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Trait Self-Focused Attention Increases Sensitivity to Nonconscious Primes: Evidence from Effort-Related Cardiovascular Reactivity

Paul J. Silvia, Casey S. Kelly, Alireza Zibaie, Joseph L. Nardello, and Lance C. Moore

Department of Psychology, University of North Carolina at Greensboro.

Abstract

A broad range of primes presented outside of awareness—ranging from emotional faces to people’s first names—can influence the physiological mobilization of effort during active coping tasks. Who responds more strongly to implicit cues? Based on models of self-awareness, the present research examined how individual differences in self-focused attention influence sensitivity to nonconscious primes. Adults completed a challenging cognitive task in which two kinds of primes were presented (people’s first names and words related to the task’s difficulty). Trait self-focus significantly interacted with both primes to predict effort, measured as systolic blood pressure (SBP) reactivity. People high in trait self-focus had significantly higher SBP reactivity when primed with words that made the task seem more important (their first names) and harder (high difficulty words). These findings thus expand the evidence for motivational intensity theory’s analysis of implicit processes.

Keywords

effort; cardiovascular reactivity; self-focused attention; implicit priming; motivational intensity; active coping

Few goals require or deserve people’s peak effort. Motivational intensity theory (Brehm & Self, 1989; Gendolla, Wright, & Richter, 2012), a model of effort regulation, examines factors that promote mobilizing and withdrawing effort. Historically, motivational intensity research has studied explicit, conscious factors such as task difficulty (Wright, Williams, & Dill, 1992), monetary incentives (Richter, 2012), moods (Gendolla, Brinkmann, & Silvestrini, 2012), feelings of energy and fatigue (LaGory, Dearen, Tebo, & Wright, 2011), and self-perceptions of ability (Wright & Dill, 1993). Recently, however, research has taken an implicit turn—several lines of work have examined how cues presented outside of conscious awareness influence the psychophysiology of effort. For example, rapid masked presentations of emotional faces and words (Capa, Cleeremans, Bustin, & Hansenne, 2011; Gendolla, 2012; Freydefont & Gendolla, 2012), words related to action or inaction (Gendolla & Silvestrini, 2010; Silvestrini & Gendolla, in press), and people’s first names

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Correspondence should be addressed to: Paul J. Silvia, Department of Psychology, P. O. Box 26170, University of North Carolina at Greensboro, Greensboro, NC, 27402-6170; p_silvia@uncg.edu.

The last four authors contributed equally.

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(Silvia, 2012; Silvia, Kelly, Jones, & Zibaie, 2011a) influence effort-related cardiovascular activity in a manner predicted by motivational intensity theory.

In the motivational intensity literature, effort is often assessed using outcomes that reflect the impact of the sympathetic division of the autonomic nervous system on the heart (Wright, 1996). To assess effort-related cardiovascular activity, we measured systolic blood pressure (SBP), diastolic blood pressure (DBP), and heart rate (HR) during a baseline and a task period. Motivational intensity research reliably finds effects for outcomes that reflect β -adrenergic sympathetic influences on the heart, such as SBP (Gendolla et al., 2012; Wright, 1996) and, in recent work using impedance cardiography, systolic time intervals such as pre-ejection period (PEP; Richter, Friedrich, & Gendolla, 2008; Richter & Gendolla, 2009). SBP served as our primary outcome. Of the three, SBP is the most strongly affected by sympathetic influence on the myocardium. Sympathetic activity increases myocardial contractility (Drew & Sinoway, 2012), which increases SBP via increased cardiac output. Relative to SBP, DBP is less affected by sympathetically-mediated changes in contractility. It is thus a less consistent marker of effort, but DBP effects do appear in many studies (e.g., Al'Absi et al., 1997; Gendolla & Richter, 2005; Silvia, McCord, & Gendolla, 2010). Finally, effects for HR are the least reliable of the three. The substantial parasympathetic influence on the heart period can mask sympathetic influences (Berntson, Cacioppo, & Quigley, 1993), but HR effort effects do appear in some studies (e.g., Eubanks, Wright, & Williams, 2002).

An important question, now that a range of nonconscious influences on effort-related cardiovascular activity have been established, concerns the moderation of subliminal primes. Who is more affected by these primes, and why? One likely moderator is *trait self-focus*, which captures individual differences in the tendency to be self-reflective and introspective (Fenigstein, 2009; Smári, Ólason, & Ólafsson, 2008). The best known effect of self-focused attention is self-regulation: focusing on the self makes people compare the self against relevant standards, thus leading to goal-directed action (Carver, 2012; Duval & Silvia, 2001, 2002; Duval & Wicklund, 1972). But self-focus has additional effects, such as making self-knowledge more accessible and influencing awareness of internal states (Gibbons, 1990; Silvia & Eddington, 2012; Silvia & Gendolla, 2001).

For understanding how priming affects effort, the most relevant effect of self-focus is to make external stimuli self-relevant. Hull's model of self-focus proposes that focusing on the self makes external cues seem self-relevant, which makes people more likely to act on the cues (Hull & Levy, 1979; Hull, Van Treuren, Ashford, Propsom, & Andrus, 1988). If self-focused people are more likely to see subliminal primes as relevant, then self-focus should amplify priming effects. Several studies have supported this reasoning. People high in trait self-focus responded faster to a cognitive task when the trials had rapid masked primes related to success (Hull, Slone, Meteyer, & Matthews, 2002, Study 2). When primed with masked emotional words, people high in trait self-focus showed higher systolic blood pressure (SBP) and heart rate (HR) in response to anger primes and lower SBP and HR in response to relaxation primes (Hull et al., 2002, Study 4). Rapid masked primes related to rudeness or politeness affected how quickly people interrupted the experimenter (Wheeler, Morrison, DeMarree, & Petty, 2008) for people high in self-reflection, measured via a subscale of the private self-consciousness scale (Fenigstein, Scheier, & Buss, 1975). When people thought about themselves after priming, rapid primes related to aggression or peace increased prime-consistent behavioral measures of aggression (DeMarree & Loersch, 2009). Although none of these studies examined effort per se, they do consistently show that self-focus amplifies the influence of primes.

In the present research, we examined trait self-focus as a moderator of how subliminal priming affects effort-related cardiovascular reactivity. Because past work suggests that self-focused people are more sensitive to cues, we expected that people high in trait self-focus would be more responsive to subliminal primes. We measured trait self-focus using the self-reflection scale (Grant, Franklin, & Langford, 2002), a recent measure of individual differences in self-focused attention that has good psychometric properties (Silvia & Phillips, 2011). People worked on a cognitive task that was fixed at a challenging level of difficulty—a level, we expected, at which effort could be nudged up or down by priming.

During the task, two kinds of word primes were orthogonally manipulated. First, people were primed with either easy concepts (*easy, simple*) or hard concepts (*hard, difficult*), which should influence perceptions of the task's difficulty. Second, we primed people with either random letters or with their first name, which makes meeting goals more important (Silvia, 2012; Silvia et al., 2011a; Silvia & Phillips, 2013). These two primes map onto the two primary factors in motivational intensity theory: some variables influence appraisals of task difficulty, and others influence the importance of achieving the goal (Brehm & Self, 1989; Wright, 2008). Based on the theory and past work, we would expect effort to be highest when the primes increase the importance of success (first name primes) and imply that the task is hard (high difficulty primes). And if trait self-focus increases prime sensitivity, then this priming pattern should be most pronounced when trait self-focus is high.

Method

Participants and Design

A total of 56 people (39 women, 17 men) enrolled in General Psychology at the University of North Carolina at Greensboro participated as part of a research participation option. Six cases were excluded (three due to software crashes, three because of difficulty getting cardiovascular readings), leaving a final sample of 50 people (35 women, 15 men). Based on self-reported race and ethnicity, the sample was approximately 56% European American, 30% African American, 8% Asian American, and 8% Hispanic or Latino; people could choose more than one category. Age ranged from 18 to 30 ($M = 18.8$, $SD = 1.88$).

People were randomly assigned to one of four between-subject conditions in a 2 (Difficulty Prime: Easy, Hard) by 2 (Name Prime: Control, First Name) factorial design.

Cardiovascular Assessment

The cardiovascular outcomes—SBP (mmHg), DBP (mmHg), and HR (bpm)—were assessed with an automated Dinamap 8100 cardiovascular monitor (Critikon, USA) using the oscillometric method. Recordings were taken with a standard cuff placed over the brachial artery of the participant's non-dominant arm. There were four baseline assessments (one every two minutes) and five task assessments (one every minute).

Procedure

Everyone participated individually. After participants provided informed consent, the experimenter explained that the study was about bodily changes during mental activity, particularly how people made quick decisions in the face of different kinds of distractions. The experiment started with a baseline period, during which participants sat quietly and completed a questionnaire. Four baseline scores were obtained, one every two minutes.

Assessment of trait self-focus—Among filler scales and demographic questions, the baseline questionnaire contained the 12-item self-reflection scale (Grant et al., 2002). This

scale measures the same construct as older scales (e.g., the original private self-consciousness scale; Fenigstein et al., 1975) but has much stronger psychometric properties (Lyke, 2009; Silvia & Phillips, 2011). Another virtue of the self-reflection scale is its unitary factor structure: past work has found that different clusters of items in the private self-consciousness scale have opposing effects on prime sensitivity (Wheeler et al., 2008).

The d2 task—After the baseline period, the experimenter introduced the “cognitive task,” which was a computerized version of the d2 test of attention (Brickenkamp & Zillmer, 1998). The d2 task has been used in many studies of motivational intensity (Gendolla & Richter, 2005; Gendolla, Richter, & Silvia, 2008; Silvia, 2012; Silvia et al., 2010). During the d2 task, a single *d* or *p* appears on the computer monitor. Each *d* or *p* has 0, 1, or 2 apostrophes above it and below it. Participants must decide if the item is a d2 (a *d* with 2 apostrophes above it, 2 apostrophes below it, or with 1 above and 1 below it). If the letter was a *d* with exactly 2 apostrophes, people pressed a green button; if it was anything else (all *ps* and *ds* with 1, 3, or 4 apostrophes), they pressed a blue button. People responded with their dominant hand on a Cedrus RB-834 response pad (Cedrus, USA); the task was presented and controlled using SuperLab Pro 2.0.4 (Cedrus, USA).

The d2 items had a fixed response window of 750 ms: the item remained onscreen for 750 ms regardless of when or whether the participant gave the correct response. We chose a 750 ms window because it is a volatile “tipping point” level of task difficulty, based on our extensive past work with the d2 task. A 750 ms window is difficult enough to make the majority of the sample try harder but not so easy or hard that everyone withholds effort (Silvia 2012, Studies 2 and 3; Silvia, Jones, Kelly, & Zibaie, 2011b; Silvia, Moore, & Nardello, 2013). Because of this variability, it is a good difficulty level at which effort could be nudged in either direction using rapid masked primes.

The experimenter explained that the d2 task’s standard was to get 90% of the items correct. The standard was thus an accuracy standard—make few mistakes—but the fixed response window required people to respond quickly and accurately. To familiarize themselves with the task, people completed 22 practice trials. The practice trials were unscored, and no priming occurred during the practice trials.

Priming manipulation—The two priming manipulations were accomplished using rapid masked sequential priming. Difficulty priming involved rapidly presenting words implying different difficulty levels. For the easy primes, the words were *easy* and *simple*; for the hard primes, the words were *hard* and *difficult*. One of the two primes was randomly presented during each trial. First name priming involved rapidly presenting either the participant’s first name or a random letter string.

Each trial began with an intertrial interval (250 ms) and fixation cross (500 ms) followed by the person’s first name or a random-letter string (30 ms), a 16-letter random consonant mask (150 ms), a difficulty prime (30 ms), a different 16-letter random consonant mask (200 ms), and then the d2 item (750 ms). All letters were presented in 48 pt uppercase Tahoma in black against a white background. The monitor had a refresh rate of 75 Hz, so the functional length of the 30 ms primes ranged from approximately 27 ms to 40 ms (i.e., 2 to 3 refreshes of the screen).

The priming was justified by explaining that the study was interested how different distractors influenced performance. Distracting letter flashes were one kind; other ostensible distractors were listening to music during the task and viewing one’s reflection in a large mirror. A set of headphones and a large mirror (covered with a cloth) were on the desk as props to bolster the cover story.

The d2 task took five minutes. Cardiovascular responses were assessed five times, once per minute, starting with the task's onset. Afterward, participants were systematically probed about the priming manipulation, debriefed, thanked, and given the opportunity to ask questions about the research.

Analysis Strategy

As in our past work (Gendolla et al., 2008; Silvia et al., 2011a, 2011b), we used contrast analysis to examine whether the predicted pattern of effects varied as a function of trait self-focus. Because motivational intensity theory predicts higher effort when success is important and the task is challenging, we used a 3 vs. 1 contrast that compared the First Name/Hard Primes condition to the other three conditions. The First Name/Hard Primes condition thus received a weight of +3; the remaining conditions each received a weight of -1. Using regression models, we then estimated the main effect of the contrast; the main effect of trait self-focus, which was standardized; and the interaction of the contrast and trait self-focus. This interaction was critical to our predictions: if trait self-focus increases prime sensitivity, then the 3 vs. 1 pattern should be more pronounced when trait self-focus is high. The regression models were conducted in Mplus 7 using maximum likelihood estimation. All regression weights are unstandardized.

Results

Data Reduction

The last three baseline assessments were averaged to create baseline scores for SBP ($\alpha = .85$), DBP ($\alpha = .88$), and HR ($\alpha = .98$). (The first baseline score was dropped because it was significantly higher than the other three.) Table 1 shows the baseline values and their confidence intervals. The five task assessments were averaged to form overall task scores for SBP ($\alpha = .95$), DBP ($\alpha = .96$), and HR ($\alpha = .99$). Cardiovascular reactivity was computed via difference (delta) scores, shown in Table 2; note that these values represent main effects of the primes and do not reflect the interaction with trait self-focus. Each difference score's corresponding baseline value was included as a predictor in the regression models to control for possible initial-value effects (e.g., Vickers & Altman, 2001). The self-reflection scale, as in our past work, showed strong reliability ($\alpha = .89$).

Cardiovascular Reactivity

SBP reactivity—For SBP reactivity, our primary measure of effort, the regression model found that the main effect of the contrast ($b = .21$, $SE = .36$, $p = .553$) and the main effect of trait self-focus ($b = .53$, $SE = .65$, $p = .419$) were non-significant. The interaction between the contrast and trait self-focus, however, was significant, $b = 1.03$, $SE = .37$, $p = .006$. The predictors explained 18.9% of the variance in SBP reactivity.

As predicted, the pattern of coefficients indicates that the difference between the First Name/Hard Primes condition and the other three grew larger as trait self-focus increased. Figure 1 depicts the estimated pattern of results for groups low and high in trait self-focus (± 1.50 *SD*). As expected, people high in trait self-focus showed a pronounced difference between the conditions: SBP reactivity was highest when self-focused people were primed with their first name and with words implying a difficult task. People low in trait self-focus, in contrast, were insensitive to the primes and showed low SBP reactivity regardless.

DBP reactivity—For DBP reactivity, the regression model found no significant main effects or interactions, all $ps > .664$.

HR reactivity—For HR reactivity, the model found non-significant main effects for the 3 vs. 1 contrast ($b = -.17$, $SE = .37$, $p = .636$) and for trait self-focus ($b = -.32$, $SE = .66$, $p = .631$). The interaction, however, was significant, $b = .83$, $SE = .39$, $p = .034$. The model explained 14.6% of the variance in HR reactivity. Figure 2 depicts the pattern of results, which less reliably adhered to the predicted pattern observed for SBP, our primary measure. For HR reactivity, all of the predicted reactivity scores were negative, but they were least negative when people high in self-focus received First Name/Hard Word primes and when people low in self-focus received other prime combinations.

Task Performance

We next explored whether priming and trait self-focus influenced behavioral measures of task performance (see Table 3). We calculated response times for correct trials and the number of errors, expressed as a percentage. For both response times and for errors, the regression model found no significant main effects or interactions, all $ps > .240$, indicating that the primes and trait self-focus had larger effects on physiological effort during the task than on actual achievement. As an aside, 52% of the sample met the standard of getting 90% of the trials correct.

For the sample as a whole, response times did not significantly correlate with SBP ($r = .01$, $p = .933$), DBP ($r = .12$, $p = .401$), or HR ($r = -.10$, $p = .494$) reactivity scores. Error proportions, however, correlated significantly with SBP ($r = -.33$, $p = .010$), marginally with HR ($r = -.24$, $p = .067$), and non-significantly with DBP ($r = -.15$, $p = .271$) reactivity. The direction of the significant SBP correlation indicates that people made fewer mistakes as SBP reactivity increased, which reflects better performance in relation to the task's accuracy standard.

Discussion

Research on motivational intensity theory has taken an implicit turn in recent years. Several strands of work have examined how cues presented outside of awareness influence the physiological mobilization and withdrawal of effort (Capa et al., 2011; Gendolla, 2012; Silvia, 2012; Silvia et al., 2011a), measured primarily as SBP or PEP reactivity, two indicators of sympathetic influence on the heart. Now that nonconscious influences on effort have been established for a range of primes, what factors make priming more or less influential?

The present research considered individual differences in self-focused attention, a trait central to self-regulation (Carver, 2012; Silvia & Duval, 2001) and an important contributor to effort (Silvia et al., 2011b). When self-focused, people are more likely to see an external event as relevant to the self (Hull et al., 2002). As a result, external cues can have a greater influence on self-focused people if they appraise the cues as relevant to ongoing action and goals (Wheeler, DeMarree, & Petty, 2007). Trait self-focus is thus a natural candidate when considering moderators of implicit priming.

Consistent with past work on self-focus, the experiment found interactions between trait self-focus and two kinds of subliminal primes. The combination of primes expected to affect effort the most—priming first names and hard words—had a significantly stronger effect on effort, measured via SBP reactivity, when people were high in trait self-focus. It is notable that these effects were strongest for SBP reactivity. As discussed earlier, of the three outcomes we measured, SBP reactivity is the measure that best reflects β -adrenergic sympathetic influences on the heart, and research on motivational intensity theory has historically focused on sympathetic activity generally and SBP specifically (e.g., Wright, 1996). Nevertheless, SBP is an oblique measure of sympathetic impact, and the recent

literature has shifted to impedance cardiography, which affords more direct and precise assessment of sympathetically-mediated changes in cardiac contractility (e.g., PEP; Kelsey, 2012). Examining the role of trait self-focus in priming using impedance cardiography would be an important extension of the present work.

The present results are noteworthy in several respects. First, it involved primes that affect different factors in motivational intensity theory—the perceived difficulty of the task (difficulty priming) and the importance of meeting the goal (name priming; Silvia et al., 2011a; Silvia, 2012). We thus demonstrated that the major factors in the theory can be modified outside of awareness. Second, the effects involved successive nonconscious priming, which has only rarely been used in effort work. And third, the results revealed an interaction between conscious (trait self-focus) and nonconscious (primes) factors, thus illustrating the breadth and generality of motivational intensity theory's predictions.

Differences in effort-related cardiovascular activity had some corresponding differences in task performance. The effects were specific to the number of errors, which is consistent with the d2 task's standard to get at least 90% of the trials correct. For the sample as a whole, SBP reactivity—the outcome most closely linked to effort—correlated significantly with errors: higher SBP was related with making fewer mistakes, a pattern consistent with effort fostering better task performance. Motivational intensity research often finds stronger effects for physiological measures of effort than for behavioral measures of performance. There are many reasons for such differences, but the most important is that effort is only one contributor to how well people do. People also bring individual differences in cognitive abilities, and tasks vary in how much of their variance is due to abilities, effort, and task-specific strategies. Moreover, effort and performance needn't be positively related, such as in cases of “compensatory effort” when people are fatigued (Hockey, 1997; Wright & Stewart, 2012). As a result, it is important for motivation researchers to keep in mind the distinctions between the intensity (physiologically assessed effort), quality (level of task performance), and duration (level of task persistence) of motivated action.

The sample size of the present experiment ($n = 50$) may seem somewhat low for a study of individual differences. Nevertheless, we are confident that the findings do not represent a lucky “false positive” for several reasons. First, the number of participants per cell is about the same as our past research in this area (Silvia, 2012; Silvia et al., 2011a, 2011b, 2013). The sample size is thus typical for the literature and suitable for the medium and large effects that are usually observed (e.g., we explained 19% of the variance in SBP, our main outcome). Second, we have published and submitted *all* of our experiments from this line of research on self-focus and effort, which was outlined ahead of time in an NIH proposal. Because there are no failed “file drawer” experiments, the present experiment is not a lucky hit selected from a larger pool of experiments. Third, our effects conceptually replicate past findings for trait self-focus (Silvia et al., 2011b), for implicit priming of task difficulty (Gendolla, 2012), for first-name priming (Silvia, 2012; Silvia & Phillips, 2013), and for SBP (Wright, 1996). Taken together, the effects of self-focus on effort-related physiology have been easy for us to obtain and replicate.

One important task for future work is to expand evidence for prime sensitivity. The present work examined individual differences in self-focus, but there are a range of factors that might increase prime sensitivity (Wheeler et al., 2007). People with traits that foster openness to outside influences—such as high openness to experience (McCrae & Sutin, 2009), thin boundaries (Hartmann, 1992), low self-monitoring (DeMarre, Wheeler, & Petty, 2005), and low need for closure (Webster & Kruglanski, 1994)—might be expected to moderate priming effects. Moving beyond individual differences, it is important to examine situational manipulations that moderate priming effects on effort, such as prime frequency

(Silvestrini & Gendolla, 2011), situational manipulations of self-focus (e.g., showing people their images; Phillips & Silvia, 2005), or regulatory focus (Fransen, Fennis, Pruyn, & Vohs, 2011). Regardless of the specific moderators, exploring moderators of implicit effort effects is an important “second generation” question for motivational intensity research.

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Research Highlights

- Implicit cues can influence how people regulate effort.
- People high in trait self-focus should be more sensitive to implicit cues.
- People were presented implicit difficulty primes and first names during a task.
- Effort was measured using cardiovascular reactivity.
- Trait self-focus moderated the primes' effect on systolic BP reactivity.

Figure 1.

Effects of trait self-focus and the implicit priming contrast on SBP reactivity.

Note. SBP is measured in mmHg. $n = 12$ in the Control/Easy and Control/Hard conditions; $n = 13$ in the Name/Easy and Name/Hard conditions.

Figure 2.

Effects of trait self-focus and the implicit priming contrast on HR reactivity.

Note. HR is measured in bpm. $n = 12$ in the Control/Easy and Control/Hard conditions; $n = 13$ in the Name/Easy and Name/Hard conditions.

Table 1

Cardiovascular Baseline Values

	Control Priming		First Name Priming	
	Easy Primes	Hard Primes	Easy Primes	Hard Primes
SBP				
<i>M</i>	117.97	115.11	119.33	118.44
<i>SE</i>	2.34	1.74	3.32	2.92
95% CI	112.81, 123.14	111.28, 118.95	112.10, 126.57	112.08, 124.79
DBP				
<i>M</i>	65.39	65.44	66.08	65.56
<i>SE</i>	2.08	2.44	3.12	2.73
95% CI	60.81, 69.96	60.06, 70.82	59.27, 72.88	59.59, 71.53
HR				
<i>M</i>	75.89	84.89	80.31	78.59
<i>SE</i>	3.91	3.34	3.80	3.56
95% CI	67.29, 84.49	77.53, 92.24	72.02, 88.59	70.82, 86.36

Note. SBP = systolic blood pressure; DBP = diastolic blood pressure; HR = heart rate. SBP and DBP are in mmHg; HR is in beats per minute. *n* = 12 in the Control/Easy and Control/Hard conditions; *n* = 13 in the Name/Easy and Name/Hard conditions.

Table 2
Overall Effects of Implicit Priming on Cardiovascular Reactivity and Task Performance

	Control Priming		First Name Priming	
	Easy Primes	Hard Primes	Easy Primes	Hard Primes
SBP				
	<i>M</i>	-1.10	1.04	-.27
	<i>SE</i>	1.39	1.53	1.29
	95% CI	-4.18, 1.97	-2.32, 4.41	-3.08, 2.54
DBP				
	<i>M</i>	-2.62	-1.36	.86
	<i>SE</i>	1.52	1.77	1.59
	95% CI	-5.96, .72	-5.26, 2.53	-2.61, 4.33
HR				
	<i>M</i>	-1.83	-3.96	-2.26
	<i>SE</i>	1.52	1.19	1.39
	95% CI	-5.17, 1.50	-6.59, -1.32	-5.28, .76

Note. SBP = systolic blood pressure; DBP = diastolic blood pressure; HR = heart rate. SBP and DBP are in mmHg; HR is in beats per minute. Cardiovascular scores are raw, uncorrected values. *n* = 12 in the Control/Easy and Control/Hard conditions; *n* = 13 in the Name/Easy and Name/Hard conditions.

Table 3

Overall Effects of Priming on Task Performance

	Control Priming		First Name Priming	
	Easy Primes	Hard Primes	Easy Primes	Hard Primes
Response Time				
M	524	538	558	555
SE	14	15	9	10
95% CI	494, 555	505, 570	540, 577	533, 578
Errors				
M	.11	.11	.17	.13
SE	.02	.03	.03	.03
95% CI	.06, .16	.05, .18	.10, .24	.07, .19

Note. Mean response times are rounded to the nearest millisecond. $n = 12$ in the Control/Easy and Control/Hard conditions; $n = 13$ in the Name/Easy and Name/Hard conditions.