



Coaction and upward social comparison reduce the illusory conjunction effect: Support for distraction–conflict theory[☆]

Dominique Muller, Thierry Atzeni, and Fabrizio Butera^{*}

Pierre Mendès France University at Grenoble, France

Received 11 February 2003; revised 25 November 2003

Available online 3 February 2004

Abstract

This article proposes an integration of Festinger's (1954) social comparison theory and Baron's (1986) distraction–conflict theory of the social facilitation–inhibition effect, which successfully predicts attentional focusing in coaction when social comparison represents a distraction. Two experiments confronted participants with the illusory conjunction task (Treisman, 1998), where illusions occur because of the lack of attentional processing of central cues. If coaction, like upward comparison, is distracting and thereby enhances the attention allocated to central cues (here the target's features) at the expense of peripheral cues (here distractors), then a reduction should be found in the illusions. Experiment 1 indeed showed a lower rate of conjunctive errors under upward comparison than under downward comparison. Experiment 2 specified that this effect was due to downward comparison effectively reducing distraction, with upward comparison only maintaining it, as compared to mere coaction.

© 2004 Elsevier Inc. All rights reserved.

Keywords: Social facilitation and inhibition; Coaction; Social comparison; Distraction–conflict theory; Illusory conjunction; Attentional focusing; Perception

The social facilitation–inhibition effect refers to the fact that the presence of an audience or of coactors (i.e., persons working independently on the same task) sometimes facilitates, and sometimes inhibits performance (Bond & Titus, 1983). This apparent paradox has been resolved by Zajonc (1965), who proposed that the presence of others increases the tendency to display

dominant responses (i.e., those that are first in the behavioral repertory), which in turn facilitates or inhibits performance, depending on the appropriateness of these dominant responses. Although this “drive theory” is still pre-eminent in the field (Guerin, 1993), there is still disagreement about the mechanisms involved in the explanation of social facilitation–inhibition.

Among the theories of social facilitation–inhibition, some rely upon attentional processes (e.g., Baron, 1986; Manstead & Semin, 1980) rather than dominant response as the basis for an explanation of this effect. Baron's (1986) distraction–conflict theory postulates that, in situations of attentional conflict between the task and some distractors, for instance the presence of a coactor, conflict leads to a cognitive overload that produces attentional focusing. Attentional focusing is defined as a narrowing of attention: More attention is allocated to central cues while peripheral cues are neglected (Cohen, 1978; Geen, 1976). Hence, performance is enhanced if the task only requires central cues, but impaired if peripheral cues are necessary to perform

[☆] Dominique Muller and Fabrizio Butera, Laboratoire de Psychologie Sociale de Grenoble-Chambéry; Thierry Atzeni, Laboratoire de Psychologie et NeuroCognition, CNRS UMR 5105 Grenoble. Dominique Muller is now at the Department of Psychology, University of Colorado at Boulder. This work is part of Dominique Muller's doctoral dissertation under the supervision of Fabrizio Butera and was supported by the “Avenir” program of the Rhône-Alpes regional council and the Swiss National Science Foundation. Part of this work was presented at the Second Meeting of the European Social Cognition Network, Heidelberg (D), September 1–3, 2000. We wish to express our gratitude to Cécile Ballaz, Olivier Corneille, Pascal Huguet, Charles M. Judd, Christian Marendaz, and Vincent Yzerbyt for their comments on previous versions of this article.

^{*} Corresponding author. Fax: +33-4-76-82-56-65.

E-mail address: fabrizio.butera@upmf-grenoble.fr (F. Butera).

adequately. In this view, attentional focusing is the main mediator of the social facilitation–inhibition effect.

One task that has been extensively used to study attention is the Stroop task (MacLeod, 1991). In the classical version (Stroop, 1935), participants have to name the color of patches (control items) or that of color-incompatible words (e.g., the word “red” written in green). The Stroop interference describes the fact that response time is slowed down by color-incompatible words. This interference is said to be due to the relative automaticity of word reading (Kahneman & Chajczyk, 1983; MacLeod, 1991). This task was used by Huguet, Galvaing, Monteil, and Dumas (1999) to test an attentional explanation of social facilitation–inhibition: If the presence of others leads to attentional focusing (Baron, 1986), then attention to colors (here, central cues) should be enhanced and lowered for word meaning (peripheral cues), thereby reducing Stroop interference. Indeed, they found that the mere presence of others, as well as upward social comparison (the other person is superior to the self) during coaction, led to a decrease in Stroop interference, contrary to drive theory, which would have predicted an increase in interference, due to the use of the dominant response (reading). However, Huguet et al. (1999) explained these results in terms of a strategic (conscious) inhibition of word reading, which is not necessary to an attentional explanation. The Stroop literature allows such an interpretation in terms of strategic inhibition: Some authors have demonstrated that using strategies can lower Stroop interference (e.g., Logan, Zbrodoff, & Williamson, 1984). It is also worth noting that such strategies can be systematic: Participants can inhibit the same tendency, i.e., reading, on all items.

The aim of the present contribution is to provide more definitive support for the attentional hypothesis of distraction–conflict theory, showing that the positive impact of mere coaction, as well as of upward social comparison, can be found *even* when the task does not rely upon a learned process (as in the Stroop task, cf. MacLeod, 1991) and, most importantly, *even* when a systematic strategy cannot improve performance.

Accordingly, the present contribution used a task designed to demonstrate a perceptual effect of attentional allocation, namely the illusory conjunction effect (Treisman, 1988). According to Treisman (1988), in the first stage of visual perception, the perceptual system extracts—automatically (without any attention required), and simultaneously (every characteristic is processed at the same time)—the visual primitives, i.e., the simplest perceptual features of the object. The second stage—in which attentional processing is needed—is the association phase: Visual primitives are bound if they are parts of the same object. Interestingly, Treisman (1998, p. 1305) specified that “binding failures (...) occur with high load displays when several objects must be processed under time pressure.” For example, a leaning “\$”

target presented among distractors (e.g., vertical and horizontal bars) will be considered as present when in fact only its visual primitives—i.e., the leaning “S” and the leaning bar—have been presented (very briefly), but have been combined in an illusory manner (Treisman & Paterson, 1984). Here, the leaning bar and the leaning S are the central cues for determining the target’s presence, while the distractors are peripheral cues. Thus, if coaction induces a higher attentional focusing through distraction (Baron, 1986), only central cues—and not peripheral—should receive attention, making illusory conjunction less likely to occur.

This task appears to be highly relevant to an unambiguous test of the attentional hypothesis of distraction–conflict theory, since the illusory conjunction effect is due to a lack of attentional processing of central cues (i.e., the visual primitives of the target). Moreover, contrary to the Stroop task, which is based on a learned skill (i.e., reading, cf. MacLeod, 1991), this task is a more purely perceptual one, given that illusory conjunctions are found with many different stimulus features, even when there is no reference to letters (e.g., Prinzmetal, 1981). Finally, what makes the illusory conjunction paradigm that we used highly diagnostic for our concern is that the use of a strategic and systematic inhibition of a certain type of response, e.g., always saying that the target is present, could be detected. Hence, if—contrary to our predictions—participants use this kind of strategy in coaction and/or in upward social comparison, their error rate should be lower (compared to the alone condition) when the target is actually present (what we called here “conjunctive items”) *but* should be higher when the target is actually present (here the “non-conjunctive items”).

One may ask why coactors should be sources of distraction. Sanders, Baron, and Moore (1978) contend that coactors are sources of social comparison information. It has indeed been demonstrated that coaction affects performance only when the coactor is a relevant target of comparison: Sanders et al. (1978) found that when the coactor performed another task, no facilitation was observed. Moreover, as stated by Wills (1986, p. 283): “Comparison process is strengthened when people face a potentially unfavourable comparison (i.e., upward social comparison).” The corollary is that comparison is less relevant when the individual is superior to the coactor, i.e., under downward social comparison. Indeed, Seta (1982) showed that no facilitation effects were observed in downward social comparison. As noted by Seta himself, in social comparison there exists a drive upward (Festinger, 1954) which typically leads individuals to be more interested, in laboratory as in natural settings, in upward social comparison (e.g., Nosanchuk & Erickson, 1985; Wheeler & Miyake, 1992; see Wood, 1989, for a review), and to be satisfied with their performance only when they are superior to the

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات