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Positive Mood + Action = Negative Mood + Inaction: Effects of General Action and Inaction Concepts on Decisions and Performance as a Function of Affect

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General action and inaction concepts have been shown to produce broad, goal-mediated effects on cognitive and motor activity irrespective of the type of activity. The current research tested a model in which action and inaction goals interact with the valence of incidental moods to guide behavior. Over four experiments, participants' moods were manipulated to be positive (happy), neutral, or negative (angry or sad), and then general action, inaction, and neutral concepts were primed. In Experiment 1, action primes increased intellectual performance when participants experienced a positive (happy) or neutral mood, whereas inaction primes increased performance when participants experienced a negative (angry) mood. Including a control-prime condition, Experiments 2 and 3 replicated these results measuring the number of general interest articles participants were willing to read and participants' memory for pictures of celebrities. Experiment 4 replicated the results comparing happiness with sadness and suggested that the effect of the prime's adoption was automatic. Overall, the findings supported an interactive model by which action concepts and positive affect produce the same increases in active behavior as inaction concepts and negative affect.

Keywords: goals, self-regulation, mood

Human behavior is influenced by specific evaluations of the behavior (Fishbein & Ajzen, 1975; Glasman & Albarracin, 2006) but also by temporary concepts and moods that are not objectively connected to the behavior (Aarts, Custers, & Holland, 2007; Albarracin et al., 2008; Albarracin, Leeper, & Wang, 2009; Fishbach & Labroo, 2007; Schwarz & Clore, 1983; Clore & Schall, 2005). First, general goals of action and inaction have been shown to impact the amount of cognitive and motor output irrespective of the type of behavior (Albarracin et al., 2008; Laran, 2010). People primed with general action words (e.g., *go*) solve intellectual problems, eat, memorize information, and move to a greater extent than people primed with general inaction words (e.g., *stop*; Albarracin et al., 2008). Second, moods and temporary affective reactions influence behavior as well (Clore & Schnall, 2005). For example, suggesting that negative (vs. neutral) moods trigger uncontrolled eating (Herman & Polivy, 1980), food intake increases in response to anxiety-provoking films (Cools, Schotte, & McNallyy, 1992; Schotte, Cools, & McNally, 1990), task failure (Ruderman, 1985), and pain anticipation (Herman & Polvy, 1975). Moreover, some negative moods, particularly those low in arousal (e.g., sadness), can signal inadequate progress at a task and increase effort and attention in various contexts (for a review, see Clore & Schnall, 2005).

One interesting and currently unanswered question concerns how general action and inaction prompts influence behavior while people experience positive or negative moods. To begin, each factor may be additively combined as multiple pieces of information are combined in decisions (Anderson, 1959, 1970, 1974), albeit not necessarily in an intentional fashion. In that case, the effects of action and inaction concepts may remain independent from the effects of mood, with action concepts producing more active behavioral performance (more problem solving, better recognition memory) than inaction concepts, regardless of the mood people experience (see, e.g., Albarracin et al., 2008).

Other effects are also plausible, however. As general action and inaction prompts have been shown to promote general action and inaction goals (Albarracin et al., 2008), moods may exert interactive, motivational effects on behavior. Past research has demonstrated that neutral behavioral concepts (e.g., doing puzzles) are adopted as goals when the behavior concepts are coactivated with positive affect (Custers & Aarts, 2005). Correspondingly, neutral behaviors are abandoned when the behavior concepts are coactivated with negative affect (Aarts et al., 2007, 2008; Custers & Aarts, 2005). In this past research, an evaluative conditioning paradigm paired goal concepts (e.g., "doing puzzles") with positive, negative, or neutral affective stimuli (e.g., "sunshine" in the case of positive, "table" in the case of neutral, and "garbage" in the case of negative). In one of these studies, for example, goal-related words became less accessible when paired with negative than neutral affective primes (Aarts, Custers, & Holland, 2007). In other studies, means consistent with a primed goal were pursued

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less when the goal concept was paired with negative than neutral concepts (Aarts, Custers, & Holland, 2007). These effects, which were not driven by arousal or attention and were replicated in a variety of contexts, may occur when negative moods are paired with general action or inaction concepts.

This past work on how affective stimuli influence the adoption of goal concepts assumes that goal concepts are conditioned by the simultaneous presentation of affective concepts. Exposure to the word *sunshine* leads to a temporary affective reaction that is attached to and shapes the evaluation of a behavioral concept such as working on puzzles (Aarts, Custers, & Holland, 2007). In Aarts and colleagues's work, however, affect is primed at the trial level, by incidentally pairing the two words. Thus, it is unclear whether moods that are experienced over several minutes or hours can influence the activation of goals in the same fashion. Prior research in the area of affect suggests that conditioning procedures and moods induced before requesting a response both activate positive and negative concepts that can then be attributed to temporally close behavior concepts (Albarracin & Kumkale, 2004; Jones, Fazio, & Olson, 2009; Wyer, Clore, & Isbell, 1999), and there are precedents of mood effects on goal activation (Fishbach & Labroo, 2007). The empirical research on our specific question, however, remains to be conducted.

Considering potential interactions between inaction concepts and negative moods suggests some interesting effects. If a positive mood (or perhaps the lack of a negative mood) signals that a behavioral concept is acceptable, priming *action* during the experience of a positive mood may produce more activity than priming *action* during the experience of a negative mood. Correspondingly, as mood can signal adoption and rejection of both action and inaction, priming *inaction* during the experience of a positive mood may produce less activity than priming *inaction* during the experience of a negative mood. This action/inaction goal adoption is likely to occur with little or no deliberation (Aarts, Custers, & Holland, 2007; Fishbach & Labroo, 2007).

Our conceptualization implies that the same mechanisms underlying the connections between mood and action goals should apply to the connections between mood and inaction goals. Such connections predict decreased activity in negative than positive mood conditions when action goals are in place, to be contrasted with increased activity in negative than positive mood conditions when inaction goals are in place. In fact, in an experiment manipulating mood, participants with known scores on an eating-restraint scale had an opportunity to eat raisins or popcorn following an induction of anxious, neutral, or happy moods (Cools, Schotte, & McNally, 1992). Consistent with our predictions, a negative mood produced more eating in participants with high restraint (perhaps similar to an inaction goal) than in participants with low restraint (perhaps similar to an action goal). In contrast, a positive mood produced less eating in participants with high restraint than in participants with low restraint. Although indirectly, these findings support the hypothesis that positive and negative moods can signal adoption or rejection of a behavioral concept, with rejection of an inaction (e.g., not eating) producing an action.

Investigating the influences of mood on general goal adoption is important for at least three reasons. First, our predictions complement past research by specifying further mechanisms by which negative affect can facilitate rather than hinder a given behavior. Second, action and inaction concepts have been shown to influence behaviors that are in the focus of attention (a required task following priming) without establishing the situational moderators of this effect (e.g., a current mood). Third, anger has been assumed to increase activity (Carver & Harmon-Jones, 2009), but we predict conditions under which anger will decrease activity. The present paper reports four experiments. In Experiment 1, participants were first induced to experience either a positive (happy) mood or a negative (angry) mood, were then primed with action or inaction words, and finally solved a series of math and verbal problems after a brief delay. Unlike perceptual-priming effects, prior research has demonstrated that goal-priming effects persist over a brief delay between priming and performance, whereas conceptual priming is not verified after the same delay (Bargh et al., 2001). Therefore, as we hypothesized that the effects of the primes would be goal-mediated, we expected them to be visible after this delay.

Further, if general action and inaction concepts elicit goals to be respectively active and inactive, the primes should interact with the mood manipulation (Custers & Aarts, 2005; Fishbach & Labroo, 2007). General action concepts should produce better problem solving than general inaction concepts when participants are induced to experience a positive (happy) mood but worse problem solving when participants are induced to experience a negative (angry) mood. Moreover, as chronic (neutral) moods are generally positive (Storbeck & Clore, 2008) and lack of negative information is perceived as positive (Borstein, 1989), neutral moods may only differ from negative (angry) mood conditions.

Experiment 2 was designed to provide a replication of the effects of general action primes. The replication was planned using a statistically more efficient 2×2 design. Participants were first induced to experience either a positive (happy) or negative (angry) mood, were then primed with action or control words, and finally selected how many articles they wanted to read on a topic. We expected that participants would select more articles when primed with action concepts in positive (happy) mood conditions but fewer articles in negative (angry) mood conditions. Additionally, Experiment 3 was designed to provide a similar replication of the effects of general inaction primes. Participants were first induced to experience either a positive (happy) or negative (angry) mood, were then primed with inaction or control words, and then performed a memory task. We hypothesized that participants would show better memory performance when primed with inaction concepts in the negative (angry) mood conditions than the positive (happy) mood conditions.

In the first three experiments, participants were induced to experience either a happy mood or an angry mood, which best controls for the processing (e.g., attentional) effects that distinguish the emotional states of happiness and sadness (Bodenhausen, 1993; see also Albarracin & Wyer, 2001; Albarracin & Kumkale, 2003). Like happiness, anger increases reliance on accessible cognitive representations (e.g., stereotypes) because it elicits high arousal. The use of happiness and anger thus permitted comparing the influence of valence without the arousal differences that are naturally present when one compares happiness and sadness. Experiment 4, however, replicated our results comparing happiness with sadness.

Experiment 1

Method

Participants and design. Participants were 87 (56 females) students from introductory psychology classes participating in exchange for credit. The experimental design was a 2 (prime: action vs. inaction) × 3 (mood: happy, neutral, and angry) factorial.

Experimental procedures. Upon arriving to the lab, participants were told that they would be participating in several unrelated tasks that relate to verbal processing. First, participants were induced to experience either a happy mood or an angry mood, after which they performed a word-completion task that included either general action or inaction words. Moods were induced by having participants write about an episode in their lives. The word completion task included 20 words, including eight primes (e.g., "go" vs. "pause").

Procedures

Mood manipulation. To manipulate mood, participants were asked to write a letter to a friend about a personal experience that either made them very happy or very frustrated and angry (this same procedure has been used successfully by Schwarz & Clore, 1983; Albarracin & Wyer, 2001; Albarracin & Kumkale, 2003). Participants in neutral-mood conditions were asked to write about a typical day in their life. After five minutes, participants were instructed to move to the next task.

Detecting the effects of mood manipulations implies measuring mood immediately after its manipulation and mood measures regularly bias results (see Schwarz & Clore, 1983). Therefore, a separate sample of participants was tested to verify the effects of our mood manipulation on mood. We sampled 30 participants who were asked if they felt happy and angry at the time using a scale from 1 (*not at all*) to 9 (*extremely*). Reports of anger were then subtracted from reports of happiness, and this difference was analyzed as a function of manipulated mood. Analyses indicated a significant effect of the mood manipulation on self-reported mood, $F(1, 27) = 15.60$, $p < .001$, with the means for feelings being 4.80, 0.90, and −4.70 for the positive (happy), neutral, and negative (angry) mood conditions, respectively. All contrasts were statistically significant and suggested a successful mood manipulation.

Priming. Following the letter writing task, we explained that we needed to administer a quick measure of verbal ability. Participants were asked to complete 20 words, eight of which connoted either "action" or "inaction." Depending on random allocation, half of the participants received eight incomplete inaction-related words that could be completed as "still," "pause," "interrupt," "calm," "freeze," "unable," "stop," and "paralyze," whereas the other half received eight action-related words that could be completed as "motivation," "doing," "behavior," "engage," "action," "make," "go," and "active." Most of these words had high associations with "action" and "rest" (inaction) in the (empirically derived) Computerized Edinburgh Associative Thesaurus (Kiss, Armstrong, Milroy, & Piper, 1973).

The prime words have been extensively pretested for concept activation and effects on mood. With respect to concept activation, an independent group of 28 students rated our action, control, and inaction words in terms of whether the words or the concepts were 1 (*passive*) to 7 (*active*), 1 (*slow*) to 7 (*fast*), and 1 (*still*) to 7 (*moving*). These semantic differential scales are typical of the activity dimension (see Osgood, Suci, & Tannenbaum, 1957) and differed across our word types; $F(2, 54) = 241.93$, $p < .001$. Specifically, action, control, and inaction words had mean activity ratings of 5.95 ($SD = 0.52$), 4.05 ($SD = 0.41$), and 2.80 ($SD = 0.58$), respectively, and each word type differed significantly from each other type ($p < .001$ in each case).

With respect to mood effects of the primes, a separate group of students ($n = 30$) were presented with a block of 10 words containing either action and control words or either inaction or control words and then used 1 to 11 scales to indicate whether they felt *good* versus *bad*, *disappointed* versus *satisfied*, *sad* versus *happy*, and *displeased* versus *pleased*. Responses to these four scales were used as an index of feelings valence ($\alpha = .98$), which did not vary as a function of experimental condition (Ms = 8.32, $SD = 2.04$ for action words; Ms = 7.81, $SD = 2.87$ for inaction words); omnibus $F(1, 29) = 0.31$, *ns*. These findings provide confidence that action and inaction primes were unlikely to impact affective feelings (see also Laran, 2010).

Intellectual problems. The priming manipulation was followed by a 5-min delay to strengthen goal-mediated effects of the priming and mood manipulations (see Shah, 2003). After this delay, participants were presented with the first problem on the computer. All participants completed 21 questions that assessed verbal ability (antonyms, sentence completion, and analogies) and quantitative ability (solving word problems and algebraic equations). The delay was introduced to show that the effect was goal-mediated.

Suspicion probes. At the end of the experiment, several questions probing for suspicion and experimental demand were included. Specifically, participants were asked (a) "what was the purpose of the experiment?"; (b) "do you think any tasks were related?"; (c) "do you think any earlier task affected your responses?"; and (d) "did you notice anything about the experiment that seemed strange?" Responses were coded for suspicion and awareness of the hypothesis. As no participant was aware of the hypothesis in any of the experiments, these measures are not discussed further.

Results and Discussion

The proportion of correctly solved multiple-choice problems was analyzed as a function of mood [positive (happy), neutral, and negative (angry)] and prime (action vs. inaction). This analysis revealed a significant interaction, $F(2, 81) = 3.49$, $p = .04$ and no significant main effects, $F(1, 81) < 1.85$, *ns*. The means corresponding to these analyses appear in Figure 1. As predicted, planned contrasts revealed that in positive (happy) and neutral-mood conditions, action primes produced better performance than inaction primes, $t(81) = 2.40$, p one-tailed = .01. In contrast, inaction primes produced better performance than action primes in negative (angry)-mood conditions, $t(81) = 1.69$, p one-tailed = .05. These data provide a first step toward verifying that general action and inaction concepts combine multiplicatively with ephemeral mood states to influence goal-directed behavior. Additional studies examined the generality of this multiplicative effect

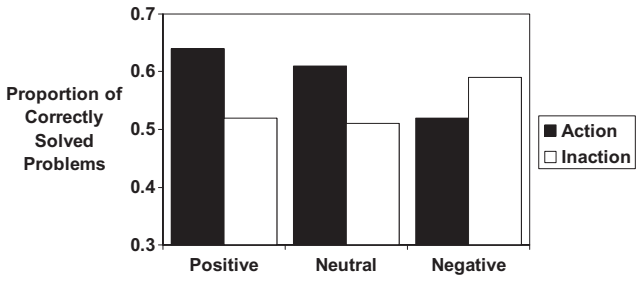

Figure 1. Experiment 1.

using different dependent variables and a control-prime condition. In Experiment 2, participants were induced to experience a positive (happy) or negative (angry) mood, then were primed with action or control words, and finally were asked to select articles (on an upcoming decision) to read. Selecting more articles supposes a disposition to engage in greater activity.

Of note, a positive (vs. neutral) mood failed to instill greater motivation to attain the primed action and inaction goal states. This finding apparently contradicts prior work on evaluative conditioning, which showed that repeatedly pairing neutral goal words (e.g., "shower") with positive words (positive-affective association; "sunshine") increases motivation to achieve the goal relative to pairings involving neutral words (neutral-affective association; Custers & Aarts, 2005). Yet, we believe that this difference does not expose a theoretical contradiction as much as it highlights a key difference between how to conceptualize a "neutral" *mood* and a neutral *affective association*. Indeed, a "neutral" mood is actually a misnomer because most people are happy most of the time (Wyer, Clore, & Isbell, 1999), yet affective associations can be *truly* neutral (e.g., a neutral attitude). Thus, comparisons between positive and neutral (i.e., somewhat positive) moods on priming are naturally less robust than comparisons between neutral and positive affective associations.

Experiment 2

Participants and Design

Participants were 139 (83 females) students from introductory psychology classes enrolled in our study in exchange for credit. The design was a 2 (prime: action vs. control) × 2 (mood: happy vs. angry) factorial.

Procedures

The experimental procedures were similar to Experiment 1 except that the dependent variable was different and that control words were primed. The incomplete control words could be completed as "button," "cement," "desk," "bridge," "lock," "pencil," "carpet," and "paper." After the mood induction (happiness vs. anger) and the priming manipulation (action vs. control words), we assessed how many articles participants were willing to read as part of a decision-making task. Participants were informed that the contract of a clothing store manager was up for extension and their job was to decide whether or not to grant this extension. At this point, participants read a short vignette that contained nonevaluative information about the manager ("Mr. Miller"; see Frey, 1981). For example, the vignette described that Mr. Miller was initially hired to fill the void left by the store owner's dead husband. In addition, it listed some of his various tasks (e.g., ordering clothing and managing the appearance of the store). After reading this material, participants were shown an array of 12 titles that were relevant to reaching a decision (e.g., "Mr. Miller treated his workers with respect," and "Mr. Miller lacked business savvy.") and were asked to select the articles that they would like to read. The number of selected articles was our dependent measure.

Results and Discussion

The number of selected articles was skewed to the right and required a square root transformation. Following this transformation, number of articles was analyzed as a function of mood and prime. The analysis revealed the predicted interaction between mood and prime, $F(1, 135) = 5.45$, $p = .02$, as well as a main effect of mood, $F(1, 135) = 8.23$, $p = .005$, which was fully explained by the interaction. The back-transformed means corresponding to this analysis appear in Figure 2. Planned contrasts indicated a significant difference between action and control primes when mood was positive (happy), $F(1, 135) = 1.99$, p one-tailed $= .03$. Although the effect of prime when mood was negative (angry) was only marginally significant, $F(1, 135) = 1.30$, p one-tailed $= .097$, the size of the two contrasts did not differ significantly, $F(1, 135) = 0.51$, *ns*. These findings thus supported our conclusions from Experiment 1 that the effects of action concepts were dependent on mood. Action concepts (vs. control) increased activity (i.e., the selection of articles) when participants experienced a positive (happy) mood but slightly decreased activity when participants experienced a negative (angry) mood. Nonetheless, the hypothesis that inaction primes might increase activity in the presence of a negative (angry) mood was not examined in this study. Inaction and control primes were compared in Experiment 3.

Experiment 3

Participants and Design

Participants were 81 (57 females) introductory psychology students who enrolled in the study in exchange for class credit. The design was a 2 [mood: positive (happy) vs. negative (angry)] × 2 (prime: inaction vs. control) factorial.

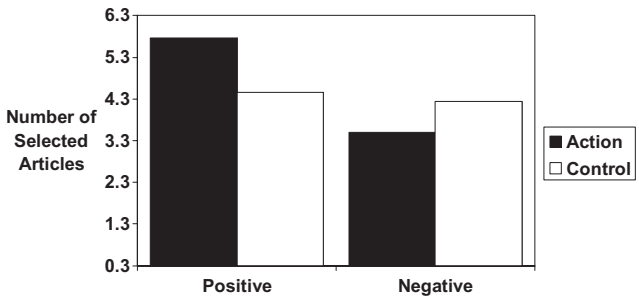

Figure 2. Experiment 2.

Procedures

Participants were first induced to experience a positive (happy) or negative (angry) mood using the prior procedures and then primed with inaction or control words using a scrambled-sentence task. Following these procedures, they were presented with pictures of celebrities along with filler questions and asked to pay attention to the pictures. At the end of the study, participants' memory for the pictures was tested by presenting previously seen and unseen images of the celebrities and having participants report whether an image was or was not previously seen.

Priming task. Inaction and control words were primed using a scrambled-sentence task. Participants were told that we were pilot-testing an instrument to assess how people form sentences and that the task required them to rearrange four of five words to make a coherent sentence. Participants were given 12 scrambled sentences, eight of which contained the inaction words (used in the previous priming tasks) or control-related words (see Experiment 2). The other four words were control fillers (e.g., *time*, *green*, *clip*, *but*).

Celebrity picture recognition. Under the pretense that we were examining how people perform tasks in distracting situations, participants learned that they would view pictures interspersed with random questions. Thirty-eight celebrity photographs of approximately 2.0 × 1.7 in. in size appeared interspersed among various filler questions. The questions and photographs were presented simultaneously on the computer screen. After participants indicated that they were finished viewing the pictures, they completed an assessment of memory for the celebrity photographs. Specifically, 38 photographs of the *same* celebrities (19 from the initial task and 19 that were previously unseen) were presented sequentially on the computer screen. Participants clicked on a box labeled '*Yes*' or '*No*' to report whether or not the picture had appeared previously. These responses were used to calculate hits and correct rejections. Of the two, however, hits had nonsignificant between-subjects variability; χ^2 (n = 81) = 2.69, *ns*, leading to only rejections being analyzed as a measure of correct performance using analysis of variance. This pattern of results is often the norm because this type of task often induces more false alarms than misses (Van der Molen, Boomsma, Jennings, & Nieuwboer, 1989).

Results and Discussion

An analysis of variance revealed that correct performance was an interactive function of prime and mood, $F(1, 78) = 7.32$, $p = .008$, as well as a function of mood, $F(1, 78) = 5.77$, $p = .02$. The means corresponding to this analysis appear in Figure 3 and show that inaction primes increased performance in negative (angry) mood conditions, $t(78) = 2.07$, p one-tailed = .02, but decreased performance in positive (happy) mood conditions, $t(78) = -1.74$, p one-tailed = .04. Importantly, these results closely replicated results from Experiment 1 and extended them by providing comparisons with control-prime conditions. Inaction (vs. control) concepts enhanced behavioral performance (i.e., memory retrieval) when participants experienced a negative (angry) mood but reduced behavioral performance when participants experienced a positive (happy) mood.

In sum, three experiments demonstrated that action concepts combine with happy versus angry moods to influence performance. Experiment 4 was designed to replicate the results from Experiments 1–3 while inducing a sad as opposed to an angry mood. Otherwise, the methods were the same as in Experiment 1 except that we did not include a neutral mood condition. In addition, we included measures of conscious effort exerted during the task to assess if the influence of our manipulations occurred outside of awareness. Given the prediction of a null finding representing automatic effects on goal activation, we maximized the statistical power of our study by increasing its sample size.

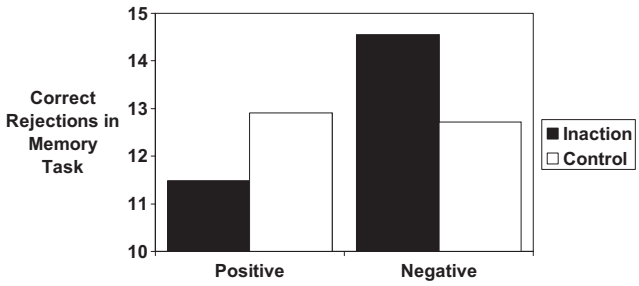

Figure 3. Experiment 3.

Experiment 4

Method

Participants and design. Participants were 140 students from introductory psychology classes participating in exchange for credit. The experimental design was a 2 (prime: action vs. inaction) × 2 (mood: happy vs. sad) factorial.

Procedures

Participants were first induced to experience a positive (happy) or negative (sad) mood with the same procedures used in the earlier experiments, except that in the negative mood conditions participants were asked to describe an episode that had made them sad. They were then primed with action or inaction words using the word completion task described in Experiment 1. Following the priming, participants completed the intellectual problems used in Experiment 1, as well as several items designed to test the effect of the manipulations on participants' moods and experience of action goals. Specifically, participants were asked to report if they had tried to monitor and plan their performance in the intellectual problems. All responses were provided on scales from 1 (*not at all*) to 10 (*extremely*). This measure was used as an indication of conscious awareness.

Results

We first analyzed the effects of our priming manipulation on the intellectual problems using analysis of variance. The means corresponding to these analyses appear in Figure 4. Replicating our prior findings, there was a significant interaction between the action/inaction primes and the induced mood, $F(1, 131) = 6.11$, $p = .02$. As before, inaction primes increased performance in negative (sad) mood conditions, $t(78) = 2.36$, p one-tailed = .001, but decreased performance in positive (happy) mood conditions,

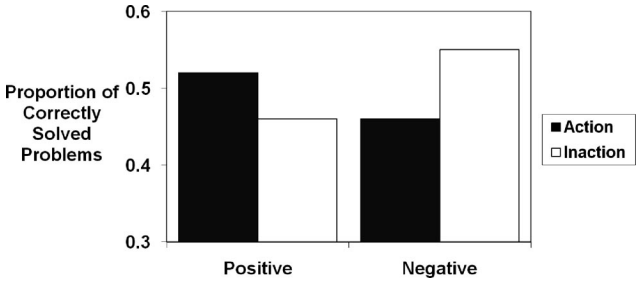

Figure 4. Experiment 4.

$t(78) = -1.64$, p one-tailed $= .04$. Moreover, an analysis of reported conscious effort revealed no significant main effects or interactions, $p > .20$ in all cases. The means for reported effort were 6.04 and 6.10 for action and inaction primes under negative affect and 5.70 for both action and inaction primes under positive affect.

General Discussion

This research examined the effects of priming general action versus inaction concepts, which were introduced as part of scrambled sentences or incomplete words. Moods also varied across experimental conditions based on a longstanding mood manipulation that has produced robust effects in disparate types of research (Albarracin & Wyer, 2001; Schwarz & Clore, 1983; Clore & Schall, 2005). Across four experiments, we found that negative moods thwarted activity when general action prompts were presented but enhanced it when inaction prompts were present. Presumably, the free-floating mood transferred its affective *valence* to the recently primed action or inaction state to imply information about the motivational value of the state. Similar to prior research (Custers & Aarts, 2005), the transfer of positive affect led to approach whereas the transfer of negative affect led to avoidance of the goal implied by the primed concept.

These findings have important implications for more general work on the influence of affect on concept accessibility. For example, in much the same way moods validate or invalidate the value of an accessible goal concept (Fishbach & Labroo, 2007), they have also been shown to validate or invalidate accessible affective concepts (Centerbar, Schnall, Clore, & Garvin, 2008). In one interesting demonstration of this mechanism (Centerbar, Schnall, Clore, Garvin, 2008), participants were induced to experience a happy or sad mood and then were exposed to either 40 positive or 40 negative words (e.g., *smiled* vs. *depressed*) in the context of a sentence-completion task. Subsequently, participants were asked to read a story about a fictional character and, after a brief delay, to recall details of the story. Results showed that participants primed with positive concepts more accurately recalled the story (i.e., better cognitive performance) when they were in a positive mood (vs. negative mood), whereas participants primed with negative concepts showed more accurate recall when they were in a negative mood (vs. positive mood). Centerbar et al. concluded that a positive (negative) mood and positive (negative) concepts increase a state of fluency that in turn enhances performance. Although clearly this mechanism could not explain our findings because an inaction goal is neither affectively negative nor is it a mood (see our pilot data in this paper; see also Albarracin et al., 2008; Laran, 2009 for multiple demonstrations), our work complements Centerbar et al.'s work in highlighting the need to consider affect in our understanding of the effects of accessible behavioral goals.

Future research should establish the goal-mediated process presumably underlying the reported effects as well as the generality of our findings and other implications of these phenomena. For example, although our effects are likely motivational, a more stringent test of this idea is required. Specifically, the interactive influence of the primes and mood lasted over a delay that would allow concepts and behavior procedures to decay (see Experiment 2), yet a no-delay condition would be required to assess whether the interactive effects grew stronger (indicative of a motivational process). Future research might include this no-delay condition or use different assessments that verify goal mediation (see Forster, Liberman, & Friedman, 2007).

Future research may also examine conditions that moderate the reported effects. For example, anger may promote the adoption (rather than rejection) of primed action or inaction concepts when participants are explicitly asked to consider these states as rewarding prior to priming (a condition that is not included in the present paper). Consistent with this idea, in one study (Aarts et al., 2010), participants squeezed a handgrip to indicate how much they wanted several objects (e.g., a pen) in the presence or absence of instructions to consider the objects as goals (i.e., a reward context). Unbeknownst to the participants, these objects were routinely paired with angry or neutral faces prior to the handgrip test. Interestingly, objects paired with angry (vs. neutral) faces generated a weaker squeeze when the reward context was absent (indicative of less wanting), but a stronger squeeze when the reward context was present. Hence, it seems reasonable that, in the case of anger, a reward context may moderate our reported effects.

In closing, human behavior is influenced by concepts and moods that are not objectively connected to the behavior (Aarts, Custers, & Holland, 2007; Albarracin et al., 2008; Albarracin, Leeper, & Wang, 2009; Fishbach & Labroo, 2007; Schwarz & Clore, 1983; Clore & Schnall, 2005). Nonetheless, the particular dynamic of this interaction is complex, requiring consideration of various types of goals. In this paper, general goals of action and inaction were shown to impact behavior in combination with the moods people experience. Whereas general action (vs. inaction) goals increase behavioral output when combined with positive (happy) moods, general inaction (vs. action) goals decrease output when combined with positive (happy) moods. For the first time then, this research suggests that increases in certain behaviors as a result of negative moods may be attributable to linking inhibitory goals with the experienced affective reactions. Future research should continue to unveil what promises to be a wide spectrum of affect-goal interactions.

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