors, etc.; Burgoon et al., 2002b). Subjective norms surrounding sources deemed more credible allow for a wider variety in message components (e.g., language intensity); however, if a source is deemed less

credible there is a tighter restriction on the normative expectations for their language choices especially in terms of implementing strong language within persuasive appeals.

Expanding upon the results of Stephens et al. (2009), this thesis moves the focus away from the casual language used in student-produced messages and instead examines how students perceive an instructor's use of lower power language in their email responses. This thesis aims to determine if the less powerful language used by instructors will similarly violate audience expectations and impact the credibility of the source through the following hypothesis:

H2a: Instructor use of powerless language in emails will reduce student ratings of source credibility, compared to instructor use of powerful language.

Alternatively, although research has shown that communicators who use powerful language have more credibility as a result of their use of direct language (Bradac et al., 1981; Burgoon et al., 1975), the explicit and controlling imperatives contained within their messages may unintentionally result in a lowered credibility evaluation if the receiver perceives the message as controlling or demanding due to a threat to their autonomy (Burgoon et al., 2002a; Brehm, 1966; Miller et al., 2007; Worchel & Brehm, 1970). Drawing from this evidence, this thesis predicts that threats to autonomy will result in lowered credibility ratings for instructors that use powerful language in their email requests.

H2b: There will be a negative indirect effect between powerful language and student ratings of source credibility mediated by psychological reactance.

### **Psychological Reactance Theory**

While the extent to which a message contains powerful or powerless language has been found to impact not only an individual's perception of the message and the source, but there is also evidence that the intensity of the language can impact the way an individual responds to a



persuasive message—especially if it limits their perception of personal control (Brehm, 1966; Burgoon et al., 1975; Lanceley, 1985; Quick & Considine, 2008). When individuals feel their personal liberties have been threatened through a message, especially one persuading them to act or respond in a particular way, they may enter into a state of *psychological reactance*. Reactance occurs when individuals are motivated to restore their personal freedoms that they perceive as threatened or eliminated (Brehm, 1966). The level of reactance experienced is dependent on both the degree of threatened of freedom(s) eliminated as well as the importance of the freedom itself (Brehm, 1966).

Individuals desire autonomy, or the ability to freely choose from a variety of alternatives (Deci & Ryan, 2000; Niemiec & Ryan, 2009), and typically this freedom is provided in a multitude of ways through both voluntary and involuntary means. Individuals can choose from a variety of needs, desires, and possibilities and make a conscious choice to enact one behavior over another to accomplish a particular goal of their choosing. However, if the alternatives are eliminated and the individual is left with only a limited or single option, they will begin to experience psychological reactance (Brehm, 1966). This occurs when individuals are prompted to behave in a certain way through the social influence of something or someone else (e.g., persuasion; Brehm, 1966; Brehm & Brehm, 1981).

The activation of psychological reactance can create tense emotional states where the affected individuals may feel uncomfortable or even angry, prompting them to work towards the reestablishment of their freedoms (Brehm, 1966; Brehm & Brehm, 1981; Dillard & Shen, 2005; Rains, 2013). Experiencing reactance elicits a variety of cognitive and behavioral responses through which individuals attempt to restore threatened or eliminated freedoms. Initially, Brehm (1966; Brehm & Brehm, 1981) stated that psychological reactance was a latent variable that

could not be measured directly and thus reactance levels were ascertained by measuring associated behavioral and cognitive variables. Behaviorally speaking, restoration of freedom may occur through direct restoration (Brehm, 1966) or enacting behaviors or cognitions that oppose the campaigned appeal (Worchel & Brehm, 1970), such as source derogation (Smith, 1977), a heightened attraction towards the threatened freedom (Hammock & Brehm, 1966), and counter arguing (Dillard & Shen, 2005).

Recognizing previous suggestions that psychological reactance is a latent variable, more recent research has provided scales that measure both lasting trait reactance as well as attempts to measure the more volatile state reactance (Hong, 1992; Miron & Brehm, 2006; Sittenthaler et al., 2015). Trait reactance has been operationalized as an enduring personality component that is categorized through frustration and anger associated with situations where personal freedoms are perceived as threatened. Additionally, individuals with higher trait reactance will have a stronger desire to restore threatened freedoms to gain personal control of their behaviors (Hong & Page, 1989). Alternatively, state reactance focuses on a direct and specific instance where an individual is motivated to restore threatened personal freedoms (Brehm, 1966; Sittenthaler et al., 2015). This type of reactance is categorized by anger and frustration during a specific instance of threatened freedom and it varies in intensity based solely on the situation at hand (Brehm, 1966).

Dillard and Shen (2005) examined psychological reactance in the realm of persuasion and posited that reactance could be classified as counterarguing or negative cognitions about a message perceived as threatening to their freedom. Additionally, Dillard and Shen (2005) stated that reactance could be measured through negative affect such as anger and thus they conceptualized two models of reactance. The first model explained a dual-process model where negative cognition and anger work separately when encountering reactance, and the second

model was an intertwined model combining anger and negative cognitions into one unique functional reaction. Empirical analysis on both models resulted in the finding that the intertwined model was more successful in measuring reactance, indicating that combining anger and negative cognition was more effective than measuring them separately (Dillard & Shen, 2005). This model combining the individual's experience of negative cognitions and anger when experiencing psychological reactance has become the contemporary method of operationalizing psychological reactance (Rains, 2013). In the context of student-instructor communication, this would manifest as a student feeling angry toward an instructor's request or experiencing negative cognitions resulting in the derogation of either the nature of the request or the instructor as a credible source.

In much of the research conducted on psychological reactance, the intertwined model of negative cognition and anger is used to operationalize reactance (Dillard & Shen, 2005; Shen, 2010). Quick and Considine (2008) examined the use of forceful language on persuasive messages, and found that when forceful language was implemented in their persuasive appeal, participants indicated they perceived a threat to their ability to choose and which resulted in negative thoughts or cognitions and anger—which were used to measure reactance. Additionally, Ball and Goodboy (2014) found that when instructors use forceful language in the classroom setting, students perceived higher threats to their freedom which is an indication of psychological reactance. Following this evidence, this thesis will examine how this process translates to a mediated communication context with an instructor. Specifically, an instructor's powerful request should elicit reactance in students, compared to instructor's powerless request, which should affect intention to follow through.

H3: Email request responses from instructors that contain powerful language will cause students' psychological reactance, which in turn, will lower their willingness to follow through with an instructor's request.

### **Source Derogation and Restoration of Freedom**

When individuals feel their autonomy has been threatened and are no longer able to consciously choose whether or not to act, they are likely to report higher levels of psychological reactance (Brehm, 1966; Miller et al., 2007; Worchel & Brehm, 1970). As previously reviewed, when individuals experience psychological reactance, they are motivated to restore the freedoms which they feel were threatened, and this can be accomplished in a variety of ways including counterarguing (Dillard & Shen, 2005), source derogation (Smith, 1977), boomerang effects (Worchel & Brehm, 1970), and a heightened level of desire for an alternative recently eliminated (Hammock & Brehm, 1966), among others. Each of these restoration strategies allows the individual experiencing reactance to reclaim some of the autonomy they perceived as lost due to the reactance triggering event.

One reactance restoration strategy is the tendency for individuals to “boomerang” to the alternative choice when faced with reactance (Worchel & Brehm, 1970). When individuals do not have a clear stance on an issue being presented that threatens their freedom, they may switch to the opposing standpoint of the persuasive message. By alleviating the threat to follow only the persuasive appeal, the individual is able to reduce their reactance level. Similarly, individuals might be motivated to choose the alternative standpoint if they experience a reaction that they do not wish to align themselves with, especially if it means they will be viewed negatively (Cooper & Jones, 1969). For example, if an individual held a moderate standpoint on an issue, but then witnessed someone they deemed as undesirable align themselves with a particular side, the

original individual would more likely choose the opposition to signify a difference from that individual. Alternatively, Worchel and Brehm, (1970) found that reactance occurs when individuals are committed to their option as long as there are other options available.

Hammock and Brehm (1966) found that when a particular choice is eliminated via the action of another person, the eliminated option becomes more desirable compared to the other alternatives which result in psychological reactance. Moreover, the remaining alternative loses attraction because it is not the individual's choice and thus results in a "sour grapes" effect (Brehm et al., 1966; Hammock & Brehm, 1966). This derogation of the alternatives was furthered by Smith (1977) through the analysis of how perceived threats to freedom influences individuals' use of source derogation, which has been defined as the difference from original to present perceived level of source credibility (Maile & Kizilbash, 1976). Maile and Kizilbash (1976) found that when presented with threatening messages, individuals used source derogation to restore threatened freedoms because perceiving the source as less credible allowed for the participants to experience less threat. When an individual evaluates a source as less credible, that source becomes less influential, and thus, less threatening (Miller et al., 2007). This thesis will build upon this research and investigate the relationship between psychological reactance and credibility among instructors who email their students.

H4: Students' experience of psychological reactance will be negatively associated with a) perceived instructor credibility, and b) intention to follow through with the instructors' request.

### **Verbal Immediacy**

Powerful and controlling language has the capacity to trigger psychological reactance in students. This occurs due to the perception that these messages are manipulative or threatening to

their autonomy (Burgoon et al., 2002a; Worchel & Brehm, 1970) especially if the language is commanding (Miller et al., 2007). However, these effects have been extenuated through the inclusion of restoration postscripts at the end of persuasive messages which trigger reactance (Bessarabova et al., 2013; Bessarabova et al., 2017; Miller et al., 2007). These postscripts are additional information provided following an overtly persuasive message to counteract the negative experience associated with reactance. These postscripts provide the individual experiencing reactance the opportunity to restore their threatened autonomy by offering a direct restoration of autonomy (e.g., “up to the receiver to make up his or her own mind;” Miller et al., 2007, p. 234). However, while presenting individuals with an explicit outlet to restore threatened autonomy may mitigate some negative effects associated with psychological reactance, there has been evidence that postscripts may decrease source trustworthiness (Bessarabova et al., 2017).

Another possible solution to mitigate negative effects may be found in the inclusion of verbal immediacy cues within instructor request messages. Immediacy is a construct established by Mehrabian (1969) to describe nonverbal and verbal behaviors which reduce the perceived physical or psychological distance between two people (Andersen, 1979; Mehrabian, 1971). When individuals are more immediate they also are liked more (Mehrabian, 1971), and in an academic setting, higher immediacy results in increased affect towards the course instructor (Andersen, 1979). This is especially true with verbal immediacy which is defined in the instructor’s use of verbal expressions to “reduce psychological distance by recognizing individual students and their ideas and viewpoints, by incorporating student input into course and class design, by communicating availability and willingness to engage in one-to-one interactions, and by enhancing their ‘humanness’ via humor and self-disclosure” (Gorham, 1988, p. 52).

Additionally, verbal immediacy has been found to be related to perceptions of source competence and character (Bradac et al., 1979).

Additional research in the academic setting has found that verbal immediacy provides a more inclusive view of the student/instructor relationship which suggests the instructor is more willing to interact via extra-class communication than a non-immediate instructor who maintains the power differential between the student and instructor (Fusani, 1994). Fusani (1994) discovered that immediacy was also a strong predictor of students' satisfaction with extra-class communication. Additionally, Nadler and Nadler (2001) found that instructor credibility and empathy also impact how students assess their out-of-class communication with instructors; when instructors were deemed more empathic and more credible, students evaluated both their communication with instructors outside of class and their affect toward the instructor higher.

Instructor verbal immediacy was also found to be a predictor of how frequent and long extra-class communication interactions are between students and verbally immediate instructors (Jaasma & Koper, 1999). This suggests that higher immediacy from instructors will be related to less student anger when confronted with more forceful language due to the increased willingness to communicate with more immediate instructors. This is consistent with Waldeck et al. (2001), who found that when students read higher immediacy-focused language in instructor emails, they were more willing to communicate via email with these instructors. Additionally, Young et al. (2011) found that students perceived their correspondence with instructors that contained more inclusive pronouns including: "we" and "our class," (Waldeck et al., 2001; Witt & Wheelless, 2001) as more immediate and also evaluated their relationship with the instructor to be more positive and rewarding.

Immediacy has also been shown to reduce student resistance and increase students' likelihood of compliance, or likelihood of follow-through, with the request made by immediate instructors (Kearney et al., 1988; Kearney et al., 2006). Burroughs (2007) found that not only were students more compliant to an immediate instructor, but that students reported more resistance and less conformity with the wishes of a nonimmediate instructor. Previous research has established that the perception of high immediacy is related to a decrease in resistance to an instructor message, an increase in appraisals of both credibility and affect toward the instructor, and a higher willingness to follow through with instructor requests (Andersen, 1979; Kearney et al., 1988). Based on this research, this thesis asks the following research question to address whether an increase in verbal immediacy in instructor emails may influence the perception of forceful language as threatening.

RQ1: Does instructors' use of verbal immediacy language offset the negative effects of psychological reactance triggered by powerful language in instructor email requests, and in turn, their intention to follow through with instructor requests?

### **Covariates**

In addition to the main hypotheses and research question, this thesis will also control for the possible influence of the following covariate variables: total number of completed semesters of undergrad, students' levels of powerful language and verbal immediacy expectations, and their need for autonomy. These covariates are included in relation to the third hypothesis to hold constant the effects of these variables on the hypothesized relationship between language choice and psychological reactance in students. The addition of these variables would address the possibility that the duration of time spent in college and exposure to emails (Miller, 1976; Zajonc, 1968), the normative expectations of instructors' language choice (Burgoon et al.,



2002b), and students' desire to have control over their own choices (Deci & Ryan, 2000; Niemiec & Ryan, 2009) may have an influence on their interpretation of the instructor language in these email manipulations.

## CHAPTER TWO

### Method

#### Participants

The final sample included 234 participants over the age of 18, currently enrolled as an undergraduate student, and who identified they experienced communicating with an instructor outside of class through email. A total of 277 participants voluntarily accessed the survey on Qualtrics, however, several individuals were removed ( $n = 43$ ) from the final sample for either not meeting the required criteria for participation ( $n = 8$ ) or for omitting over half of the survey ( $n = 35$ ). The sample consisted primarily of individuals who identified as female ( $n = 143$ ), White/Caucasian students with a mean age of 20.67 ( $SD = 4.09$ ). For further information on the demographics of this sample see Table 1.

**Table 1.** Demographic Information of Participants (N= 234)

Variable	<i>n</i> (%)
<b>Age (years)</b>	
18-23	225 (96.2%)
24-29	5 (2.1%)
30-35	--
36-41	1 (.4%)
42-47	--
48-53	1 (.4%)
54-59	2 (.9%)
Mean (SD)	20.67 (4.09)
Minimum, Maximum	18, 54
<b>Gender Identity</b>	
Female	143 (61.1%)
Male	90 (38.5%)
Other	1 (.4%)

**Racial/Ethnic Identity**

Black/ African American	24 (9.8%)
East Asian/East Asian Descent	7 (2.9%)
Hispanic/Latino(a)	12 (4.9%)
Middle Eastern	7 (2.9%)
Native American/American Indian	2 (.8%)
Native Hawaiian or Pacific Islander	1 (.4%)
South Asian/ South Asian Descent	5 (2%)
White/Caucasian	185 (75.5%)
Other	2 (.8%)

**Number of Semesters Completed**

0-4	116 (50%)
5-9	105 (45.3%)
10-14	11 (4.6%)
Mean (SD)	4.55 (2.80)
Minimum, Maximum	0, 13

**Class Ranking**

First-year	59 (25.2%)
Sophomore	52 (22.2%)
Junior	77 (32.9%)
Senior	46 (19.7%)
Mean (SD)	2.47 (1.07)

*Note.* Totals of percentages are not 100 for every characteristic because of rounding.

**Procedures**

After receiving acknowledgement from the Institutional Review Board, participants participated in an online experiment and completed an anonymous post-test through Qualtrics (see Appendix D). Participants were recruited from the research pool at this large university via physical and digital advertisements (see Appendix A) and were given the opportunity to receive extra credit for their participation. After signing up for the study, they were presented with a cover letter (see Appendix B) detailing the criteria for participation. After agreeing to participate and meeting the criteria, participants were randomly assigned to one of the four research conditions within an email chain containing a student request followed by an instructors response email which contained a manipulated level of powerful language and verbal immediacy (e.g.,

higher powerful language and low verbal immediacy) cues. Each email chain consisted of two elements: first all participants viewed a sample email request for missed notes to a nondescript Communication Studies professor at West Virginia University (WVU) from themselves using a piped text formatting within the survey which allowed participants to see their own email and name (e.g., John; [jm123@mix.wvu.edu](mailto:jm123@mix.wvu.edu)). All participants encountered the same sample student email, differing only in the content of the piped text described above. Immediately after reading this first email, participants were randomly assigned to read one of the four email manipulation responses from their instructor. Within each condition the instructor either addressed the participant by name, using the same piped text from before, or did not address them at all. Then within the content of the email the instructor informed the student using a variety of powerful language and verbal immediacy cues that the student needed to obtain the notes from another student (see Table 2). Following the manipulation, participants responded a post-test consisting of the following scales: thought-listing prompt (Quick & Stephenson, 2007), source credibility (McCroskey & Teven, 1999), state reactance (Dillard & Shen, 2005), intention to follow through (Ajzen, 1991; Moore & Richards, 2019), basic needs satisfaction (autonomy; Gagné, 2003), and email expectancy (Gorham, 1988; Miller, 2007; Witt & Wheelless, 2001). Finally, participants were asked to report their demographic information, and then were provided a link through which they could navigate to a separate website to earn extra credit for their participation.

**Table 2.** Email Manipulations

Student	<p>To: drsmith@mix.wvu.edu Subject: Missed Zoom Class</p> <p>Hi Dr. Smith,</p> <p>I was unable to attend the lecture today because I lost internet connection in my apartment. Is there any way I could get the notes for today's class?</p>
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	<p>Thank you, (piped text name)</p>
<p>Condition 1 (HVI/LPL)</p>	<p>To: (piped text email) Subject: This might help regarding notes in our class</p> <p>Hi (<i>piped text name</i>),</p> <p>According to the syllabus for <i>our class</i> you are responsible for missed notes. You <b>could try to get</b> notes before next class because <i>we might have a quiz on what we covered in our class</i>, but <b>I have not decided yet</b>. However, <i>I understand</i> technical difficulties occur and <i>I want you to be able to do well</i>. <b>I guess if you have any further questions you could</b> email me or and <b>you can maybe come to my office hours this week if you think that could help, but that is up to you. <u>If you get a chance you could try to contact a fellow classmate so you can ask questions before the quiz on Tuesday (although I might not give it).</u></b></p> <p>- DRS</p> <p>/ D. R. Smith Professor, Department of Communication Studies West Virginia University <a href="mailto:drsmith@mix.wvu.edu">drsmith@mix.wvu.edu</a></p>
<p>Condition 2 (HVI/HPL)</p>	<p>To: (piped text email) Subject: *MUST READ* Re: missing notes for our class</p> <p>Hi (<i>piped text name</i>),</p> <p>According to the syllabus for <i>our class</i> you are responsible for missed notes. You <b>must get notes</b> before next class because <i>we will have a quiz on what we covered for our class</i>. However, <i>I understand</i> technical difficulties occur and <i>I want you to be able to do well</i>. If you have any further questions please email me <b>and you should come to my office hours this week. <u>You need to contact a fellow classmate and you ought to do so soon</u></b> so you can ask questions before <u>the quiz on Tuesday.</u></p> <p>- DRS</p> <p>/ D. R. Smith Professor, Department of Communication Studies West Virginia University <a href="mailto:drsmith@mix.wvu.edu">drsmith@mix.wvu.edu</a></p>

<p>Condition 3 (LVI/HPL)</p>	<p>To: (piped text email) Subject: *MUST READ* Re: your missing notes</p> <p><i>Hello, [no name here intentionally]</i></p> <p>According to the syllabus for <i>my class</i> you are responsible for missed notes. You <b>must get notes</b> before next class because <i>you will have a quiz on what I covered</i> in my class. Technical difficulties occur, but <i>you must be in class to be able to do well</i>. If you have any further questions please email me and <b>you should come to my office hours this week</b>. <u>You need to contact a fellow classmate immediately and you ought to do so soon so you can ask questions before the quiz on Tuesday.</u></p> <p>- DRS</p> <p>/ D. R. Smith Professor, Department of Communication Studies West Virginia University <a href="mailto:drsmith@mix.wvu.edu">drsmith@mix.wvu.edu</a></p>
<p>Condition 4 (LVI/LPL)</p>	<p>To: (piped text email) Subject: If you can take a look at this...</p> <p><i>Hello, [no name here intentionally]</i></p> <p>According to the syllabus for <i>my class</i> you are responsible for missed notes. You <b>could try to get</b> notes before next class because you <b>might</b> have a quiz on what <i>I covered in my class</i>, but <b>I have not decided yet</b>. <b>I guess</b> technical difficulties occur, but <i>you should maybe be in class to be able to do well</i>. <b>I guess if you have any further questions you could</b> email me and <b>you can maybe come to my office hours this week if you think that could help, but that is up to you</b>. <u>If you get a chance you could try to contact a fellow classmate so you can ask questions before the quiz on Tuesday (although I might not give it).</u></p> <p>- DRS</p> <p>/ D. R. Smith Professor, Department of Communication Studies West Virginia University <a href="mailto:drsmith@mix.wvu.edu">drsmith@mix.wvu.edu</a></p>

*Note.* The following information is for clarification use only and was not shown to participants. Text in **bold** indicate powerful language manipulation, text in *italics* indicate verbal immediacy manipulation, and the instructor's request is underlined.

### **Instrumentation**

**Manipulation Check.** Prior to testing the hypotheses, a manipulation check was conducted to test the manipulations of the independent variables (i.e., powerful language, verbal

immediacy). Twenty-nine participants in an undergraduate communication studies research method course at WVU were provided the four email manipulations and were asked to respond to thirteen items for each manipulation (See Appendix C). To assess participants' perception of powerful language they responded to a modified version of the one item measure used by Ball and Goodboy (2014) to identify forceful/controlling language (e.g., "This professor uses forceful (i.e., controlling) language in their email response;"  $M = 4.22$ ,  $SD = .99$ ). Verbal immediacy manipulation was assessed using five items from Gorham's (1988) verbal immediacy behavior scale. These items include, "Instructor addresses student by name," "Instructor refers to class as "my" class or what "I" am doing," "Instructor refers to class as "our" class or what "we" are doing," "Instructor invites students to email or meet with them outside of class if they have questions or want to discuss something," and "Instructor criticizes or points out faults in students' actions." These five items were selected from the original 20 because they were most relevant to the specific manipulation of verbal immediacy in these emails, whereas the other 15 were better suited for a face-to-face instructor/student interaction. A reliability coefficient omega of .57 was obtained ( $M = 4.51$ ,  $SD = .50$ ) with higher scores indicating more immediacy within the email. Realism was assessed using seven items adapted from Cho et al. (2012) including "The email from the instructor is something one could possibly receive in real life," and "The content of the email above was Unbelievable/Believable." Responses for all items were collected using a 7-point Likert response format ranging from Strongly Disagree (1) to Strongly Agree (7). A reliability coefficient omega of .74 was obtained ( $M = 4.48$ ,  $SD = .61$ ) with higher scores indicating more realism within the email.

**Email Manipulation.** Drawing from Zhang and Sapp's (2013) request legitimacy/expectedness conditions, the email request manipulations were modified to include aspects of

high and low levels of powerful language and verbal immediacy in a more relevant scenario for the current academic atmosphere. For example, in the high powerful language/high verbal immediacy condition, verbal immediacy was manipulated using cues from Witt and Wheelless (2001) such as inclusivity (e.g., “we, our class”) and concern (e.g., “I want you to do well”). Powerful language was manipulated using imperatives such as “must,” “ought,” and “have to” (Miller et al., 2007). Alternatively, in the low powerful language/low verbal immediacy condition less powerful language contained phrases like “maybe” and hedges such as “I guess” and “um” (Miller et al., 2007) and low verbal immediacy was manipulated using cues (Witt & Wheelless, 2001) such as lack of object participation (i.e., no use of names) and lack of inclusivity (e.g., “you, my class”). See Table 2 for email manipulations.

**Source Credibility.** To measure participants’ reports of instructor credibility this thesis used the 18-item Source Credibility Measure (McCroskey & Teven, 1999). This measure asks participants to indicate how strongly they feel each bipolar description fits how they perceive the instructor using a 7-point semantic differential scale (e.g., Inexpert-Expert). This measure evaluated participants’ perception of the instructor or source’s competence, goodwill, and trustworthiness. A reliability coefficient omega of .90 was obtained for source competence ( $M = 4.57$ ,  $SD = 1.38$ ), with .91 for source goodwill ( $M = 3.38$ ,  $SD = 1.53$ ), and with .91 for source trustworthiness ( $M = 4.44$ ,  $SD = 1.37$ ); with higher scores indicating a higher perception of each dimension within the email. See Table 3 for a breakdown of descriptive statistics for each manipulation.

**Psychological Reactance.** To measure state reactance, this thesis used the operationalization of psychological reactance adapted from Dillard and Shen (2005). This measure evaluated both participant anger by indicating the extent to which they felt: irritated,

angry, annoyed, and aggravated (Dillard & Shen, 2005) through a 7-point Likert-type response format ranging from “none of this feeling” to “a great deal of this feeling.” A reliability coefficient omega of .95 was obtained ( $M = 4.46$ ,  $SD = 1.99$ ) with higher scores indicating higher anger experienced after reading the email. Additionally, participants responded to a thought-listing activity which asked them to list up to five thoughts they had about the email message and to report if each of their thoughts were positive, negative, or neutral (Quick & Stephenson, 2007). These responses were then reviewed to ensure all negative participant-coded responses were coded correctly and to remove responses which were either not relevant to the message content itself (e.g., “The email was long”) or provided evidence the participant did not read the email (e.g., “The professor did not offer office hours”). After this review the participant-coded thoughts were combined to create a total number of negative cognitions which ranged from zero to five ( $M = 1.23$ ,  $SD = 1.13$ ). See Table 3 for a breakdown of descriptive statistics for each manipulation.

**Intention to Follow Through with Requests.** To assess participants’ intention to follow through with the request made by the instructor (e.g., “You need to contact a fellow classmate and you ought to do so soon so you can ask questions before the quiz on Tuesday.”), this thesis followed the operationalization by Moore and Richards (2019) and used an adapted version of Ajzen’s (1991) behavioral intention measure. Participants reported their responses using a 7-point semantic-differential scale with three items (e.g., unlikely/likely, possible/impossible, would/would not) to indicate their level of intention to follow through with the provided request. A reliability coefficient omega of .84 was obtained ( $M = 5.03$ ,  $SD = 1.60$ ) with higher scores indicating a greater intention to follow through with the instructor’s request. See Table 3 for a breakdown of descriptive statistics for each manipulation.



**Need for Autonomy.** The seven-autonomy specific items from the Basic Needs Satisfaction Scale (Gagné, 2003) were used to evaluate participant's need for autonomy. Participants indicated how true each statement was to themselves using a 7-point scale ranging from Not true at all (1) to Very True (7). A reliability coefficient omega of .74 was obtained ( $M = 4.93$ ,  $SD = 1.02$ ) with higher scores indicating a greater need for autonomy in their overall everyday experience. See Table 3 for a breakdown of descriptive statistics for each manipulation.

**Email Expectancy.** To evaluate participants' expectations of instructor language use in email responses four items were generated to assess verbal immediacy and powerful language based on previously established language characteristics (Gorham, 1988; Miller et al., 2007; Witt & Wheelless, 2001). Sample items include, "I expect emails from my instructors to address me by name" and "I expect my instructor to use explicit and direct language that tells me exactly what I should do in their emails that contain requests." A reliability coefficient omega of .31 was obtained with higher scores indicating the verbal immediacy cues ( $M = 4.80$ ,  $SD = 1.10$ ) and powerful language cues ( $M = 5.76$ ,  $SD = 1.10$ ) used within the email were more expected or normal. See Table 3 for a breakdown of descriptive statistics for each manipulation.

**Table 3.** Experimental Manipulation Descriptive Statistics

	Condition 1 (HVI/LPL) $n = 58$	Condition 2 (HVI/HPL) $n = 58$	Condition 3 (LVI/HPL) $n = 59$	Condition 4 (LVI/LPL) $n = 56$
	<i>Mean (SD)</i>	<i>Mean (SD)</i>	<i>Mean (SD)</i>	<i>Mean (SD)</i>
Source Credibility				
Competence	5.09 (1.23)	4.50 (1.42)	4.78 (1.27)	3.90 (1.36)
Goodwill	4.11 (1.40)	3.50 (1.58)	3.07 (1.48)	2.85 (1.40)
Trustworthiness	4.93 (1.34)	4.50 (1.35)	4.46 (1.35)	3.87 (1.26)
Psychological Reactance				
Anger	4.09 (1.34)	4.09 (1.35)	4.51 (1.84)	5.16 (1.89)
Negative Cognitions	.97 (1.06)	1.12 (1.08)	1.25 (1.07)	1.58 (1.22)

Intention to Follow Through	5.16 (1.45)	5.12 (1.64)	5.01 (1.62)	4.81 (1.71)
Need for Autonomy	4.81 (.95)	4.96 (1.11)	4.97 (.97)	4.97 (1.05)
Email Expectations				
Powerful Language	5.57 (1.09)	5.77 (.93)	5.70 (.77)	5.99 (.94)
Verbal Immediacy	4.72 (.89)	4.84 (1.28)	4.80 (1.11)	4.84 (1.09)

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## Data Analyses

After cleaning the dataset and removing the aforementioned participants who did not meet specified inclusion criteria or complete the survey, zero-order Pearson correlations were run to assess the relationships between all of the variables. Following the analysis of my descriptive variables, I analyzed the results of my manipulation check as well as my four hypotheses and single research question using the following methods. To assess the effectiveness of the language and immediacy conditions in my manipulation check, a paired-samples *t*-test was used to assess if there were significant differences between the different levels of language and immediacy manipulations for each condition (e.g. high verbal immediacy and low powerful language) and to ensure the emails were perceived as realistic. An open coding analysis (Corbin & Strauss, 1990) was conducted on the thought-listing prompt to assess the relevant themes associated with participant-coded responses. Hypothesis 1 and 4 were examined using zero-order Pearson correlations to assess the direction and strength of these predicted associations. An independent samples *t*-test was conducted to assess if the mean score of instructor credibility when reading powerless language were significantly lower compared to the mean scores of encountering powerful language in Hypothesis 2a. To analyze Hypothesis 2b and Hypothesis 3, an ordinary least squares path analysis was estimated using PROCESS 3.4 (Hayes, 2018) with a multicategorical antecedent (Hayes & Preacher, 2014). Additionally, a second test of Hypothesis 3 was run adding the covariates into the model using the same path model. Finally, my research

question was tested using a conditional process model (first-stage moderated mediation). Relative indirect and direct effects were estimated using 5000 percentile bootstrap samples to generate confidence intervals (Hayes, 2018) and moderated mediation was determined using the index of mediated mediation (Hayes, 2015).

## CHAPTER THREE

### Results

Prior to testing the hypotheses and research question a manipulation check was conducted to assess if the manipulation of high and low powerful language and verbal immediacy cues were perceived as different by students. Students read each email manipulation and were asked to complete a post-test measuring the presence of powerful language and verbal immediacy and reported how realistic each email condition was before moving on to the next email manipulation. Each student reported on the level of all three variables for each email manipulation condition. The results from a paired samples *t*-test indicated the manipulation of powerful language was successful,  $t(28) = 4.79, p < 0.01, d = .89$ , indicating significantly higher reports of powerful language cues in both Condition 1 (High verbal immediacy/High powerful language;  $M = 4.69, SD = 1.71$ ) compared to Condition 2 (High verbal immediacy/Low powerful language;  $M = 2.76, SD = 1.88$ ) and between Condition 3 (Low verbal immediacy/High powerful language;  $M = 5.66, SD = 1.29$ ) compared to Condition 4 (Low verbal immediacy/Low powerful language;  $M = 3.76, SD = 1.66$ ),  $t(28) = 4.88, p < 0.01, d = .91$ . Additionally, results of a paired samples *t*-test also revealed that the manipulation of verbal immediacy was successful,  $t(28) = 10.06, p < 0.01, d = 1.87$ , indicating that participants perceived higher verbal immediacy cues in both Condition 1 (High verbal immediacy/High powerful language;  $M = 5.71, SD = 0.82$ ) compared to Condition 3 (Low verbal immediacy/High powerful language;  $M = 2.97, SD =$

0.89) and between Condition 2 (High verbal immediacy/Low powerful language;  $M = 5.59$ ,  $SD = 0.74$ ) compared to Condition 4 (Low verbal immediacy/Low powerful language;  $M = 2.82$ ,  $SD = 0.85$ ),  $t(28) = 11.81$ ,  $p < 0.01$ ,  $d = 2.19$ .

Perceived realism of email manipulations was assessed using a one-sample  $t$ -test with a test value of 4. These results indicated significant difference between the test value of 4 and the mean realism score for both Condition 1 (High verbal immediacy/High powerful language) and Condition 2 (High verbal immediacy/Low powerful language), but the mean scores for Condition 3 (High verbal immediacy/ Low powerful language) and Condition 4 (Low verbal immediacy/ Low powerful language) were not significantly different from the test mean of 4. See Table 4 for a breakdown of these results and the results of all variables.

**Table 4.** Manipulation Check Descriptive and One-Sample  $t$ -test with a test value of 4 (N = 29)

	<i>M</i>	<i>SD</i>	df	<i>t</i>	<i>p</i>	95% CI [UL, LL]	Mean Difference
<b><u>Condition 1</u></b>							
Verbal Immediacy	5.71	.82	28	11.30	<.01	[1.40, 2.02 ]	1.71
Powerful Language	4.69	1.71	28	2.17	.04	[.04, 1.34]	.69
Realism	5.75	1.00	28	9.42	< .01	[1.37, 2.14]	1.75
<b><u>Condition 2</u></b>							
Verbal Immediacy	5.59	.74	28	11.66	<.01	[1.31, 1.87]	1.59
Powerful Language	2.76	1.88	28	3.55	.001	[-1.96, -.53]	1.24
Realism	4.66	1.51	28	2.33	.03	[.08, 1.23]	.66
<b><u>Condition 3</u></b>							
Verbal Immediacy	2.97	.89	28	6.21	<.01	[-1.37, -.69]	1.03
Powerful Language	5.66	1.29	28	6.91	<.01	[1.16, 2.15]	1.66
Realism	4.41	1.10	28	2.00	.06	[-.01, .83]	.41
<b><u>Condition 4</u></b>							
Verbal Immediacy	2.82	.85	28	7.45	<.01	[-1.50, -.86]	1.18
Powerful Language	3.76	1.66	28	.78	.44	[-.87, .39]	.24
Realism	3.92	1.32	28	.32	.75	[-.58, .43]	.08

*Note.* Condition 1 (High Verbal Immediacy/High Powerful Language), Condition 2 (High Verbal Immediacy/Low Powerful Language), Condition 3 (Low Verbal Immediacy/High Powerful

Language), and Condition 4 (Low Verbal Immediacy/Low Powerful Language).

Participants' cognitions toward the message source were assessed using the participant-coded responses from the thought-listing prompt. Open coding analysis of the data collected revealed a total of 25 themes among the 528 coded cognitions. The majority of the cognitions were coded as negative (e.g., "professor had little empathy;"  $n = 225$ ), fewer coded as neutral (e.g., "The email exchange was professional;"  $n = 175$ ), and the fewest were coded as positive (e.g., "The professor wants me to do well;"  $n = 128$ ). However, only the negative coded cognitions were used in the subsequent data analyses. See Table 5 for a breakdown of themes.

**Table 5.** Open Coding of Thought-listing Prompt

	Count $n$ (%)	Example Quotes
<b><u>Positive</u></b>	128 (24.24%)	
Appropriate/Formal Content	39 (30.47%)	"The emails had professional diction and had good openings and closings."
Email Content	27 (21.09%)	"Well constructed."
Helpful Instructor	19 (14.84%)	"The professor gave the student different options to solve her issue."
Suggestions for Student	7 (5.47%)	"The student should have asked for other options."
Other	36 (28.13%)	"Thought the professor did well with explaining what the syllabus said."
<b><u>Neutral</u></b>	175 (33.14%)	
Email Content	32 (18.29%)	"The student could visit the instructor's office hours in order to ask him questions."
Formatting	29 (16.57%)	"The information was easy to follow."
Syllabus Reference	11 (6.29%)	"The syllabus says you are responsible for missed notes."
Suggestions for Instructor	11 (6.29%)	"The teacher could have been kinder."
Fairness	8 (4.57%)	"I thought the teacher was fair."
Suggestions for Student	8 (4.57%)	"Could the student have moved to another location?"
Not Knowing Other Students	6 (3.43%)	"I don't have anyone's number or email to get in contact with them."
Other	70 (40%)	"It was not my fault I could not come to class."

<b><u>Negative</u></b>	225 (42.61%)	
Unhelpful Instructor	33 (14.67%)	“Unwilling to help.”
Lack of Concern	29 (12.89%)	“The professor does not care about my education.”
Harsh/Rude Instructor	24 (10.67%)	“The professor was a little rude with the email.”
Not Knowing Other Students	18 (8.00%)	“Because the class is online, what if the student does not know any of the other students?”
Negative Personal Experience	15 (6.67%)	“This actually happened to me just last Thursday.
Negative Affect	14 (6.22%)	“I thought about how frustrating this situation was ending up.”
Student Misbehavior	14 (6.22%)	“Without a real reason about missing class, you are in college it is not acceptable.”
Unprofessional/Informal	11 (4.89%)	“They used words such as maybe and I think which sounded unprofessional.”
Vague/Confusing	10 (4.44%)	“The instructor’s response was very confusing and hard to comprehend.”
Uncertain Instructor	8 (3.56%)	“Even the teacher seemed unsure of the class layout and structure.”
Passive Aggressive	6 (2.67%)	“The professor seemed passive aggressive.”
Other	43 (19.11%)	“I want to drop this class.”

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*Note.* Categories with less than 5 cases were grouped as “Other.”

Hypothesis 1 stated that perceived instructor credibility would be positively related to students’ intention to follow through with the instructor’s request. Results of a Pearson correlation fully supported this hypothesis; a significant positive relationship was revealed between competence and intention to follow through,  $r(230) = .21, p < .01$ , between goodwill and intent to follow through,  $r(230) = .23, p < .01$ , and between trustworthiness and intent to follow through,  $r(231) = .21, p < .01$ . See Table 8 for all correlations.

Hypothesis 2a predicted that the use of powerless language in emails would result in lower student ratings of source credibility, compared to instructor use of powerful language. This hypothesis was supported finding a significant difference in the scores for competence in high powerful language conditions ( $M = 4.93, SD = 1.25$ ) and low powerful language conditions ( $M = 4.21, SD = 1.42$ );  $t(230) = 4.12, p < .001, Mdif = .72$ . As well as a significant difference in the

scores for goodwill in high powerful language conditions ( $M = 3.58$ ,  $SD = 1.53$ ) and low powerful language conditions ( $M = 3.18$ ,  $SD = 1.52$ );  $t(230) = 2.05$ ,  $p = .04$ ,  $Mdiff = .41$ . And finally, there was a significant difference in the scores for trustworthiness in high powerful language conditions ( $M = 4.69$ ,  $SD = 1.36$ ) and low powerful language conditions ( $M = 4.19$ ,  $SD = 1.34$ );  $t(231) = 2.88$ ,  $p < .01$ ,  $Mdiff = .51$ .

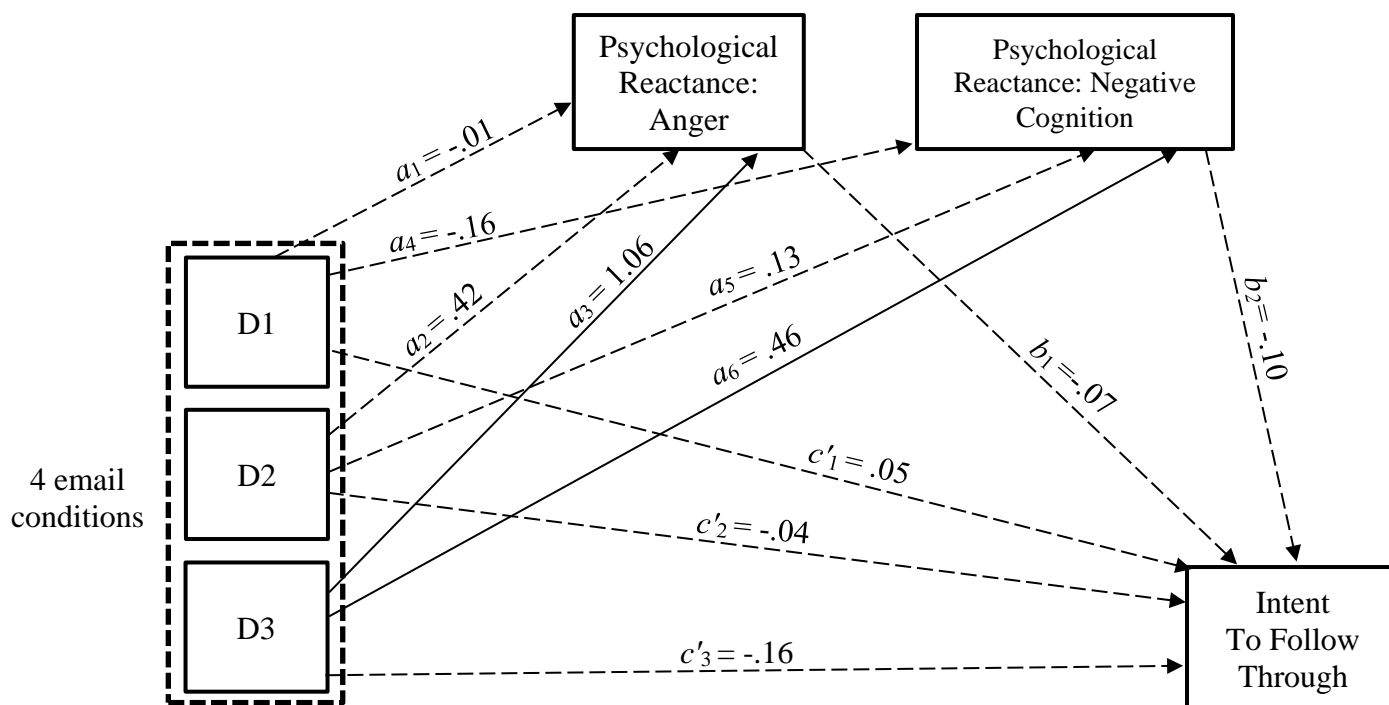
Hypothesis 2b predicted that there would be indirect effects between powerful language and students' ratings of credibility mediated by psychological reactance. Results of an ordinary squares regression analysis did not reveal indirect effects between competence and anger,  $ab = .09$ ,  $SE = .08$ , 95% CI[-.06, .26], between goodwill and anger,  $ab = .13$ ,  $SE = .11$ , 95% CI[-.09, .36], or between trustworthiness and anger,  $ab = .11$ ,  $SE = .09$ , 95% CI[-.07, .31]. Additionally, no indirect effects were revealed between competence and negative cognitions,  $ab = .06$ ,  $SE = .05$ , 95% CI[-.01, .17], goodwill and negative cognitions,  $ab = .09$ ,  $SE = .06$ , 95% CI[-.02, .22], or between trustworthiness and negative cognitions,  $ab = .05$ ,  $SE = .04$ , 95% CI[-.01, .16]. All six confidence intervals contained zero. Hypothesis 2b was not supported.

Hypothesis 3 posited that email requests from instructors containing powerful language would cause students' psychological reactance, which in turn, would lower their willingness to follow through with an instructor's request. Results of a parallel multiple mediator model (Model 4; Hayes, 2018) revealed no indirect effects between powerful language and intention to follow through with instructor requests for any of the conditions. However, results uncovered an effect of email condition on psychological reactance (anger, and independently, negative cognitions) between condition 1 (e.g., high verbal immediacy/low powerful language) and condition 4 (e.g., low verbal immediacy/lower powerful language). See Table 6 for unstandardized model

estimates and Figure 1 for the mediation model including paths and confidence intervals.

Hypothesis 3 was not supported.

**Figure 1.** Parallel Multiple Mediator Model without Covariates



*Note.* The multicategorical antecedent (4 instructor email conditions) is represented by three dummy coded variables serving simultaneously as the independent variable (D1: high verbal immediacy/high powerful language, D2: low verbal immediacy/high powerful language; D3: low verbal immediacy/low powerful language) as it compares to the reference condition: high verbal immediacy/low powerful language.

**Table 6.** Hypothesis 3  
*Unstandardized Model Estimates and Confidence Intervals*

Path $a(s)$ : Condition predicting PR: Anger and PR: Negative Cognitions	
PR: Anger	
$a_1$	$a_1 = -.01, t(229) = .36, p = .98, CI: [-.72, .71]$
$a_2$	$a_2 = .42, t(229) = .36, p = .25, CI: [-.29, 1.13]$
$a_3$	$a_3 = 1.06, t(229) = 2.91, p < .01, CI: [.34, 1.78]$
PR: Negative Cognitions	
$a_4$	$a_4 = -.16, t(229) = .75, p = .45, CI: [-.56, .25]$



$$a_5 = .13, t(229) = .63, p = .53, CI: [-.27, .53]$$

$$a_6 = \mathbf{.46}, t(229) = \mathbf{2.21}, p = \mathbf{.03}, CI: [\mathbf{.05}, \mathbf{.87}]$$

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 Path  $b(s)$ : PR: Anger and PR: Negative Cognitions predicting IFT
 

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PR: Anger

$$b_1 = -.07, t(227) = 1.15, p = .25, CI: [-.20, .05]$$

PR: Negative Cognitions

$$b_2 = -.10, t(227) = .84, p = .40, CI: [-.32, .13]$$


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 Path  $c'(s)$ : Condition predicting IFT
 

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$$c'_1 = .05, SE = .30, p = .86, CI: [-.53, .64]$$

$$c'_2 = -.04, SE = .30, p = .90, CI: [-.62, .54]$$

$$c'_3 = -.16, SE = .30, p = .61, CI: [-.76, .44]$$


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 Relative Indirect Effects
 

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 Condition  $\rightarrow$  PR: Anger  $\rightarrow$  IFT

$$ab_1 = .00, SE = .04, CI: [-.09, .08]$$

$$ab_2 = -.03, SE = .04, CI: [-.09, .04]$$

$$ab_3 = -.08, SE = .08, CI: [-.25, .06]$$

 Condition  $\rightarrow$  PR: Negative Cognitions  $\rightarrow$  IFT

$$ab_1 = .01, SE = .03, CI: [-.03, .10]$$

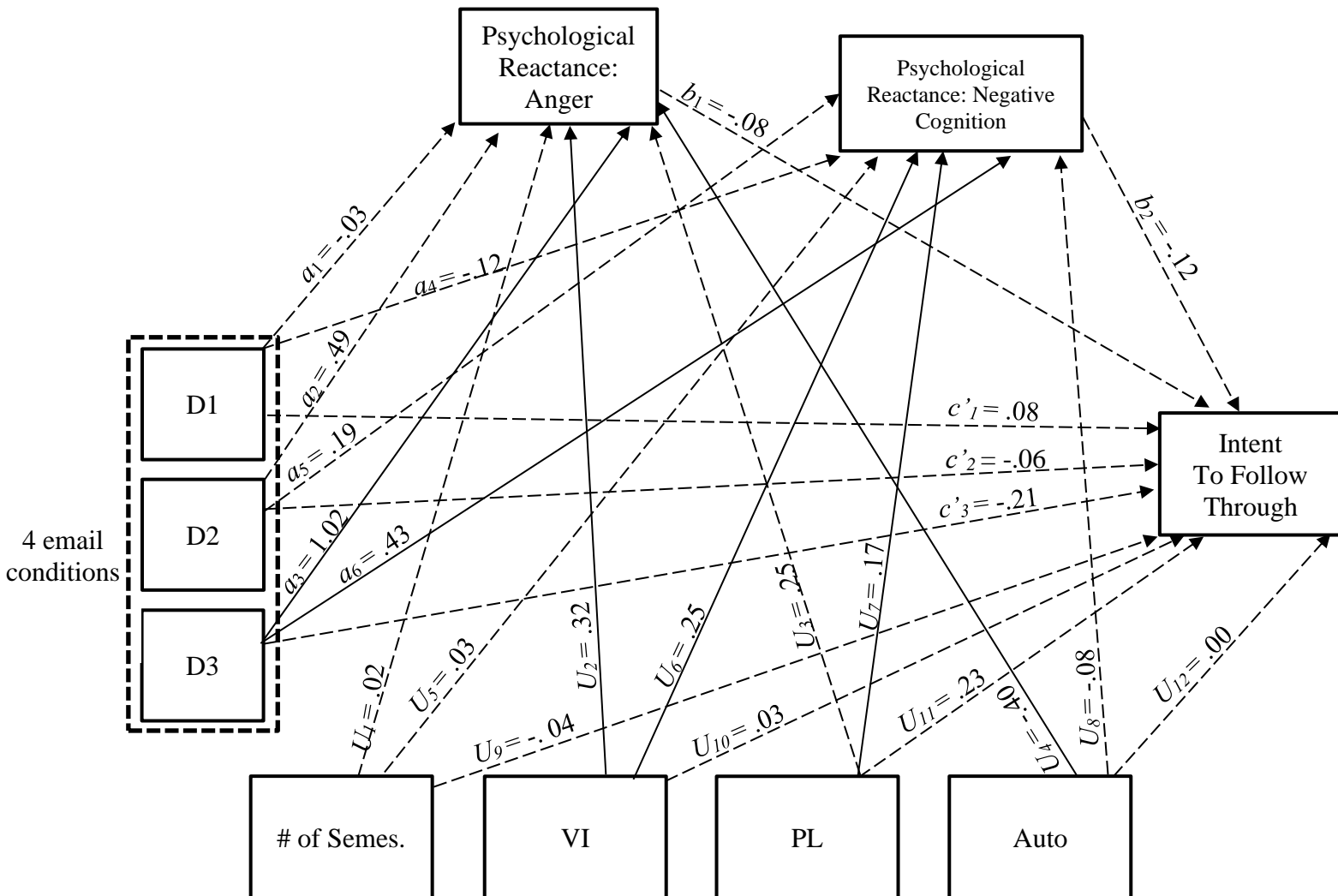
$$ab_2 = -.01, SE = .03, CI: [-.01, .04]$$

$$ab_3 = -.04, SE = .06, CI: [-.18, .05]$$


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*Note.* Bolded values indicate significance.

An additional analysis was run testing Hypothesis 3 including four covariates. Findings indicated significant effects of several covariates on the two dimensions of psychological reactance. A positive effect of both verbal immediacy expectations and students' need for autonomy on anger was revealed, as well as a positive effect of both verbal immediacy and powerful language expectations on negative cognitions. The number of semesters students have completed had no effect on any of the variables in the model. However, the results of the model before the addition of covariates did not change for lack of mediation. See Table 7 for unstandardized model estimates and Figure 2 for the final mediation model including paths, covariates, and confidence intervals.

**Figure 2.** Final Parallel Multiple Mediator Model with Covariates

*Note.* The multicategorical antecedent (4 instructor email conditions) is represented by three dummy coded variables serving simultaneously as the independent variable (D1: high verbal immediacy/high powerful language, D2: low verbal immediacy/high powerful language; D3: low verbal immediacy/low powerful language) as it compares to the reference condition: high verbal immediacy/low powerful language. Covariates are number of semesters completed (# of Semes.), verbal immediacy expectancy (VI), powerful language expectancy (PL), and need for autonomy (Auto).

**Table 7.** Hypothesis 3 with Covariates  
*Unstandardized Model Estimates and Confidence Intervals*

Path <i>a</i> (s): Condition predicting PR: Anger and PR: Negative Cognitions
<p style="text-align: center;">PR: Anger</p> $a_1 = -.03, t(223) = .09, p = .93, CI: [-.79, .66]$ $a_2 = .49, t(223) = 1.40, p = .16, CI: [-.20, 1.18]$ $a_3 = \mathbf{1.02}, t(223) = \mathbf{2.88}, p < \mathbf{.01}, CI: [\mathbf{.32}, \mathbf{1.72}]$
<p style="text-align: center;">PR: Negative Cognitions</p> $a_4 = -.12, t(223) = .61, p = .55, CI: [-.51, .27]$ $a_5 = .19, t(223) = .96, p = .34, CI: [-.20, .58]$ $a_6 = \mathbf{.43}, t(223) = \mathbf{2.18}, p = \mathbf{.03}, CI: [\mathbf{.04}, \mathbf{.82}]$
Path <i>b</i> (s): PR: Anger and PR: Negative Cognitions predicting IFT
<p style="text-align: center;">PR: Anger</p> $b_1 = -.08, t(221) = 1.18, p = .24, CI: [-.21, .05]$
<p style="text-align: center;">PR: Negative Cognitions</p> $b_2 = -.12, t(221) = 1.03, p = .30, CI: [-.35, .11]$
Path <i>c</i> '(s): Condition predicting IFT
$c'_1 = .08, SE = .30, p = .79, CI: [-.51, .67]$ $c'_2 = -.06, SE = .30, p = .85, CI: [-.64, .53]$ $c'_3 = -.21, SE = .31, p = .50, CI: [-.81, .40]$
Covariate Path U(s)
<p style="text-align: center;">PR: Anger</p> $U_1 = .02, t(223) = .40, p = .69, CI: [-.07, .11]$ $U_2 = \mathbf{.32}, t(223) = \mathbf{2.61}, p = \mathbf{.01}, CI: [\mathbf{.08}, \mathbf{.56}]$ $U_3 = .25, t(223) = 1.73, p = .09, CI: [-.03, .52]$ $U_4 = \mathbf{-.40}, t(223) = \mathbf{3.13}, p = \mathbf{.02}, CI: [\mathbf{-.65}, \mathbf{-.15}]$
<p style="text-align: center;">PR: Negative Cognitions</p> $U_5 = .03, t(223) = 1.15, p = .25, CI: [-.02, .08]$ $U_6 = \mathbf{.25}, t(223) = \mathbf{3.68}, p < \mathbf{.01}, CI: [\mathbf{.12}, \mathbf{.39}]$ $U_7 = \mathbf{.17}, t(223) = \mathbf{2.11}, p = \mathbf{.04}, CI: [\mathbf{.01}, \mathbf{.32}]$ $U_8 = -.08, t(223) = 1.13, p = .26, CI: [-.22, .06]$
<p style="text-align: center;">IFT</p> $U_9 = -.04, t(221) = .98, p = .33, CI: [-.11, .04]$ $U_{10} = .03, t(221) = .30, p = .76, CI: [-.18, .24]$ $U_{11} = .23, t(221) = 1.88, p = .06, CI: [-.01, .47]$ $U_{12} = .00, t(221) = .02, p = .98, CI: [-.22, .22]$

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 Relative Indirect Effects
 

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Condition → PR: Anger → IFT

 $ab_1 = .00$ , SE = .04, CI: [-.08, .09]

 $ab_2 = -.04$ , SE = .05, CI: [-.16, .04]

 $ab_3 = -.08$ , SE = .08, CI: [-.25, .06]

Condition → PR: Negative Cognitions → IFT

 $ab_1 = .01$ , SE = .03, CI: [-.04, .10]

 $ab_2 = -.02$ , SE = .04, CI: [-.12, .03]

 $ab_3 = -.05$ , SE = .06, CI: [-.19, .04]
 

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*Note.* Bolded values indicate significance.

Hypothesis 4 predicted that students' experience of psychological reactance from the use of powerful language would be negatively associated with both a) perceived instructor credibility, and b) intention to follow through with the instructors' request. Results of a Pearson correlation fully supported Hypothesis 4a; significant negative associations were revealed between anger and competence,  $r(230) = -.55$ ,  $p < .01$ , between anger and goodwill,  $r(230) = -.72$ ,  $p < .01$ , and between anger and trustworthiness,  $r(231) = -.62$ ,  $p < .01$ . Further, significant negative correlations were revealed between negative cognitions and competence,  $r(230) = -.46$ ,  $p < .01$ , between negative cognitions and goodwill,  $r(230) = -.60$ ,  $p < .01$ , and between negative cognitions and trustworthiness,  $r(231) = -.48$ ,  $p < .01$ . Regarding Hypothesis 4b results of a Pearson correlation revealed a significant negative relationship between anger and intention to follow through,  $r(231) = -.14$ ,  $p = .03$ , and between negative cognitions and intention to follow through,  $r(232) = -.13$ ,  $p = .05$ . Hypothesis 4 was fully supported. See Table 8 for all correlations.

**Table 8.** Correlation Matrix

Variable	M	SD	$\omega$	1	2	3	4	5	6	7	8	9	10	11
1. Number of Semesters	4.55	2.80	–	–										
2. Age	20.67	4.09	–	.32**	–									
3. Need for Autonomy	4.93	1.02	.74	-.04	.00	–								
4. Verbal Immediacy Expectancy	4.80	1.10	.57	.20**	.11	.21**	–							
5. Powerful Language Expectancy	5.76	.94	–	-.01	.00	.24**	.29**	–						
6. Anger	4.46	1.99	.95	.06	.11	-.14**	.18**	.14*	–					
7. Negative Cognitions	1.23	1.13	–	.11	.10	.10	.29**	.21**	.57**	–				
8. Competence	4.57	1.38	.90	.03	-.03	.05	-.14*	-.09	-.55**	-.46**	–			
9. Goodwill	3.38	1.53	.91	-.02	-.06	.04	-.17**	-.19**	-.72**	-.60**	.70**	–		
10. Trustworthiness	4.44	1.37	.91	-.01	-.02	.08	-.19**	-.11	-.62**	-.48**	.85**	.78**	–	
11. Intention to Follow Through	5.03	1.60	.84	-.07	-.10	.05	.01	.10	-.14*	-.13*	.21**	.23**	.21**	–

Note. \* $p < .05$ ; \*\* $p < .01$

My research question suggested that instructors' use of verbal immediacy language might moderate the negative effects of psychological reactance triggered by powerful language in instructor email requests and in turn their intention to follow through with instructor requests. Results of the index of moderation mediation (Hayes, 2015) did not reveal moderated mediation because the confidence interval contained zero; index of moderated mediation =  $-.07$ ,  $SE = .07$ ,  $CI [-.24, .04]$ .

## CHAPTER FOUR

### Discussion

This thesis explored how psychological reactance functioned in mediated communication between students and instructors providing evidence on the importance of instructor's language choice in crafting emails. While previous research has found evidence of reactance and restoration behaviors in the instructional context from instructor's language (Ball & Goodboy, 2014; Zhang & Sapp, 2013), the results of this study add valuable inquiry into the utility of instructor language in quelling or stoking student reactance. This chapter will further discuss the relevant findings, present important practical and theoretical implications, explore limitations of this design, and offer suggestions for future research.

Results of Hypothesis 1 found that students' reports of perceived credibility were positively associated with their intentions to follow through with the requests made by their instructors for all three dimensions of credibility. Consistent with previous research when students perceive their instructors as having more competence, goodwill, and trustworthiness they are more likely and willing to follow through with requests with these instructors (Myers, 2004; Zhang et al., 2011; Zhang & Sapp, 2013). Applying these results practically, establishing and maintaining high levels of these three dimensions of credibility would allow instructors to

garner more intention to follow through with their requests from students both in-person and over email. Alternatively, results from Hypothesis 4 revealed significant negative correlations between students' perception of instructor credibility and their experience of psychological reactance for both negative cognitions and anger. This indicates that as sources become less credible, in any dimension of credibility, there is an increase in students reporting higher levels of anger and negative cognitions toward the message and source. Additionally, students' intention to follow through with messages was also negatively correlated to their experience of psychological reactance (e.g., negative cognitions and anger).

These findings taken together provide support for the original conceptualization by Brehm (1966) of employing autonomy restoration techniques when experiencing psychological reactance. Results indicated that with higher reports of both anger and negative cognitions there is a decrease in evaluations of instructor's competence, goodwill, and trustworthiness. These results could be explained by the process of source derogation or the evaluation of an individual typically deemed credible as less credible to reduce their influence (Hammock & Brehm, 1966). When instructors craft messages that are likely to elicit negative cognitions and anger from their students it is less likely that their message will result in their students following through with the request as a result of decreased credibility. A possible remedy could be the inclusion of verbal immediacy cues in messages which evoke source derogation restoration techniques.

A surprising finding was revealed in testing the third hypothesis. Results revealed an effect between the use of verbal immediacy cues on students' experience of psychological reactance after reading the instructor's email. Surprisingly, findings indicated that in the presence of low powerful language cues the inclusion of verbal immediacy was shown to reduce both anger and negative cognitions about the message request and the instructor. However, despite the

predicted relationship between reported experience of psychological reactance and students' decreased intention to follow through with instructor requests, there were no mediation effects between either dimension of psychological reactance on students' intention to follow through with the request made by the instructor. Interestingly, while the only significant finding for this hypothesis was that low power messages created higher reactance in students there was an indication within the results that the relative indirect effect of reactance on intention to comply was trending toward negative significance. However, the confidence interval contained zero which indicates there was no significant impact on the students' willingness to follow through with the request in the email.

This finding may be explained by students' high expectations of powerful language from instructors. When students were confronted with instructors using powerless language cues their expectations of normative communication from instructors were likely violated increasing their negative cognitions about the instructor and anger toward the message (Burgoon et al., 2002b). For instance, one student described the use of low-powered language (e.g., hedges such as "I guess") by an instructor as "unprofessional" and found the email to be "not very helpful" and reported both of these cognitions as negative when listing their thoughts on the message. This is consistent with the findings of Haleta (1996) which state that instructor's use of powerless language resulted in negative impressions of these instructor's credibility and increased negative perceptions from students. Additionally, Bradac and Mulac (1984) found that the use of powerless language negatively affects impressions of a source's credibility in situations where powerful language and authority are deemed necessary (e.g., within a conversation between an instructor and student).



Further, these results support the normalcy of explicit and direct messages from instructors which contain imperatives (Miller et al., 2007). In fact, the results of hypothesis 2a found that the email manipulations containing more powerful language from instructors resulted in significantly higher evaluations of all three dimensions of credibility compared to the lower-powered language used by other instructors. This result supports findings that instructors who utilize powerless language are perceived as less credible due to their apparent lack of control and certainty (Hosman, 1989). These results indicate the importance of balancing the expected levels of powerful and controlling language attributed to the expanded bandwidth of credibility for certain sources (e.g., instructors) while being cognizant of the role these language choices play on students' levels of anger and negative cognitions (i.e., psychological reactance; Burgoon et al., 2002a; Miller et al., 2007).

Finally, the results of the research question which posited that verbal immediacy cues would moderate the effect of powerful language on students' experience of psychological reactance, and in turn, students' intention to follow through with instructors' requests revealed no evidence of moderated mediation. This could be attributed again to the expectation of instructors to use more powerful language cues such as imperatives and explicit language in email correspondence. However, taken together with other results in this thesis there are significant practical implications for the future of student/instructor email communication as well as broader implications for language choice within mediated communication overall.

Because verbal immediacy cues were found to significantly predict a decrease in reports of psychological reactance this implies that utilization of these cues in email communication could have a positive effect, especially when the use of imperatives and controlling language is necessary. Previous research has established the reduction of credibility and affect toward

instructors who employ controlling language (Burgoon et al., 2002a; Brehm, 1966; Miller et al., 2007; Worchel & Brehm, 1970), and further research has provided evidence of the opposite effect in verbally immediate instructors (Burroughs, 2007; Kearney et al., 1988; Kearney et al., 2006; Waldeck et al., 2001). Taken together with the current findings the application of verbal immediacy cues within mediated interactions, could not only decrease the negative effects of psychological reactance, but could also possibly mitigate residual lowered affective and credibility ratings from the use of powerful language. Future replication of this study should focus on exploring the role of including verbal immediacy cues in the reduction of the onset of students' experience of psychological reactance.

### **Practical Implications**

These findings support the notion that students perceive the use of powerful language within emails from instructors to be normal and expected, however, that does not mean that powerful language does not impact students' reactions to the message. Many students reported in the thought-listing activity that they found the powerful language used in the email manipulations to convey passive aggression on the part of the instructor which they reported as a negative cognition. Additionally, students reported that instructors in the high powerful language manipulations were seen as "jerks," "manipulative," and "unreasonable." While the results of these findings indicated that powerful language use did not predict a decrease in students' intention to follow through with requests it is clear that students encountering messages which use imperatives and explicit language still report feelings of anger and negative thoughts. When applying these findings practically, one should consider the deeper implications these negative cognitions may have on student perceptions of the instructor, especially in later reports of these impression such as overall instruction reviews in course evaluations.

When crafting emails that utilize powerful language cues, it is also important to consider the findings on the mitigating effect verbal immediacy has on students' psychological reactance levels. Students' have lower expectations of verbal immediacy in emails from their instructors and so the inclusion of cues such as the student's name, inclusive pronouns such as "we" and "our class," and language which communicates concern such as "I want you to do well" may positively impact their expectations resulting in reduced psychological reactance. That is, the inclusion of verbal immediacy can reduce negative cognitions and anger toward instructor messages which contain powerless language shifting the perspective from "too passive and unsure" to "caring" and "sincere." Future research should explore the influence of verbal immediacy cues which decrease the perceived psychological distance in powerless conditions on perceptions of credibility.

Finally, a practical application of this research not specifically derived from a single result is the necessity of setting expectations. Setting expectations for the type of language the instructor and the student should and will use in emails may mitigate any negative effect language choices may have in a specific course. Without specified and upheld expectations, students are likely to attribute more general perceptions of normative email behavior which may result in violations based on an individual's use of language cues, especially in persuasive messages (Burgoon et al., 2002b). Establishing and maintaining expectations for the language use in instructor emails will also provide students with a baseline of credibility from which to interpret emails. This is especially important when considering the influence perception of credibility has on students' experience of psychological reactance and their intention for following requests made by their instructors.

## **Theoretical Implications**

In terms of theoretical implications, this thesis extends the previous research of psychological reactance theory in the instructional context (Ball & Goodboy, 2014; Zhang & Sapp, 2013) adding valuable insight on this theory in a mediated context. As previously established when individuals are presented with autonomy-threatening messages they can enter a state of psychological reactance and thus become motivated to reestablish their threatened freedoms (Brehm, 1966; Brehm & Brehm, 1981). Consistent with seminal research on psychological reactance and freedom restoration (Brehm, 1966), when students encountered email messages from an instructor which threatened their ability to choose how to behave they reported higher anger, negative cognitions, and subsequently reported lower scores of credibility for the instructor (i.e., source derogation; Maile & Kizilbash, 1976). The results of this thesis emphasize the autonomy-threatening function of language in emails from sources of authority (Brehm, 1966; Lanceley, 1985; Miller et al., 2007) a function present even in environments where students expect more powerful language cues to be used by the source.

Additionally, taking these results into context, future research should explore the role of students' trait reactance (Hong, 1992; Hong & Faedda, 1996) prior to encountering autonomy-threatening messages in addition to measuring their state reactance. Previously, trait reactance has been positively correlated with state reactance (Shen & Dillard, 2005). This might indicate a higher propensity for some individuals to experience state reactance in autonomy-threatening situations. Because trait reactance is more enduring than state reactance future research could assess the individuals' reactance level based particularly on the situation or source at hand, and explore whether individuals high in trait reactance possess a stronger drive for restoration of freedoms in specific situations compared to individuals with low trait reactance.

Further, this thesis extends the research on language intensity in the realm of psychological reactance theory finding that using powerful language, while more direct, does not always result in higher reports of psychological reactance (Miller et al., 2007). The present findings instead support the notion that the perception of language intensity is context and source-specific with certain sources more likely and expected to implement harsher language without evident repercussion in the form of decreased intention to follow requests (Burgoon et al., 2002b). Future research should explore how different sources, with varying levels of expected credibility, may impact students', and individuals' in general, experiences of psychological reactance in the presence of powerful language cues in persuasive appeals.

Finally, the results on the influence of verbal immediacy cues emphasize the importance of their inclusion in persuasive messages to mitigate the influence of the negative cognitions and anger associated with psychological reactance, especially in situations where normative expectations may be violated. While there was not a significant moderation or mediation effect within this model, the significant effect verbal immediacy had on both anger and negative cognitions (i.e., psychological reactance) illuminates the necessity and relevancy of these verbal language cues in mediated communication where nonverbal immediacy is inaccessible. In consideration of previous research which argues that immediacy relies on the combination of nonverbal and verbal cues to elicit significant effects (Kearney et al., 1988; Witt & Wheelless, 2001; Witt et al., 2004), this finding opens the door for future exploration in how instructors' use of verbal immediacy cues can decrease the perceived psychological distance felt by their students prevalent in a mediated context.

### **Limitations and Future Research**

However, this thesis was not without limitations. The first limitation of this thesis was the use of participant-coded reports of negative cognitions via a thought-listing prompt after reading the email manipulations. Numerous participants misconstrued the instructions pertaining to the thought-listing prompt and reported facts about the manipulation itself (e.g., “the email was formatted good”) or included personal experience that mirrored the situation detailed in the manipulation (e.g., “I had a similar experience...I know no one so it was not helpful”). Another limitation associated with this thought-listing prompt was the participant-coding of the valence of their specific thoughts. The format allowed participants to rate their thoughts as positive, negative, or neutral which resulted in some students reporting negative cognitions as positive or neutral or not rating them at all. Future replications of this study should consider clarifying the language in the instructions to ensure participants are exclusively reporting information about negative thoughts they had while reading the instructor’s email and not negative thoughts about the student (e.g., “The student should've looked at the syllabus before emailing the professor” ) or the format of the manipulation itself (e.g., “easy to read”).

An additional limitation was the nature of academic experience for the current sample. History effects may have played a key role in this specific sample of students’ interpretation of these messages as all participants in this study were currently enrolled in at least one, if not exclusively enrolled in, online classes. Many participants responded to the thought-listing prompt with their own complaints about online classes and the decreased likelihood of knowing other people in their own online courses (e.g., “what if I don't know any people in my class to get notes from”) which may have created more negative cognitions about the instructor’s request to obtain notes from another classmate. Similarly, many participants reported that these emails and

online classes make them anxious especially if the students do not know anyone in the class. There were several responses in the thought-listing activity which referred to feeling nervous about not knowing other students (e.g., “I may not know anyone in the class” and “nervous I won’t be able to find anyone to send me those notes”). Personal experience, especially negative experience, may have had an influence on the perception of the instructors in all conditions and should be considered when interpreting the results of this thesis.

A third limitation of this thesis was the use of contrived scenarios which exclusively examined student perception of credibility based on a single email response from an instructor. Additionally, they knew very little information about especially pertaining to the relationship they, as the student, had with this instructor. In a more realistic scenario, students would encounter multiple emails from the same source allowing for impressions to form about the source themselves as well as expectations pertaining to the language choices they use within their emails. In the scenario presented in this thesis, students were evaluating their perception of the credibility of a source who they had never encountered before with no indication of the qualifications and characteristics of the speaker. This may have skewed the results of the three credibility dimensions as student participants understood this situation was not real nor would they interact with this instructor again after this experimental manipulation.

Future directions should address this matter in one of two ways. If replications of this research maintain the vague nature of the email source, an additional item asking participants if and whom they pictured after reading the email manipulation could result in a broader understanding of the evaluative process of the speaker taking into consideration personal factors such as age, gender, sexuality, etc. which could influence the perception of the source as credible and or persuasive. Alternatively, if future research employed specific decisions pertaining to

source characteristics and language choices, especially through the use of multiple emails, the researcher could measure how these specific elements may have mediating effects on the perception of credibility, the persuasiveness of the message, and how likely students are to follow through with requests that trigger psychological reactance.

Finally, a related limitation was the perceived realism of some email manipulations used in this thesis. Due to the contrived nature of these email manipulations the realism scores attained in the manipulation check for two of the four manipulations were not significantly different from the neutral middle option. This result is likely due to the manipulation of low powerful language using hedges such as “I guess” which students are unlikely to see in an email from their instructor. While low powerful, or powerless language hedges such as these are not uncommon in face-to-face communication, it is likely that the realism score was decreased due to the asynchronous nature of email communication which typically allows for more planned and reviewed communication. Additionally, the low verbal immediacy manipulations were not perceived as significantly different from the mean, but this could possibly be accounted for by the more subtle nature of verbal immediacy cues and the expectation of instructors to use more controlling language. The low verbal immediacy cues which intended to decrease perceived distance (e.g., “my class” versus “our class”) may have been seen as normal if their expectation for instructors is to use more explicit language. Future replications should account for this issue by assessing the realism of language in person and via email to account for possible uses of powerful/powerless language by instructors in general. Additionally, a stronger manipulation check assessing the verbal immediacy manipulation, which should be repeated in the main study, may also account for a different perception of realism.



## **Conclusion**

This thesis adds valuable insight on the role of psychological reactance on students' perceptions of their instructors based on their use of language in emails, further solidifying its relevance in the instructional communication context. Further, the results highlight a unique relationship between powerless language cues and psychological reactance which is assuaged through the inclusion of verbal immediacy cues. This finding expands the scope of previous language intensity research and provides an outlet for future research. Taken together, individuals of power and high credibility, particularly in an instructional context, should consider the results of this study when crafting mediated messages. These findings are especially relevant if the intended messages are persuasive in nature, in order to avoid psychological reactance and improve the likelihood of individuals following through with requests.

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## Appendix A

Printed (Bulletin Board) Advertisement:

Dear WVU Student,

If you are (1) *18 years or older* and are (2) *currently enrolled in as an undergraduate student*, you are eligible to participate in a research study examining college students' attitudes toward instructor requests via email. Students may earn extra credit for participation in this research study. To find out if you are eligible, please consult your course syllabus for your instructor's policy on extra credit.

This anonymous survey will take approximately 15 minutes to complete and is being conducted by Christiana A. Robey and Dr. Alan K. Goodboy in WVU's Department of Communication Studies in 108 Armstrong Hall, P.O. Box 6293, Morgantown, WV 26505.

If you wish to participate in this voluntary research study, you can follow the link below to learn the details of the study and complete the survey. This survey will in no way identify you to your survey responses.

**Survey Link:** [https://wvu.qualtrics.com/jfe/form/SV\\_d4DUWtDSEktGXpc](https://wvu.qualtrics.com/jfe/form/SV_d4DUWtDSEktGXpc)

If you would like more information about this research project, feel free to contact co-investigator Christiana A. Robey at [car0007@mix.wvu.edu](mailto:car0007@mix.wvu.edu)  
West Virginia University's Institutional Review Board acknowledgment of this project is on file (Protocol: 2103255683).

Thank you very much for your participation.

Respectfully,

**Dr. Alan K. Goodboy**

Professor

Principal Investigator

[agoodboy@mix.wvu.edu](mailto:agoodboy@mix.wvu.edu)

**Christiana A. Robey**

M.A. Student

Co-investigator

[car0007@mix.wvu.edu](mailto:car0007@mix.wvu.edu)

## Appendix B

Cover Letter

Dear Participant,

This letter is a request for you to take part in a research project examining college students' attitudes toward instructor requests via email. This project is being conducted by Christiana A. Robey in the Department of Communication Studies at WVU under the supervision of Dr. Principal Investigator Alan K. Goodboy, in the Department of Communication Studies to fulfill requirements for a master's degree in Research.

If you decide to participate, you will be asked to read a sample email and respond to a series of questions corresponding with the email. Your participation in this project will take approximately 15 minutes to complete. You must be 18 years of age or older to participate. Students may earn extra credit for participation in this research study.

Your involvement in this project will be kept as confidential as legally possible. All data will be reported in the aggregate. You will not be asked any questions that could lead back to your identity as a participant. Your participation is completely voluntary. You may skip any question that you do not wish to answer, and you may discontinue at any time. Your class standing will not be affected if you decide either not to participate or to withdraw. West Virginia University's Institutional Review Board acknowledgement of this project is on file (Protocol: 2103255683). Your email address will be requested so that we can enter your name in order to award extra credit. However, it will be stored separately from any data collected in the study.

If you have any questions about this research project, please feel free to contact me the co-investigator at [car0007@mix.wvu.edu](mailto:car0007@mix.wvu.edu). If you have any questions about your rights as a research participant, please contact the WVU Office of Human Research Protection by phone at 304-293-7073 or by email at [IRB@mail.wvu.edu](mailto:IRB@mail.wvu.edu).

I hope that you will participate in this research project, as it could help us better understand students' attitudes toward instructor requests. Thank you for your time and consideration.

Sincerely,

Christiana A. Robey

WVU Communication Studies M.A. Student

[car0007@mix.wvu.edu](mailto:car0007@mix.wvu.edu)

## Appendix C

Manipulation Check Scales**Email Expectations (Gorham, 1988; Miller, 2007; Witt & Wheelless, 2001)**

Directions: Think back on your own experience with instructor email interactions. How would you describe the communication style you expect from your professors via email? Please indicate the extent you agree with the following statements

Response Format: (1) Strongly Disagree – (7) Strongly Agree

1. I expect emails from my instructors to address me by name.
2. I expect my instructor to use explicit and direct language that tells me exactly what I should do in their emails that contain requests.
3. I expect emails from my instructors that criticize or point out faults in students' work, actions, or comments.
4. I expect my instructors to use phrases like "I guess" or "maybe" in their emails that contain requests.

**Basic Needs Satisfaction (Autonomy; Gagné, 2003)**

Directions: Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you.

Response Format: (1) Not true at all – (7) Very true

1. I feel like I am free to decide for myself how to live my life.
2. I feel pressured in my life.
3. I generally feel free to express my ideas and opinions.
4. In my daily life, I frequently have to do what I am told.
5. People I interact with on a daily basis tend to take my feelings into consideration.
6. I feel like I can pretty much be myself in my daily situations.
7. There is not much opportunity for me to decide for myself how to do things in my daily life.

## Appendix D

Experiment Post-Test Scales**Number of Semesters**

Directions: Please report the number of semesters you have completed (including summer semesters) in college.

Response Format: Open-ended

**Source Credibility (McCroskey & Teven, 1999)**

Directions: Referring back to the email above, how would you rate the INSTRUCTOR on the following items

Response Format: 7-pt Bipolar

1. Intelligent—Unintelligent
2. Untrained—Trained
3. Cares about me—Doesn't care about me
4. Honest—Dishonest
5. Has my interests at heart—Doesn't have my interests at heart
6. Untrustworthy—Trustworthy
7. Inexpert—Expert
8. Self-centered—Not self-centered
9. Concerned with me—Not concerned with me
10. Honorable—Dishonorable
11. Informed—Uninformed
12. Moral—Immoral
13. Incompetent—Competent
14. Unethical—Ethical
15. Insensitive—Sensitive
16. Bright—Stupid
17. Phony—Genuine
18. Not understanding—Understanding

**State Reactance (Anger; Dillard & Shen, 2005)**

Directions: Referring back to the prompt please indicate the extent to which you felt the following emotion statements after reading the INSTRUCTOR'S email response.

Response Format: (1) None of this feeling – (7) A great deal of this feeling

1. Irritated
2. Angry
3. Annoyed
4. Aggravated

### **State Reactance (Negative Cognition; Dillard & Shen, 2005)**

Directions: In the space provided below, please list out all of the thoughts you had while reading the email just presented to you. Then, please indicate if each thought you list was a positive, negative, or neutral thought. You may, but do not need to, fill in every box.

Response Format: Open ended

### **Intention to Follow Through (Ajzen, 1991; Moore & Richards, 2019)**

Directions: Referring back to the prompt please indicate the extent to which you agree with the following prompts regarding the request stated in the INSTRUCTOR'S response.

Response Format: 7-pt Bipolar

1. How likely are you to follow the request to contact a classmate made by the instructor?
  - a. Unlikely—Likely
2. How possible is it that you will follow the request to contact a classmate made by the instructor?
  - a. Possible—Impossible
3. Would you follow the request to contact a classmate made by the instructor?
  - a. Would—Would not

### **Email Expectations (Gorham, 1988; Miller et al., 2007; Witt & Wheelless, 2001)**

Directions: Think back on your own experience with instructor email interactions. How would you describe the communication style you expect from your professors via email? Please indicate the extent you agree with the following statements

Response Format: (1) Strongly Disagree – (7) Strongly Agree

1. I expect emails from my instructors to address me by name.
2. I expect my instructor to use explicit and direct language that tells me exactly what I should do in their emails that contain requests.
3. I expect emails from my instructors that criticize or point out faults in students' work, actions, or comments.
4. I expect my instructors to use phrases like "I guess" or "maybe" in their emails that contain requests.

### **Basic Needs Satisfaction (Autonomy; Gagné, 2003)**

Directions: Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you.

Response Format: (1) Not true at all – (7) Very true

1. I feel like I am free to decide for myself how to live my life.



2. I feel pressured in my life.
3. I generally feel free to express my ideas and opinions.
4. In my daily life, I frequently have to do what I am told.
5. People I interact with on a daily basis tend to take my feelings into consideration.
6. I feel like I can pretty much be myself in my daily situations.
7. There is not much opportunity for me to decide for myself how to do things in my daily life.