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Matthew Richard Wallaert , '05

Andrew Ward
Swarthmore College, award1@swarthmore.edu

T. Mann

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Ask a Busy Person: Attentional Myopia and Helping

Matthew Wallaert,
Department of Psychology, Swarthmore College

Andrew Ward[1], and
Department of Psychology, Swarthmore College

Traci Mann
Department of Psychology, University of Minnesota

Abstract

According to an oft-quoted piece of folk wisdom, if one wants something accomplished, the best person to ask is a busy person. We tested a version of this proposition in two studies. Study 1 exposed participants to a helping request in which cues promoting the relevant behavior were made more salient than those inhibiting it. Study 2 featured a request in which inhibiting cues were made more salient than cues promoting the behavior. In both studies, participants who were "busied" by high cognitive load showed more influence of the dominant behavioral pressure than did participants under minimal load. The results suggest that busy people can respond more to a helping appeal, but only when cues facilitating helping are more salient than those discouraging it.

Keywords

attention; helping; self-regulation; self-control; prosocial behavior

"If you want something done, ask a busy person." The premise underlying this familiar adage (see Byrne, 2008; Marks & MacDermid, 1996) is that busy people are those enviable (or annoying) individuals who are especially efficient and thus most likely to accomplish a task successfully when called upon to do so. But another possibility presents itself—one also captured by the aforementioned aphorism but involving a less sanguine interpretation. Perhaps busy individuals can be so cognitively distracted that they are unable to attend to valid reasons for turning down a request. This alternative informed the studies reported here.

Myopia Models

Support for this "distraction" account comes from work by Steele, Josephs, and colleagues on *alcohol myopia*, "an acute state of shortsightedness in which [intoxicated individuals] process fewer cues less well" (Steele & Josephs, 1988, p. 197). In one early investigation of what they termed *inhibitory conflict* (see Steele & Southwick, 1985), Steele, Critchlow, and Liu (1985) exposed both sober and intoxicated participants to a situation that pitted

[1]Correspondence concerning this article should be addressed to Andrew Ward, Department of Psychology, Swarthmore College, 500 College Ave., Swarthmore, PA 19081. award1@swarthmore.edu.

pressures to engage in a behavior against those associated with resisting the behavior. In particular, individuals were asked to help an experimenter by agreeing to complete an extremely boring task (namely, repeatedly crossing out certain letters in a series of identical paragraphs). Participants thus faced a conflict between their desire to help the experimenter and their inclination to avoid the tedious task. The results of the study showed that drunk individuals were more likely to accede to a request for help with the task than were sober individuals, but only when environmental cues promoting helping (occasioned by an especially impassioned plea by the experimenter) dominated those favoring resistance. According to the researchers, alcohol intoxication made it difficult to focus on anything except the salient need for help expressed by the experimenter in the study. Indeed, when prominent cues failed to promote helping, drunk individuals were no more likely than sober individuals to agree to provide assistance.

Josephs and Steele (1990) maintained that alcohol myopia arises because alcohol "consistently impairs the capacity to engage in controlled, effortful cognitive processing" (p. 115; see also Giancola, Josephs, Parrott, & Duke, 2010). More recently, Mann and Ward (2004, 2007) advanced the *attentional myopia* model, arguing that *any* source of cognitive limitation can potentially result in the same shortsighted attentional consequences observed in studies of alcohol by Steele et al. and by others (e.g., MacDonald, Fong, & Zanna, 2000). In prior investigations, both eating and smoking behavior have been shown to be influenced by salient environmental cues when participants have found themselves under significant cognitive load (Ward & Mann, 2000; Westling, Mann, & Ward, 2006).

The Present Research

In the studies reported here, we sought to investigate the implications of the attentional myopia model for helping, focusing on attentional limitation in the presence of salient cues that either promoted or inhibited the behavior in question. To impose limits on attention, we chose a task that pretesting revealed would present a significant cognitive load but would not be so distracting to participants that they could not heed the pertinent helping request. At the same time, it allowed us to ensure that participants would be exposed to a continuous source of cognitive load, requiring sustained attention, even while they attempted to process and respond to the request. Participants played a video game that involved either substantial or minimal cognitive demands while being asked to engage in helping behavior—a request in which salient cues ensured that the pressure to comply would either be strong (Study 1) or weak (Study 2). Consistent with our past research on attentional myopia, we predicted that participants under high cognitive load would be more influenced by relevant cues that either promoted or inhibited helping behavior than would participants under minimal cognitive load.

Study 1

Method

Participants—Fifty-eight undergraduate participants (34 females, 24 males; mean age = 18.21 years) completed the study in individual sessions in partial fulfillment of an

introductory psychology course requirement. The study took place in a psychology laboratory.

Procedure—Participants were informed by a male experimenter that the study involved two tests of cognitive abilities, one linguistic and one spatial. They then completed a mood measure, namely, the 20-item Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988), after which they were introduced to the "linguistic test," an arduous and boring task. The task was adapted from the one used by Steele et al. (1985) and was designed to create a conflict in a participant's mind between the need to help the experimenter and the desire to avoid engaging in an unpleasant task.

In this investigation, the task consisted of a series of identical passages composed of "greeking" text—nonsense words designed to mimic Latin-based language. Participants were instructed to go through the passages and cross out every *a* and *e* in the text, completing as many passages as possible in ten minutes. The experimenter then left the room and returned at the allotted time, at which point participants completed a post-task questionnaire.

After filling out the questionnaire, participants were told that they would next be completing a spatial test that made use of a computer game. The rules of the game were explained, and participants were informed that the first two minutes of the game would constitute a practice session, after which the computer would begin to record their performance for an additional 8 minutes. The experimenter indicated that he would inform the participants when five minutes had elapsed and then exited the room.

After five minutes, the experimenter returned and, while participants continued to play the video game, he delivered the following message:

> OK, you're halfway through with the spatial test; keep playing, as the computer is still scoring you. After you finish playing the game and the computer records your score, I need you to repeat the first linguistic ability test that you did a few minutes ago, crossing out *as* and *es* in short passages, with a different passage. Obviously, the more data I collect, the better; can you give me an idea of how many more passages you'd be willing to complete, and I'll go make copies? I need you to do at least one, but I'd really appreciate it if you could do more.

Participants then completed the primary dependent variable, adapted from Steele et al. (1985), which consisted of a measure of each participant's intention to help the experimenter. Specifically, they were handed a sheet to indicate the number of additional passages they were willing to complete (see below). The experimenter then departed again, and participants completed the remaining portion of the game.

After the gaming session was complete, the experimenter returned with a stack of greeking-text passages, along with a second copy of the PANAS, which he asked participants to fill it out prior to beginning the second linguistic test. After completing the PANAS, and again consistent with Steele et al. (1985), participants were told that they in fact did not have to complete the test, at which point they were debriefed.

Cognitive Load Manipulation: The cognitive load manipulation made use of a video game known as Armagetron, a free, open-source computer game based on a scene from the (original) motion picture *Tron*. The object of the game is to "drive" a small motorcycle, called a lightcycle, around an enclosed virtual playing surface. As the lightcycle is driven, a solid barrier extends from behind it, creating a virtual wall. For each round of the game, driving the lightcycle into one's own wall, another player's wall, or the outer wall of the playing space results in a loss, while forcing an opponent into a wall produces a win.

For participants in the low cognitive-load condition, the game was configured to include a single computer-controlled opponent that moved at a slow pace, resulting in a task that presented minimal challenge to the player (see Figure 1a). By contrast, participants in the high-cognitive load condition faced three other computer-controlled opponents, all of whom moved at eight times the speed of the cycle in the low-load condition, resulting in a task that pretesting revealed was extremely challenging to perform successfully without crashing (see Figure 1b).

Dependent Measures: In addition to completing the PANAS twice during the session, participants filled out a post-task questionnaire that included the following three items: "How difficult did you find the linguistic test?", "How enjoyable did you find the linguistic test?", and "How boring did you find the linguistic test?" (1 = *not at all*; 7 = *very much*). It also asked, "How many copies of the linguistic test did you complete in the 10-minute session?". After this final item, a blank line was provided for participants to fill in with the appropriate number. Finally, in response to the experimenter's request to complete additional passages, participants were given a sheet listing the numbers 1 through 20 (with 20 equivalent to almost twice the maximum number of passages any participant had completed during the preliminary phase of the study) and asked to circle the numeral corresponding to the number of additional passages they were willing to complete. This constituted our primary dependent measure.

Results

Preliminary Ratings—A total of 137 undergraduate raters were asked to read the script employed by the experimenter to solicit additional passage completions from participants in both Study 1 and Study 2 (with order of the two scripts counterbalanced). After reading the first script, raters were asked, "under those circumstances," to what extent did they feel that (a) they "really should complete additional passages," and (b) it would be "okay to not complete any additional passages" (1 = *not at all*; 9 = *a great deal*). They were then presented with the script employed in the other study and asked to respond to the same two items again. With respect to the script employed in Study 1, raters reported greater endorsement of the item indicating that they should complete additional passages (M = 5.36, SD = 2.35) than the item indicating that it would be okay not to (M = 4.63, SD = 2.40), paired $t(136) = 2.02$, $p = .05$, $d = 0.17$. This finding thus confirms that perceived pressures to comply with the experimenter's strong helping request to complete more of the task were stronger than pressures to resist it.

Preliminary Measures—Participants in the high cognitive-load condition (M = 6.68, SD = 1.49) did not differ from those in the low cognitive-load condition (M = 6.90, SD = 1.69) in terms of how many initial passages they completed, $t(56) < 1$. The two groups also did not differ significantly in how difficult ($M_{\text{high load}}$ = 2.21, SD = 1.23; $M_{\text{low load}}$ = 2.33, SD = 1.27), $t(56) < 1$, or boring ($M_{\text{high load}}$ = 4.57, SD = 1.73; $M_{\text{low load}}$ = 5.27, SD = 1.80), $t(56)$ = 1.50, p = .14, they found the crossing-out task. There was, by chance, a marginally significant difference in how enjoyable the high cognitive-load participants found the task (M = 2.79, SD = 1.34), as compared to the low cognitive-load participants (M = 2.07, SD = 1.41), $t(56)$ = 1.98, p =.052. However, controlling for this variable in the relevant regression analysis did not significantly alter the statistical significance of the primary result (i.e., the cognitive load effect on helping) reported in the next section, Sobel z =1.39, p = .16.

A 2 × 2 analysis of variance (Cognitive Load × Gender) revealed that results on the primary dependent measure reported below (i.e., the number of additional paragraphs that participants indicated they were willing to complete) were unaffected by participant gender, $F(1, 54) < 1$, nor was there a significant main effect of gender for this measure, $F(1, 54)$ = 2.70, $p > .10$. Similarly, analyses of covariance revealed no significant main effect of participants' initial or final scores on the PANAS for this result, both Fs < 1. In addition, participants in the two conditions did not differ significantly in their initial affect, final affect, or change in affect, all ts < 1. Indeed, the absence of significant differences between the two groups on any item within the PANAS (including such items as “interested,” “alert,” “distressed,” and “excited”) suggests that the cognitive load manipulation did not exert a differential emotional impact on the two groups. Moreover, mean levels of ratings for the PANAS items “upset” and “hostile” on the post-task survey were both below 2 (i.e., “a little”) on the relevant 5-point scale (which, it will be recalled, ranged from 1 = *very slightly or not at all* to 5 = *extremely*), suggesting no pronounced negative effects in either condition from playing this particular video game (cf. Anderson et al., 2010). The variables of gender and mood receive no further discussion in this report.

Primary Dependent Measure—When faced with the request from the experimenter to complete additional passages, participants in the high cognitive load condition offered to complete more passages (M = 7.11, SD = 4.06) than did participants in the low cognitive-load condition (M = 5.40, SD = 1.94), $t(56)$ = 2.07, p = .043, d = .54.

Discussion

As predicted, creating a situation in which pressures promoting compliance with a helping request were stronger than those inhibiting compliance (as confirmed by raters) resulted in greater acquiescence to the request by those who were under high cognitive load than by those not as cognitively distracted. These findings thus confirm and extend those of Steele et al. (1985), who found similar results when participants' cognitive capacities were limited after ingesting alcohol. The findings reported here suggest that, like alcohol, cognitive load can lead participants to focus disproportionate attention on a salient request for assistance, to the neglect of more distal reasons for refusing the request.

Of course, alternative explanations for these findings are possible (though, as with the Steele et al. (1985) studies, one alternative factor, mood, does not appear to have played a significant role). Accordingly, in an additional test of the attentional myopia model, we carried out a second study in which we endeavored to create inhibiting pressures that were stronger than pressures promoting helping behavior. Once again, we predicted that the more salient pressure would especially drive the responses of those participants whose attention had been limited through the imposition of cognitive load. In the study, we adopted the same procedure as in Study 1, except that we altered the helping appeal delivered by the experimenter to weaken relevant cues promoting helping and strengthen those that discouraged it.

Study 2

Method

Participants—A total of 102 undergraduate participants (47 females, 55 males; mean age = 19.97 years) completed the study in partial fulfillment of an introductory psychology course requirement.

Procedure—All procedures and measures were identical to those employed in Study 1, with the exception of the messaged conveyed to the participant by the experimenter after 5 minutes had elapsed during the computer game task. In this study, while participants continued to play the video game, the experimenter delivered a request designed to create a situation in which the inhibiting pressures opposing further assistance dominated those pressures promoting additional helping. The message read as follows:

> OK, you're halfway through with the spatial test; keep playing, as the computer is still scoring you. After you finish playing the game and the computer records your score, I'd like you to repeat the first cognitive ability test that you did a few minutes ago, crossing out *as* and *es* in short passages, with a different passage. Can you give me an idea of how many more passages you'd be willing to complete and I'll go make copies? I realize you may be tired, so if you don't want to do more, please don't feel *any* pressure to do so.

Results

Preliminary Ratings—After reading the Study 2 experimenter script, our student raters indicated that, “under those circumstances,” it was more likely that it would be “okay to not complete any additional passages” ($M = 6.65$, $SD = 2.20$) than that they “really should complete additional passages” ($M = 4.03$, $SD = 2.28$), paired $t(136) = 7.79$, $p < .001$, $d = .67$.[1] These ratings thus suggested that, in this study, we had succeeded in creating a scenario

[1]Comparisons of ratings across the two studies lend further support to the hypothesized balance of pressures created by the respective appeals from the experimenter. When asked whether they should complete additional passages, raters responded to the experimenter script for Study 1, in which pressures to help were designed to dominate those inhibiting helping, with much greater endorsement of the relevant item ($M = 5.36$, $SD = 2.35$) than they did in response to the experimenter script for Study 2 ($M = 4.03$, $SD = 2.28$), paired $t(136) = 6.00$, $p < .001$, in which inhibiting pressures were designed to be dominant. Similarly, when asked if it would be okay not to complete additional passages, raters responded to the script in Study 2 with significantly higher ratings ($M = 6.65$, $SD = 2.20$) than they did with respect to the script in Study 1 ($M = 4.63$, $SD = 2.40$), paired $t(136) = 8.57$, $p < .001$.

in which perceived pressures to resist the experimenter's rather weak request and thus refuse to complete more of the boring task were stronger than pressures to comply with the request.

Preliminary Measures—As in Study 1, participants in the high cognitive-load condition (M = 7.09, SD = 2.00) did not differ significantly from those in the low cognitive-load condition (M = 6.43, SD = 2.11) in terms of how many initial passages they completed, $t(100) = 1.61$, $p = .11$. And the two groups did not differ significantly in how difficult ($M_{\text{high load}} = 2.16$, $SD = 1.16$; $M_{\text{low load}} = 2.22$, $SD = 1.13$), enjoyable ($M_{\text{high load}} = 2.23$, $SD = 1.38$; $M_{\text{low load}} = 2.37$, $SD = 1.25$), or boring ($M_{\text{high load}} = 5.21$, $SD = 1.80$; $M_{\text{low load}} = 5.04$, 1.74) they rated the initial passage task, all ts < 1.

Primary Dependent Measure—When faced with the request from the experimenter to complete more passages, participants in the high cognitive load condition offered to complete fewer additional passages (M = 2.54, SD = 3.30) than did participants in the low cognitive-load condition (M = 4.28, SD = 4.76), $t(100) = 2.18$, $p = .03$, $d = .43$.

Discussion

Upon exposure to pressures to resist a helping request that were stronger than those promoting helping (as confirmed by raters), participants under high cognitive load agreed to complete fewer additional passages than did those under low load. In their investigation, Steele et al. (1985) did not include a manipulation explicitly intended to test the effect of pitting salient inhibiting pressures against less potent promoting pressures (but see MacDonald et al. (2000) for such an investigation in a related domain). However, in what they referred to as the “low inhibitory conflict” condition, minimal pressure to comply with the helping request was applied, resulting in intoxicated participants in fact exhibiting less helping behavior than sober participants (though the result failed to reach conventional levels of significance). The findings reported here provide the first explicit evidence that individuals performing a cognitively demanding task will offer significantly less assistance than less distracted individuals when pressures to perform the relevant task are evidently outweighed by pressures not to do so.

In two studies, individuals were exposed to conflicting behavioral pressures that, on balance, either promoted or inhibited helping behavior. In each case, consistent with the attentional myopia model, participants' responses showed more influence of the stronger pressure when they found their attention occupied by a cognitively demanding (but not overwhelming) task than when they were less distracted. Indeed, an analysis of the effects sizes associated with the two studies presented here revealed a predicted pattern (see Mann & Ward (2004) for a similar pattern of results across samples). That is, whereas in Study 1 the imposition of cognitive load significantly increased intentions to help under conditions designed to promote helping behavior, $r = .26$, that same cognitive load significantly decreased intentions to help when study conditions instead served to decrease helping (see Figure 2), $r = -.21$, resulting in a significant difference between the two studies, $z = 2.85$, $p = .002$.

It would seem, then, that asking a (cognitively) busy person can be an effective strategy for eliciting assistance on an unpleasant task, but only if cues promoting helping are more

salient than those opposing it. Otherwise, our results suggest, one might fare better by asking a cognitively unoccupied person instead.

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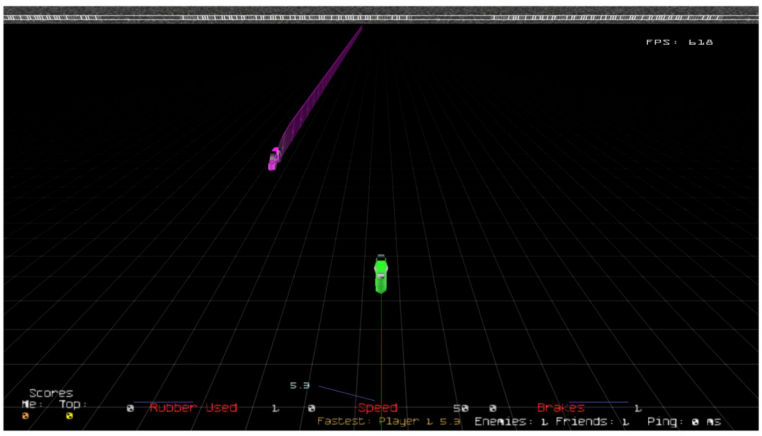
(a)



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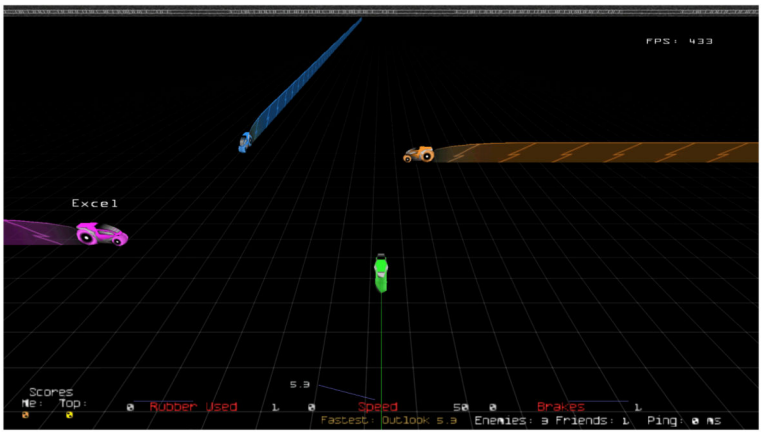

Figure 1.
Video game scenarios faced by participants under low (a) and high (b) cognitive load.

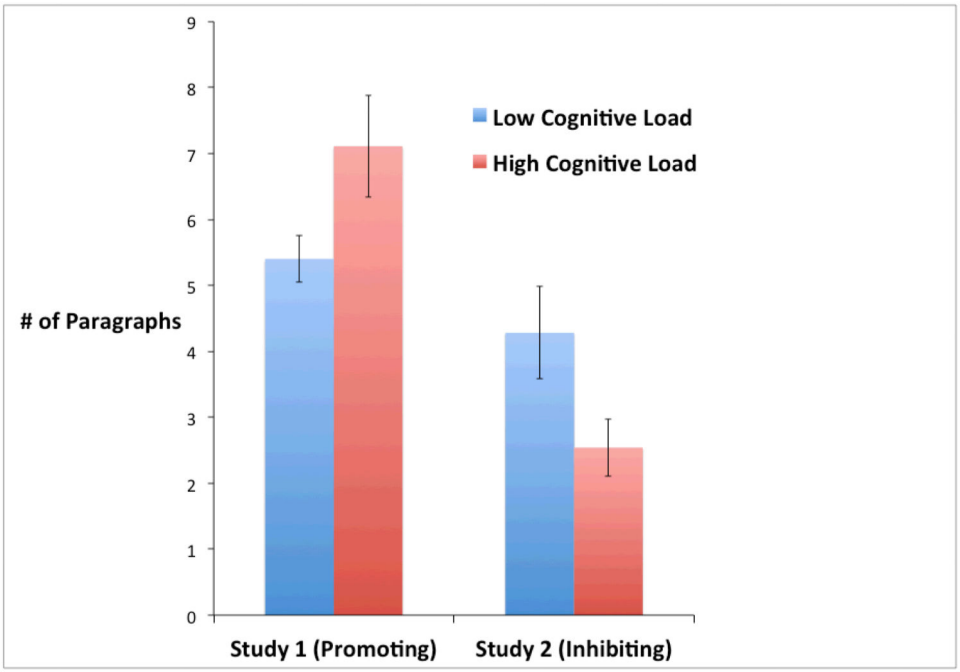

Figure 2.

Number of paragraphs agreed to be completed by participants under low vs. high cognitive load in Study 1 (promoting pressure stronger) and Study 2 (inhibiting pressure stronger). Error bars represent standard errors.