"Thanks for the quick reply!": Email Chronemics and Instructor Liking

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“Thanks for the quick reply!”:
Email Chronemics and Instructor Liking

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This study explored how chronemic conditions in email exchanges affect student liking of instructors. Participants (N = 123) were exposed to one of four email vignettes that simulated a message exchange between a student and instructor. In each vignette, a student posed a question to their instructor about a class assignment. The researchers manipulated the importance of the assignment discussed (low and high assignment point value) as well as the speed at which the instructor responded (10 hours and 14 days). A factorial ANOVA indicated that only instructor response time significantly influenced student liking of instructor. Implications of these findings are discussed and practical suggestions are offered for instructors.

Keywords: instructional communication, expectancy violations theory, chronemics, computer-mediated communication

Though still in an arguably nascent stage, the Internet has already significantly impacted higher education. With growing regularity, new and exciting intersections between the Internet and education are proposed, increasing interconnectivity in ways that may have strained the imagination of instructors a generation ago. Though there are undoubtedly a host of promising technologies on the horizon, it is the venerable technology of email that continues to play a pivotal, communicative role in the lives of students and instructors, as well as the interpersonal relationships that exist between them (Bolkan & Holmgren, 2012; Hassini, 2006; Stephens, Houser, & Cowan, 2009). Much is known about the relationship between the instructor and student in a face-to-face setting (see Hess & Mazer, 2017), and new discoveries are regularly made regarding how the relationship differs in an online
setting (e.g., Kaufmann, Sellnow, & Frisby, 2016). Despite these advances, the complexity and diversity of computer-mediated communication means that new avenues remain to be explored.

One little explored area of interest in the context of instructor/student email exchanges relates to nonverbal chronemics. Addressing the messages that are interpreted from the passage of time (Burgoon & Saine, 1978), chronemics are an especially important element of asynchronous communication media such as email. The present study seeks to determine how chronemic factors of instructor/student email exchanges affect student liking of instructors, as well as how message content might interact with such effects.

Email Chronemics

Instructors use both face-to-face and computer-mediated communication to maintain their relationship with students (Frymier & Houser, 2000). Computer-mediated communication can often be described as out-of-class communication (OCC; Dobransky & Frymier, 2004) and is defined as “interactions outside the formal classroom that may be initiated by students or faculty” such as “advising, students seeking out faculty to ask questions about class content, faculty involvement in student organizations, and/or student-faculty discussions about non-class related issues” (Nadler & Nadler, 2001, p. 242). Previous research has demonstrated that effective OCC not only correlates positively with the instructor-student relationship, it also enhances student learning (Dobransky & Frymier, 2004; Martin & Myers, 2006). Thus, the widespread use of email in higher education has expanded the number of opportunities for students to interact with instructors than was previously available (Bloch, 2002; Hassini, 2006). As is the case with the introduction of any communication medium, email communication carries with it a distinctive set of challenges and opportunities, as well as distinct types of nonverbal messages.

Research exploring email exchanges has brought to light the essential role that time, or chronemics, plays in this particular form of asynchronous communication (Johnson & Card, 2007; Kalman & Rafaeli, 2010; Kalman, Ravid, Raban, & Rafaeli, 2006; Walther, 1995; Walther & Tidwell, 1995). Burgoon and Saine (1978)
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postulated that the concept of chronemics describes “how we perceive, structure, and react to time” in addition to “the messages we interpret from such usage” (p. 99). Text-based computer-mediated communication lacks elements (i.e., cues) afforded by traditional face-to-face interaction (e.g., body movements, facial expressions, vocal pitch, tone of voice). Consequently, much technology-centered research over the past several decades has focused on the consequences associated with a lack of these nonverbal cues (Stafford & Hillyer, 2012; Walther, 2011), generally concluding that communicators place increased importance on cues that are still present, such as chronemics (Kalman, et al., 2013). For instance, scholars have begun to highlight the powerful role of chronemics in text-based computer-mediated communication in professional and personal contexts (Kalman, et al., 2013; Walther, 2002). Scholars have primarily relied on social information processing theory (see Walther, 1992) and expectancy violation theory (see Burgoon & Jones, 1976; Burgoon, 1993) to explain this influence. In instructor-student email exchanges, most nonverbal cues are filtered-out (Walther & Parks, 2002), which can lead to a propensity to over-attribute, or an inclination to apply additional significance to paralinguistic cues (i.e., email message latency; Johnson & Card, 2007), “without tempering such impressions in light of the relatively meager information base upon which they are built” (Walther & Tidwell, 1995, p. 358). While chronemics are an essential component in all human communication (Ballard & Seibold, 2004), understanding the role of time in mediated settings may be even more important.

Based on the above, it seems reasonable to conclude that the latency factors (i.e., the amount of time between the original message and the response) of these interactions have the potential to shape factors such as liking between senders and receivers of email messages (Hassini, 2006; Johnson & Card, 2007). Though this conclusion can be reasonably intuited, the existing literature exploring the intersection of email chronemics and the college class is limited to one case-study (Johnson & Card, 2007). While chronemics is a concept that speaks to both time span as well as time frame, this present study is primarily interested in the messages students infer from the passage of time, or response latency.
Expectancy Violations Theory

Students enter college courses already acquainted with a variety of modes of computer-mediated communication. With increased utilization of these modes (including email), students are likely to develop more solidified expectations. Thus far, researchers have investigated email communication predominately through the lens of expectancy violations theory (EVT) to interpret messages in regard to response latency (Kalman & Rafaeli, 2010; Kalman, et al., 2007). EVT posits that individuals approach communication contexts with pre-determined expectations, or “idealized standards of conduct that are perceived as needed, wanted, or desired” (Burgoon, 1995, p. 196). When these expectations are violated, differing outcomes may occur and have the opportunity to result in either positive or negative effects. Furthermore, EVT also proposes that sometimes a violation of expectations is preferable to having one’s expectations met (Burgoon & Saine, 1978). Assuming that students have an expectation of email response latency from their instructors, the instructor response time is likely to either meet expectations, or positively or negatively violate them. Presumably, a response time faster than student expectations will be perceived as a positive violation, while slower than expected response time will be viewed as a negative violation of expectations. These violations are likely to affect student perceptions of their instructor.

Instructor Liking

Instructor liking (or “affinity-seeking”) is defined by McCroskey and Wheeless as “a positive attitude toward another person” (1976, p. 231). The concept of affinity-seeking also includes the act of advancing behaviors believed to promote affinity-development, such as: managing one’s physical appearance, positive self-disclosure, emphasizing points of positive similarity, positive reinforcement, cooperation, complying with wishes of others, and fulfilling the needs of others (Frymier, 1994). Utilizing the foundational work of McCroskey and Wheeless (1976), Bell and Daly (1984) developed 25 strategies to elicit liking in others - strategies that were also found to be used by classroom instructors (Gorham et al., 1989). While the aforementioned studies made significant strides in understanding the relationship between affinity-seeking by instructors and their relationship with
positive student behaviors, Frymier (1994) sought to determine “the effectiveness of each of the affinity-seeking strategies to increase liking in the instructional context” (p. 89). Liking is not only a desirable interpersonal outcome in the classroom, it has also been positively linked to both students’ self-reported learning (e.g., Gurung & Vespia, 2007) and student motivation (e.g., Richmond, 1990).

In light of the above, this study will seek to shed light on how email response latencies and assignment importance can interact to affect instructor liking by proposing the following hypothesis:

**H1:** Low-latency (quicker) email response conditions will result in greater levels of instructor liking than high latency conditions regardless of assignment importance.

**Method**

**Participants**

For this study, participants (*N* = 123) were recruited from sections of the basic course at a large, southeastern university. Most participants identified as female (*n* = 81; 65.9%) and the minority identified as male (*n* = 42; 34.1%). Ages of the sample participants ranged from 18 to 27 (*M* = 18.74, *SD* = .97). Participants identified as Caucasian (*n* = 101; 82.1%), African American (*n* = 7; 5.7%), Hispanic (*n* = 3; 2.4%), Asian (*n* = 8; 6.5%), Native American (*n* = 2; 6.5) and “Other” (*n* = 2; 1.6%). Participants defined themselves as first-year students (*n* = 113; 91.9%), sophomores (*n* = 6; 4.9%), juniors (*n* = 3; 2.4%), and one student was a senior (*n* = 1; 0.8%).

**Sampling Procedure**

After attaining approval from the institution’s internal review board, participants were recruited through a research participation program administered among basic communication courses. A brief description of the study was provided to students via email and they were offered minimal extra credit for participating. The survey was administered through Qualtrics, an online survey system.
Research Design

In order to measure how chronemic factors influence student perceptions of instructor liking, a series of vignettes (see Appendix A) were created in the form of a 2x2 cross-sectional post-test only design. Research has suggested that vignettes “enable one to develop questions within the survey format of a very concrete kind” (Finch, 1987, p. 110), and provide the opportunity to “explore normative issues in a way which approximates to the complexities with which such issues are surrounded” (p. 111). Given that this study is specifically interested in the circumstances surrounding a communicative event (i.e. message response latency), vignettes are a well-suited research method.

Each participant was randomly presented one of four possible vignettes that simulated an email exchange, each featuring a manipulation of the importance of the assignment being discussed and the speed at which the imagined instructor responded. Each simulated exchange featured explanatory text to help students better understand the manipulations in addition to the simulated elements such as “time-stamps” on the emails exchanges. Students were instructed to imagine that each vignette was in reference to a high-importance or low-importance assignment (“Imagine this assignment is worth 5% of your final grade,” and “Imagine this assignment is worth 70% of your final grade”) and each exchange displayed email time-stamps as well as latency cues on the survey (“Imagine you received this response 10 hours later,” and “Imagine you received this response 14 days later”). Students were assigned one of the four vignettes at random: (1) low latency/low importance ($n = 32$), (2) low latency/high importance ($n = 28$), (3) high latency/low importance ($n = 27$), or (4) high latency/high importance ($n = 36$). Or in other words, quick instructor response to a student questions about a low importance assignment, slow instructor response to a student questions about a low importance assignment, quick instructor response to a student questions about a high importance assignment, and slow instructor response to a student questions about a high importance assignment.

The chronemic factors of a communication event can be based on the passage of time (latency) or the point in time (time of day or day of week). Although, in an attempt to attain higher ecological
validity, the simulated email exchanges do possess time-stamps, time frame (i.e., time of day) was not manipulated in this study. Thus, all four email exchange vignettes include time-stamps that indicate the conversations began at 9:00pm and conclude at 7:00am. Keeping the time-frame consistent across vignettes increases the likelihood that any changes observed in instructor liking are due to the manipulated response latencies and their interaction with assignment importance.

Instrumentation

**Instructor Liking.** Liking was operationalized using ten items developed by Frymier (1994). This unidimensional measure asks students to report on a seven-point semantic differential scale (e.g. “How would you describe this instructor? Likable-Dislikable). The scale has proven reliable in previous research ($\alpha = .92$; Frymier, 1994) and in the present study ($\alpha = .97, M = 4.64, SD = 1.55$).

Results

H1 predicted that low-latency email response conditions will result in greater levels of instructor liking than high latency conditions. A factorial ANOVA was conducted with latency and assignment importance entered as fixed factors and liking entered as the dependent variable. Analysis reveals that there was no significant main effect for assignment importance [$F(1, 123) = .01, p = .99, \eta_p^2 = .001$]. There was a significant main effect for response latency [$F(1, 123) = 109.649, p < .01, \eta_p^2 = .480$], with participants in the low latency condition ($M = 5.76, SE = .15$) reporting significantly higher levels of liking than participants in the high latency condition ($M = 3.61, SE = .14$). However, there was no significant interaction effect between response latency and assignment importance [$F(1, 123) = .61, p = .44, \eta_p^2 = .005$]. Thus, the hypothesis was fully supported.

Discussion

This study utilized EVT to explore how email response latency affected student liking toward instructors. Results demonstrate that response latency significantly affects student liking for in-
structor regardless of assignment importance. These results fur- 
ther support EVT and the notion that having ones’ expectations 
violated can be a positive experience.

These findings reveal important implications for instructors. 
Email communication has the potential to cause a significant ef- 
flect on student liking of instructor. Furthermore, this study re- 
veals that these effects can occur solely due to latency differ- 
ences. Ultimately, regardless of message content, instructors who 
desire to be liked more by their students should make efforts to 
respond to student emails more quickly. Instructor motivations to 
elicit increased liking in their students are twofold. First, liking 
has been correlated with motivation (Richmond, 1990) and stu- 
dent self-reports of their perceived learning (Gurung & Vespia, 
2007). Second, instructors are increasingly dependent on positive 
student evaluations to maintain their employment. Figlio, 
Schapiro, and Soter (2015) note that the past 40 years has wit- 
nessed a significant decline in the number of tenured faculty, 
with the percentage of tenure-track faculty in American universi-
ties recently falling to 29%.

As mentioned above, liking for instructor improves the interper-
sonal teacher-student relationship, as well as offering the poten-
tial to improve learning outcomes and student motivation. How-
ever, attaining these results comes at a potential cost. Readers 
may already be aware of this fact, but students and instructors 
sometimes operate on differing work schedules, and by result 
maintain different email practices. While an instructor may wish 
to answer all emails before leaving work at 5:00pm, students may 
choose to email in the evening, resulting in a nearly 24-hour la-
tency window. If instructors wish to limit latent periods and at-
tain the resulting increases in student liking, they may have to 
change their email usage habits by doing things such as enabling 
message notifications on their mobile phones, or checking email 
on their computer while at home. Though this study reveals that 
engaging in practices like those described above may increase 
student liking, it is not known what effects they may have on fac-
tors such as instructor burnout.

With the above considerations in view, some specific suggestions 
are offered here for instructors that wish to increase student lik- 
ing. First, instructors should consciously seek to, when possible,
respond more quickly to student emails, especially in instances when there is little “cost” associated with doing so. In other words, if it makes little difference to an instructor whether they respond to a message immediately or in two days, their inclination should be toward an immediate response. Secondly, instructors should encourage and train their students to utilize courteous and professional email habits. Bolkan and Holmgren (2012) found that polite emails increased instructor affect for students and instructors desire to work with students. An increased desire to work with students may help to alleviate some of the inconvenience surrounding an after-hours email exchange. Finally, instructors should consider making students aware of their email usage behaviors. It seems reasonable to assume that many students may be reluctant to send a frivolous message at 8:00pm if they believe doing so might disturb their instructor while at dinner.

Like all research, this study possesses limitations. First, there are limitations inherit within the research design. While vignettes are a powerful and effective research tool, they can never fully capture the phenomena of OCC email exchanges between instructors and students. For instance, in the vignettes students were asked to imagine a certain amount of time had passed between the sending of the original message and the instructor response. While students may achieve varying degrees of success in their imaginings, it may be difficult for some students to mentally replicate the experience of actual time passage. Future research should explore ways of adding ecological validity to the research method, perhaps utilizing a longitudinal approach so that actual latency could be experienced by participants. Second, this study only manipulated the span of time (i.e., length between messages), not the time frame (i.e., time of day/week messages were sent). Thus, this research does not illuminate how or if the time of day or day of week during which instructors respond may affect student’s expectations of response latency or their liking of instructors. Manipulating both time span and time frame in a single study would be an effective and illuminating direction for future research. Third, while vignette manipulations followed the example of Kalman and Rafaeli (2011) by limiting manipulations to within a day and two weeks (Kalman and Rafaeli also added a condition of over one month), the limited duration of a course semester compared to the indefinite span of some projects in the business
world may significantly alter the latency expectations of students. Future research should apply a more robust set of latent periods (e.g., 10 minutes, one hour, three days, one week) in order to more fully reflect the range of possibilities.

Fourth, this study did not account for student characteristics prior to exposure to the vignettes that could potentially impact students’ expectations and evaluation of the vignette email exchanges (e.g., grade orientation, state motivation, consumer orientation). Thus, future research should attempt to control for factors like those listed above and others that could potentially influence students’ response to chronemic manipulations. Fifth, while this study demonstrated that response latency increased student liking, the degree to which delayed response may lead to negative affect for instructors is not known. Considering the importance often placed upon student evaluations of their instructors, email chronemics as it relates to “disliking” should be further explored. Sixth, assignment importance did not interact with instructor response speeds. Since the hypothetical assignment did not affect the participant’s grade in an actual class, the importance of the assignment may have been perceived as inconsequential. Or, while the manipulation of assignment importance was successful, perhaps assignment importance could be manipulated more effectually in future research (e.g., provide more information about due dates). Regardless, as this study is only an initial exploration of the interaction between response time and assignment importance, the importance of the assignment being discussed in an e-mail exchange could play a larger role in other studies; future research should continue to explore this possibility to confirm the present findings.

**Conclusion**

Email communication continues to be a significant presence in higher education and the importance of its role is only likely to increase, especially as online sections of college courses proliferate. This study demonstrates that email plays an important role in the teacher-student relationship and can modify a student’s perception of their instructor. For instructors who wish to be liked by their students, whether for professional, educational, or interpersonal goals, it is not only important *what* is said, but *when* it is said.
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Appendix A

Vignette #1
Low Assignment Importance/ High Latency

Imagine you are a student contacting your instructor via email about an upcoming assignment for an undergraduate communication course. Below are the assignment details:

**Reading Response (50 points - 5% of final grade)**
As an individual, please reflect on the assigned readings from class. Based on the ideas presented in the reading, you will write a brief response taking a clear position on the topic. The response should be a minimum of 1 page and integrate at least 1 credible source.

In order to get some clarification about the assignment, you send the following email at 8:00pm on 2/12/16:

From: Taylor Jones
To: Dr. Morrison
Dr. Morrison,
My name is Taylor Jones. I am a student in your COM 211 Public Speaking Class that meets on MWF at 9am.
I have a brief question concerning one of the daily work assignments for this class. Even though this assignment isn’t worth a significant portion of my grade, I want to make sure that I fully understand the requirements. Can I stop by your office in the near future to get some clarification? Please get back to me at your earliest convenience.
- Taylor Jones

After sending the above email, you receive the following email response from your instructor at 7:00am on 2/13/16, 10 hours after you sent the initial email:

From: Dr. Morrison
To: Taylor Jones
Taylor.
Absolutely. Feel free to stop by my office before or after class this week. If you are unavailable at those times, we can work to make an appointment at a time that works for both of us.
See you in class tomorrow.
- Dr. Morrison

Paying close attention to the subject matter (daily work) and response time (10 hours) of the above email exchange, please respond to the following questions.
Vignette #2
High Assignment Importance/ High Latency

Please thoroughly read the following instructor-student scenario....

Imagine you are a student contacting your instructor via email about an upcoming assignment for an undergraduate communication course. Below are the assignment details:

**Persuasive Essay (700 points - 70% of final grade)**

As an individual, you will identify a controversial issue that you are interested in studying. Based on research you conduct to learn more about this topic, you will write a paper taking a clear position on this issue. The paper should be a minimum of 10 pages and integrate at least 15 credible sources.

In order to get some clarification about the assignment, you send the following email at 9:00pm on 2/12/16:

**From:** Taylor Jones  
**To:** Dr. Morrison

Dr. Morrison,

My name is Taylor Jones. I am a student in your COM 211 Public Speaking Class that meets on MWF at 9am.

I have a brief question concerning our final project for this class. Because this assignment is worth a significant portion of my grade, I want to make sure that I fully understand the requirements. Can I stop by your office in the near future to get some clarification?

Please get back to me at your earliest convenience.

- Taylor Jones

After sending the above email, you receive the following email response from your instructor at 7:00am on 2/13/16, 10 hours after you sent the initial email:

**From:** Dr. Morrison  
**To:** Taylor Jones

Taylor,

Absolutely. Feel free to stop by my office before or after class this week. If you are unavailable at those times, we can work to make an appointment at a time that works for both of us.

See you in class tomorrow.

- Dr. Morrison

Paying close attention to the subject matter (major assignment) and response time (10 hours) of the above email exchange, please respond to the following questions.
Vignette #3
Low Assignment Importance/ Low Latency

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Please thoroughly read the following instructor-student scenario....

Imagine you are a student contacting your instructor via email about an upcoming assignment for an undergraduate communication course. Below are the assignment details:

**Reading Response (50 points - 5% of final grade)**
As an individual, please reflect on the assigned readings from class. Based on the ideas presented in the reading, you will write a brief response taking a clear position on the topic. The response should be a minimum of 1 page and integrate at least 1 credible source.

In order to get some clarification about the assignment, you send the following email at 9:00pm on 2/12/16:

**From: Taylor Jones**
To: Dr. Morrison

Dr. Morrison,
My name is Taylor Jones. I am a student in your COM 211 Public Speaking Class that meets on MWF at 9am.
I have a brief question concerning one of the daily work assignments for this class. Even though this assignment isn’t worth a significant portion of my grade, I want to make sure that I fully understand the requirements. Can I stop by your office in the near future to get some clarification?
Please get back to me at your earliest convenience.
- Taylor Jones

After sending the above email, you receive the following email response from your instructor at 7:00am on 2/25/16, 14 days after you sent the initial email:

**From: Dr. Morrison**
To: Taylor Jones

Taylor,
Absolutely. Feel free to stop by my office before or after class this week. If you are unavailable at those times, we can work to make an appointment at a time that works for both of us.
See you in class tomorrow.
- Dr. Morrison

Paying close attention to the subject matter (daily work) and response time (14 days) of the above email exchange, please respond to the following questions.
Vignette #4
High Assignment Importance/ Low Latency

Please thoroughly read the following instructor-student scenario....

Imagine you are a student contacting your instructor via email about an upcoming assignment for an undergraduate communication course. Below are the assignment details:

**Persuasive Essay (700 points - 70% of final grade)**

As an individual, you will identify a controversial issue that you are interested in studying. Based on research you conduct to learn more about this topic, you will write a paper taking a clear position on this issue. The paper should be a minimum of 10 pages and integrate at least 15 credible sources.

In order to get some clarification about the assignment, you send the following email at 9:00pm on 2/12/16:

**From: Taylor Jones**
**To: Dr. Morrison**

Dr. Morrison,

My name is Taylor Jones. I am a student in your COM 211 Public Speaking Class that meets on MWF at 9am.

I have a brief question concerning our final project for this class. Because this assignment is worth a significant portion of my grade, I want to make sure that I fully understand the requirements. Can I stop by your office in the near future to get some clarification?

Please get back to me at your earliest convenience.

- Taylor Jones

After sending the above email, you receive the following email response from your instructor at 7:00am on 2/25/16, 14 days after you sent the initial email:

**From: Dr. Morrison**
**To: Taylor Jones**

Taylor,

Absolutely. Feel free to stop by my office before or after class this week. If you are unavailable at those times, we can work to make an appointment at a time that works for both of us.

See you in class tomorrow.

- Dr. Morrison

Paying close attention to the subject matter (major assignment) and response time (14 days) of the above email exchange, please respond to the following questions.