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Differential consequences of trait inferences: a direct test of the trait-referent hypothesis

DIEDERIK A. STAPEL and WILLEM KOOMEN
Department of Social Psychology, University of Amsterdam, The Netherlands

Abstract

The hypothesis was investigated that when trait inferences refer to abstract behaviour labels (i.e. 'conceited') they act as a general interpretation frame and lead to assimilation in subsequent judgments of an ambiguous target, whereas when they refer to specific actor–trait links (i.e. 'Peter is conceited') the activated information is likely to be used as a scale anchor and contrast effects are more likely. Compared to previous studies investigating the consequences of trait inferences, this 'trait-referent' hypothesis was tested in a relatively direct way. Target judgments of participants instructed that trait-implying sentences described a 'behaviour' showed assimilation, whereas judgments of participants instructed that these sentences described a 'person' showed contrast.

INTRODUCTION

Social psychologists have devoted a great deal of effort to studying the formation of person impressions. As trait constructs seem to be central to our representations of people, research has specifically examined trait inferences. A plethora of recent investigations suggests that categorizing others' behaviour in trait terms is something we do both frequently and spontaneously and is therefore a core aspect of person perception (see Uleman, Newman & Moskowitz, 1996). It is less clear, however, *what* exactly is inferred when people categorize behaviour in trait terms. What are the referents of trait inferences?

Addressee for correspondence: Diederik A. Stapel, Department of Social Psychology, University of Amsterdam, Roetersstraat 15, 1018 WB Amsterdam, The Netherlands, fax: (31) 20 639 1896, e-mail: sp-stapel@macmail.psy.uva.nl.

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Whereas trait inferences have often been described as *person* descriptions (i.e. actor–trait links such as 'Peter is conceited'), more recently it has been suggested that trait inferences do not necessarily refer to inferences about people and their dispositions, but may refer merely to *behaviour* descriptions (i.e. trait concepts such as 'conceited', see Bassili, 1989). A number of investigations have now specified several conditions that affect the likelihood that trait inferences activate actor–trait links instead of trait concepts. For instance, procedural knowledge (Smith, 1990), the situational context (Uleman, Moskowitz, Roman & Rhee, 1993; Whitney, Davis & Waring, 1994), the goals and motivation of the individual perceiver (Uleman & Moskowitz, 1994), and the personality the perceiver brings into the situation (Moskowitz, 1993) may all affect the likelihood that trait inferences activate person descriptions or actor–trait links instead of behaviour descriptions. For example, specific actor–trait links (e.g. 'Peter is conceited') are reported to be activated when participants have an *impression* formation goal when reading trait-implying sentences, whereas abstract behaviour labels (e.g. 'conceited') have been shown to be activated under *memory* instructions (see Bassili, 1989; Uleman *et al.*, 1993; Whitney *et al.*, 1994).

Recently, it has been argued that it is especially important to specify when trait inferences refer to actor–trait links and when to behaviour labels because of the interpersonal *consequences* these inferences may have for subsequent judgments of not only the target involved, but also of other targets (see Uleman *et al.*, 1996). For example, Stapel, Koomen, and Van der Pligt (1996b) suggest that when trait inferences are behaviour labels they may lead to 'assimilation' in subsequent judgments of an ambiguous target. As social cognition research has shown, when an *abstract* trait concept is activated at the time information about a target person is received, this trait concept is more likely to be used to categorize that target than other, less accessible concepts (see Higgins, 1989; Higgins, Rholes & Jones, 1977). On the other hand, however, when trait inferences refer to specific actor–trait links they may be more likely to lead to 'contrast' in subsequent judgments of a target person because the social perceiver may be more likely to consider the target information in relation to this specific and distinctive person representation. When this is the case, people will use the activated person–trait link as a comparison standard, in relation to which the target person is contrasted. As investigations of comparative and social judgment have shown, when *specific* category exemplars are cognitively activated, these exemplars may constitute a distributional norm with which the target is compared and contrasted during judgment. Stimuli that do not provide judges with information that is perceived as 'distinctive' and 'relevant' are not likely to be used as a comparison standard (see Helson, 1964; Herr, 1986; Sherif & Hovland, 1961; Stapel *et al.*, 1996b). When the task is to judge a target person, activated behaviour labels such as 'conceited' may be perceived as less distinctive than specific category exemplars, such as 'Peter is conceited'. Furthermore, abstract *behaviour* labels may not be similar enough to the target *person* to be used as a relevant comparison standard. Actor–trait links, indicating person concepts are, on the other hand, more distinctive and more similar to the target and may therefore be used as relevant standards in person judgments and result in contrast. However, when abstract behaviour labels such as 'conceited' are primed, we would expect assimilation to occur. These global behaviour descriptions will 'capture' the subsequently presented target stimulus (Bruner, 1957) and function as a general interpretation frame when information about the target stimulus is encoded.

Moskowitz and Roman (1992), although offering a different interpretation, provided evidence that supports the above line of reasoning. In their research, participants were presented with a small set of sentences describing behaviours clearly implying specific personality traits (e.g. 'confident' or 'conceited'). Participants asked to memorize these trait-implying sentences subsequently judged an unrelated target actor in a manner consistent with the implied traits (assimilation). Participants asked to form an impression of the actors in the sentences judged an unrelated target actor in a manner opposite to the traits implied by the sentences (contrast). Since previous trait inference research has demonstrated that actor–trait links are activated when participants have an impression formation goal when reading trait-implying sentences, whereas behaviour labels are activated under memorization instructions (see Bassili, 1989; Uleman *et al.*, 1996), the assimilation and contrast effects reported by Moskowitz and Roman (1992) support our hypothesis concerning the consequences of differential trait inferences.

Using a paradigm similar to the one employed by Moskowitz and Roman (1992), Stapel *et al.* (1996b) also report findings that are in line with this 'trait-referent' hypothesis. Using the same trait-implying sentences as Moskowitz and Roman (1992), these authors assumed that when the actors in these sentences were given proper names and the sentences were accompanied with photos of these actors, participants would perceive the sentences as describing actions of specific and 'real' individuals and — as research by Uleman *et al.* (1993) has found — this would make the activation of actor–trait links more likely. Thus, as predicted by our trait-referent hypothesis, in these 'personalized' conditions subsequent contrast effects resulted, not only under impression but even under memorization instructions. When the trait-implying sentences were not accompanied by the 'personalizing' information, similar to the Moskowitz and Roman study, contrast was found under impression and assimilation under memorization instructions.

In a second study Stapel *et al.* (1996b) varied the background information accompanying the trait-implying sentences to investigate again the hypothesis that the way in which exposure to trait-implying sentences affects subsequent judgments is dependent on the *kind* of trait information (abstract behaviour label or specific actor–trait link) these sentences prime. This study was inspired by Kelley's (1967) covariation model in which attributions can be based on consensus, distinctiveness, and consistency information. This model suggests that the process of drawing inferences from single sentences may be influenced by the informational context in which the trait-implying sentences are presented. For example, the trait concept 'clumsy' can refer to a behaviour label (Peter's stepping on a dance partner's feet is clumsy) and to a specific actor–trait link (Peter is clumsy). As Bassili (1989) has demonstrated, *context information* often determines whether either a behaviour label or an actor–trait link is activated. An example may illustrate this. Consider a situation in which Peter's display of 'clumsiness' is accompanied by the following information: 'Peter seldom steps on his partner's feet while dancing [high distinctiveness], most other people step on Judy's feet while dancing [high consensus]'. Although Peter's dancing might be identified as clumsy in this situation, it is unlikely that the perceiver will infer that Peter himself is a clumsy person. It is more the specific context that instigates his clumsiness and therefore the actor–trait link 'Peter is clumsy' is not likely to be made. Now suppose the context information is as follows: 'Peter always steps on his partner's feet while dancing [low distinctiveness], most other people do not step on Judy's feet while

dancing [low consensus]'. In this case it is much more likely that the perceiver will infer that Peter is clumsy. Bassili (1989) showed that when context information accompanying trait-implying actions has a high-distinctiveness/high-consensus structure, the action is likely to merely activate a behaviour label, whereas when such context information has a low-distinctiveness/low-consensus structure, actor–trait links are primarily likely to be activated. Stapel *et al.* (1996b) used these properties of context information to investigate the proposed referent-based explanation of assimilation and contrast effects that are the consequence of exposure to trait-implying sentences. As predicted, they found contrast effects by accompanying the trait-implying sentences with background information that suggested strong person attributions of the actions described, whereas assimilation was found when situation attributions were suggested by background information.

Together, these findings provide strong evidence for the notion that when trait inferences refer to abstract behaviour labels they act as a general interpretation frame and lead to assimilation in subsequent judgments, whereas when they refer to specific actor–trait links the activated information is likely to be used as a scale anchor and contrast effects are more likely. However, none of the studies reported by either Moskowitz and Roman (1992) or Stapel *et al.* (1996b) *directly* or *explicitly* manipulate the trait inferences people make when exposed to trait-implying sentences. In these previous studies, the activation of actor–trait links or behaviour labels is indirectly inferred from the instructions (memorization versus impression) or background information (suggesting person or situation attributions) accompanying the trait-implying sentences. Although together these studies suggest that the reported assimilation and contrast effects may be interpreted in terms of a trait-referent hypothesis, the indirect nature of these manipulations warrants some prudence towards such an account (see Stapel *et al.*, 1996b). Hence, the present study was set up to replicate these earlier results but especially to provide a more direct and clean test of the trait-referent hypothesis of the impact trait inferences exert on subsequent judgments.

In the present study participants were explicitly *told* what the referents of the trait-implying sentences were. Half of the participants were told that the sentences described a particular *behaviour*. The other half were told that they described a particular *person*. With this manipulation we directly induced either a 'person set' or a 'behaviour set' and thus had participants explicitly focus on a particular *kind* (trait concept or actor–trait link) of trait inference. The trait-referent hypothesis of the judgmental effects of trait-implying sentences then suggests the following predictions: participants who are told that the sentences they read describe a behaviour should form trait inferences of which the referents are behaviour labels and should thus exhibit assimilation effects in subsequent target judgments. Participants who are told that the sentences they read describe a person are expected to form trait inferences of which the referents are actor–trait links and should exhibit contrast effects in their judgments.

METHOD

Procedure, materials and measures

Participants arrived at the laboratory in groups of two to eight and were seated individually at desks in cubicles. There they received a booklet that was 'part of a project on Language Comprehension'. On the front page of this questionnaire participants were told that on the next pages they would find four texts that were printed in a box and in bold letter type. Participants were instructed to read these texts carefully and attentively and to answer the questions that accompanied each text.

Trait-implying sentences

On the second page the trait-implying sentences appeared. One group of participants was told that the sentences were behaviour descriptions extracted from a text in which 'a particular kind of behaviour' was described (*behaviour set* participants). Another group was told that the sentences were person descriptions extracted from a text in which 'a particular person' was described (*person-set* participants). On the basis of experimental sentences type, three groups were created. One-third of the participants read two experimental sentences that implied relevant *positive* traits. One-third of the participants read two experimental sentences that implied relevant *negative* traits. One-third of the participants read sentences that implied *irrelevant* traits. These sentences were Dutch translations of the sentences used by Moskowitz and Roman (1992; see also Stapel *et al.*, 1996b), who had chosen pretested sentences that were both strong in their ability to imply (and thus prime) traits and relevant to two trait dimensions that characterized the target stimuli to be judged later on (persistent–stubborn and confident–conceited; see below). The positive sentences were: 'He paddled even harder as he fell further behind in the race' (PERSISTENT); 'He knew he could handle most problems that would come up' (CONFIDENT). The negative sentences read: 'He refused to listen to them even though all the evidence was in their favour' (STUBBORN); 'He knew he was the best and didn't hesitate to tell people about it' (CONCEITED). The irrelevant sentences were: 'He decorated the office with antiques from the Far East' (CULTURED); 'He invited them to call if they needed any help getting settled' (HELPFUL). Order of sentence presentation was counterbalanced across conditions.

Each of the two trait-implying sentences was followed by two multiple-choice questions. Participants were present with two behaviour descriptions and had to choose which of these descriptions corresponded best with, dependent on the impression instruction condition, either the 'behaviour' or the 'person' described in the trait-implying sentence that appeared in the box. These multiple-choice questions were designed and pretested to have participants think about the trait concept or actor–trait link implied by the sentences more elaborately and thus to heighten the activation level of these primes. Participants had to choose between two alternatives: one clearly corresponded with the implied trait and one did not. For example, participants who read the CONCEITED-implying sentence were asked which of the two following behaviour descriptions corresponds best with the behaviour/person described in that sentence: (A) When asked who is the smartest person in the class answering with 'That's a difficult question', or (B) When asked who is the smartest person in the class answering with 'That's quite clear'. For each of the multiple-choice questions, all participants chose the answer that corresponded with the trait implied by the sentences they were exposed to earlier. This indicates that the trait-

implying sentences indeed were understood as hinting at the traits they were to imply.

Target stimuli and rating scales

On the third page two ambiguous target descriptions appeared. Participants were instructed to read these descriptions and to form an impression of the persons described. The descriptions were Dutch translations of behavioural descriptions pretested and determined to be ambiguous along the dimensions implied by the trait-implying sentences (see Higgins *et al.*, 1977; Moskowitz & Roman, 1992; Stapel *et al.*, 1996b). The first description concerned the behaviour of 'Jaap', was ambiguous along the PERSISTENT–STUBBORN dimension, and read as follows: 'Once Jaap made up his mind to do something it was as good as done, no matter how long it might take or how difficult the going might be. Only rarely did he change his mind even when it might have been better if he had'. After reading this description, participants were asked to indicate their impression of Jaap by circling a number on a relevant 7-point scale (1 = 'persistent', 7 = 'stubborn'). The second description concerned the behaviour of 'Peter', was determined to be ambiguous along the CONFIDENT–CONCEITED dimension, and read as follows: 'By the way he acted one could readily guess that Peter was well aware of his ability to do many things well'. After reading this description, participants were asked to indicate their impression of Peter by circling a number on a relevant 7-point scale (1 = 'confident', 7 = 'conceited') (*cf.* Moskowitz & Roman, 1992; Stapel *et al.*, 1996b).

When they had finished judging the target persons on the relevant scales, participants were thanked and debriefed.

Participants and design

Ninety-seven Dutch students (mean age 23 years) participated in this experiment. There were 55 female and 42 male students, assigned randomly to the conditions of a 3(prime type: positive, negative, irrelevant) × 2(impression instruction: behaviour set, person set) factorial between-subjects design.

RESULTS

A two-way interaction was predicted between the prime type and impression instruction manipulations. More specifically, behaviour set participants who were presented with positive trait-implying sentences (confident and persistent) or negative trait-implying sentences (conceited and stubborn) should show an assimilation effect and rate the targets as more confident and persistent or more conceited and stubborn, respectively. Person-set participants should show a contrast effect and should rate the targets as more confident and persistent when the sentences implied negative traits (conceited and stubborn) and more conceited and stubborn when the sentences implied positive traits. Finally, participants shown

Table 1. Target rating scores of prime type by impression instruction manipulations

Impression instruction	Prime type: Positive	Negative	Irrelevant
Behaviour set	3.9_a	5.2_b	4.4_{ab}
Person set	4.9_b	3.9_a	4.3_{ab}

Note. Means are computed over the two target ratings (confident–conceited, persistent–stubborn). Means with different subscripts differ significantly at $p < 0.05$. Lower scores indicate more positive ratings.

sentences that did not imply relevant trait dimensions should not show differences in their ratings.

We tested our predictions in a 3 (prime type) × 2 (impression instruction) analysis of variance (ANOVA). Because order of sentence presentation showed no effects, this factor is not reported here. To keep presentation of the results simple, we report analyses on the composite scores of the two rating scales. For this measure, an ANOVA revealed the expected two-way interaction between prime type and impression instruction, $F(2,91) = 7.18$, $p < 0.01$. Univariate and multivariate analyses of variance on the two separate rating scales showed the same pattern of results as the analyses on the composite measure. Table 1 presents composite mean target ratings for each of the conditions.

As can be seen in Table 1, this interaction reflects that ratings of target stimuli were more positive (negative) for behaviour set participants who were shown positive (negative) trait-implying sentences—assimilation—and were more negative (positive) for person set participants who were shown positive (negative) sentences—contrast. Comparing the relevant means showed that behaviour set participants exposed to positive trait-implying sentences rated the targets as more positive ($M = 3.9$) than did behaviour set participants exposed to negative trait-implying sentences ($M = 5.2$), $F(1,91) = 9.31$, $p < 0.01$ (assimilation), whereas person set participants exposed to positive trait-implying sentences rated the targets as more negative ($M = 4.9$) than person set participants primed with negative sentences ($M = 3.9$), $F(1,91) = 5.33$, $p < 0.01$ (contrast). Ratings of participants exposed to irrelevant sentences were halfway between ratings of participants in the experimental conditions, but differences between experimental and irrelevant prime type conditions did not reach ordinary levels of significance.

DISCUSSION

The findings of the present study support our predictions: participants assimilated their judgments of target stimuli towards the constructs activated by trait-implying sentences when they perceived these sentences as describing a particular *behaviour*, whereas participants contrasted their target judgments away from the activated constructs when they perceived the trait-implying sentences as decribing a particular *person*. This experiment thus extends earlier research on the 'prime' generating properties of trait-implying behaviours and supports the general idea that inferences

resulting from the exposure to trait-implying behaviours may guide the manner in which subsequent behaviour is interpreted and judged. The present findings demonstrate that when studying the impact of trait inferences on subsequent judgments it is important to specify when trait inferences refer to abstract trait concepts and when to specific actor–trait links because the referents of trait inferences determine their consequences.

In the literature on knowledge accessibility effects a number of factors have been identified as determining the direction of context effects. For example, researchers have argued that Gricean communication rules (see Strack, 1994) or accuracy motivations (e.g. Ford & Kruglanski, 1995) may determine whether assimilation or contrast will result from accessible information. However, it is unlikely that in the present studies the behaviour set and person-set manipulations differentially increased people's desire to be accurate or primed the use of a Gricean rule such as the maxim of quantity ('convey information that the questioner does not already have').

Other researchers have identified 'extremity' of the primed information as determining assimilation and contrast effects (e.g. Helson, 1964; Herr, 1986; Sherif & Hovland, 1961). For example, in ratings of ambiguous targets, a moderate prime is likely to lead to assimilation whereas a more extreme contextual prime is likely to lead to contrast. In our studies both assimilation and contrast resulted from exposure to the same trait-implying sentences. This seems to rule out explanations in terms of the actual or relative extremity of the primed inferences. However, there is a version of the extremity hypothesis that may fit the present results. According to Higgins (1989), because of the rules of communication, primed person concepts or actor–trait links tend to be seen as more extreme than primed behaviour labels or trait concepts. This is because when we describe somebody as, for example, persistent we presumably do so because that person clearly differs from others on the persistence dimension. In other words, the person is assumed to be more persistent than average. Thus, priming actor–trait links may produce a more extreme construct than the priming of a behaviour label. Although the present findings do not rule out the possibility that actor–trait links represent more extreme information than behaviour labels, we would argue that extremity is not a sufficient precondition for contrast to occur. Elsewhere we show that the impact of extremity is dependent on the *type* of information that is activated (Stapel, Koomen & Van der Pligt, 1996a). More specifically, when studying the impact of extremity in the context of specific person exemplar priming, extremity leads to strong contrast effects (see also Herr, 1986), whereas in the context of abstract trait concept priming, extremity leads to strong assimilation effects (see also Wyer & Srull, 1989). Thus, whereas person concepts could be more extreme than trait concepts, we argue that the present contrast findings cannot be explained by prime extremity alone because extreme trait primes intensify *assimilation* effects relative to moderate trait primes.

Contrast effects have also been explained with reference to 'prime-awareness', that is when people realize that their thoughts or judgments could be influenced by the primed information they may want to correct for such contaminating influences. Some authors argue that awareness-based contrast effects are driven by participants' attempts to partial out the influence of the primes from the representation of the target (e.g. Martin, 1986) or by overcorrection when participants are trying to avoid unwanted contamination of their judgments (e.g. Petty & Wegener, 1993). Others

argue that when participants are aware of the priming episode, these primes reinforce extreme standards that do not match the ambiguous target information when evaluating the fit between target and primed traits (e.g. Skowronski, Carlston & Isham, 1993)[1]. Whatever the exact process, for awareness-induced 'correction' attempts to occur and succeed, participants have to be aware of the relation between contextual information and the target description, and must have the requisite motivation and opportunity to remove the contextual influence from their 'true' reaction to the target. There seems no reason to expect that in the research presented here participants either would be more suspicious of potential contamination of their target judgments or would be more motivated to construct accurate target judgments in the person-set conditions in which we found contrast (*cf.* Martin, 1986). Both the behaviour-set and person-set manipulations quite blatantly and explicitly introduced the trait-implying sentences. This suggests that, at least in the present research paradigm, prime-awareness or judgments of inappropriateness are not necessary preconditions for contrast effects (see Banaji, Hardin & Rothman, 1993; Ford & Kruglanski, 1995; Schwarz & Bless, 1992). Therefore we prefer viewing the contrast effects found here as a result of 'unaware', *comparison* processes between the person information implied by the trait-implying sentences and the target person as opposed to 'aware' *correction* processes in which it is attempted to subtract contextual contamination from target judgments.

Our explanation of the assimilation and contrast effects found in the research reported here emphasizes that when trait-implying sentences activate abstract trait concepts or behaviour labels, these concepts will serve as an interpretative framework, making assimilation to their features more likely when encoding information about the target stimulus. When trait-implying sentences activate more specific actor–trait links, contrast is more likely because these actor–trait links are sufficiently 'distinctive' and 'relevant' to be used as subjective standards for purposes of comparison in person judgment (*cf.* Helson, 1964; Herr, 1986; Sherif & Hovland, 1961). This line of reasoning is consistent with Schwarz and Bless' (1992) inclusion/exclusion model of assimilation and contrast effects. This model predicts assimilation when a primed construct can be included in the target and contrast when the primed information is excluded from the target. The Schwarz and Bless model suggests that the broader and more inclusive the *primed category*, the more likely it is that judgments of target stimuli will be assimilated to it. Likewise, contrast effects are likely to the extent that the primed category is narrow and exclusive. The present conceptualization also can be related to theorizing by Wyer and Srull (1989). Reinterpreting previous findings of assimilation and contrast, they suggest that respondents are more likely to use accessible information as an interpretation frame during encoding when that information consists of an attribute concept (e.g. 'conceitedness'). Accessible information may, on the other hand, be more likely to serve as a comparison standard in the judgment stage when both an attribute concept and an object concept (e.g. 'conceited person') are activated.

To end with a more empirical and methodological note, the main contribution of the present research has been to add more flesh to the results and insights of both

[1]It needs to be added that in traditional studies of comparative judgment (e.g. Helson, 1964; Parducci, 1965; Sherif & Hovland, 1961), contrast effects are depicted as mediated by the *automatic* and *unconscious* use of contextually induced norms or anchors (see also Kahneman & Miller, 1986).

Moskowitz and Roman (1992) and Stapel *et al.* (1996b). The present study replicates the findings of these previous studies using a different paradigm. More importantly, however, compared to these previous experiments, the present study provided a relatively direct and simple test of the proposed trait-referent hypothesis of the implications of trait inferences for subsequent judgments. Whereas in previous investigations the activation of actor–trait links or trait concepts was indirectly inferred from the instructions or background information accompanying the trait-implying sentences, in the present study participants were explicitly informed what the referents of the trait-implying sentences were. In sum then, the present findings provide not only *strong* evidence, but also relatively *direct* evidence for the notion that when trait inferences refer to abstract behaviour labels they act as a general interpretation frame and lead to assimilation in subsequent judgments, whereas when they refer to specific actor–trait links the activated information is likely to be used as a scale anchor and contrast effects are more likely.

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