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Don't you know that you want to trust me? Subliminal goal priming and persuasion

Jean-Baptiste Légal, Julien Chappé, Viviane Coiffard, Audrey Villard-Forest

“Watching T.V. I start to cry; For no reason I don't know why; Could it be from messages on my TV; Which I'm getting subliminally” (Muir, 1993).

Can subliminal exposure lead people to adopt an idea, an attitude, or an action? In other words, is subliminal persuasion a myth or a fact? Subliminal influence has been a recurrent topic of debate in both scientific and popular communities since Vicary (in a press conference held in 1957) claimed (even if he finally admitted it was a hoax) that subliminal exposure to short sentences, such as “Drink coke” or “Eat pop-corn”, could drastically influence people's will to consume that products. To date, evidence suggests that subliminal exposure to faces, words, or brands, can to some extent influence judgments about people (e.g., Bargh & Pietromonaco, 1982), judgments about ads (Channouf, 2000), people's self-evaluation (e.g., Baldwin, Carrel, & Lopez, 1990), their attitudes (e.g., Zajonc, 1980), and even their behavior (Brasel & Gips, 2011).

Subliminal exposure has also been used to prime goals, directly or through goal-related constructs (e.g., Chartrand & Bargh, 1996; for evidence about nonconscious goal-priming and pursuit, see also Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001; Custers & Aarts, 2010). In the framework of persuasion, goal-priming research has essentially focused on need-related behaviors (e.g., thirst, hunger). For instance, Cooper and Cooper (2002) subliminally activated a motivational state of thirst using stimuli related to thirst (the word “thirsty”, pictures of Coca Cola® cans, or picture of a sweating boxer) embedded in an episode of *The Simpsons*. Compared to a control condition, participants' ratings of thirst were significantly higher following the

priming manipulation. Strahan, Spencer, and Zanna (2002) also suggested that a message could be perceived as more persuasive when it corresponds to an active motive or need. Thus, for already thirsty participants, a relevant ad (i.e., a message about a thirst-quenching beverage) could be more convincing if it was accompanied by the subliminal presentation of thirst-related words. In the same line, Karremans, Stroebe, and Claus (2006) primed participants with the brand of a drink (Lipton Ice). They demonstrated that subliminal priming of a goal-related feature (i.e., the brand of the drink: Lipton Ice) affected participants' choice, as well as their intention to drink the primed brand, but only if they were thirsty.

In a way, research about subliminal persuasion only partially benefitted from findings concerning nonconscious goal pursuit. Indeed, in previous research, participants were not primed with goals directly related to features typically associated with source effects (i.e., effects produced by characteristics associated to the source of the message and that influence persuasion, such as credibility, expertise, and attractiveness; see Petty & Wegener, 1998), but with means to accomplish the goal (Karremans et al., 2006) or goal-related concept (Cooper & Cooper, 2002; Strahan et al., 2002; see also Dijksterhuis, Wegner, & Aarts, 2001; cited in Dijksterhuis, Aarts, & Smith, 2005). In our research, we tried to use goal priming to enhance the persuasiveness of a message in a more direct way. Specifically, we attempted to use the goal “to trust” to influence participants' evaluation of the message and its source.

Previous studies have found that priming general goals could influence behavior and cognitive processing. For instance, Chartrand and Bargh (1996) demonstrated that a general impression formation goal could be primed; Albarracín et al. (2008) also demonstrated that activating general action or inaction goals influenced behavioral outcome (doodling on a piece of paper) as well as cognitive outcomes (recall performance; problem solving). In our view, the goal “to trust” is one of these general or high order goals. Indeed, it has been proposed (e.g., Fiske & Taylor, 2008) that motivation to trust other people

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is one of our most basic motivations, as people generally expect good things from other people. This inclination to trust other people would render “to trust” a rather accessible and easily activated goal.

In this study, we tried to determine whether priming the goal “to trust” could influence the way a persuasive message is processed and its influence on judgment and behavioral intentions. We hypothesized that goal-priming would lead to a better acceptance of a persuasive message, a more positive perception of the source of the message, as well as greater intentions to behave in accordance with the message.

Method

Participants and design

Ninety-three undergraduate psychology students (80 women and 13 men) participated in this study in exchange for course credits. Participants were randomly assigned to one of the two conditions: goal priming or control.

Procedure and material

We chose to use a persuasive message promoting the benefits of drinking tap water, which is a simple, an easy-to-do, and a practical daily pro-environmental behavior. Before the experimental session, participants received a questionnaire designed to assess their initial attitudes toward tap water. Participants had to indicate, on a six points Likert scale, their degree of agreement with the following statements: “I like tap water”, “I think that tap water tastes bad” (reversed score), and “I think that tap-water is good for health”. We computed a global score of attitude toward tap water (Cronbach's $\alpha = 0.89$). Attitude scores ranged from 1 to 6, $M = 3.88$, and $SD = 1.87$.

Upon arriving to the lab, participants were informed that they would participate in two independent studies. They were then invited to start with the study on visual attention. The visual detection task they performed was actually a pretext to carry out the subliminal goal priming. Indeed, during the task in which participants had to indicate which shape (“O” or “X” displayed during 120 ms) they perceived on the computer screen, they were subliminally primed (30 ms) with “to trust” or with verbs¹ closely related to this goal (e.g., to approve, to accept, to agree). Primes were flashed in the center of the screen and were immediately followed by a mask, which was displayed until participants responded. Thirty primes were flashed, half of them directly related to the goal “to trust”. Participants in the control condition also performed the task; however, they were not exposed to subliminal primes. In order to check the subliminal character of our priming manipulation, a separate group of 23 participants received the task with specific instructions. They were informed that words would flash during the visual detection task and that they would have to detect these words and to report them at the end of the task. None of the participants were able to recall any word flashed during the subliminal priming manipulation, indicating that the stimuli were displayed beneath the subjective threshold.

Once the visual detection task was completed, participants were told the first study was over and that they would now complete a survey about water consumption. They were first given 80 s to read a persuasive message promoting tap-water consumption. The message was illustrated with the picture a woman, Mrs. Marie, presented as the executive head of the regional water control organization. Subsequently, participants answered questions about the message they read (agreement, clarity), the source of the message (likeable/nice, trustworthy, competent), and behavioral intentions about tap water (drinking more tap water; not buying bottled water). In the last part, a funneled questionnaire allowed

us to assure that participants had not perceived subliminal primes and did not discovered the relation between the two studies.

Results

In order to control for the potential effect of participants' attitudes, ANCOVAs were used to analyze the data. Initial attitude about tap water consumption was used as a covariate. Table 1 summarizes the means, means adjusted for the covariate and standard deviations for all variables.

Message

Data analysis yielded an effect of the priming manipulation on message assessment, $F(1,90) = 4.66$, $p < 0.05$, $\eta^2 = 0.04$. Participants primed with the goal of trusting displayed a greater agreement with the message's arguments compared to the participants in the control condition ($M = 4.62$ and $M = 4.18$, respectively). Attitude about tap-water was a significant covariate for this measure, $F(1,90) = 48.77$, $p < .001$. We found no differences in the evaluation of the message's clarity.

Source of the message

Goal priming influenced judgments about Mrs. Marie, who delivered the pro-tap water message. Particularly, compared to control participants, primed participants perceived Mrs. Marie as more likeable/nice, $F(1,90) = 3.73$, $p < 0.05$, $\eta^2 = 0.04$ ($M = 4.49$ and $M = 4.26$) and more trustworthy, $F(1,90) = 5.78$, $p < 0.02$, $\eta^2 = 0.06$ ($M = 4.02$ and $M = 3.35$). The covariate contributed significantly to the perception of the source as being likeable, $F(1,90) = 4.63$, $p < 0.05$, and trustworthy, $F(1,90) = 5.12$, $p < 0.03$. No effect was found for perceived competency.

Behavioral intentions

Goal priming had an effect on behavioral intentions about water consumption. Participants primed with the goal of trusting and exposed to the pro tap-water message indicated that they would drink more tap water, $F(1,90) = 5.24$, $p = 0.02$, $\eta^2 = 0.06$ ($M = 3.74$ and $M = 2.82$) and avoid buying bottled water, $F(1,90) = 9.98$, $p = 0.002$, $\eta^2 = 0.10$ ($M = 2.70$ and $M = 1.73$; reversed scores). The covariate, attitude about tap water, was significantly related to both intentions with $p < 0.001$.

Table 1

Judgment of the message, judgment of the source, and behavioral intentions as a function of priming condition.

Priming condition	Control		Trust	
	<i>M</i> (<i>M</i> _{Adj.})	<i>SD</i>	<i>M</i> (<i>M</i> _{Adj.})	<i>SD</i>
<i>Message</i>				
Agreement with the message	4.18 (4.19)	0.16	4.62 (4.59)	0.15
Clarity	5.34 (5.35)	0.15	5.25 (5.24)	0.14
<i>Source</i>				
Likeable/nice	4.02 (4.05)	0.15	4.49 (4.46)	0.18
Trustworthiness	3.35 (3.38)	0.18	4.02 (3.99)	0.18
Competency	3.73 (3.75)	0.19	4.03 (4.01)	0.19
<i>Behavioral intentions</i>				
Drink more tap water				
Not buying bottled water	2.82 (2.91)	0.24	3.74 (3.69)	0.24
	1.73 (1.80)	0.20	2.70 (2.64)	0.20

Note. *M*_{Adj.} = means adjusted for the covariate.

¹ Verbs in French are single words.

Discussion

Our study explored the possibility of using a goal priming technique to enhance persuasion by priming goals related to features typically associated with source effects. Specifically, our aim was to use goal priming to directly influence the trust in the message and its source. Results indicated that participants primed with the goal of trusting not only evaluated more positively the message and its source, but also expressed more behavioral intentions in line with the message. Results extend Strahan et al.'s (2002) findings, which indicated that a message could be perceived as more persuasive even when it does not correspond to an active motive or need. In our case, activating the goal "to trust" facilitated the acceptance and enhanced the persuasiveness of the subsequently displayed message. Results are also in line with the idea that the goal "to trust" is a general goal that can influence information processing and behavioral intentions, extending Albarracín et al.'s (2008) findings.

In sum, our study demonstrated that subliminally priming a goal targeting the credibility dimension influences perception of the message and of its source as well as its consequences in terms of behavioral intentions. Potential practical implications of these findings are numerous. On the bright side, results could be used to develop procedures helping to promote public health campaigns (quit smoking, safe driving). As a darker alternative, advertisers could be tempted to use them to persuade consumers to try or buy a product they weren't previously interested in. Even if many countries forbid the use of subliminal advertising, it does not mean that nonconscious influences and nonconscious goal pursuit do not occur in a natural setting or that goal priming cannot be used to enhance the persuasiveness of a message or people's receptivity to a message. Indeed, incidental exposure (i.e., products or brands unobtrusively presented in a setting) is rather close of subliminal priming in terms of effects (Berger & Fitzsimons, 2008). This kind of exposure is frequently manipulated in natural settings (e.g., in TV shows, websites, video games, or more generally in supermarkets and crowded places) and could allow goal priming such as the one we used to occur and operate.

Future research should address other issues that our current findings did not resolve. First, underlying processes need to be refined. How does motivation "to trust" operate? Does it work as a filter, leading people to focus only on positive/pros arguments in the message? Does it "lower people's shields" and if so, under what circumstances, if any? Moreover, motivation may be one option, but not the only possible explanation. Indeed, as our experiment did not measure motivation, we cannot exclude a non-motivational explanation for this effect. For instance, it could be that trust primes cause people to perceive the source as more trustworthy, which drives the effects. A future study will have to decide between these two possibilities. Second, priming has to be studied in combination with other classic source effects' features of persuasion, such as message framing (e.g., Kahneman & Tversky, 1979). For example, goal priming could be associated with a goal framing manipulation (Levin, Schneider, & Gaeth, 1998) to influence implicit goals of "obtaining

the positive consequence (i.e., positive framing)" or "avoiding the negative consequence (i.e., negative framing)". In particular, priming a goal congruent with the goal stressed in the goal-framing message should influence the evaluation of the message and, consequently, enhance its persuasiveness. Finally, we used a unilateral message concerning a quite consensual topic (drinking tap water). It might be interesting to extend this study to other types of messages, including counterattitudinal, political, or even religious.

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