

Theory-based bias correction in dispositional inference: The fundamental attribution error is dead, long live the correspondence bias

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Social psychological research has repeatedly shown that perceivers draw correspondent dispositional inferences from observed behaviour even when this behaviour was highly constrained by situational factors (i.e., the correspondence bias). Even though this phenomenon has been proposed to be multiply determined, the most common explanation is still that perceivers ubiquitously consider situational factors to have little impact on human behaviour (i.e., the fundamental attribution error). The present chapter offers a critical analysis of the available empirical evidence on the correspondence bias from the perspective of theory-based bias correction. It is concluded that the correspondence bias results from a number of different processes associated with the application of perceivers' causal theories about situational influences on human behaviour. However, there is no evidence for the assumption that the correspondence bias is due to causal theories implying that situational factors have little impact on human behaviour. Theoretical and empirical implications are discussed.

There is a long history of research in social psychology showing that perceivers draw correspondent dispositional inferences from other people's behaviour even when the observed behaviour was highly constrained by situational factors. This phenomenon, which is often called *the correspondence bias* (Gilbert & Jones, 1986), seems to be so pervasive that Jones (1990, p. 138) called it "a candidate for the most robust and repeatable finding in social psychology". Even though some researchers have argued that the correspondence bias is a multiply determined phenomenon that can be due to a number of very different processes (e.g., Gilbert & Malone, 1995; Jones,

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1990; Trope, 1998), the most common explanation is still that the correspondence bias is due to perceivers' causal theories about the determinants of human behaviour, implying that situational factors have little impact on human behaviour. This ubiquitous underestimation of situational influences on human behaviour is usually called *the fundamental attribution error* (Ross, 1977).

The main goal of the present chapter is to review the available empirical evidence on the correspondence bias from the perspective of theory-based bias correction (cf. Strack, 1992; Wegener & Petty, 1997; Wilson & Brekke, 1994). Specifically, it is analysed whether the correspondence bias is actually due to causal theories implying that situational factors have little impact on human behaviour. Based on the available evidence, it is argued that the correspondence bias results from a number of different processes associated with the *application* of perceivers' causal theories about situational influences on human behaviour. However, there seems to be no evidence for the widespread assumption that the correspondence bias is due to causal theories implying that situational factors have little impact on human behaviour (for a similar claim, see Harvey & McGlynn, 1982; Harvey, Town, & Yarkin, 1981).¹ For this purpose, the first part of this chapter discusses some general aspects of theory-based bias correction and how these aspects are reflected in common explanations of the correspondence bias. The second part summarises the available evidence obtained in the main paradigms used to investigate the correspondence bias, discussing whether this evidence actually supports the assumption that the correspondence bias is due to causal theories implying that situational factors have little impact on human behaviour.

EXPLANATIONS OF THE CORRESPONDENCE BIAS

Drawing on the general notion of theory-based bias correction (cf. Strack, 1992; Wegener & Petty, 1997; Wilson & Brekke, 1994), the neglect of situational factors in dispositional inference could be due to at least four different factors. First, perceivers may explicitly believe that situational factors have little impact on human behaviour (i.e., lack of situational theory). Second, perceivers may believe that situational factors have a strong impact on human behaviour, but they may unintentionally fail to apply their causal theories about situational influences to correct their dispositional judgements for these influences (i.e., failure to apply situational theory).

¹Note that the present review is not concerned with the question of whether perceivers' social judgements are adequate from a normative point of view (e.g., McClure, 1998; Morris & Larrick, 1995), but whether perceivers' causal theories imply that situational factors actually have an influence on human behaviour (for critiques of normative approaches, see Funder, 1987; Kruglanski & Ajzen, 1983).

Third, perceivers may believe that situational factors have a strong impact on human behaviour, but they may intentionally neglect their causal theories about situational influences to correct their dispositional judgements for these influences (i.e., deliberate neglect of situational theory). Fourth, perceivers may believe that situational factors have a strong impact on human behaviour and they may actually apply their causal theories about situational influences to correct their dispositional judgements for these influences, but they may apply these theories in a manner that promotes (rather than attenuates) correspondent dispositional inferences from situationally constrained behaviour (i.e., biasing application of situational theory). Even though previous conceptualisations did not explicitly refer to a framework in terms of theory-based bias correction, all of these processes have been proposed as potential explanations for the correspondence bias in a more or less similar manner (e.g., Gilbert & Malone, 1995; Jones, 1990; Trope, 1998).

Lack of situational theory

The most fundamental determinant of the correspondence bias is represented by perceivers' causal theories about the determinants of human behaviour (Gilbert & Malone, 1995). From a general perspective, a causal theory affirming situational influences on human behaviour may be conceptualised as the propositional assumption that a given situation S_i promotes a particular behaviour B_i . For the sake of simplicity, this causal proposition may be called S-Theory. If people do not have the knowledge of S-Theory (i.e., they do not know that S_i promotes B_i), or if they consider S-Theory as empirically wrong (i.e., they do not believe that S_i promotes B_i), it seems almost inevitable that they infer a corresponding disposition D_i from behaviour B_i regardless of whether a behaviour promoting situation S_i is present or absent. In other words, they draw the same correspondent dispositional inferences regardless of whether the observed behaviour is constrained by situational factors or not. Even though the correspondence bias has also been associated with a variety of other factors (e.g., Gilbert & Malone, 1995; Jones, 1990; Trope, 1998), this seminal account in terms of a general underestimation of the causal influence of situational factors on human behaviour is still the most prominent and influential explanation of the correspondence bias (e.g., Ross, 1977; Ross & Nisbett, 1991).

Failed application of situational theory

Even if perceivers know about S-Theory, and even if they actually believe in the adequacy of S-Theory, they may nevertheless infer corresponding dispositions from situationally constrained behaviour when they fail to apply S-Theory to correct their dispositional inferences for situational factors.

With regard to the present question, it is important to note that this explanation in terms of failed application implies the inadequacy of the first one in terms of a general lack of S-Theory. If perceivers do not have the knowledge of S-Theory, there is no theory that perceivers can (fail to) apply. In this case, perceivers should ubiquitously draw correspondent dispositional inferences regardless of whether situational factors are present or absent. In a similar vein, if perceivers consider S-Theory as empirically inadequate, they should also infer correspondent dispositional inferences regardless of whether situational factors are present or absent. Hence, if under certain conditions perceivers do *not* infer correspondent dispositional inferences from situationally constrained behaviour, this would provide evidence that perceivers know about S-Theory, as well as that they actually believe in the adequacy of S-Theory but sometimes fail to apply S-Theory to correct their dispositional judgements for situational factors. This may be the case (a) when they are not aware of the actual presence of situation S_i implied by S-Theory, or (b) when they do not have the motivation or the cognitive capacity to engage in the effortful process of applying S-Theory. The latter case seems to be particularly important (c) when perceivers have the goal of inferring a disposition (rather than of making inferences about the situation).

Awareness. A possible reason for perceivers' failure to apply S-Theory is that they are not aware of the actual presence of a situational factor S_i implied by S-Theory. In other words, perceivers may actually believe that situational factors influence human behaviour, but they may nevertheless draw correspondent dispositional inferences from situationally constrained behaviour when they are not aware of the presence of situational influences (Gilbert & Malone, 1995). Consistent with this claim, several attribution researchers argued that situational factors often have a very low salience (Arkin & Duval, 1975; Heider, 1958; McArthur & Post, 1977; Taylor & Fiske, 1975; for a review, see Taylor & Fiske, 1978). This is particularly true for invisible factors, such as social roles or psychological constraints (Jones, 1990). Awareness of such kinds of influences is often limited to actors who are directly exposed to these constraints, whereas observers often fail to recognise the present situational influences (Jones & Nisbett, 1972; Storms, 1973). Awareness of a given influence, however, has to be regarded as a necessary precondition for judgemental correction (e.g., Lombardi, Higgins, & Bargh, 1987; Strack, Schwarz, Bless, Kübler, & Wänke, 1993; for a more detailed discussion, see Strack & Hannover, 1996), in this case for the application of perceivers' causal theories about the impact of situational factors on human behaviour.

Motivation and capacity. Perceivers may believe in the adequacy of S-Theory, and they may be aware of the present situational factors implied by S-Theory, but they may nevertheless draw correspondent dispositional

inferences from situationally constrained behaviour when they lack the motivation or the cognitive capacity to engage in the effortful process of applying S-Theory. Consistent with this claim, Gilbert (1989) argued that dispositional inference follows a sequential process that consists of three distinct stages: behaviour categorisation (i.e., what is the actor doing?), dispositional characterisation (i.e., what disposition does the behaviour imply?), and situational correction (i.e., what situational determinants might have caused the behaviour?). Whereas categorisation and characterisation are assumed to be relatively automatic processes that are independent of the degree of cognitive elaboration (for a review, see Uleman, Newman, & Moskowitz, 1996), situational correction is assumed to be a more deliberate, relatively controlled process that depends on both the motivation and the cognitive capacity for an effortful processing of available information. Hence, perceivers may fall prey to the correspondence bias when they do not have the motivation or the cognitive capacity to apply S-Theory, i.e., to engage in the effortful process of situational correction (e.g., Gilbert, Jones, & Pelham, 1987; Gilbert, Krull, & Pelham, 1988a; Gilbert, Pelham, & Krull, 1988b).

Inferential goals. It is important to note, however, that insufficient motivation or capacity undermines the application of S-Theory only when perceivers have the goal of inferring a disposition, but not when they have the goal of making inferences about the situation. Drawing on previous conceptualisations of dispositional inference in terms of judgemental anchoring (e.g., Jones, 1990; Quattrone, 1982a; see also Strack & Mussweiler, 1997), Krull (1993) argued that the processing sequence in social inference is not a fixed one, but depends on the inferential goal of the perceiver. When perceivers are interested in inferring dispositions, they are assumed (a) to spontaneously categorise the observed behaviour, (b) to spontaneously characterise a corresponding disposition, and then (c) to deliberately correct these characterisations for situational constraints. In contrast, when perceivers are interested in the causal role of situational factors, they are assumed (a) to spontaneously categorise the observed behaviour, (b) to spontaneously characterise the situation, and then (c) to deliberately correct these characterisations for dispositional factors. Because processes of characterisation usually require less cognitive effort than processes of correction, Krull's (1993) conceptualisation implies that insufficient motivation or capacity should undermine the application of S-Theory only when perceivers have a dispositional goal, but not when they have a situational goal. Moreover, the application of the alternative causal proposition that disposition D_i promotes a particular behaviour B_i (D-Theory) seems to be unaffected by motivation and capacity only when perceivers have a dispositional goal, but not when they have a situational goal (e.g., Krull & Dill, 1996; Krull & Erickson, 1995).

Deliberate neglect of situational theory

Perceivers may believe in the adequacy of S-Theory, they may be aware of the present situational factors implied by S-Theory, and they may have the motivation and the cognitive capacity to engage in the (more or less) effortful process of applying S-Theory, but they may nevertheless draw correspondent dispositional inferences from situationally constrained behaviour when they deliberately neglect S-Theory as irrelevant. This can be the case when perceivers regard the observed behaviour as highly diagnostic irrespective of the presence or absence of situational factors. Drawing on the notion of necessary and sufficient causes (e.g., McClure, 1998; McGill, 1998; Trope & Liberman, 1993), a behaviour is highly diagnostic when the expected probability of the behaviour is high for actors possessing a corresponding disposition (sufficiency) and low for actors who do not have that disposition (necessity). With regard to the present question, it is particularly the necessity assumption that can lead to a deliberate neglect of S-Theory in dispositional inference. If a corresponding disposition D_i is considered to be necessary for a particular behaviour B_i , then B_i is highly diagnostic for D_i regardless of whether a behaviour promoting situation S_i is present or not.

These considerations are reflected in Reeder's schematic model of dispositional inference (Reeder, 1993; Reeder & Brewer, 1979). Reeder (1993) argued that people usually check the diagnostic value of the observed behaviour before they correct their dispositional inferences for situational factors. If the diagnostic value of the observed behaviour is low, perceivers may correct their dispositional inferences for the situational factors implied by S-Theory (unless they are not aware of these factors or they do not have the motivation or capacity to apply S-Theory). If, however, the diagnostic value of the observed behaviour is high, perceivers may generally infer a corresponding disposition without correcting their judgements for the situational factors implied by S-Theory. According to Reeder (1993), such diagnosticity checks are guided by the logic of implicational schemata (see Reeder & Brewer, 1979), which are defined as lay perceivers' trait-specific assumptions about the behaviours implied by a given dispositional level. The most important schema with respect to the present question is the hierarchically restrictive schema, which is applied in dispositional inferences from moral behaviours and in dispositional inferences from ability-related performances.

According to the schema for moral behaviours, perceivers assume that only immoral individuals behave immorally. Moral behaviours, in contrast, are expected for all people regardless of whether they have a moral or an immoral disposition (e.g., Reeder, Henderson, & Sullivan, 1982). In other words, an immoral disposition is considered to be a necessary precondition for immoral behaviour. A moral disposition, in contrast, may be sufficient for moral behaviour, but it is not necessary. Hence, immoral behaviours have a high

diagnostic value for inferring a corresponding disposition, and thus should lead to the attribution of an immoral disposition regardless of whether situational factors promoting immoral behaviour are present or absent. Moral behaviours, in contrast, have only a low diagnostic value, and thus should lead to the attribution of a moral disposition only when there is no situational factor accounting for the moral behaviour, but not when situational factors promote moral behaviour (Reeder & Spores, 1983; Skowronski & Carlston, 1989).

Similar relations are implied by the schema for ability-related performances. Specifically, perceivers seem to assume that only skilled individuals are able to achieve high-level performances. Low-level performances, in contrast, may be achieved by both skilled and unskilled individuals (e.g., Reeder et al., 1982). In other words, a high ability level is considered to be a necessary precondition for high-level performances. Low ability levels, in contrast, are sufficient, but not necessary for low-level performances. Accordingly, high-level performances have a high diagnostic value for the attribution of a high ability level, and thus should lead to the attribution of a high ability level regardless of the presence or absence of situational factors. Low-level performances, in contrast, have only a low diagnostic value, and hence should lead to the attribution of a low ability level only when there is no situational factor accounting for the poor performance, but not when the poor performance can be explained by situational influences (Reeder, 1979, 1997; Reeder, Hesson-McInnis, Krohse, & Scialabba, 2001).

Applied to the present question, one could argue that perceivers actually underestimate the impact of situational factors on human behaviour—and thus do not believe in the adequacy of S-Theory—if empirical evidence indicates that the trait-behaviour relations implied by implicational schemata are empirically wrong (e.g., Gilbert & Malone, 1995). This might be the case when situational factors can lead moral individuals to engage in immoral behaviour, or when situational factors can promote high-level performances even for individuals with a low ability level. In contrast to this claim, however, a more detailed analysis of research on implicational schemata suggests that S-Theory and implicational schemata are actually independent of one another. Specifically, it seems that implicational schemata can lead perceivers to the assumption that an observed behaviour B_i is highly diagnostic for inferring a corresponding disposition D_i even when they consider a present situational factor S_i to have a strong impact on behaviour B_i . This issue will be discussed in more detail in the second part of this chapter in the context of moral attributions.

Biasing application of situational theory

Perceivers may believe in the adequacy of S-Theory, they may be aware of the present situational factors implied by S-Theory, they may have the

motivation and the cognitive capacity to engage in the (more or less) effortful process of applying S-Theory, and they may consider the observed behaviour to have a low diagnostic value, but they may nevertheless draw correspondent dispositional inferences from situationally constrained behaviour when they apply S-Theory in a manner that promotes (rather than attenuates) correspondent dispositional inferences. This kind of biasing application is implied by Trope's two-stage model of dispositional inference (Trope, 1986; Trope & Gaunt, 1999; Trope & Liberman, 1993). According to Trope, theory-based expectations about situational influences on human behaviour often bias the categorisation of ambiguous behaviour in an assimilative manner (e.g., Trope & Alfieri, 1997; Trope, Cohen, & Alfieri, 1991; Trope, Cohen, & Maoz, 1988). For example, information about an anxiety-inducing situation may lead to a spontaneous categorisation of ambiguous behaviour as highly anxious, which in turn promotes correspondent inferences of dispositional anxiety (e.g., Snyder & Frankel, 1976). Most importantly, such effects of assimilative behaviour categorisation often compensate the effects of situational correction such that it appears as if perceivers have totally ignored the causal role of situational factors (e.g., Gawronski, Alshut, Grafe, Nespethal, Ruhmland, & Schulz, 2002). That is, they may draw correspondent dispositional inferences regardless of whether situational factors are present or absent. Hence, perceivers may commit the correspondence bias not only when they—intentionally or unintentionally—do not apply S-Theory, but also when they “over-apply” S-Theory, i.e., when they use S-Theory to disambiguate ambiguous behavioural cues.²

As with the explanation in terms of failed application of S-Theory, it is important to note that the present account also implies the inadequacy of the first one in terms of causal theories implying that situational factors have little influence on human behaviour. If perceivers do not have the knowledge of S-Theory, or if they consider S-Theory as empirically inadequate, there is no theory that perceivers can apply in a manner that promotes (rather than attenuates) dispositional inferences from situationally constrained behaviour. Hence, if there is evidence that perceivers apply S-Theory in a manner that promotes rather than attenuates correspondent dispositional inferences from situationally constrained behaviour, this would provide evidence that

²It is important to note that the proposed “over-application” of S-Theory does not imply a judgemental error or a normatively inadequate inference. As already outlined in Footnote 1, the present investigation is not concerned with the question of whether perceivers' social judgements are normatively adequate (e.g., McClure, 1998; Morris & Larrick, 1995), but whether perceivers' causal theories imply that situational factors actually have an influence on human behaviour. However, the proposed application of S-Theory to disambiguate ambiguous behaviour can nevertheless be considered as having a “biasing” effect, because it systematically increases the likelihood of correspondent dispositional inferences (for a more detailed discussion of the terms error and bias, see Kruglanski & Ajzen, 1983).

perceivers know about S-Theory as well as that they actually believe in the adequacy of S-Theory.

EMPIRICAL EVIDENCE

Even though some studies slightly modified the standard paradigms to investigate the tendency to draw correspondent dispositional inferences from situationally constrained behaviour (e.g., Fleming & Darley, 1993; Gilbert & Jones, 1986; Humphrey, 1985; A. G. Miller, Jones, & Hinkle, 1981; Napolitan & Goethals, 1979; Trope & Alfieri, 1997; Trope et al., 1988, 1991), all of these experiments can be traced back to one of four basic paradigms: the *attitude attribution paradigm* investigating inferences about attitudes (Jones & Harris, 1967), the *silent interview paradigm* investigating inferences about emotionality (Snyder & Frankel, 1976), the *quiz-role paradigm* investigating inferences about ability (Ross, Amabile, & Steinmetz, 1977), or the *moral attribution paradigm* investigating inferences about morality (Bierbrauer, 1979).

The attitude attribution paradigm

The most common paradigm to investigate the correspondence bias is the attitude attribution paradigm developed by Jones and Harris (1967). In this experimental paradigm, participants are asked to infer the personal attitude of a fictitious target towards a particular topic (e.g., abortion, legalisation of marijuana). For this judgemental task, participants receive a short essay on the topic in question, ostensibly written by the target. In one condition—the so-called free choice condition—participants are informed that the writer was free to choose the position advocated in the essay (i.e., pro or contra). In a second condition—the so-called assignment or no choice condition—they are told that the position advocated in the essay was assigned. According to Jones (1979), participants fall prey to the correspondence bias when they infer an attitude in line with the position of the essay even when it was introduced as being assigned. This tendency to infer a corresponding attitude from a situationally constrained essay is a very robust finding that has been shown to be independent of perceivers' personal attitudes (e.g., Alicke, Zerbst, & LoSchiavo, 1996), the level of generality of perceivers' inferences (e.g., Cantor, Pittman, & Jones, 1982), the order of essay and situational information (e.g., Jones, Riggs, & Quattrone, 1979), contradictory essays from the same author (e.g., Allison, Mackie, Muller, & Worth, 1993), explicit warnings of judgemental bias (e.g., Croxton & Miller, 1987), different types of situational constraint information (e.g., Alicke et al., 1996; Croxton & Morrow, 1984; Fleming & Darley, 1989; Gilbert & Jones, 1986; Gilbert et al., 1987), artificial versus authentic essays (e.g.,

A. G. Miller, Ashton, & Mishal, 1990; Reeder, Fletcher, & Furman, 1989; Snyder & Jones, 1974), additional information about the essay writer (e.g., Ajzen, Dalto, & Blyth, 1979; A. G. Miller, 1976), and cultural differences (Choi & Nisbett, 1998; Krull, Loy, Lin, Wang, Chen, & Zhao, 1999).

Notwithstanding these findings, however, a number of studies have shown that the correspondence bias in the attitude attribution paradigm diminishes when certain conditions are met. For example, drawing on Gilbert's (1989) three-stage model, several studies have demonstrated that perceivers' tendency to commit the correspondence bias in the attitude attribution paradigm is reduced when they have a high motivation to process the available information effortfully (e.g., D'Agostino & Fincher-Kiefer, 1992; Fein, 1996; Fein, Hilton, & Miller, 1990; Forgas, 1998; McCaul, 1983; Tetlock, 1985; Vonk, 1999; Webster, 1993; Yost & Weary, 1996). These results indicate that perceivers may fall prey to the correspondence bias in the attitude attribution paradigm when they do not have the motivation to engage in the effortful process of applying S-Theory. However, if perceivers actually have the motivation to engage in the effortful process of applying S-Theory, they correct their dispositional inferences for the situational factors implied by S-Theory. Most importantly, the mere fact that participants apply S-Theory under conditions of high cognitive elaboration indicates that participants actually believe in the adequacy of S-Theory. If they did not believe in the adequacy of S-Theory, increasing the motivation to process the available information effortfully should have no effect on the impact of assignment information on attitude attributions. Rather, participants should generally infer corresponding attitudes regardless of whether the essay position was assigned or freely chosen, and regardless of whether participants process the available information effortfully or superficially.

The role of salience in attitude attribution was recently investigated by Trope and Gaunt (2000). These researchers found that participants generally corrected their dispositional inferences for situational constraints, unless they were distracted *and* the salience of situational factors was low. If participants were not distracted *or* situational factors were highly salient, participants generally corrected their attitude attributions for situational constraints. In other words, reduced cognitive capacity attenuated the application of S-Theory only when the salience of situational factors was low, but not when it was high. These results suggest that both cognitive elaboration and salience of situational factors increase the likelihood that people apply S-Theory in dispositional inference. Most importantly, Trope and Gaunt's (2000) results indicate that participants apply S-Theory under certain conditions, and thus that they actually believe in the adequacy of S-Theory, even though they may sometimes fail to apply this theory (e.g., when salience of situational factors is low *and* perceivers are distracted).

Investigating the role of inferential goals, Quattrone (1982a) slightly modified the original attitude attribution paradigm. Specifically, participants were asked to judge the strength of situational forces (i.e., subtle requests from the experimenter) rather than to infer the personal attitude of the author. Additionally, they were presented with information about the true attitude of the author, with an opinion questionnaire ostensibly completed by the writer of the essay. Although respondents had clear information about the personal attitude of the author, participants attributed free choice essays that were consistent with the writer's attitude to situational forces rather than to the personal attitude of the author. These results are consistent with Krull's (1993) assumption that the processing sequence in social inference is not a fixed one, but depends on the inferential goal of the perceiver. That is, perceivers with a situational goal may spontaneously apply S-Theory in order to characterise the situation, but they may fail to correct their inferences for potential dispositional factors. Most importantly, Quattrone's (1982a) findings suggest that participants actually believe that the present situational factors influence behaviour in the attitude attribution paradigm, thus indicating that they actually believe in the adequacy of S-Theory.

A similar conclusion is implied by studies on essay diagnosticity (e.g., Gawronski, 2003a; Jones, Worchel, Goethals, & Grumet, 1971; A. G. Miller et al., 1990; A. G. Miller & Rorer, 1982; Reeder et al., 1989; Schneider & Miller, 1975; see also Lord, Scott, Pugh, & Desforges, 1997). From a general perspective, these studies have demonstrated that perceivers assess the diagnostic value of constrained essays by the logic of implicational schemata (Reeder & Brewer, 1979) before they correct their attitude judgements for situational constraints. More precisely, it seems that people assume that only authors with a corresponding attitude are able to write a highly persuasive essay on a given topic (Gawronski, 2003a). Hence, highly persuasive essays can be considered to have a high diagnostic value for inferring a corresponding attitude, whereas unpersuasive essays have only a low diagnostic value. In other words, a corresponding attitude is considered to be a necessary precondition for a highly persuasive essay. Consistent with these assumptions, Gawronski (2003a) demonstrated that highly persuasive essays led to strong correspondent dispositional inferences regardless of the presence or absence of situational constraints. Unpersuasive essays, in contrast, led to attributions of a corresponding attitude only under free choice, but not under assignment conditions (Experiment 2). This effect was independent of assimilation effects of situational information on the categorisation of ambiguous (weak) essays (Experiment 4) or contingent essay characteristics such as the particular content of the essays (Experiment 3). Moreover, consistent with the assumption that the assessment of diagnosticity is a cognitively effortful process (Reeder, 1993), persuasiveness

affected inferences from situationally constrained essays only when the available information was processed effortfully, but not when cognitive capacity was low (Experiment 6).

Do the results on essay diagnosticity imply that perceivers do not believe in the adequacy of S-Theory with regard to attitude attribution? Drawing on the consideration that the ability to write a highly persuasive essay may be more directly related to language skills or intelligence rather than to personal attitudes, one could argue that perceivers' schematic assumptions about the ability to write a highly persuasive essay are empirically inadequate. Moreover, a person with a strong attitude may often be familiar with the counterarguments to his or her personal opinion, and thus should also be able to write a highly persuasive counterattitudinal essay. Consistent with these assumptions, a number of studies using authentic essays found that participants are not able to detect the true attitude of an author (e.g., A. G. Miller et al., 1990; Reeder et al., 1989; Snyder & Jones, 1974). In other words, perceivers' schematic assumption about the ability to write a highly persuasive essay does not lead to accurate judgements, and thus seems to be empirically inadequate. It is important to note, however, that this inadequacy does not necessarily imply an underestimation of situational factors in terms of S-Theory. In contrast, it may actually imply an overestimation of situational factors. That is, perceivers seem to underestimate people's dispositional ability to write a counterattitudinal essay, and they seem to overestimate the causal influence of assignment conditions on the resulting quality of an essay. Accordingly, even though results on essay diagnosticity indicate that diagnosticity checks play an important role in attitude attribution, they offer no evidence for the assumption that perceivers do not believe in the adequacy of S-Theory.

In sum, research on attitude attribution has shown that a number of different factors contribute to the emergence of the correspondence bias. Specifically, there is supportive evidence for explanations in terms of insufficient situational correction under conditions of low cognitive elaboration (e.g., D'Agostino & Fincher-Kiefer, 1992; Forgas, 1998; McCaul, 1983; Vonk, 1999; Webster, 1993; Yost & Weary, 1996), low salience of situational factors (e.g., Trope & Gaunt, 2000), inferential goals referring to dispositions rather than to situations (e.g., Quattrone, 1982a), and implicational schemata implying a high diagnostic value of highly persuasive essays (e.g., Gawronski, 2003a; Jones et al., 1971; A. G. Miller et al., 1990; A. G. Miller & Rorer, 1982; Reeder et al., 1989; Schneider & Miller, 1975). From a general perspective, these results imply that the correspondence bias in the attitude paradigm is due to (a) perceivers' unintentional failure to apply S-Theory, or (b) perceivers' deliberate neglect of applying S-Theory when the observed behaviour is highly diagnostic (see Table 1). Most importantly, however, all of these explanations imply that

TABLE 1
 Overview of empirical evidence as a function of paradigm and potential causes of the
 correspondence bias

<i>Potential cause</i>	<i>Attitude attribution (attitudes)</i>	<i>Silent interview (emotionality)</i>	<i>Quiz-role (ability)</i>	<i>Moral attribution (morality)</i>
Lack of S-Theory	NO	NO	NO	
Failed Application of S-Theory	YES	YES	YES	
Deliberate Neglect of S-Theory	YES		YES	YES
Biasing Application of S-Theory		YES		

Note: "YES" indicates positive evidence, "NO" indicates negative evidence, no cell entry indicates lack of evidence.

perceivers actually apply S-Theory under some conditions, which in turn suggests that people actually believe in the adequacy of S-Theory.

The silent interview paradigm

A less common but very sophisticated paradigm for investigating the correspondence bias is the silent interview paradigm developed by Snyder and Frankel (1976). In this paradigm, participants watch a videotaped interview of an anxiously behaving target with the soundtrack cut off. Instructions, however, indicate that the topic of the interview is either anxiety provoking (e.g., sexual fantasies) or not anxiety provoking (e.g., favourite books). According to Snyder and Frankel (1976), participants fall prey to the correspondence bias when they infer a high level of dispositional anxiety regardless of whether the interview topic is anxiety provoking or not.

Evidence for the role of cognitive elaboration in the silent interview paradigm comes from a study conducted by Gilbert et al. (1988b). Participants were presented with a silent interview of an anxiously behaving woman. Subtitles indicated either that questions were anxiety provoking (e.g., sexual fantasies) or that questions were related to mundane topics (e.g., ideal vacations). Orthogonal to this manipulation, cognitive capacity was manipulated by asking half of the participants to be prepared to recall each of the seven interview topics at the end of the experiment (load condition). The remaining half were told that they would be asked to make several judgements about the target's personality (no load condition). Consistent with Gilbert's (1989) assumption about the effortfulness of situational correction, participants under cognitive load inferred a high level of dispositional anxiety regardless of whether the interview topics were mundane or anxiety provoking. In contrast, participants under control

conditions inferred a high level of dispositional anxiety only when interview topics were mundane, but not when they were anxiety provoking. Applied to the present question, these results indicate that perceivers may fail to apply S-Theory under conditions of low cognitive elaboration. Moreover, the mere fact that perceivers apply S-Theory when they have sufficient cognitive capacity indicates that they actually believe in the adequacy of S-Theory. This, however, is inconsistent with the assumption that perceivers generally consider situational factors to have a weak impact on human behaviour.

Evidence for the role of inferential goals in the silent interview paradigm was offered by Krull (1993; see also Krull & Erickson, 1995). Participants saw a silent interview of an anxiously behaving female target with interview topics ostensibly ranging from anxiety provoking (e.g., sexual fantasies) to non-anxiety provoking issues (e.g., world travel). Additionally, participants were informed that the sample of interviewees ranged from clinically anxious individuals to people who are not at all anxious. Before watching the interview, participants were instructed either to estimate the trait anxiety level of the target (dispositional goal) or to determine the extent to which the interview topic was anxiety provoking (situational goal). Cognitive load was manipulated by asking half of the participants to rehearse an eight-digit number while watching the interview. The remaining half did not have to perform an additional task. Consistent with Krull's (1993) assumptions about the goal dependency of social inference processes, cognitively busy participants with a dispositional goal rated the target higher in dispositional anxiety than their non-busy counterparts. However, busy participants with a situational goal rated the target lower in dispositional anxiety than their non-busy counterparts. Moreover, non-busy participants' ratings of situationally provoked anxiety did not differ as a function of the inferential goal. However, busy participants rated interview topics higher with respect to their anxiety-provoking power when they had a situational goal than when they had a dispositional goal. Taken together, these results indicate that inferential goals play an important role for dispositional inferences in the silent interview paradigm. Specifically, Krull's (1993) results suggest that low cognitive elaboration undermines the application of S-Theory only when perceivers have a dispositional goal, but not when they have a situational goal. Most importantly, however, these results indicate that perceivers actually believe in the adequacy of S-Theory, but that they sometimes fail to apply S-Theory.

Beyond cognitive elaboration and inferential goals, dispositional inferences in the silent interview paradigm have also been shown to be affected by assimilation effects in the categorisation of ambiguous behaviour (e.g., Gawronski et al., 2002; Snyder & Frankel, 1976). Snyder and Frankel (1976), for example, presented interview topics either before or after watching the clip. Afterwards, all participants were asked to rate the target's

behavioural anxiety as well as her dispositional anxiety. Results indicate that the target's behaviour was perceived as more anxious when the interview topic was anxiety provoking than when it was not anxiety provoking. However, this effect emerged only when interview topics were introduced before watching the clip, but not when interview topics were presented afterwards. Moreover, ratings of dispositional anxiety were unaffected by the interview topic when participants were informed about the interview topics before watching the clip. However, when participants learned about the interview topic afterwards, the target was rated lower in dispositional anxiety when the interview was anxiety provoking than when it was not anxiety provoking. Drawing on Trope's (1986) two-stage model of dispositional inference, these results suggest that perceivers apply S-Theory about the causal influence of the interview topic (a) to disambiguate ambiguous behavioural cues, and (b) to correct dispositional inferences for situational constraints. These two processes compensate each other by their antagonistic effects on dispositional attributions (e.g., Gawronski et al., 2002). Moreover, assimilation effects of S-Theory on the categorisation of ambiguous behaviour seem to be limited to conditions under which perceivers learn about situational factors before categorising the behaviour, but not when situational information is provided afterwards (see also Trope et al., 1991). Taken together, these results indicate that the correspondence bias in the silent interview paradigm can be due to an "over-application" of S-Theory that promotes rather than attenuates correspondent dispositional inferences from situationally constrained behaviour. Moreover, the mere fact that perceivers apply S-Theory for two different processes (i.e., disambiguation of ambiguous behavioural cues, correction for situational constraints) indicates that perceivers actually believe in the adequacy of S-Theory.

In sum, the available evidence indicates that a number of different processes contribute to the emergence of the correspondence bias in the silent interview paradigm. These factors include insufficient situational correction under conditions of low cognitive elaboration (e.g., Gilbert et al., 1988b), inferential goals referring to dispositions rather than to situational factors (e.g., Krull, 1993; Krull & Dill, 1996; Krull & Erickson, 1995), and assimilation effects of situational information on the categorisation of ambiguous behaviour (e.g., Gawronski et al., 2002; Snyder & Frankel, 1976). From a general perspective, these results imply that the correspondence bias in the silent interview paradigm is due to (a) perceivers' unintentional failure to apply S-Theory, or (b) perceivers' biasing application of S-Theory (see Table 1). Moreover, because all of these processes imply that perceivers actually believe in the adequacy of S-Theory, the present findings are clearly inconsistent with explanations in terms of causal theories implying that situational factors have little impact on human behaviour.

The quiz-role paradigm

Another common paradigm to investigate the correspondence bias is the quiz-role paradigm developed by Ross et al. (1977). In this paradigm, three participants unfamiliar to each other are randomly assigned to the roles of quizmaster, contestant, and observer. The quizmaster is then instructed to think up ten challenging general knowledge questions and to pose them to the contestant, who is usually unable to answer more than four questions correctly. The most interesting finding in this paradigm, however, is that observers seem to use these performance differences to attribute a higher level of general knowledge to the quizmaster than to the contestant (e.g., Block & Funder, 1986; Burger, 1991; Gawronski, 2003b; Gibbins & Walker, 1996; Johnson, Jemmott, & Pettigrew, 1984; Krull et al., 1999; Quattrone, 1982b; Ross et al., 1977; Sumpton & Gregson, 1981). In other words, they seem to neglect (a) the situationally induced role-advantage of the quizmaster, who was free to confront the contestant with questions displaying his or her personal knowledge, and (b) “the ‘invisible jail’ in which contestants were imprisoned” when they had to answer the questions generated by the quizmaster (Gilbert & Malone, 1995, p. 25). Drawing on these considerations, higher general knowledge ratings for quizmasters as compared to contestants (i.e., the questioner superiority effect) are usually interpreted as evidence for perceivers’ ubiquitous tendency to underestimate the causal influence of situational factors on human behaviour (Ross, 1977; Ross & Nisbett, 1991).

Evidence for the role of inferential goals in the quiz-role paradigm was presented by Johnson et al. (1984). In their study, participants not only had to rate the quizmaster and the contestant with respect to their general knowledge, they were also asked to estimate the number of questions the quizmaster could answer correctly if quizmaster and contestant were to change their roles. Although participants generally rated the quizmaster higher in general knowledge than the contestant, they estimated the number of correct answers after role-change as being equal to the number previously observed in the quiz-role game. This result suggests that participants’ judgements strongly depended on the inferential goal implied by the particular question. When the inferential goal was dispositional (i.e., general knowledge), they drew correspondent inferences from the observed performances even though the targets’ performances were strongly determined by the situationally induced role asymmetries. However, when the inferential goal was situational (i.e., randomly assigned roles) they took the present situational factors into account, and hence considered the situationally induced role advantage in their social judgements. Most importantly, however, Johnson et al.’s (1984) findings indicate that the questioner superiority effects may be due to perceivers’ failure to apply S-Theory to their dispositional inferences about contestants and quizmasters, rather than to a general lack of S-Theory.

A somewhat different interpretation of the cognitive processes in the quiz-role paradigm was recently proposed by Gawronski (2003b). Specifically, Gawronski argued that a sufficient understanding of the questioner superiority effect requires a separate consideration of the dispositional inference processes about each of the two parties, particularly when it comes to the process of situational correction. Most importantly, this conceptualisation implies that it is not valid to conclude that perceivers underestimate the causal influence of situational factors when they attribute a higher level of general knowledge to the quizmaster than to the contestant.

With respect to inferences about contestants, it was argued that perceivers consider question difficulty as an important situational factor for the contestant's performance. Whether the contestant will be able to offer correct answers should depend not only on his or her general knowledge level, but also on the difficulty of the questions (Kelley, 1972; Weiner, 1985). That is, easy questions should generally lead to better performance than difficult questions. Hence, poor performance in answering difficult questions may be explained by the difficulty of the questions. Poor performance in answering easy questions, in contrast, cannot be explained by the difficulty of the questions. Hence, if perceivers consider the difficulty of the questions as an important situational factor for the contestant's performance, they should rate contestants higher in general knowledge when the questions posed by the quizmaster were difficult than when they were easy. Consistent with these assumptions, Gawronski (2003b) found that participants attributed a higher level of general knowledge to the contestant when the questions not answered correctly were difficult than when they were easy (Experiment 1). Interestingly, this effect emerged only when participants were primed to take the perspective of the contestant, but not when they were primed to take the perspective of the quizmaster (Experiment 3). In this case, general knowledge attributions for contestants were unaffected by question difficulty. The latter findings are consistent with the assumption that perspective taking can increase the salience of situational influences actors are exposed to (Storms, 1973), thus increasing the likelihood that perceivers actually apply S-Theory (see also Trope & Gaunt, 2000). In the present case, it seems that perceivers become aware of the situational factors that contestants are exposed to only when they take the perspective of the contestant, but not when they take the perspective of the quizmaster. Most importantly, these results indicate that perceivers actually consider "the 'invisible jail' in which contestants were imprisoned" (Gilbert & Malone, 1995, p. 25) as an important situational factor in terms of S-Theory, but they may fail to apply S-Theory when the salience of this factor is low.

With respect to inferences about quizmasters, Gawronski (2003b) argued that perceivers assess the diagnostic value of the quizmaster's performance by the difficulty of the questions posed to the contestant. Specifically, perceivers seem to assume that only quizmasters with a high level of general knowledge

are able to generate difficult questions.³ In line with these assumptions, Gawronski (2003b) found that perceivers attributed a higher level of general knowledge to the quizmaster when the questions posed to the contestant were difficult than when they were easy. However, consistent with the assumption that the assessment of diagnosticity is a cognitively effortful process (Reeder, 1993), this effect was observed only when perceivers were highly motivated to process the available information effortfully, but not when they were distracted (Experiment 2). This result indicates that perceivers may deliberately neglect the quizmaster's situationally induced role-advantage, and thus S-Theory, if the quizmaster was able to generate highly difficult questions, i.e., when his or her performance has a high diagnostic value.

Do these results imply that perceivers generally underestimate the causal role of situational factors in terms of S-Theory? Given the normative assumption that anyone should be able to generate a number of questions that another person may fail to answer correctly, one could still argue that the questioner superiority effect is a valid indicator for the often proposed underestimation of situational factors in terms of S-Theory (e.g., Ross & Nisbett, 1991; but see Kruglanski & Ajzen, 1983). However, given perceivers' complex inferences about the interaction of role asymmetries, question difficulty, and the observed performance, one may question this arbitrary normative conclusion. Rather, one may conclude that perceivers actually believe in the adequacy of S-Theory, but that S-Theory has different contents for inferences about contestants and quizmasters. Whereas S-Theory refers to question difficulty for contestants, S-Theory for quizmasters refers to the situationally induced role advantage. Moreover, because both kinds of S-Theories imply a significant role of question difficulty (i.e., situational factor for contestants, diagnosticity information for quizmasters), an asymmetrical application of S-Theory for quizmasters and contestants can either increase or decrease the questioner superiority effect, thus making the effect itself uninformative about a general lack of S-Theory. A closer inspection of the particular inferences about quizmasters and contestants may reveal that perceivers actually apply the two kinds of S-Theories even when they exhibit the questioner-superiority effect.

In sum, the available evidence indicates that a number of different processes are responsible for the questioner superiority effect. Among these factors are inferential goals (Johnson et al., 1984), diagnosticity checks (Gawronski, 2003b), the degree of cognitive elaboration (Gawronski, 2003b), and the salience of situational factors (Gawronski, 2003b). From a general perspective, these results imply that the correspondence bias in the quiz-role paradigm is due to (a) perceivers' unintentional failure to apply S-

³Note that this case differs from the one of the contestant such that question difficulty refers to the observed behaviour for quizmasters, but to a situational factor for the contestant.

Theory, or (b) perceivers' deliberate neglect of S-Theory when the observed behaviour is highly diagnostic (see Table 1). Most importantly, the common interpretation of the questioner superiority effect as evidence for a general underestimation of situational factors in terms of S-Theory seems to depend on arbitrary normative assumptions that are highly questionable given lay perceivers' complex inferences about the interplay of situationally induced role asymmetries, question difficulty, and the observed performance (Gawronski, 2003b). Accordingly, even results from the quiz-role paradigm offer no evidence for the assumption that perceivers' causal theories imply that situational factors have little influence on human behaviour.

The moral attribution paradigm

A fourth paradigm to investigate the correspondence bias is particularly concerned with inferences about moral dispositions. In this paradigm, participants learn about classic social psychological experiments that investigated the influence of situational factors on moral behaviour and are asked to make inferences or predictions based on the available information. For instance, participants may first learn about how situational factors in Milgram's (1963) studies on obedience drove people to administer highly dangerous electric shocks to other individuals. Afterwards, they are asked to make dispositional inferences about a particular target in a similar situation, who behaved in accordance with the majority of Milgram's participants (e.g., Bierbrauer, 1979). A common finding in this paradigm is that perceivers generally attribute immoral dispositions to immorally behaving targets even when they have learned that situational factors have a strong impact on the tendency to engage in immoral behaviour (e.g., Bierbrauer, 1979; A. G. Miller, Gillen, Schenker, & Radlove, 1974; Pietromonaco & Nisbett, 1982; Sabini & Silver, 1983; Safer, 1980).

Results from the moral attribution paradigm are generally consistent with the assumption that perceivers assess the diagnostic value of situationally constrained behaviour by implicational schemata before they engage in a process of situational correction (Reeder, 1993). Specifically, perceivers seem to consider an immoral disposition as a necessary precondition for immoral behaviour, which in turn can be regarded as having a high diagnostic value (Reeder & Brewer, 1979). Hence, perceivers may generally infer an immoral disposition from immoral behaviour regardless of the presence or absence of situational factors.

Given the evidence of studies demonstrating strong situational influences on the tendency to engage in immoral behaviour, one could argue that findings like these unambiguously indicate that perceivers underestimate the causal influence of situational factors in terms of S-Theory. Specifically, it may appear as if people's schematic assumption that only immoral individuals

engage in immoral behaviour is empirically wrong. This conclusion may be drawn from a number of studies demonstrating strong situational influences on the tendency to engage in immoral behaviour, such as Milgram's studies on obedience (Milgram, 1963), Zimbardo's Stanford Prison Experiment (Haney, Banks, & Zimbardo, 1973), or Darley and Latané's studies on bystander intervention (e.g., Darley & Batson, 1973; Darley & Latané, 1968; Latané & Darley, 1968). In contrast to this claim, however, a more detailed analysis of the available evidence provides a different picture. Specifically, it seems that perceivers can regard situational factors to have a strong impact on the tendency to engage in immoral behaviour (S-Theory), but still believe that only immoral individuals behave in an immoral manner. Accordingly, perceivers may attribute a high diagnostic value to immoral behaviour, and thus draw correspondent dispositional inferences from situationally induced immoral behaviour, even when they agree that situational factors actually promote this kind of behavior.⁴

This may be illustrated with a study conducted by Bierbrauer (1979). Bierbrauer presented participants with a re-enactment of Milgram's (1963) studies on obedience. After watching this re-enactment, participants were asked to rate the person assigned to the teacher role as well as an average student of the same sex and age on various traits such as dependence, aggression, obedience, irresponsibility, and authoritarianism. Results indicated that the person in the teacher role was rated higher on these socially undesirable traits than an average student. Most interestingly, however, even participants' explicit appreciation of the present situational forces did not reduce their tendency to attribute negative dispositions to the teacher (for similar findings, see A. G. Miller et al., 1974; A. G. Miller, Schmidt, Meyer, & Colella, 1984; Reeder, Kumar, Hesson-McInnes, & Trafimow, 2002).

With respect to the present question, Bierbrauer's (1979) findings indicate that perceivers can regard situational factors as having a strong impact on the tendency to engage in immoral behaviour (S-Theory), but nevertheless draw correspondent dispositional inferences from situationally constrained behaviour when the observed behaviour is highly diagnostic. Most importantly, however, Bierbrauer's results suggest that implicational

⁴A similar claim was recently made by Sabini, Siepmann, and Stein (2001). According to their conceptualisation, the empirical inadequacy of lay perceivers' attributions with respect to these paradigms stems from an underestimation of fear of embarrassment as an important factor. Moreover, fear of embarrassment was considered as an internal factor, thus implying an underestimation of internal factors rather than an underestimation of external factors. It has to be noted, however, that both fear and embarrassment are emotional states rather than stable dispositions. Most importantly, emotional states are commonly attributed to situations rather than to dispositions (e.g., Brown & Fish, 1983; Malle, 1999; Semin & Fiedler, 1988). Hence, one could argue that Sabini et al.'s (2001) critique does not genuinely question the often proposed underestimation of situational factors in terms of S-Theory.

schemata and S-Theory are not the same. Specifically, it seems that causal theories about the impact of situational factors on human behaviour are *empirical* in nature. Implicational schemata, in contrast, seem to imply a *definitional* aspect of a given trait. In other words, regardless of whether perceivers agree or disagree with the empirical proposition that situational factors can promote immoral behaviours (S-Theory), they may still hold on to the schematic proposition that immoral behaviour is—by definition—a sufficient indicator of an immoral disposition.

This difference between empirical and definitional propositions can be further illustrated by the common reaction to studies demonstrating a strong impact of situational factors on moral behaviour (e.g., Darley & Batson, 1973; Darley & Latané, 1968; Haney et al., 1973; Latané & Darley, 1968; Milgram, 1963). With respect to Milgram's (1963) studies, for example, people are usually very surprised when they learn about the high level of destructive obedience (e.g., Bierbrauer, 1979; A. G. Miller et al., 1974; Sabini & Silver, 1983; Safer, 1980). This surprise may be due to two a priori assumptions: (1) only immoral individuals behave immorally, and (2) most people have a moral disposition. These two assumptions are obviously inconsistent with the conclusion implied by Milgram's studies that (3) many individuals behave in an immoral manner. Hence, in order to achieve consistency, people have to reject at least one of these three propositions. First, they may reject Proposition 1, and thus agree that even moral individuals can be driven to behave immorally. Second, they may reject Proposition 2, and thus assume that many people have an immoral disposition. Finally, they may reject Proposition 3, and thus question the validity of Milgram's (1963) studies of obedience. With respect to Bierbrauer's (1979) findings, it seems that participants rejected Proposition 2. That is, they held on to their schematic assumption that only immoral individuals behave immorally, they did not question the validity of Milgram's (1963) studies, but they concluded that at least the observed individuals must have an immoral disposition. Put differently, participants may argue: "It doesn't matter if anyone does it under situational constraints; it is nevertheless immoral!"

What implications do these considerations have for the present question of whether the correspondence bias is due to causal theories implying that situational factors have little impact on human behaviour? The most important implication is that the tendency to infer a corresponding immoral disposition from situationally induced immoral behaviour does not necessarily indicate that perceivers do not have the knowledge of S-Theory, or that they consider S-Theory as inadequate. Rather, perceivers may consider situational factors to have a strong causal influence on the tendency to exhibit immoral behaviour, but nevertheless draw strong correspondent inferences from situationally induced immoral behaviour (e.g., Bierbrauer,

1979; A. G. Miller et al., 1974; Reeder et al., 2002; Safer, 1980). This seems to be due to the high diagnostic value of immoral behaviour, which usually leads perceivers to the conclusion that they can deliberately neglect S-Theory without committing a judgemental error. Moreover, perceivers' surprised reactions to studies demonstrating a strong impact of situational factors on moral behaviour seem to be due to their a priori assumption that most people have a moral disposition. If this assumption is rejected, they may agree that situational forces have a strong impact on moral behaviour (S-Theory), but nevertheless draw strong correspondent dispositional inferences from situationally induced immoral behaviour. Accordingly, correspondent dispositional inferences from situationally induced immoral behaviours (e.g., Bierbrauer, 1979; A. G. Miller et al., 1974; Reeder et al., 2002; Safer, 1980) are still ambiguous as to whether perceivers' causal theories imply that situational factors have little influence on the tendency to engage in immoral behaviour. Rather, such inferences may indicate that perceivers do not apply their causal theories about situational influences when the observed behaviour has a high diagnostic value (see Table 1).

GENERAL DISCUSSION

The main goal of the present chapter was to review the available empirical evidence on the correspondence bias from the perspective of theory-based bias correction (cf. Strack, 1992; Wegener & Petty, 1997; Wilson & Brekke, 1994). Specifically, it was analysed whether the correspondence bias is actually due to causal theories implying that situational factors have little impact on human behaviour (e.g., Ross, 1977; Ross & Nisbett, 1991). Even though some researchers argued that the correspondence bias is a multiply determined phenomenon that can be due to a number of very different processes (e.g., Gilbert & Malone, 1995; Jones, 1990; Trope, 1998), the most common and influential explanation is still that the correspondence bias is due to perceivers' causal assumption that situational factors have little impact on human behaviour. The present review indicates that the correspondence bias results from a number of different processes associated with the *application* of perceivers' causal theories about situational influences on human behaviour. However, there seems to be no evidence for the assumption that the correspondence bias is due to causal theories implying that situational factors have little impact on human behaviour (see also Harvey & McGlynn, 1982; Harvey et al., 1981).

What causes the correspondence bias?

Drawing on the present framework of theory-based bias correction (cf. Strack, 1992; Wegener & Petty, 1997; Wilson & Brekke, 1994), there are at

least three general explanations of the correspondence bias that have gained empirical support. Specifically, perceivers may actually believe that situational factors have a strong influence on human behaviour (S-Theory), but they may nevertheless draw correspondent dispositional inferences from situationally constrained behaviour (a) when they unintentionally fail to apply S-Theory to correct their dispositional inferences for situational factors, (b) when they deliberately neglect S-Theory in the light of a high diagnostic value of the observed behaviour, or (c) when they apply S-Theory in a manner that promotes (rather than attenuates) dispositional inferences from situationally constrained behaviour. From a general perspective, these results suggest that the correspondence bias is due to a number of different processes associated with the *application* of S-Theory, rather than to a general lack of S-Theory. Moreover, because empirical evidence for the first and the third explanations logically requires that perceivers actually believe in the adequacy of S-Theory, evidence for these kinds of processes is clearly in contrast with the claim that perceivers do not have the knowledge of S-Theory (i.e., they do not know that situation S_i promotes behaviour B_i), or that perceivers consider S-Theory as inadequate (i.e., they do not believe that situation S_i promotes behaviour B_i).

How can situational theories be measured?

An important question raised by the present analysis concerns the assessment of perceivers' causal theories about the impact of situational factors on human behaviour. Based on the present review, one has to conclude that the tendency to draw correspondent dispositional inferences from situationally constrained behaviour can be due to a number of different processes that do not imply a genuine underestimation of situational factors in terms of S-Theory. Hence, dispositional inference measures seem not to be suitable to assess lay perceivers' causal theories about situational influences on human behaviour (see also Hilton, Smith, & Kim, 1995; Smith & Miller, 1983).

An alternative way to measure perceivers' beliefs regarding S-Theory may be the assessment of behavioural predictions (Ross & Nisbett, 1991). Specifically, one could manipulate the presence or absence of situational factors and then assess whether or not behavioural predictions are affected by this manipulation. However, this procedure is also problematic because it requires an interpretation of a null effect in order to establish the proposed underestimation of situational factors in terms of S-Theory. Moreover, behavioural predictions do not only depend on perceivers' causal theories about the influence of situational forces, but also on base-rate assumptions about relevant dispositions. That is, behavioural predictions are the result of assumed trait–situation interactions (Shoda & Mischel, 1993), rather than

pure measures of assumed situational causality. Hence, when perceivers hold particular base-rate assumptions about a relevant disposition, behavioural predictions can be unaffected by situational information even when situational factors are considered to have a strong influence on human behaviour. Consequently, even though behavioural predictions can offer evidence that perceivers actually do believe in the adequacy of S-Theory, they are unable to offer evidence in favour of the proposed underestimation of situational factors in terms of S-Theory.

Another alternative may be to directly assess lay perceivers' causal assumptions about the impact of situational factors on human behaviour, i.e., to directly assess their agreement or disagreement with S-Theory. Even though this method is relatively straightforward, it has not been used very frequently. Most interestingly, studies that actually used variants of this measure indicate that perceivers generally attribute a strong causal influence to situational factors (e.g., Bierbrauer, 1979; Krull, 1993; Krull & Erickson, 1995; Quattrone, 1982a). Hence, it seems that even direct measures offer little evidence for the often proposed underestimation of situational influences on human behaviour.

What is situational correction?

An important question related to the present analyses concerns the general process of situational correction. Classic research on dispositional inference largely assumed that perceivers engage in a process of discounting (Kelley, 1972), such that they discount the explanatory value of one cause in the presence of an alternative cause that could also account for the observed outcome. With regard to dispositional inference, this conceptualisation implies that perceivers should subtract the presumed influence of situational factors from the presumed influence of dispositional factors when making correspondent dispositional inferences from situationally constrained behaviour (for a discussion, see Gilbert, 1995). In contrast to this hydraulic perspective, however, some researchers have argued that lay perceivers may have an interactionist theory of human behaviour (e.g., Reeder & Brewer, 1979; Shoda & Mischel, 1993), implying that human behaviour is a product of trait–situation interactions. Such interactionist theories go beyond hydraulic theories by including assumptions about necessary causes. Whereas hydraulic theories imply that both situational and dispositional factors may be sufficient causes for a particular behaviour, interactionist theories additionally imply assumptions about the necessity of a cause (cf. McClure, 1998; McGill, 1998; Morris & Larrick, 1995). This reasoning is consistent with Reeder's (1993) claim that perceivers employ implicational schemata to assess the diagnostic value of observed behaviour before correcting dispositional inferences to situational constraints (e.g., Gawronski, 2003a;

Reeder, 1997). Such diagnosticity checks may imply that a corresponding disposition D_i is necessary for a particular behaviour B_i , thus implying that correspondent dispositional inferences are justified even when situational factors are present. In other words, situational correction is not just the subtraction of a situational cause from a presumed dispositional cause, such as is implied by hydraulic theories. Rather, situational correction may imply complex inferences about the particular interaction of necessary and sufficient causes, in this case situational and dispositional factors.

The present review was mainly concerned with the role of S-Theory in situational correction. It has to be mentioned, however, that S-Theory is not the only kind of theory that may affect the process of situational correction. Leyens, Yzerbyt, and Corneille (1996), for example, found that people hold naïve theories about different attitude topics, indicating whether a given attitude is better explained in terms of personality or social circumstances. More importantly, such kinds of theories moderated the influence of inferential goals emphasised in the instructions (i.e., dispositional vs situational). Specifically, Leyens et al. found that inferential goals pertaining to dispositions led to correspondent attitude inferences from situationally constrained essays only when this goal was consistent with the naïve theory triggered by the essay topic, but not when it was inconsistent (see also Corneille, Leyens, Yzerbyt, & Walther, 1999). In a similar vein, a number of studies indicate that people employ naïve theories pertaining to underlying motives when making dispositional inferences from situationally constrained behaviour. Fein and colleagues (Fein, 1996; Fein et al., 1990), for example, have shown that suspicion about ulterior motivation significantly reduces the correspondence bias in the attitude attribution paradigm. Extending these findings, Reeder and colleagues (Reeder et al., 2002; Reeder, Vonk, Ronk, Ham, & Lawrence, 2004) recently demonstrated that inferred motives mediate dispositional inferences from situationally constrained moral behaviour (e.g., helping behaviour, aggressive behaviour). Taken together, these results indicate that the application of S-Theory in situational correction may depend not only on the awareness of situational factors, cognitive elaboration, inferential goals, or the diagnostic value of the observed behaviour, but also on its consistency with other naïve theories related to the particular kind of inference.

Another important aspect of situational correction was recently investigated by Yzerbyt, Corneille, Dumont, and Hahn (2001). Specifically, these researchers argued that situational correction involves two different processes: (a) the examination of situational factors in terms of S-Theory, and (b) the potentially required suppression of dispositional inferences. Drawing on these assumptions, Yzerbyt et al. (2001) argued that suppression of dispositional inferences may lead to dispositional rebound effects (Wegner, 1994) when the initial suppression is relieved. Consistent with this assumption, Yzerbyt et al.

(2001) found that participants who suppressed correspondent attitude inferences from a situationally constrained essay subsequently made stronger dispositional inferences from a second free-choice essay (Experiment 1). Additional studies showed that this effect emerged only when participants tried to avoid thinking about the author's characteristics, but not when they tried to focus on situational constraints (Experiments 2 and 3). These results indicate that it is particularly the suppression of dispositional inferences, rather than the application of S-Theory, that leads to dispositional rebound effects. Most importantly, Yzerbyt et al.'s (2001) findings suggest that situational correction may involve two processes, i.e., the application of S-Theory to examine situational factors and the potentially required suppression of dispositional inferences.

An interesting question for future research concerns the particular content of situational correction. According to Strack (1992), people may correct social judgements either by adjusting them to the assumed influence or by using the available evidence to recompute a new judgement (e.g., Strack & Mussweiler, 2001). Whereas classic hydraulic theories (e.g., Kelley, 1972) usually adopted an adjustment-related approach, interactionist theories (e.g., Shoda & Mischel, 1993) additionally allow for recomputations which may be derived from implicational schemata about the expected extremity of a particular behaviour in a given situation (e.g., Reeder & Brewer, 1979). Moreover, recomputations of dispositional judgements may rely on different qualities of situationally constrained behaviour. For example, situationally corrected attitude attributions may be based on the perceived persuasiveness of an essay, whereas uncorrected attitude attributions largely rely on the perceived extremity of an essay (e.g., Gawronski, 2003a). In a similar vein, situationally corrected general knowledge attributions for quizmasters may be based on the perceived difficulty of the questions rather than on the mere knowledge of the answers (e.g., Gawronski, 2003b). Future research may further clarify the role of adjustment and recomputation processes in dispositional inference from situationally constrained behaviour.

Implications

The present review also offers new perspectives on a variety of conceptual and empirical issues regarding dispositional inference. First, the present analyses provide further support for recent claims to consider *the correspondence bias* and *the fundamental attribution error* as two different phenomena (e.g., Hamilton, 1998; Krull, 2001). Drawing on the commonly proposed causal relation between a general underestimation of situational factors in terms of S-Theory and the tendency to draw correspondent dispositional inferences from situationally constrained behaviour, the latter is usually interpreted as an indicator of the former. Accordingly, the labels

“fundamental attribution error” and “correspondence bias” are often used interchangeably to refer to one and the same phenomenon. In contrast to this rather widespread equation, however, some researchers argued that the correspondence bias should be considered as the tendency to draw correspondent dispositional inferences from situationally constrained behaviour, whereas the fundamental attribution error should be considered as the tendency to underestimate situational influences on human behaviour in terms of a causal theory (e.g., Hamilton, 1998; Krull, 2001). The present review expands on these claims by arguing that the tendency to draw correspondent dispositional inferences from situationally constrained behaviour is actually independent of the often proposed underestimation of situational factors in terms of S-Theory. In other words, the correspondence bias and the fundamental attribution error seem to be two potentially related, but actually independent phenomena. Moreover, even though there is strong evidence for the correspondence bias, the available data offer no evidence for the assumption that the correspondence bias is due to the fundamental attribution error.

The present review also offers some deeper insights into cultural differences in attribution. In contrast to previous evidence demonstrating that people from collectivist countries generally give more weight to situational causes than people from individualist countries (e.g., J. G. Miller, 1984; Morris & Peng, 1994; for a review, see Choi, Nisbett, & Norenzayan, 1999), recent studies have shown that people from collectivist cultures are almost as susceptible to the correspondence bias as people from individualist cultures (e.g., Choi & Nisbett, 1998; Krull et al., 1999). The latter finding may appear somewhat surprising if the correspondence bias is explained by cultural differences regarding the acceptance of S-Theory. However, it seems less surprising if one considers that the correspondence bias is largely due to processes affecting the *application* of S-Theory, rather than to a general lack of S-Theory. Hence, even though collectivists and individualists may attribute a different weight to particular kinds of behavioural determinants, they may be equally prone to at least some of the processes that have been shown to be relevant for the correspondence bias. Consistent with this assumption, Miyamoto and Kitayama (2002), for example, found that both Japanese and American participants inferred a corresponding disposition from situationally constrained behaviour when this behaviour was highly diagnostic. In a similar vein, Gidron, Koehler, and Tversky (1993) found that Israelis and Americans generally agree on how many instances of a given behaviour are necessary for the attribution of a corresponding disposition, i.e., they seem to share the quantitative assumptions about necessary and sufficient causes implied by implicational schemata. Notwithstanding these findings, however, some studies actually found cultural differences in dispositional inference, indicating that at least some of the

discussed processes may differ as a function of culture. For instance, Choi and Nisbett (1998) found that Koreans show more situational correction in the attitude attribution paradigm than Americans. However, this difference emerged only when situational factors were highly salient, but not when their salience was low. In a similar vein, Knowles, Morris, Chiu, and Hong (2001) demonstrated that cognitive load increased correspondent dispositional inferences from situationally constrained behaviour for Americans, but not for participants from Hong Kong. Finally, Miyamoto and Kitayama (2002) have shown that Japanese participants show more situational correction than Americans for non-diagnostic (but not for diagnostic) behaviour. Future research employing the present framework of theory-based bias correction may offer deeper insights into both cultural differences and cultural commonalities in dispositional inference.

Another important implication of the present review concerns potential ways of reducing the tendency to draw correspondent dispositional inferences from situationally constrained behaviour. Because the correspondence bias seems to be independent of the often proposed underestimation of situational influences in terms of S-Theory, teaching lay perceivers about the causal impact of situational factors on human behaviour may be ineffective in reducing the correspondence bias (e.g., Bierbrauer, 1979; A. G. Miller et al., 1974; Pietromonaco & Nisbett, 1982). Moreover, the effectiveness of a given strategy may strongly depend on the particular cause of the correspondence bias. For example, motivating lay perceivers to process the available information effortfully may have no impact on the tendency to commit the correspondence bias when it is due to an assimilative categorisation of ambiguous behaviour (e.g., Gawronski et al., 2002; Snyder & Frankel, 1976; Trope & Alfieri, 1997; Trope et al., 1988, 1991) or to the high diagnostic value of the observed behaviour (e.g., Gawronski, 2003a, 2003b; Reeder, 1997). Moreover, whether or not lay perceivers regard their judgements as biased may strongly depend on their a priori definition of a given trait implied by the respective implicational schema (Reeder & Brewer, 1979). Hence, any kind of debiasing technique may be ineffective when it is in contradiction with lay perceivers' schema-dependent definition of a given trait.

Conclusion

In sum, the present review suggests that the correspondence bias results from a number of different processes associated with the application of causal theories about situational influences on human behaviour. However, there seems to be no evidence for the widespread assumption that the correspondence bias is due to causal theories implying that situational factors have little influence on human behaviour. Notwithstanding this lack of evidence, it has to be noted that the present conclusion does not imply

that the correspondence bias can *never* be due to causal theories implying that situational factors have little influence on human behaviour. Future research may provide new evidence that this is actually the case. Based on the present evidence, however, it has to be regarded as an unjustified overinterpretation of the available data to infer that perceivers consider situational factors to have little impact on human behaviour from the tendency to draw correspondent dispositional inferences from situationally constrained behaviour.

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