

Volume 11, Number 15

Submitted: July 3, 2006

First Revision: July 27, 2006

Second Revision: August 11, 2006

Accepted: August 16, 2006

Published: August 16, 2006

### THE INFLUENCE OF PHONETIC ABBREVIATIONS ON THE EVALUATION OF STUDENT PERFORMANCE

Gary W. Lewandowski Jr.

Samantha Harrington

Monmouth University

#### ABSTRACT

*This study explores the effect of an e-mail that contains phonetic abbreviations and acronyms on subsequent evaluations of students and their writing ability. A sample of 87 (36 male, 51 female) college students, who assumed the role of a college professor, read a student e-mail, evaluated the student's Philosophy essay, assisted the student with aspects of the essay, and finally, gave their impressions of the student. The nature of the student's e-mail was manipulated such that in one condition the e-mail utilized phonetic abbreviations and acronyms (e.g. How R U?), while the other condition made an identical request using proper grammar (e.g. How are you?). As hypothesized, those in the phonetic abbreviation condition were perceived less favorably compared to the normal e-mail condition on several personality characteristics, and were perceived to have put forth less effort on their essay. No significant effects were found for grade on the essay, willingness to help, or for perceived plagiarism. The findings suggest that different communication styles within an e-mail may create perceptual biases that influence perceptions of the e-mail's author*

With the advent of new forms of communication, such as e-mail and instant messaging, the necessity of seeking help from a professor in person during office hours decreases. However, the use of e-mail may introduce new issues that could influence professors' impressions of students and their work. Without contextual cues, such as facial expressions or voice inflection, the content of an e-mail may be particularly influential in the impression formation process (Jessmer & Anderson, 2001). Many students today frequently communicate via e-mail, instant message programs, and through text-messaging with cell phones. Phonetic abbreviations and acronyms of words and phrases (e.g. How R U? versus How are you?, or TTYL versus Talk to you later) that speed communication have become more customary over e-mail and instant message programs. This has become so prevalent that entire websites are dedicated to teaching this style of shorthand (e.g. [www.netlingo.com](http://www.netlingo.com)). Previous research has indicated that the use of slang is prevalent amongst many college students, with some slang specific to one campus itself, and others found to be general across many campuses (Hummon, 1994). While this style of informal communication may be common among students, it is not the norm in more formal settings like college. The present study examines the influence that an e-mail's format (abbreviations or proper grammar) has on perceptions of the sender, judgments of student work, and willingness to help the student.

### **General Influences on Perception**

When communication takes place in a written format, the writer's use of grammar may provide information that can bias person perception. Previous research on this topic asked participants to imagine they were at their place of work and, as part of a within-subjects design, were provided an e-mail request from a co-worker (Jessmer & Anderson, 2001). In one condition, the request was made with proper grammar. The second condition contained the same request with improper grammar (e.g. misspelled words, typographical errors, punctuation mistakes). Results showed that perceivers found authors of e-mails with proper grammar more likeable and friendly, and were more willing to work with the author, compared to authors of grammatically incorrect requests. This suggests that aspects of writing structure may influence the perception of the author. It is also possible that the style of writing could influence perceptions.

To test this, Jessmer and Anderson (2001) also evaluated how the politeness of a request affects perceptions of a writer. Polite requests made used "please" and apologized for inconveniences. Impolite messages used threats, demands, and had sections written in all capital letters. Individuals who wrote requests in a polite manner were thought to be more competent, friendly, likeable, and increased participants interest in working with the writer compared to those who made impolite requests. Taken together, these findings demonstrate that the nature of an e-mail request has important implications for how the sender is perceived.

In light of the effects of writing style on willingness to work with the author, it is possible that perceptions of the author's effort change. Student effort is particularly difficult to measure because it is often manifested as time spent studying outside of the academic environment. Thus, professors have no direct means of observing or assessing student effort. However, perceptions of effort may have important implications for grading in an academic setting.

One study explored the accuracy of sixth grade math teachers' perceptions of student effort (Jussim, 1989). Results based on student and teacher assessments of effort revealed that teachers' evaluations of effort were based on student performance in class, which were often in direct contrast to students self-report of effort. This discrepancy is important because students' perception of effort positively correlated with the grade the student was assigned. However, students' scores on standardized tests did not reflect the grades. These findings suggest that teachers assessing writing ability may be biased in a similar manner, such that the style or format of writing may influence the teacher's perception of student effort.

### **Impression Formation and E-mail Communication**

E-mail communication presents unique challenges for communication due to lack of contextual/non-verbal cues, which increases the possibility that people may misconstrue messages. This may obscure the author's intended message. In fact, previous research shows that the sender's egocentrism plays a role in this process (Kruger, Epley, Parker, & Ng, 2005). This study found that egocentrism impedes the ability of e-mail writers to properly assess the difficulty of conveying things such as humor and sarcasm over e-mail when contextual cues (voice inflection, facial expression) are absent. As a result, the author of an e-mail may take for granted that the reader knows what the true intention of the e-mail was, or may assume that the reader overlooks less important details in the e-mail such as punctuation and grammar. Thus, the potential negative impact the e-mail has on perceptions of the sender is not fully considered. This may be one way it might reflect negatively on perceptions of the sender's personality.

In fact, previous research has shown that individuals infer personality traits from e-mail (Gill, Oberlander, & Austin, 2005). Participants made judgments of personality from a stranger's e-mail to a friend. Six e-mail conditions represented high and low levels of three traits (extraversion, psychoticism, and neuroticism). Results showed high inter-judge and target-judge agreement on extraversion and psychoticism, but low agreement for neuroticism. This demonstrates that individuals can reliably identify some personality traits based upon an e-mail's content, and that receiver's perceptions are not fully congruent with the sender's intentions. This suggests that writers need to be more conscientious of how they construct e-mails.

### **The Present Study**

Taken together, previous findings suggest that alternative formats of writing, such as the use of abbreviations, may lead the receiver to form unanticipated perceptions. Because students may frequently use abbreviations in their personal communication, they may not anticipate the negative impact it might have on perceptions of their personality, the effort they put forth, or on the grade they receive from a professor. This is important in light of findings that teachers' perception of effort influence grades, but that these perceptions may be inaccurate (Jussim, 1989).

Past research fails to examine how a student's use of abbreviations influences other's perceptions (i.e. how dependable, hard-working, or intelligent the student is). Further, research has failed to determine if the use of abbreviations influences other's perceptions of effort, willingness to help the sender, and the grade the sender receives on a subsequent essay.

An experiment that examines the influence of type of e-mail (abbreviated format vs. proper grammar) on perceptions of the student and their work was conducted to address previous shortcomings. The present study is the first to explore the potential priming effect that abbreviations have on person perception. We tested the following hypotheses:

1. Students who e-mail in proper grammar will be perceived as more dependable, hard-working, intelligent, motivated, responsible, and studious than those who e-mail using abbreviations.
2. Students who e-mail in proper grammar will result in a better grade on the subsequent essay than those who e-mail using abbreviations.
3. Students who e-mail using proper grammar will receive more help than those who e-mail using abbreviations.
4. Students who e-mail in proper grammar will be regarded as having put forth more effort into the subsequent essay than those who e-mail using abbreviations.
5. Students who e-mail in abbreviations will be perceived as more likely to have plagiarized their essay than those who e-mail using proper grammar.

## **METHOD**

### **Participants**

36 males and 51 females ranging in age from 18 to 51 ( $M = 20$ ) from a private Northeast university participated in this study. (Thirteen participants were excluded from the study because of failure to follow directions or left a majority of the posttest incomplete.) The participants were primarily Caucasian (82.8%). 39.1% of the participants were freshmen, 24.1% sophomores, 24.1% juniors, and 12.6% seniors. As part of a course requirement to participate in a research study or summarize an article, participants volunteered to take part in this study from a list of available studies on the Psychology department's on-line research participation pool. Course credit was given to each student in exchange for participation in this study.

### **Materials**

The study used the following materials: an e-mail to a professor, a philosophy essay, a packet of dependent measures, a demographic sheet, and a dictionary.

### ***Person Perception***

Participants' perception of the student was based on the following adjectives: dependable, hard-working, intelligent, motivated, responsible, and studious. Participants rated each single characteristic on a 7-point Likert scale (1 = not at all to 7 = extremely) based on how descriptive each was of the student. For overall perception, a mean score was also created for the combination of all six adjectives.

### ***Perceived Effort***

The following single item: "How much effort do you think the student put into writing their essay?" assessed perception of effort. Participants made responses on a 7-point Likert scale (1 = None to 7 = A Great Deal).

### ***Plagiarism Assessment***

The following single item assessed plagiarism: "In your opinion, how likely is it that this student plagiarized in their paper?" Participants made responses on a 7-point Likert Scale (1 = not at all likely to 7 = extremely likely).

### ***Student Grade***

Evaluation of the student was measured via grade participant gave to the student's essay. Participants circled one of ten grades (A = 1, A- = 2, B+ = 3, B = 4, B- = 5, C+ = 6, C = 7, C- = 8, D = 9, F = 10), which are based on the University's system for final grades. This was done to ensure that students were familiar with the grading system.

### ***Willingness to Help***

The student e-mail posed several questions that, based upon participant's responses assessed willingness to help. Following the essay, students asked: "I wasn't sure if I used the word perspicacious right in the second paragraph. Is it right? If not, I also considered using magnanimous. Which do you think is better?" We coded responses as 0 = incorrect/no help (participant did not indicate either word was wrong, or said that the perspicacious was correct), 1 = partial (participant responded that perspicacious was wrong, but that magnanimous was okay), or 2 = correct (participant responded that both word choices were wrong and/or offered an appropriate alternative) Participants had a dictionary so that they could easily look up the words. Based on definitions in the dictionary, both words were clearly inappropriate for the context of the sentence. However, we cannot rule out the possibility there were participants who believed one of the words was correct even after looking them up in the dictionary. The use of two incorrect words gave them two chances to offer help: 1) by identifying perspicacious as incorrect for the sentence, and 2) by identifying magnanimous as incorrect for the sentence as well. Thus, incorrectly stating that either perspicacious or magnanimous was appropriate was coded as not offering help because the participant could have easily looked up the words, and provided correct feedback. Because there were two chances to help, this item was coded to reflect partially and fully correct answers.

The second question asked, "Did I make any grammatical mistakes (ex. awkward sentences, word usage)? If so, could you circle them for me to correct?" Responses were coded as 0 = incorrect/no help (participant did not circle any part of the essay), 1 = correct (participant correctly identified and circled at least one error). The final question asked "I was a little stuck on what to write about the role of money in the society. Any ideas?" Responses were coded as 0 = incorrect/no help (participant did not provide any response or any guidance about a possible answer), 1 = correct/helped (participant gave a response that offered either a possible solution, or hints about how the student could generate an idea of their own). Overall willingness to help was calculated as the sum of responses to the three questions.

## **Demographics**

The demographic questionnaire asked participants to provide information about themselves including: age, gender, race/ethnicity, class level in college, familiarity with abbreviations, whether he/she is in (or had taken) Introduction to Philosophy, ease with which participant was able to role-play as the professor, and a manipulation check based on content from the student essay to evaluate how thoroughly the participant had read it.

## **Design**

This experiment employed a between-subjects design. The independent variable was e-mail style. The first level was an e-mail that contained proper grammar with well-constructed thought out sentences:

Hello, How are you? My name is Tina and you are my Professor for Philosophy. Because I want a good grade, I was hoping you could look over my essay before I turn it in. Is there anyway you could help me with this? By the way, please see below for a few questions. If you could get this to me as soon as possible that would be great. If not, no big deal, but any help at all would be great. Thanks...see you in class! Tina

The second level was an e-mail that contained abbreviations (i.e. shorthand versions of the words):

Hello, How R U? My name is Tina and UR my Prof 4 Philosophy. B/C I want a good grade, I was hoping you could look over my essay b4 I turn it in? Is there n-eway U could help me w/ this? BTW, pls C below 4 a few questions. If U could get this 2 me asap that would B gr8. If not, NBD, N-E help @ all would B gr8. Thanx...c-u in class! Tina

The dependent variables were person perception of the student, plagiarism assessment of the Philosophy paper, willingness to help the student, perceived effort, and grade evaluation. Participants received one level of the independent variable through random assignment.

## **Procedure**

Through the university online Research Participation Pool, participants volunteered for a time slot in 15 minute intervals. Prior to the experiment, participants were given informed consent forms. After participants provided informed consent, they were given the following instructions:

For this experiment, please imagine that you are a professor for undergraduate "Founders of Philosophy." The undergrads in that class have an assignment to describe what they think an ideal or Utopian society would look like. As the professor, you told the students that they could e-mail you a draft of their essay for you to read and answer specific questions on it, as well as tell the student what grade they would get in the essay if this was their final version. One of the students from the class has sent you an e-mail asking for your help. To make it easier to respond to, the e-mail has been printed out so you can give it to the student next class.

Following an e-mail, participants in both conditions read the same one-page Philosophy essay (drafted such that it includes several obvious errors) entitled "My Utopia" as follows:

The challenge presented to each creator of an Utopian society is to devise a world in which the greatest number of people will experience the "ideal" existence. This is truly a challenge because the "ideal" varies from individual to individual. Furthermore, each person's subjective experience in the novel world is dependent and highly relative to his or her previous experiences with the world around them. For these reasons, any formulation of a Utopia must begin with the goal of doing the greatest good for the greatest number of people. It is in this effort that the following Utopia was developed.

Many aspects of the Holla society will mock present society. This is done in an effort to make the transition to the new society as easy as possible. The rationalization behind this is the general nature of humans. We as a people are very perspicacious. Basically we don't like change. As this seems to be an inherent quality of most human beings, it will be utilized in most facets of the Holla society.

Of particular importance to people of Holla is the manner in which the government is organized. The basic organization of the government will be the same, three distinct branches working in an interconnected fashion. There will still be a Legislative, Executive, and Judicial branch of government. However, the members comprising each branch will be of a different nature. Political positions are based on occupation. The reason is the fact that a person's occupation is perhaps the single most important aspect in their life. A person's job is their position in society. Their contribution defines. Certainly, people generally have more at stake when political issues are decided in a context relevant to their job. Each occupation will be represented by an representative from that field.

The public will have the power to elect the representatives for their job group. However, their power will be extended slightly as they will have a vote in each major decision brought before the governing branches. In this way, political involvement will be more of a hands-on undertaking, extinguishing feelings of apathy and helplessness often associated with present governing procedure. The aforementioned conditions and aspects of government are applicable to each member of society equally and without bias or discrimination. This holds for race, religion, gender, and sexual associations.

The society of Holla will strive to be free of government control, and have the government be unobtrusive and lenient. For example, people will be able to exercise freely their existential freedom regarding the use of drugs. Those choosing to indulge their time, life, and money into drug use will be permitted to do so at their leisure and consequence. However, they will be forced to deal with any consequences of their actions through banishment or death. Potential grounds for reprimand include driving, going to work under the influence, parenting while abusing, or any crime associated with the drug's acquisition.

Generally speaking, the society of Holla will be a tolerant world allowing each individual to experience life in a manner most suitable to them. While it is altogether impossible to create a

world amenable to all individuals, it is possible to formulate an environments in which everyone can find their own happiness. That is the one characteristic of Holla that makes it a Utopia.

To measure participant's willingness to help, the essay contained several grammatical mistakes (e.g. "there" instead of "their," sentence fragments, awkward sentences), and a misused word. These errors provided participants with an opportunity to make corrections and suggestions. After the participant completed the questions following the essay and the demographic sheet, they were debriefed and asked to refrain from discussing the experiment with others to maintain the integrity of the study.

## RESULTS

### Demographics

On average, participants were familiar with abbreviations ( $M = 5.77$ ,  $SD = 1.31$ ) on a 7-point Likert scale, (93.1% were above the scale's midpoint). On average, participants reported that playing the role of professor in the experiment was easy ( $M = 3.48$ ,  $SD = 1.03$ ) on a 5-point Likert scale, 78.2% above midpoint. Table 1 shows means and standard deviations for all dependent variables by condition. All results are reported using two-tailed analyses.

**Table 1 E-mail Style Differences on Key Variables**

Variable	Proper Grammar	Abbreviations	<i>t</i>	Effect Size
Grade	4.78 (1.93)	5.26 (2.22)	-1.06	0.11
Perceived Effort	4.52 (1.31)	3.89 (1.50)	2.10*	0.22
Plagiarism	3.31 (1.49)	3.56 (1.59)	-0.44	0.05
Willingness to Help	2.31 (0.60)	2.22 (0.73)	0.61	0.07
Dependable	4.95 (1.23)	4.29 (1.46)	2.29*	0.24
Hard-Working	5.43 (1.04)	4.38 (1.46)	3.78**	0.38
Intelligent	5.00 (1.38)	4.41 (1.38)	2.00*	0.21
Motivated	5.71 (1.07)	4.93 (1.62)	2.64**	0.28
Responsible	5.64 (1.21)	4.78 (1.51)	2.94**	0.30
Studious	5.55 (1.10)	4.26 (1.52)	4.50**	0.44

Note.  $n = 87$  (Proper grammar  $n = 42$ ; Abbreviations  $n = 47$ ). Higher scores indicate a greater magnitude of each variable. All analyses are two-tailed. \*  $p < .05$ ; \*\*  $p < .01$

### Dependent Variables

We conducted an independent samples t-test to test differences between proper grammar e-mail and abbreviations e-mail conditions across each of the dependent variables. As seen in Table 1, as predicted, results of the analysis for overall person perception (as well as each of the individual characteristics), and perception of effort put forth were significant and had a small effect size. It should be noted that the magnitude of the mean difference between conditions for these variables is approximately one point (on a 7-point scale), and that perceptions in the abbreviation condition still fall above the scale midpoint. This suggests that although the abbreviation condition produces less favorable impressions than the proper grammar condition,

the impressions are not negative overall. In addition, the differences between conditions, although significant and of a small effect size, may not be observable.

In sum, this demonstrates that those who e-mailed using proper grammar were perceived as more dependable, hard-working, intelligent, motivated, responsible, and were thought to have put forth more effort compared to those who e-mailed using abbreviations. Comparisons of the two conditions on grading (on average, both conditions gave the paper the equivalent of B-), plagiarism evaluation, and willingness to help were inconclusive.

**Exploratory Analyses**

Although not hypothesized, based on previous research (Jussim, 1989) we also examined whether person perceptions and perceptions of effort influenced grading. Table 2 shows correlations among these variables, as well as descriptive statistics for each variable. As can be seen from the Table, perceived effort ( $r = -.52, p < .001$ ), and overall person perception ( $r = -.48, p < .001$ ) were both negatively correlated with grade given to the essay. (Please keep in mind that the correlations are negative due to the scaling of the item). For person perception, this pattern was significant for each of the six individual characteristics. These findings demonstrate that those who were perceived more favorably and who were perceived to put forth more effort received higher grades.

**Table 2 Descriptive Statistics and Correlations among Key Variables**

	1	2	3	4	5	6	7	8	9	10	11
1. Grade	5.03 (2.09)										
2. Overall Perception	-.48**	4.94 (1.91)									
3. Effort	-.52**	.73**	4.20 (1.44)								
4. Plagiarism	.02	-.27*	-.19	3.39 (1.53)							
5. Willingness to Help	.13	.08	-.08	-.08	2.26 (0.66)						
6. Dependable	-.44**	.82**	.56**	-.24*	.03	4.61 (1.38)					
7. Hard-working	-.43**	.88**	.66**	-.29**	.02	.74**	4.89 (1.39)				
8. Intelligent	-.57**	.76**	.60**	-.19	-.01	.54**	.64**	4.70 (1.40)			
9. Motivated	-.30**	.86**	.61**	-.27*	.14	.62**	.68**	.56**	5.31 (1.42)		
10. Responsible	-.27*	.83**	.56**	-.15	.19	.59**	.65**	.49**	.75**	5.19 (1.43)	
11. Studious	-.42**	.87**	.65**	-.19	.06	.61**	.71**	.64**	.70**	.70**	4.88 (1.48)

Note.  $n = 87$ . Higher scores indicate a greater magnitude of each variable. All analyses are two-tailed. \*  $p < .05$ ; \*\*  $p < .01$

## **DISCUSSION**

The current study examined the influence of e-mail writing style on perceptions of the author. Specifically, we hypothesized that compared to those who used abbreviations, students who used proper grammar would: (a) be perceived as more dependable, hard-working, intelligent, motivated, responsible, and studious, (b) would receive a better grade on the subsequent essay, (c) would receive more help than those who e-mailed in abbreviations, (d) would be regarded as having put forth more effort, and (e) would be perceived as less likely to have plagiarized their essay. The findings partially support the hypotheses such that proper grammar e-mail style produced more positive perceptions of students along six characteristics and increased participants' evaluation of student effort. The study failed to support the hypotheses that e-mail style would affect the grade on the essay, willingness to help, and perception of plagiarism.

### **Person Perception**

The use of abbreviations in an e-mail had a significant influence on perceptions of the student writer. In these situations, an initial writing sample in the form of an e-mail may serve as the basis for subsequent perceptions. For example, it is possible that the abbreviated style activates a schema for laziness that leads the perceiver to believe the sender put forth less effort, or is a less motivated, less intelligent, or less dependable person. Alternately, it is also possible that abbreviations subconsciously influence subsequent perceptions. Previously, it has been shown that priming can influence evaluations of unrelated, subsequent stimuli, as well as a person's ability to immediately define and categorize unrelated stimuli (Ferguson, Bargh, & Nayak, 2005). In the present study, the style of e-mail could be acting as a prime that ultimately influences the perceptions of a student sender.

### **Perception of Effort**

As hypothesized, students who e-mailed in proper grammar were thought to have put more effort into their essay than those who wrote using abbreviations. This could be due to the perception that the use of abbreviations saves effort and thus, the sender also put less effort into writing the essay.

### **Willingness to Help, Grade, and Perception of Plagiarism**

Contrary to our hypothesis, participants were equally willing to help the student regardless of the e-mail's writing style. This may be due to the general tendency for perceptions or cognitions to change more easily than behaviors (e.g. Festinger, 1957). The present study was unable to find a significant effect for style of e-mail on grade or perception of plagiarism. Due to participants' familiarity with abbreviations, they may view communication in the e-mail as entirely independent from the writing ability a student demonstrates in an essay.

### **Strengths and Limitations**

Several limitations weakened the present study. Participants consisted of a convenience sample of primarily Caucasian, first and second-year college students. This reduces the external validity

of the study as results may not be able to be generalized to wider populations. Secondly, the study design required students to assume the role of a college professor. While this technique has been utilized in several similar studies (e.g. Covington, 1979), and asks a student to take on a role they are relatively familiar with, students' perceptions of the role may not be entirely accurate. Conversely, there were also notable strengths of this study. To enhance mundane realism, the e-mails participants read were replications of screen shots of the e-mail program that students use on campus. Most importantly, the present study maintained a high level of control across the two conditions by insuring that each e-mail contained the same exact message and varied only the format of the wording (e.g. by the way versus btw).

### **Future Directions**

Further expansion of this study might measure the frequency with which participants use abbreviations themselves in their e-mail and/or text-messaging communication to see if there is a link between one's own use and judgments formed (i.e. the higher the frequency of abbreviations used, the less it will affect judgments). Finally, it would also be important to see if e-mail communication style has effects in other contexts. For example, it would be interesting to determine if the use of abbreviations has a negative influence on job applicant evaluations and whether it ultimately influences hiring decisions.

### **Conclusion**

This study shows that e-mail style affects perceptions of the sender and judgments of effort on a subsequent essay. These findings are important because they demonstrate how something as commonplace as the use of abbreviations in an e-mail can influence how a person is perceived.

### **REFERENCES**

- Covington, Martin V. 1979. "It's Best to be Able and Virtuous Too: Student and Teacher Evaluative Responses to Successful Effort." *Journal of Educational Psychology*, 71: 688-700.
- Ferguson, Melissa J., John A. Bargh, and David A. Nayak. 2005. "After-affects: How Automatic Evaluations Influence the Interpretation of Subsequent, Unrelated Stimuli." *Journal of Experimental Social Psychology*, 41: 182-191.
- Festinger, Leon. 1962. *A Theory of Cognitive Dissonance*. Oxford England: Stanford University Press.
- Gill, Alastair J., Jon Oberlander, and Elizabeth Austin. 2006. "Rating E-mail at Zero Acquaintance." *Personality and Individual Differences*, 40: 497-507.
- Hummon, David M. 1994. "College Slang Revisited: Language, Culture, and Undergraduate Life." *The Journal of Higher Education*, 65: 75-98.
- Jessmer, Sherri L., and David Anderson. 2001. "The Effect of Politeness and Grammar on User Perceptions of Electronic Mail." *North American Journal of Psychology*, 3: 331-346.

Jussim, Lee. 1989. "Teacher Expectations: Self-fulfilling Prophecies, Perceptual Biases, and Accuracy." *Journal of Personality and Social Psychology*, 57: 469-480.

Kruger, Justin, Nicholas Epley, Jason Parker, and Zhi-Wen Ng. 2005. "Egocentrism over E-mail: Can We Communicate as Well as We Think?" *Journal of Personality and Social Psychology*, 89: 925-936.

### **AUTHORS' NOTE**

The authors would like to thank Janice Stapley and David Strohmets for comments on an earlier version of this study.

### **AUTHOR BIOGRAPHY**

Gary Lewandowski is an Assistant Professor at Monmouth University. Professor Lewandowski conducts research on the self, relationships, and pedagogy. E-mail is: [glewando@monmouth.edu](mailto:glewando@monmouth.edu).

Samantha Harrington is an undergraduate student at Monmouth University. Samantha is interested in pursuing a graduate degree in clinical psychology. E-mail is: [s0483742@monmouth.edu](mailto:s0483742@monmouth.edu).