Supplemental Materials
(Luttrell, Petty, & Xu, 2016)

This online supplement contains the exact materials used in the study, including message text and question wordings (pgs. 1 - 7), and supplementary analyses of the data (pg. 8 - 14)

Messages

Non-optimal condition (i.e., Short Message + High Relevance)

Recently, as part of its short term year 2016 planning process, The Ohio State University Faculty Senate has begun to consider instituting senior comprehensive exams in students' major areas. A policy of senior comprehensive exams would require all seniors, **beginning next year with the graduating class of 2016**, to take a series of exams designed to demonstrate competency in both general academic skills and the specific skills required by their particular majors as a requirement for graduation.

Because all current students would be affected by the proposal, the specific purpose of the present survey is to assess how current students would evaluate the article prepared by a journalism student for possible publication in the local newspaper, which describes the benefits of introducing the senior comprehensive exam policy next year in 2016.

Please read:

> *Weak Arguments Message:*

Ohio State University students should be required to pass a comprehensive examination in their major prior to graduation. Adapting the exams would allow the university to be at the forefront of a national trend and thereby increase its reputation throughout the United States and the world. Graduate students have complained that since they have to take comprehensive examinations, undergraduates should have to take them as well. Moreover, by not administering the exams, a tradition dating back to the ancient Greeks was being violated. Parents have written to administrators in favor of the exams. Also, the exams would increase student fear and anxiety enough to promote more studying. The exams would cut costs by eliminating the necessity for other tests that varied with instructor. Furthermore, the exams would allow students to compare their performance with students at other schools. Finally, job prospects might be improved. Given these advantages of comprehensive exams, Ohio State University should institute them as outlined in its short term plan for next year.

> *Strong Arguments Message:*

Ohio State University students should be required to pass a comprehensive examination in their major prior to graduation. Prestigious universities have comprehensive exams to maintain academic excellence. Universities who have instituted comprehensives have seen a reversal in the national trend toward declining standardized test scores. Moreover, graduate and professional schools show a clear preference for undergraduates who have passed a comprehensive exam.

Average starting salaries are higher for graduates of schools with comprehensive exams. Also, schools with the exams attract larger and more well-known corporations to recruit students for jobs. The quality of undergraduate teaching has improved at schools with the exams. Furthermore, the state legislature would increase financial support if exams were instituted, allowing a tuition increase to be avoided. Finally, the National Accrediting Board of Higher Education would give the university its highest rating if the exams were instituted. Given these advantages of comprehensive exams, Ohio State University should institute them as outlined in its short term plan for next year.

Optimal Condition: (i.e., Long Message + Low Relevance)

Recently, as part of its long range year 2025 planning process, The Ohio State University Faculty Senate has begun to consider instituting senior comprehensive exams in students' major areas. As noted above, a policy of senior comprehensive exams would require all seniors, **beginning in 10 years with the graduating class of 2025**, to take a series of exams designed to demonstrate competency in both general academic skills and the specific skills required by their particular majors as a requirement for graduation.

Even though no current students would be affected by the proposal, the specific purpose of the present survey is to assess how current students would evaluate an article prepared by a journalism student for possible publication in the local newspaper, which describes the benefits of introducing the senior comprehensive exam policy in 2025.

Please read:

> *Weak Arguments Message:*

Ohio State University students beginning with the graduating class of 2025, should be required to pass a comprehensive examination in their major prior to graduation. The National Scholarship Achievement Board recently revealed the results of a five-year study conducted on the effectiveness of the exams at Duke University. They found that since the exams had been implemented there, students' anxiety levels had increased by 31%. At comparable schools that did not implement the exams, anxiety levels increased by only 8% over the same five years. The comprehensive exams clearly seem to be effective since increasing anxiety would motivate students to study more for their courses through fear of failure. It is highly likely that the benefits observed at Duke would also be observed at other universities that adopt the exam policy.

Graduate students have always had to take a comprehensive exam in their major area before receiving their degrees, and it is only fair that undergraduates should have to take them also. As the Dean of Harvard Business School said, "If a comprehensive exam is considered necessary to demonstrate competence for a masters or doctoral degree, by what logic is it excluded as a requirement for the bachelor's degree? What administrators don't realize is that this is discrimination. There would be a lot of trouble if universities required only men to take comprehensive exams but not women. Yet universities all over the country are getting away with the same thing by requiring graduate students but not undergraduates to take the exams." Thus,

the institution of comprehensive exams could be as useful for undergraduates as they have been graduate students.

A member of the Board of Trustees has stated publicly that his brother had to take comprehensive exam while in college and now he is manager of a large restaurant. He indicated that he realized the value of the exams since their father was a migrant worker who didn't even finish high school. He also indicated that the university has received several letters from parents in support of the exam. In fact, 4 of the 6 parents who wrote in thought that the exams were an excellent idea. Also, the prestigious National Accrediting Board of Higher Education seeks input from parents as well as students, faculty, and administrators when evaluating a university. Since most parents contribute financially to their child's education and also favor the exams, the university should institute them. This would show that the university is willing to listen to and follow the parents' wishes over those of students and faculty who may simply fear the work involved in comprehensive exams.

A study conducted by the Educational Testing Service of Princeton, New Jersey, revealed that many schools are considering adopting this policy. Thus, any university that adopted the exams could be at the forefront of a national trend. Some professors at schools with the exams who were interviewed felt that high school students would be impressed by a university that kept pace with current trends. In fact, whether or not a school has a comprehensive exam might be a determining factor in their choice of a university. Therefore, the enrollments of universities with the exams should increase as the information about the exams spreads among high school students.

An interesting and important feature of the comprehensive exam requirement is that if it were implemented nationwide, students across the country could use the exam to compare their achievements with those of students at other schools. Data from the Educational Testing Service confirm that students are eager to compare their grades in a particular course with those of other students. Just imagine how exciting it would be for students in the Midwest to be able to compare their scores with those of students at the University of Florida, for example. This possibility for comparison would provide an incentive for students to study and achieve as high a score as possible so they would not be embarrassed when comparing scores with their friends. Faculty members at universities with the comprehensive exams who were interviewed by researchers from the Carnegie Commission on Higher Education revealed that they liked the exams because it reduced the number of tests they felt they had to give in their classes knowing that students would still face one ultimate test of their knowledge in the comprehensive exam. A study at Notre Dame showed that this reduction in regular course tests saved enough paper to cover the cost of painting two classrooms.

Data from the University of Virginia show that some students favor the senior comprehensive exam policy. For example, one faculty member asked his son to survey his fellow students at the school since it recently instituted the exams. Over 55% of his son's friends agreed that in principle, the exams would be beneficial. Of course, they didn't all agree but the fact that most did proves that undergraduates want the exams. As Saul Siegel, a student whose father is a vice president of IBM wrote in the school newspaper, "The history of the exams can be traced to the ancient Greeks. If comprehensive exams were to be instituted, we could feel pleasure at

following traditions begun by Plato and Aristotle. Even if there were no other benefits of the exams, it would be worth it just to follow tradition."

Given these advantages of comprehensive exams, Ohio State University should institute them as outlined in its long range plan.

Strong Arguments Message:

Ohio State University students, beginning with the graduating class of 2025, should be required to pass a comprehensive examination in their major prior to graduation. The National Scholarship Achievement Board recently revealed the results of a five-year study conducted on the effectiveness of the exams at Duke University. They found that since the exams had been implemented there, the grade point average of undergraduates increased by 31%. At comparable schools that did not implement the exams, grade point averages increased by only 8% over the same five years. The comprehensive exams clearly seem to be effective in causing students to work harder and faculty to teach more effectively. It is highly likely that the benefits observed at Duke would also be observed at other universities that adopt the exam policy.

Graduate schools and law and medical schools are beginning to show clear and significant preferences for students who received their undergraduate degrees from institutions with comprehensive exams. As the Dean of the Harvard Business School said: "Although Harvard has not and will not discriminate on the basis of race or gender, we do show a strong preference for applicants who have demonstrated their expertise in an area of study by passing a comprehensive exam at the undergraduate level." Admissions officers of law, medical, and graduate schools have also endorsed the comprehensive exam policy and indicated that students at schools without the exams would be at a significant disadvantage in the very near future. Thus, the institution of comprehensive exams will be an aid to those who seek admission to graduate and professional schools after graduation.

A member of the Board of Trustees has stated publicly that alumni nationwide have refused to increase their contributions to the University because of what they feel are lax educational standards. In fact, the prestigious National Accrediting Board of Higher Education (NAB) has recently rejected the University's application for membership citing lack of comprehensive exam as a major reason. Accreditation by the NAB enhances a university's reputation to graduate schools, employers, and demonstrates to alumni that the school is worth supporting. A recent survey of influential alumni in corporations and the state legislature has revealed that contributions would improve significantly if the exams were instituted. With increased alumni support, continued increases in tuition might be avoided.

A study conducted by the Educational Testing Service of Princeton, New Jersey, revealed that most Ivy League schools and several of the Big 10 universities have senior comprehensive exams to maintain their academic excellence. Professors at those schools who were interviewed recently said that senior comprehensive exams assured that only high quality and knowledgeable students would be associated with the university. This, of course, increases the prestige of current students, alumni of the school, and the university as a whole. The exams should be instituted to increase the academic reputation of the university. A national educator's publication

recently predicted that within the next 10 years, the top universities would have the exam policy, and the weaker ones would not.

An interesting and important feature of the comprehensive exam requirement is that it has led to a significant improvement in the quality of undergraduate teaching in the schools where it has been tried. Data from the Educational Testing Service confirm that teachers and courses at the schools with this policy were rated more positively after implementation of the exams than before. The improvement in teaching effectiveness appears to be due to departments placing more emphasis on high quality teaching because departments suffer when their majors do poorly on the exam. For example, the University of Florida's students rated courses more highly after the exams were implemented.

Data from the University of Virginia, where comprehensive exams were recently instituted, indicate that the average starting salary of graduates increased over $4000 over the two-year period in which the exams were begun. At a comparable university without the exams, salaries increased by only $850 over the two-year period. Saul Siegel, a vice president of IBM, was quoted in Business Week as saying, "We are much quicker to offer the large salaries and executive positions to these kids because by passing their area exam, they have proven to us that they have expertise in their field rather than being people who may or may not be dependable and reliable." The exams could help attract larger and better known corporations to their campuses to recruit students. The students would have a greater chance at landing a good job than students at schools that have not implemented the policy.

A study by the U.S. Department of Education revealed that universities with the comprehensive exam requirement average about 32% more financial aid available to students than comparable universities without the exams. Richard Collings, Director of Financial Aid at the University of Southern California (USC) has written that since the comprehensive exam was instituted at USC five years ago, more individuals and corporations have been willing to donate money for student scholarships.

Given these advantages of comprehensive exams, Ohio State University should institute them as outlined in its long range plan.

Messages Used in Petty, Harkins, and Williams (1980) and adapted for Cacioppo, Petty, & Morris (1983), For Reference

Unfortunately, the original arguments from CPM are no longer available. That study was published over 30 years ago. The original publication did not provide the full text of the messages nor are we aware of any records that remain from that study. CPM, however, noted that that the set of arguments used "were essentially those described as the 'strong' and 'very weak' communications in [Petty, Harkins, and Williams] (1980)" but also emphasizes that those original messages from Petty et al. (1980) were further altered based on pre-testing.

Nevertheless, Petty et al. (1980) did not provide the full messages either, but they reported a summary of the arguments contained in the messages used (p. 87). We reprint those summaries below:

Weak Arguments Message:

"The *very weak* version of the message relied exclusively on personal opinion and personal examples. The following arguments were presented: (a) Most of the author's friends supported the proposal; (b) the author's major adviser took a comprehensive exam and now had a prestigious academic position; (c) whatever benefit the exams had for graduate students would also accrue to undergraduates; (d) requiring graduate students but not undergraduates to take the exams was analogous to racial discrimination; (e) the risk of failing the exam was a challenge most students would welcome; (f) the difficulty of the exam would prepare one for later competitions in life; (g) the Educational Testing Service would not market the exams unless they had great educational value; and (h) if the exams were instituted, Northeastern would become the American Oxford."

Strong Arguments Message:

"In brief, the *strong* version of the message provided persuasive evidence (statistics, relevant studies, etc.) in support of the following arguments: (a) Prestigious universities have comprehensive exams to maintain academic excellence; (b) institution of the exams has led to a reversal in the declining scores on standardized achievement tests at other universities; (c) graduate and professional schools show a preference for undergraduates who have passed a comprehensive exam; (d) average starting salaries are higher for graduates of schools with the exams; (e) schools with the exams attract larger and more well-known corporations to recruit students for jobs; (f) the quality of undergraduate teaching has improved at schools with the exams; (g) university alumni would increase financial support if the exams were instituted, allowing a tuition increase to be avoided; and (h) the (fictitious) National Accrediting Board of Higher Education would give the University its highest rating if the exams were instituted."

Measures

Need for Cognition

For each of the statements below, please indicate whether or not the statement is characteristic of you or of what you believe.

(1 = "Extremely uncharacteristic of me," 2 = "Somewhat uncharacteristic of me," 3 = "Uncertain," 4 = "Somewhat characteristic of me," 5 = "Extremely characteristic of me.")

1. I prefer complex to simple problems. [†]
2. I like to have the responsibility of handling a situation that requires a lot of thinking.
3. Thinking is not my idea of fun. [*]

4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities. *
5. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something. *
6. I find satisfaction in deliberating hard and for long hours. [†]
7. I only think as hard as I have to.*
8. I prefer to think about small daily projects to long term ones.*
9. I like tasks that require little thought once I've learned them. [†]*
10. The idea of relying on thought to make my way to the top appeals to me.
11. I really enjoy a task that involves coming up with new solutions to problems. [†]
12. Learning new ways to think doesn't excite me very much.*
13. I prefer my life to be filled with puzzles I must solve.
14. The notion of thinking abstractly is appealing to me. [†]
15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
16. I feel relief rather than satisfaction after completing a task that requires a lot of mental effort.*
17. It's enough for me that something gets the job done; I don't care how or why it works.*
18. I usually end up deliberating about issues even when they do not affect me personally.

[†] *Used in the 5-item reduced NFC scale (and also in ML3's scale)*
Reverse scored

Initial Attitudes
"The goal of this research is to get your reaction to an issue that some campuses across the country are facing. In particular, some universities are considering instituting a policy whereby seniors would need to take a comprehensive exam to assess general skills and knowledge in their major area of study as a requirement for graduation."

To what extent would you favor such a senior exam requirement? (1 = strongly oppose; 11 = strongly favor)

Message Evaluation ($\alpha = .922$)
- To what extent do you think the communication made its point effectively? (1 = not at all; 9 = complete)
- To what extent did you like the communication? (1 = not at all; 9 = very much)
- To what extent do you feel the communication was convincing? (1 = not at all; 9 = very convincing)
- Considering both content and style, how well written was the communication? (1 = poorly written; 9 = very well written)
- Would you judge the recommendation in the preceding message as being… (1 = very poor and uncompelling; 9 = very good and compelling)

Supplementary Analyses

Omitting Initial Attitudes as a Covariate

In the main text, we report analyses that control for participants' initial attitudes toward the senior comprehensive exam policy. Although we believe that this approach is appropriate for both theoretical and methodological reasons, we also note that ML3 did not measure initial attitudes and therefore did not have this covariate available. Thus, an analysis of the data without the covariate may be informative for comparing the two replication endeavors.

Data were first submitted to a hierarchical multiple regression model with message evaluation as the dependent variable. The first step of the model included AQ, Replication Type, and NFC (18-item scale) as simultaneous predictors. AQ and Replication Type were effects coded (-1: Weak Message/Non-optimal Condition; +1: Strong Message/Optimal Condition). NFC was entered without mean-centering. All corresponding two-way interaction terms were entered in the second step, and the three-way interaction term was entered in the third step. Results are interpreted from the first step of the model in which they appear (see Table S1).

First, there was a main effect of AQ such that participants reported more favorable evaluations of the message in the strong arguments condition ($M = 6.18$, $SD = 1.51$) than in the weak arguments condition ($M = 5.38$, $SD = 1.62$), $B = .39$, $t(210) = 3.67$, $p < .001$, 95% CI: [.18, .60] . There was also a marginal main effect of NFC on message evaluations such that increasing NFC was associated with more negative evaluations of the message, $B = -.29$, $t(210) = -1.70$, $p = .09$, 95% CI: [-.62, .05]. The main effect of replication type was not significant, $B = .16$, $t(210) = 1.52$, $p = .13$, 95% CI: [-.05, .38]. None of the two-way interactions were significant, ps >.18.

Most importantly, the results show a marginally significant three-way interaction, $B = .33$, $t(206) = 1.91$, $f^2 = .02$, $p = .06$, 95% CI: [-.01, .66]. The interaction is such that the NFC $\times$ AQ interaction is not significant in the non-optimal condition, $B = -.06$, $t(206) = -.28$, $p = .78$. There is only an effect of AQ estimated at the mean of NFC, $B = .30$, $t(206) = 1.95$, $p = .05$, 95% CI: [-.003, .60]. The interaction is significant, however, in the optimal condition, $B = .59$, $t(206) = 2.32$, $p = .02$, 95% CI: [.09, 1.09]. In this condition, there is no significant AQ effect among people relatively low (1 SD below the mean) in NFC, $B = .17$, $t(206) = .85$, $p = .39$, 95% CI: [-.23, .57], but strong arguments produced more positive message evaluations than weak arguments among people relatively high (1 SD above the mean) in NFC, $B = .92$, $t(206) = 3.88$, $p < .001$, 95% CI: [.45, 1.39].

Treating NFC as a Categorical Predictor

Research using individual differences can treat such variables either as continuous or categorical, though the former is recommended (Preacher, Rucker, MacCallum, & Nicewander, 2005). NFC has been treated as a categorical variable in much of the older literature, often with a focus on the extremes of the distribution (as in CPM), but as a continuous variable in the more recent literature (as in ML3). We thus explored whether results differed when taking extreme NFC scores to create "high" and "low" NFC groups.

First we dichotomized NFC (18-item scale) by categorizing the top tertile of scores as "high NFC," categorizing the lowest tertile of scores as "low NFC," and omitting participants who fell in the middle of the distribution, resulting in a total sample size of $N = 148$. This most closely resembles the procedure used by CPM. Data were submitted to a hierarchical multiple regression model, entering initial attitudes, AQ, replication type, and the dichotomized NFC variable in the first step. Two-way interactions were entered in the second step, and the three-way interaction was entered in the third step.

Results are presented in Table S2. Notably, the 3-way interaction is marginally significant, $B = .23$, $t(139) = 1.75$, $p = .08$, 95% CI: [-.03, .50]. Under the optimal conditions, the NFC × AQ interaction is significant, $B = .39$, $t(139) = 1.97$, $p = .05$, 95% CI: [.00, .78]. Under the non-optimal conditions, however, the NFC × AQ interaction is not significant, $B = -.08$, $t(139) = -.43$, $p = .67$, 95% CI: [-.43, .28].

We also dichotomized NFC by categorizing the top quartile of scores as "high NFC," categorizing the lowest quartile of scores as "low NFC," and omitting participants who fell in the middle of the distribution, resulting in a total sample size of $N = 110$. Data were submitted to the same hierarchical multiple regression model, entering initial attitudes, AQ, replication type, and the dichotomized NFC variable in the first step. Two-way interactions were entered in the second step, and the three-way interaction was entered in the third step.

Results are presented in Table S3. Notably, the 3-way interaction is marginally significant, $B = .29$, $t(101) = 1.87$, $p = .06$, 95% CI: [-.02, .60]. Under the optimal conditions, the NFC × AQ interaction is significant, $B = .45$, $t(101) = 1.99$, $p = .05$, 95% CI: [.00, .90]. Under the non-optimal conditions, however, the NFC × AQ interaction is not significant, $B = -.13$, $t(101) = -.61$, $p = .55$, 95% CI: [-.54, .29].

Finally, to compare the effect sizes of the key NFC × AQ interactions with various treatments of NFC, the R^2 was computed for both the full model (R_A^2) and for the model with all terms other than the NFC × AQ interaction term (R_B^2). Note that these R^2 statistics come from the full 3-way interaction regression models, set to constrain replication type to be optimal or non-optimal (see Aiken & West, 1991). These R^2 values were then converted to Cohen's f^2 whereby:

$$f^2 = \frac{R_A^2 - R_B^2}{(1 - R_A^2)}$$

Under the optimal conditions, NFC × AQ did not differ much from when NFC was treated as a continuous variable ($f^2 = .03$) to when it was treated dichotomously as the upper and lower tertiles ($f^2 = .03$), but it was larger when NFC was treated dichotomously as the upper and lower quartiles ($f^2 = .04$). Under the non-optimal conditions, NFC × AQ was small when NFC was treated as a continuous variable ($f^2 = .001$), as the upper and lower tertiles ($f^2 = .001$), and as the upper and lower quartiles ($f^2 = .004$).

Using an Alternative Reduced Scale

As noted in Footnote 6, prior to learning the exact items used in ML3, our original approach to testing a reduced NFC scale was to identify the six items with the highest factor loadings in the first report of the NFC scale (Cacioppo & Petty, 1982, Study 1), since we assumed that was what ML3 did. These are the first six items of the scale, presented elsewhere in this supplement (α = .84).

Originally, to test whether the use of a reduced, 6-item NFC scale may have impacted the ability to replicate CPM, data were submitted to a hierarchical multiple regression model with message evaluation as the dependent variable. The first step of the model included initial attitudes, AQ, Replication Type, and NFC (6 items) as simultaneous predictors. AQ and Replication Type were effects coded (-1: Weak Message/Non-optimal Condition; +1: Strong Message/Optimal Condition). NFC was entered without mean-centering. All corresponding two-way interaction terms were entered in the second step, and the three-way interaction term was entered in the third step. Results are interpreted from the first step in which they appear.

Using this reduced scale renders the 3-way interaction only marginal in significance, B = .24, $t(205)$ = 1.80, f^2 = .02, p = .07, 95% CI: [-.02, .51]. More importantly, under the optimal conditions, the NFC × AQ interaction also becomes marginal in significance when using this reduced scale, B = .36, f^2 = .02, p = .06. The NFC × AQ interaction remains nonsignificant in the non-optimal condition, B = -.13, f^2 = .002, p = .50.

These results are not very different from those obtained using the 5-item reduced scale reported in the text. If p = .05 is a benchmark of replicability, then using the 5-item ML3-consistent scale produces a significant replication whereas using this 6-item scale does not, though the p-values do not differ by much. The effect sizes for the NFC × AQ interaction under the optimal condition, however, are the same (f^2 = .02), and the effect size of the 3-way interaction is the same (f^2 = .02). Furthermore, neither of these reduced NFC scales produce effect sizes that are much different from those obtained using the full 18-item NFC scale.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions.* Newbury Park, CA: Sage.

Cacioppo, J. T., Petty, R. E., & Kao, C. F. (1984). The efficient assessment of need for cognition. *Journal of Personality Assessment, 48(3*), 306-307. doi: 10.1207/s15327752jpa4803_13

Cacioppo, J. T., Petty, R. E., & Morris, K. (1983). Effects of need for cognition on message evaluation, argument recall, and persuasion. *Journal of Personality and Social Psychology, 45*, 805-818. doi: 10.1037/0022-3514.45.4.805

Cohen, J. E. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

Ebersole, C. R., Atherton, O. E., Belanger, A. L., Skulborstad, H. M., Allen, J. M., Banks, J. B.,…Nosek, B. A. (in press). Many Labs 3: Evaluating participant pool quality across the academic semester via replication. *Journal of Experimental Social Psychology.* Retrieved from osf.io/ct89g

Petty, R. E., Harkins, S. G., & Williams, K. D. (1980). The effects of group diffusion of cognitive effort on attitudes: An information processing view. *Journal of Personality and Social Psychology, 38*, 81-92. doi: 10.1037/0022-3514.38.1.81

Preacher, K. J., Rucker, D. D., MacCallum, R. C., & Nicewander,W. A. (2005). Use of the extreme groups approach: A critical reexamination and new recommendations. *Psychological Methods, 10(2*), 178–192.

Table S1

Multiple Regression Models Predicting Message Evaluation without Covarying Initial Attitudes

	Model 1		Model 2		Model 3	
	B	*p*	*B*	*p*	*B*	*p*
Intercept	6.72	< .001	6.85	< .001	6.77	< .001
Argument Quality	.39	< .001	-.36	.53	-.43	.45
Need for Cognition	-.29	.09	-.33	.06	-.31	.07
Replication Type	.16	.13	.38	.50	.50	.38
AQ × NFC			.23	.18	.26	.13
AQ × Replication Type			.12	.25	-.94	.10
NFC × Replication Type			-.07	.69	-.10	.54
AQ × NFC × Replication Type					.33	.06

Table S2

Multiple Regression Models Predicting Message Evaluation (Dichotomizing Need for Cognition by Top and Bottom Tertiles)

	Model 1		Model 2		Model 3	
	B	*p*	*B*	*p*	*B*	*p*
Intercept	5.00	$< .001$	5.00	$< .001$	4.94	$< .001$
Initial Attitude	.16	.002	.16	.002	.17	.001
Argument Quality	.36	.01	.38	.01	.42	.002
Need for Cognition	-.17	.21	-.18	.19	-.18	.19
Replication Type	.20	.13	.19	.16	.20	.14
AQ × NFC			.13	.32	.16	.24
AQ × Replication Type			.08	.54	.11	.43
NFC × Replication Type			-.01	.94	-.02	.88
AQ × NFC × Replication Type					.23	.08

Table S3

Multiple Regression Models Predicting Message Evaluation (Dichotomizing Need for Cognition

by Top and Bottom Quartiles)

	Model 1		Model 2		Model 3	
	B	*p*	*B*	*p*	*B*	*p*
Intercept	5.01	< .001	5.05	< .001	4.96	< .001
Initial Attitude	.17	.01	.18	.01	.19	.002
Argument Quality	.35	.02	.38	.02	.42	.01
Need for Cognition	-.21	.18	-.25	.11	-.25	.11
Replication Type	.25	.12	.22	.16	.22	.17
AQ × NFC			.14	.37	.16	.30
AQ × Replication Type			.17	.27	.18	.25
NFC × Replication Type			-.17	.29	-.19	.22
AQ × NFC × Replication Type					.29	.06