



FlashReport

Vicarious goal satiation

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ABSTRACT

A signature feature of self-regulation is that once a goal is satiated, it becomes deactivated, thereby allowing people to engage in new pursuits. The present experiments provide evidence for *vicarious goal satiation*, a novel phenomenon in which individuals experience “post-completion goal satiation” as a result of unwittingly taking on another person’s goal pursuit and witnessing its completion. In Experiments 1 and 2, the observation of a goal being completed (vs. not completed) led to less striving by the observer on the same task. Given that an actor’s strength of commitment affects goal contagion, we hypothesized that such commitment would be an important boundary condition for vicarious goal satiation. The results of Experiment 2 showed that observing stronger (vs. weaker) goal commitment lowered accessibility of goal-related words, but only when the goal being observed was completed. Implications of vicarious goal satiation for goal pursuit in everyday environments are discussed.

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While striving to achieve their goals – for example, to earn a promotion or to get into better shape – individuals are, more often than not, in the proximity of others. Certainly, some people work from home and run on treadmills in their basements. Most people, though, work alongside others in offices and exercise alongside others in gyms and parks. What are the effects of pursuing goals in the company of other goal pursuers? How do others’ goals impact one’s own efforts? In this manuscript, we sought evidence for a novel phenomenon, in which watching others complete their goals can “sate” that same goal in observers. We propose that through a process we term *vicarious goal satiation*, observers can experience effects similar to the signature “post-completion inhibition” known to result from goal attainment (Förster, Liberman, & Higgins, 2005), without actually making any progress on their own goal. By “vicarious”, we mean that an individual observing another individual’s goal satiation will experience the same goal satiation, as though engaging in the goal him- or herself. This use of the term is in keeping with recent explorations of “vicarious” social psychological phenomena including cognitive dissonance (Norton, Monin, Cooper, & Hogg, 2003), ego depletion (Ackerman, Goldstein, Shapiro, & Bargh, 2009), and ostracism (Wesselmann et al., 2009).

Interpersonal influences on goal pursuit

The current studies contribute to a burgeoning area of research on interpersonal and social effects on self-regulation (Fitzsimons &

Finkel, 2010). In one program of research, significant others (friends, family members, and romantic partners) have been shown to trigger goals by acting as primes (Fitzsimons & Bargh, 2003; Shah, 2003). In work on *goal contagion*, exposure to an actor performing a goal renders the goal more likely to be “caught” by the observer (Aarts, Gollwitzer, & Hassin, 2004). In a recent line of work, the self-control efforts of others were shown to vicariously fatigue observers (Ackerman, Goldstein, Shapiro, & Bargh, 2009). For example, participants encouraged to take the perspective of a hungry waiter trying to resist eating tempting restaurant food were subsequently more “depleted” than participants who merely read about the waiter.

Taken together, these findings suggest that there is ample transfer of both the goals and associated feelings of others to bystanders. Watching an individual pursue a goal can lead to both increased goal pursuit, if the observer “catches” the goal, and decreased motivation, if the observer “catches” the fatigue. What predicts, then, whether observing someone else’s goal pursuit – catching sight of a colleague working on a paper or a neighbor out for a morning jog – affects one’s own goals in a positive or negative direction?

Goal satiation

In the current work, we focus on one such predictor: whether the observed goal is completed. The hypothesis that the observation of others attaining their goals might derail observers’ own goal pursuit is based on past research on goal completion. It is well established that goals are inhibited and cease to influence behaviors when individuals succeed at attaining those goals (Bargh, Gollwitzer, Lee-Chai, Barndollar & Troetschel, 2001; Förster et al., 2005; Marsh, Hicks, &

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Bink, 1998). For example, participants with a search goal (vs. no goal) showed heightened accessibility of search-related words before a search task, but showed reduced accessibility of those same words after they successfully completed the search task (Förster et al., 2005).

In the present set of studies, we set out to combine the crucial elements of the research described thus far into two related hypotheses, both stemming from the basic idea that if individuals can vicariously experience others' goal pursuits, that viewing goal completion should lead to a reduction in observers' striving toward that goal. First, we hypothesized that individuals who indirectly observe another person complete a given task (vs. not complete a task) should subsequently perform worse on that task. Second, we hypothesized that the more committed the other is to the goal, the more likely the goal will be "caught" and then deactivated if completed, simply because stronger displays of goal pursuit are stronger goal primes (Dik & Aarts, 2007, 2008).

Experiment 1

This experiment sought evidence for our proposed phenomenon – vicarious goal satiation – testing the hypothesis that observing someone else's completed goal pursuit can reduce striving toward that same goal. Participants engaged in a computerized perceptual task while simultaneously viewing an embedded onscreen video of a pair of hands (the "other" in this case) performing an anagram task, which the hands either did or did not complete. A control condition was also included, in which participants did the same perceptual task, but did not view an embedded "hands" video. After completing the perceptual task, participants performed an anagram task to measure goal striving. Successful performance on anagram tasks is a common measure of goal pursuit in social psychological studies of achievement (e.g., Bargh et al., 2001; Elliott et al., 2007; Shah, 2003); performance tends to correlate highly with persistence but has the advantage of also tapping into how much effort participants expend, and how well they concentrate, two other markers of goal-driven behavior.

We predicted that those who observed the hands complete the task would perform worse on the subsequent anagram task than those who either did not see the hands reach completion or saw no video.

Method

Participants

Two hundred and thirty-eight undergraduates participated in exchange for course credit. Participants were randomly assigned to one of the three conditions (complete, incomplete, and control).

Materials and procedure

Participants learned that they would receive instructions for the study via computer. They read a cover story explaining that people often have to concentrate on one task when there are competing demands on attention, such as the presence of other people. Next, participants were asked to complete a 72-trial perceptual vigilance task. In this task, colored objects were presented one at a time (for 100 ms), at a variable rate (the inter-trial interval was between 2 and 5 s) and in a random order, in four quadrants of the screen. Participants' task was to indicate as quickly and accurately as possible the side of the screen where the colored shape appeared via a key press.

During the perceptual vigilance task, a video of a pair of hands (the actor, in this case) performing an anagram task (complete and incomplete conditions) appeared onscreen in both experimental conditions, but not in the control condition. Over the course of the video, the hands' progress unfolded naturally, completing some items easily and struggling with others (e.g., spending more time on them); in both experimental conditions, the hands "acted" to show

achievement (giving the "thumbs up" signal) and pausing and retyping to show struggle, in order to convey strong motivation. Observed goal completion was operationalized by the hands completing or not completing the anagram task. In the complete condition, the screen in the embedded video presented the text "The End". In the incomplete condition, the video of the hands stops abruptly, when the hands are typing. In addition, we included a task thermometer in the embedded video which rose in an incremental fashion in line with the hands' performance. The thermometer reached its apex in the complete condition, but not in the incomplete condition.

Next, all participants completed the same anagram task. Anagrams were presented one at a time in random order on the computer screen. For each of the 50 trials, a letter string (e.g., gyppu) was presented centered onscreen. It was the participants' task to type the correct solution. Finally, participants completed a funneled debriefing that assessed awareness of the purpose(s) of the experiment (Bargh & Chartrand, 2000), and of the relation between the tasks. They were also asked how much attention they were able to pay to the perceptual vigilance task.

Results and discussion

First, we assessed anagram performance by calculating the percentage of correctly solved anagrams. The data were subjected to a univariate ANOVA with the between subjects factor of task status (complete, incomplete, control). A significant effect of task status was found, $F(2, 230) = 4.091, p = .018$, (see Fig. 1), such that participants who observed the hands complete the task performed worse on their own anagram task than those who observed the hands not complete the task ($M = 72.25, SD = 15.74$ vs. $M = 77.28, SD = 14.71, p = .037$) and those who did not observe the hands at all ($M = 78.58, SD = 15.28, p = .008$). There was no difference between the control (no observe) and the incomplete condition ($p = .614$). Using the standard Cohen's d formula, we found medium effect sizes of $d = .33$ for the complete vs. incomplete comparison, and $d = .41$ for the complete vs. control comparison.

The funneled debriefing revealed no awareness of the effect of the video on performance, suggesting that participants were not consciously aware of the observation's impact. Thus, results from the first experiment demonstrated that observing another person's goal completion can undermine an individuals' own performance. Participants who observed a pair of hands complete a task performed more poorly on a similar task than did the two other groups.

Experiment 2

In Experiment 2, we aimed to replicate Experiment 1, and to investigate our second hypothesis—that vicarious goal satiation effects would be stronger when the goal pursuer appeared to be higher in goal strength, as they should be if the effects are driven by

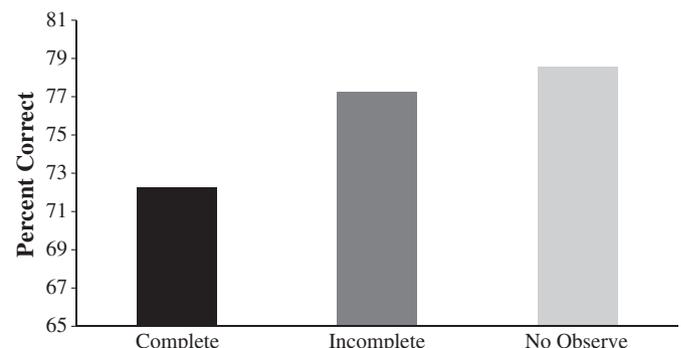


Fig. 1. The effect of task status on anagram performance.

self-regulatory processes. We focused on goal strength as a moderator for several reasons. First, it is an established moderator of other social effects on goal pursuit (Aarts et al., 2005). Second, it is an important self-regulatory variable, and one that individuals seem likely to infer from observing others' actions in everyday life. Finally, and most importantly, by showing that the effect only occurs when the actor appears to value the goal strongly, we provide good evidence that this is a goal-driven effect and not a semantic effect (as semantic content is similar across the high and low strength conditions).

Participants read a short story about an employee searching for Brian, the employee's manager. The character was high or low in goal strength, and the story either ended with the employee finding the manager (completed search task) or with the search continuing (incomplete search task). Next, participants completed a word completion task to measure accessibility of goal-relevant constructs. The accessibility of constructs related to the means and desired end-state of the goal are thought to reflect accessibility of the goal in memory (e.g., Shah, 2003). For example, participants pursuing a goal to find a photograph of eyeglasses show heightened accessibility (faster response times) to the desired outcome word "glasses" (Förster et al., 2005). Participants who have taken on the character's goal to find Brian should thus show heightened accessibility (more biased word completions) of the desired outcome words "Brian", "signature", "redhead", etc. as well as items reflecting means to the goal, like "look" and "search".

We predicted that participants who read about the completion would complete fewer goal-relevant words (showing vicarious post-completion satiation) than participants who read about the ongoing, incomplete goal. We also predicted that vicarious goal satiation would be weaker when the observed goal was low in strength—that is, participants who observe weaker goal pursuit would not catch the goal (Dik & Aarts, 2007, 2008) or then subsequently inhibit it. Thus, Experiment 2 is a 2 (completion: complete vs. incomplete) by 2 (goal strength: low vs. high) design.

Method

Participants

Sixty-six American adults (42 women; mean age = 33.10; $SD = 8.52$) completed the study online in exchange for pay.

Materials and procedure

Participants first read a short story describing the efforts of a man searching for his manager because he needed a signature. The story describes Josh's effort to find Brian in the building and describes Brian's appearance. In the high goal strength condition, Josh indicates it "is really important" that he find Brian and that "he really needs to find him"; in the low goal strength condition, John indicates that it "would be great" to find Brian and that "he would really like to find him". Furthermore, the work report is described as "urgent" in the high goal strength condition, a word that is omitted from the low goal strength condition (although in both stories it is clear that the report is due at the same time—5 pm that day). Otherwise, the text of the conditions is identical.

In the incomplete condition, the story ends with the line, "...he would have to keep searching." In the complete condition, the story ends with Josh finding Brian: "Finally, Josh's search ended and he submitted his report. Success, and just in time! Josh was so relieved to have found Brian, he decided to head home early for the day." Thus, in both the high and low goal strength conditions, there is clear evidence that the goal was completed successfully.

Next, participants read instructions indicating that they would answer some questions about the story later in the study, but that first, they would complete some tasks to "clear their minds". After some filler personality items, participants performed a word completion task, which consisted of a series of 20 words or names, 10 of

which related to the goal pursued in the story. For each of these words, a subset of the letters were provided, to allow participants to complete the word in a way that reflected the goal content or was neutral. The critical goal-relevant words were: beard, Brian, look, office, sign, report, rush, tall, redhead and boss. Finally, participants completed a funneled debriefing task (Bargh & Chartrand, 2000).

Results and discussion

The total number of critical words completed as goal-relevant (e.g., boss vs. mass), out of the possible ten, served as the score of goal accessibility, with higher numbers indicating greater accessibility of goal-relevant content. We analyzed this measure as a function of a two-way univariate ANOVA, with completion (complete, incomplete) and goal strength (high, low) as between-subjects factors. No main effect of goal strength ($F < 1$, NS) or completion ($F(1, 77) = 2.79$, $p = .09$) emerged.

As predicted, a significant two-way interaction emerged, $F(1, 77) = 4.72$, $p = .03$. As shown in Fig. 2, there was no effect of goal completion on accessibility for participants in the low goal-strength condition, $F < 1$, NS: Participants in the complete ($M = 4.25$, $SD = 2.95$) and incomplete ($M = 3.94$, $SD = 2.21$) conditions did not differ from each other. However, as predicted, there was a significant effect of goal completion on accessibility for participants in the high goal-strength condition, $F(1, 37) = 6.88$, $p = .01$, such that participants who read about the completed goal pursuit showed lower goal accessibility ($M = 3.12$, $SD = 2.69$) than participants who read about the incomplete goal pursuit ($M = 5.47$, $SD = 2.75$). Participants reported no awareness that the story affected their word completion performance.

In sum, these findings suggest that vicarious goal satiation, as shown by reduced accessibility of goal-related words, occurs when individuals are exposed to clear and strong goal pursuit. This finding likely reflects the fact that participants in the low strength condition did not "catch" the goal in the first place.

General discussion

Our findings suggest that observing others pursue goals can, under some circumstances, undermine motivation. Goal contagion processes seem to extend even to post-completion inhibition effects, attesting to the strength of goal contagion phenomena (Aarts et al., 2004).

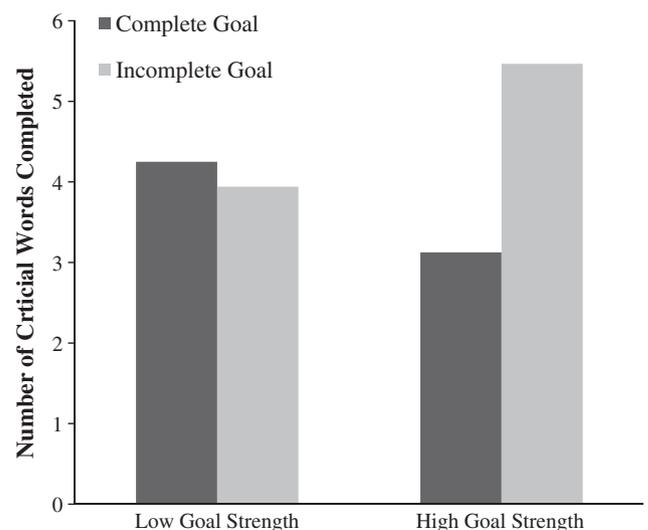


Fig. 2. The interaction between goal completion and goal strength on goal accessibility as assessed by goal-relevant word fragment completions.

Specifically, we identified *vicarious* post-completion goal satiation, wherein observing someone completing a goal leads to the satiation of that same goal in the observer. Our experiments show that satiation is more likely to occur when the goal being observed is completed and the goal commitment of the actor is high. In Experiment 1, those who observed an anagram task being completed subsequently performed more poorly on the same task. We replicated and extended this finding in Experiment 2 by showing that observers were more likely to show vicarious post-completion goal satiation when actors were high in goal strength. In sum, as predicted, we found that viewing completion of another's goal pursuit can derail goal pursuit in the observer.

Of course, goal strength is not the only variable that could moderate these results. For example, qualities of the actor–observer relationship could qualify these effects in important ways; it is possible that competitive relationship partners may seek to “best” the actor, while highly independent or avoidant partners may be unaffected by each other's success. Past work has shown that relationship factors moderate the extent to which people take on the psychological experiences of others via vicarious processes (e.g., Mobbs et al., 2009; Norton et al., 2003). Based on these findings, we believe it is likely that vicarious goal satiation would occur more strongly within close relationships or for observers who identify more strongly with the actor. This leads to an interesting prediction: observing close others' successes could be particularly de-motivating. Future research should test the role of identification and closeness in vicarious goal satiation.

A limitation of the current research is that we cannot determine the extent to which individuals actively inhibited the goal following observed completion. The vicarious goal satiation effect on performance in Experiment 1 and on accessibility in Experiment 2 could be driven by a reduction in the motivation to pursue this goal, or reduced accessibility of the goal, in addition to an active “inhibition” process. Further research is needed to determine if observers engage in true inhibitory processing.

This phenomenon has important functional implications for everyday environments in which individuals pursue goals alongside others, like the workplace. Pfeffer and Sutton (2000) have discussed an organizational phenomenon wherein explication of what “needs to be done” at meetings is often mistaken for actual progress. Our results suggest that in addition to substituting “talk” for action, witnessing these kinds of explications could lead to a false sense of goal completion. Because individuals so often pursue goals in the company of others, the effects of subtle interpersonal processes like vicarious goal satiation are important to understand. The current work contributes to ongoing efforts to extend our understanding of self-regulation processes from the “intrapersonal” to the “interpersonal” factors (Fitzsimons & Finkel, 2010), highlighting a novel mechanism through which others can affect self-regulation.

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