

## BACK TO THE FUTURE OF DISSONANCE THEORY: COGNITIVE CONSISTENCY AS A CORE MOTIVE

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In his theory of cognitive dissonance, Festinger (1957) described cognitive consistency as a psychological need that is as basic as hunger and thirst. Over the past decades, however, the idea of cognitive consistency as a core motive has been replaced by an increasingly narrow focus on dissonance-related changes in attitudes and alternative accounts that attribute such changes to mechanisms of ego-defense. The current article aims at reviving the idea of cognitive consistency as a core motive, arguing that inconsistency serves as an epistemic cue for errors in one's system of beliefs. Because inconsistency can often be resolved in multiple ways, motivated reasoning can bias processes of inconsistency resolution toward desired conclusions, although motivated distortions are constrained by the need for cognitive consistency. The ubiquity of consistency processes is illustrated through its role in various instances of threat-compensation (e.g., victim derogation, self-verification, system justification) and the insights that can be gained from reconceptualizing various social psychological phenomena in terms of cognitive consistency (e.g., prejudice-related belief systems, dispositional inference, stability of first impressions).

Festinger's (1957) theory of cognitive dissonance is arguably one of the most influential theories in the history of social psychology. The theory postulates that inconsistent cognitions elicit an aversive state of arousal (i.e., dissonance), which in turn produces a desire to reduce the underlying inconsistency and to maintain a state of consonance.<sup>1</sup> Although Festinger was convinced that the psychological need for cognitive consistency is as basic as hunger and thirst, several revisions

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1. Although Festinger (1957) preferred the term *dissonance* over *inconsistency*, it seems useful to distinguish between the inconsistency of cognitive elements and the aversive feeling of dissonance that is assumed to arise from inconsistent cognitive elements (see Gawronski, Peters, & Strack, 2008).

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of his original theory have raised doubts about the status of cognitive consistency as a core motive. These revisions have been inspired by evidence suggesting that the phenomenon of dissonance-related attitude change may not be as general as it has been assumed in the early days of dissonance theory (for reviews, see Brehm, 2007; Harmon-Jones & Harmon-Jones, 2007). To account for these deviations, attitude change in dissonance paradigms (e.g., Brehm, 1956; Festinger & Carlsmith, 1959) has been reinterpreted in terms of various alternative processes that have a stronger resemblance to mechanisms of ego-defense than to Festinger's original theory (for a discussion, see Greenwald & Ronis, 1978).

The main goal of the current article is to provide a conceptual analysis of the idea that cognitive consistency represents a core motive that is indeed as fundamental as claimed by Festinger (1957). The central argument is that inconsistency serves as an epistemic cue for errors in one's system of beliefs, thereby imposing a ubiquitous constraint on thinking and reasoning that goes far beyond the well-known demonstrations of dissonance-related attitude change. In this spirit, the current article also aims at illustrating how the basic notion of cognitive consistency can integrate a wide range of social psychological phenomena that have rarely been analyzed from a consistency perspective.

## THE PHENOMENOLOGY OF COGNITIVE CONSISTENCY

### WHAT IS COGNITIVE CONSISTENCY?

If cognitive consistency is interpreted in a relatively broad manner, it is possible to subsume a large set of constructs and phenomena under this label (for reviews, see Gawronski & Strack, 2012; Proulx, Inzlicht, & Harmon-Jones, 2012). Thus, to avoid conceptual confusion with related constructs, it is important to clearly specify how cognitive consistency should be understood in the context of the current analysis. Festinger's (1957) original definition states that two cognitive elements are inconsistent, if one element follows from the opposite of the other. More formally, this definition can be restated as: " $x$  and  $y$  are dissonant if not- $x$  follows from  $y$ " (p. 13), with  $x$  and  $y$  subsuming "any knowledge, opinion, or belief about the environment, about oneself, or about one's behavior" (p. 3).

Although this definition may seem relatively simple and straightforward, there are two important aspects that need to be considered for a conceptual analysis of cognitive consistency. First, the basic definition entails that inconsistency is defined by logical relations between cognitive elements. Second, the specification of the involved cognitive elements implies that these elements have to be understood as propositions about states of affairs that are regarded as true or false by the individual (Gawronski & Strack, 2004). Together, these criteria distinguish cognitive consistency from purely semantic relations between cognitive concepts. For example, although the concepts *extraverted* and *introverted* are semantic antonyms, the concepts themselves are not consistent or inconsistent in the sense of Festinger's (1957) definition, unless they are part of propositions that relate them to an object of reference. In fact, simultaneous activation of semantically opposite concepts would produce cognitive inconsistency only if they are part of two propositions that refer to the same object (e.g., *Sally is extraverted* and *Sally is introverted*). However, simultaneous activation of the two concepts would not produce

cognitive inconsistency if they refer to different objects (e.g., *Sally is extraverted* and *Helen is introverted*). Moreover, even if two semantically opposite concepts refer to the same object, they would still be consistent if one of the two propositions is regarded as false (e.g., affirming the validity of *Sally is extraverted* and negating the validity of *Sally is introverted*). Hence, the involved cognitive elements have to be understood as *propositional beliefs* about states of affairs, which are characterized by (a) a propositional relation between concepts (e.g., *John is smart*; *smoking causes cancer*; *Mary likes cats*, etc.) and (b) the assignment of a positive or negative truth value to the described relation (i.e., the subjective belief that the proposition is true or false). Propositional beliefs can be either general if they refer to categories of objects (e.g., *Germans are organized*) or specific if they refer to individual objects (e.g., *Bertram is disorganized*). Thus, counter to Festinger's (1957) concern with the relation between two cognitive elements, inconsistency is most often the result of more than two propositional beliefs (e.g., *Germans are organized*; *Bertram is disorganized*; *Bertram is German*).

### CONSISTENCY, AMBIVALENCE, AND FLUENCY

The specification of cognitive consistency as referring to the logical relation between propositional beliefs not only excludes semantic relations between individual cognitive concepts; it also distinguishes cognitive consistency from related constructs, such as ambivalence and fluency. Ambivalence occurs when the mental representation of an object includes both positive and negative attributes (Van Harreveld, Van der Pligt, & De Liver, 2009). In this sense, ambivalence can be the result of two (or more) propositional beliefs implying that a target object possesses a positive and a negative attribute (Petty, Briñol, & Johnson, 2012). However, ambivalence resulting from evaluatively incongruent beliefs may not necessarily produce cognitive inconsistency, if the relevant attributes involve different dimensions. For example, a person may be perceived as positive on one attribute-dimension and negative on another attribute-dimension (e.g., *Fred is competent* and *Fred is cold*), which may cause ambivalence toward this person. Such perceptions do not produce cognitive inconsistency in the sense of Festinger's (1957) definition, because the ascription of one attribute does not imply the opposite of another one (e.g., Judd, James-Hawkins, Yzerbyt, & Kashima, 2005). Nevertheless, ambivalence and inconsistency may sometimes co-occur, if the ascribed attributes are opposites of the same dimension (e.g., *Fred is warm* and *Fred is cold*). Whereas in the former case, there is no need to resolve any inconsistency because both attributes can be present at the same time, the inconsistency in the latter case would have to be resolved, for example by specifying the contexts in which each ascription is accurate (e.g., *Fred is warm at home* and *Fred is cold at work*; see Rydell & Gawronski, 2009).

Another construct that is closely related to cognitive consistency is the concept of fluency, which describes the cognitive feelings that arise during the processing of information. Although the two constructs may seem rather similar, they are conceptually distinct in that cognitive (in)consistency refers to the content of the processed information (*what?*), whereas (dis)fluency refers to the ease of processing that information (*how?*). Nevertheless, the two may sometimes influence each other, for example when the fluency of processing a particular proposition is used to evaluate the veracity of that proposition (see Winkielman, Huber, Kavanagh,

& Schwarz, 2012). Whereas fluent processing of a proposition tends to increase subjective perceptions of its validity, disfluency has been shown to reduce judgments of validity (e.g., Reber & Schwarz, 1999). Thus, higher levels of fluency can produce cognitive inconsistency when fluent processing increases the perceived validity of two inconsistent propositions.

#### WHY IS COGNITIVE CONSISTENCY IMPORTANT?

The above specification of cognitive consistency may seem rather cold and logical, and thus very different from the notion of a basic motivational force. So, what makes cognitive consistency so important that it deserves to be described as a core motive? The psychological significance of cognitive inconsistency becomes clear if one considers its function in signaling potential errors in one's system of beliefs (Quine & Ullian, 1978). Although consistency is insufficient to establish accuracy, inconsistency is an unambiguous cue for errors that require appropriate revisions. For example, if a person believes that (a) *Good friends always support each other when they need help*, (b) *Lucy and Linda are good friends*, and (c) *Lucy did not support Linda when Linda needed help*, the implied inconsistency requires a reassessment of the three beliefs, which may lead to the revision of either one of them. It may lead to a revision of the belief that good friends always support each other by allowing for exceptions (e.g., *Good friends may sometimes fail to support each other when they have their own problems*); it may lead to a revision of the belief that Lucy is actually a good friend of Linda (e.g., *Lucy always claimed that she is a good friend of Linda, but that's not true*); or it may lead to a revision of the belief that Lucy did not support Linda when Linda needed help (e.g., *Lucy offered to help Linda, but Linda did not want Lucy's help*). From a pragmatic perspective, the identification of errors in one's system of beliefs is important, because erroneous beliefs can undermine context-appropriate behavior by suggesting inadequate courses of action (Quine & Ullian, 1978). Moreover, cognitive inconsistency itself can sometimes disrupt context-appropriate behavior, because inconsistent beliefs may suggest mutually exclusive courses of action (Harmon-Jones, Amodio, & Harmon-Jones, 2009). In both cases, the state of arousal that is assumed to be elicited by inconsistent beliefs serves as a signal that the current system of beliefs has to be revised to facilitate context-appropriate action.

#### HOW DO WE IDENTIFY INCONSISTENCY?

Although the identification of inconsistency may seem relatively straightforward in the above examples, it can be quite difficult if it involves larger sets of beliefs. Johnson-Laird (2012) pointed out that a set of  $n$  propositions can be inconsistent even if any  $n-1$  of them yields a consistent set. The resulting capacity problem for the identification of inconsistency is illustrated by the fact that an exhaustive consistency assessment of a set of 100 propositions requires the consideration of  $2^{100}$  possibilities. Even if each possibility can be examined in a millionth of a second, a comprehensive examination would still take longer than the universe has existed. Johnson-Laird argues that individuals resolve this capacity problem by means of mental models. Instead of engaging in an exhaustive check of each combinatori-

cally possible combination, an efficient way to evaluate the consistency of a given set of propositional beliefs is to seek a mental model in which all the propositions are true (Johnson-Laird, Girotto, & Legrenzi, 2004). If it is possible to find such a model, the propositions will be judged consistent. If not, they will be judged as inconsistent.

In addition to the combinatorial problem identified by Johnson-Laird (2012), limits in working memory capacity impose further constraints by limiting the number of beliefs that can be simultaneously considered for an assessment of consistency. Hence, the construction of mental models is also not comprehensive, but limited to beliefs that are momentarily accessible (McGregor, Newby-Clark, & Zanna, 1999). An illustrative example is the hypocrisy paradigm (e.g., Stone, Aronson, Crain, Winslow, & Fried, 1994), in which participants are first asked to indicate their general beliefs about a specific issue in a pro-attitudinal manner (e.g., endorsement of the importance of safe sex) and then made aware of past failures to behave in line with their general beliefs (e.g., recall of past failures to use condoms). The common finding is that the inconsistency between general beliefs and past behavior influences subsequent behavior in a manner consistent with the endorsed beliefs (e.g., purchase of condoms). In other words, participants try to resolve the inconsistency between their general beliefs and their thoughts about past behavior by changing their behavior. However, for this behavioral change to occur, it is necessary that (a) general beliefs and thoughts about past behavior are simultaneously accessible and (b) both of them are endorsed as valid. If one of the two conditions is not met, there will be no inconsistency identified in the first place, and thus no change in behavior.

## THE UNIVERSAL SIGNIFICANCE OF COGNITIVE CONSISTENCY

### DOES COGNITIVE INCONSISTENCY MATTER ONLY IF IT IS SELF-RELEVANT?

The most common way to test the implications of Festinger's (1957) dissonance theory is to investigate the conditions of dissonance-related attitude change. In Festinger and Carlsmith's (1959) induced compliance paradigm, for example, participants who engaged in counterattitudinal behavior tend to show a more favorable evaluation of the relevant attitude object when they have received a low incentive for engaging in the counterattitudinal behavior than when they have received a high incentive. The typical interpretation of this finding is that a high incentive resolves the aversive feeling of dissonance arising from the inconsistency between the attitude and the counterattitudinal behavior. In contrast, a low incentive is insufficient to reduce the underlying inconsistency, thereby leading participants to change their attitudes to bring them in line with their behavior. Another example is Brehm's (1956) free choice paradigm, in which participants tend to evaluate a chosen object more favorably than a rejected object even if the two alternatives have been evaluated equally before the decision. The common explanation for this *spreading-of-alternatives effect* is that people experience an aversive feeling of post-decisional dissonance when they recognize that either (a) the rejected alternative has positive features that the chosen alternative does not have, or (b) the chosen alternative has negative features that are not present in the rejected alternative. In

order to reduce this aversive feeling, people are assumed to emphasize or deliberately search for positive characteristics of the chosen alternative and negative characteristics of the rejected alternative, which influences their subsequent evaluations of the two alternatives.

Challenging the initial assumption that these phenomena reflect the operation of a ubiquitous need for cognitive consistency, several subsequent studies have failed to show dissonance-related attitude change under particular conditions. These boundary conditions have led some researchers to conclude that the need for consistency is not as universal as proposed by Festinger (1957). Instead, dissonance-related attitude change was attributed to mechanisms of ego-defense, such as the need to maintain consistent views about the self (e.g., Aronson, 1968), the need to maintain a positive self-image (e.g., Steele & Liu, 1983), feelings of personal responsibility for producing aversive consequences (e.g., Cooper & Fazio, 1984), or the need to maintain self-views that are consistent with one's personal standards (e.g., Stone & Cooper, 2001). Although the proposed reformulations differ in important regards, they share the assumption that inconsistency matters only if it is related to the self.

In line with pragmatic interpretations (Harmon-Jones et al., 2009; Quine & Ullian, 1978), I argue that cognitive consistency is much more fundamental and ubiquitous than suggested by reformulations of dissonance theory that attribute consistency-related phenomena to mechanisms of ego-defense (see also Greenwald & Ronis, 1978; Proulx et al., 2012). An important aspect in this regard is that many accounts equate the presence versus absence of dissonance-related attitude change with the presence versus absence of aversive feelings arising from inconsistency. This equation is problematic, because it conflates the behavioral phenomenon that needs to be explained (i.e., attitude change) with the psychological mechanism that is supposed to explain the observed phenomenon (i.e., inconsistency resolution; for a more detailed discussion, see De Houwer, Gawronski, & Barnes-Holmes, 2012). Because cognitive inconsistency can be resolved in many ways other than attitude change (Festinger, 1957), the mere presence versus absence of attitude change does not allow any conclusions about cognitive inconsistency itself or the aversive feelings arising from cognitive inconsistency. Hence, although the observed boundary conditions provide important information about the moderators of attitude change as one of several strategies to resolve inconsistency, the conditions of a particular strategy to resolve inconsistency should not be confused with the presence versus absence of inconsistency itself or the aversive feelings resulting from cognitive inconsistency.

## COGNITIVE CONSISTENCY ACROSS CULTURE, AGE, AND SPECIES

The past decades of dissonance research have been characterized by recurring debates about the presumed universality of cognitive consistency as a core motive. On the one hand, many cross-cultural researchers are convinced that dissonance is a culture-specific phenomenon that is limited to Western, individualist countries and less likely in Eastern, collectivist countries (e.g., Heine & Lehman, 1997; Markus & Kitayama, 1991). On the other hand, researchers in developmental and comparative psychology have argued that dissonance can also be observed in infants and various animals (e.g., Egan, Santos, & Bloom, 2007; Lydall, Gilmour, &

Dwyer, 2010), which is consistent with Festinger's (1957) original interpretation of cognitive consistency as a universal motive.

Although the current proposal agrees with the latter view, both perspectives require a careful analysis of the available evidence to avoid premature conclusions. An important aspect in this regard is again the distinction between behavioral effects (e.g., attitude change) and the psychological mechanisms that presumably underlie these effects (e.g., inconsistency resolution). In the cross-cultural literature, for example, the absence of attitude change as a result of induced compliance (Festinger & Carlsmith, 1959) or free choice (Brehm, 1956) in East Asian participants is often interpreted as evidence that East Asians do not have a basic need for cognitive consistency, and therefore do not experience aversive feelings of dissonance (e.g., Heine & Lehman, 1997; Markus & Kitayama, 1991). As noted above, however, the absence of dissonance-related attitude change can be due to multiple factors that do not imply the absence of a basic need for cognitive consistency. One important factor in this regard is the contextualized notion of truth in Eastern cultures, which differs from the decontextualized way of thinking in Western cultures. According to the latter, the truth or falsity of a given proposition about an object is determined by the intrinsic properties of that object. This world view stands in contrast to the dialectical way of thinking in many Eastern cultures, according to which the truth or falsity of a proposition depends on the particular context; it may be true in some regards, but the opposite may be true in other regards (Peng & Nisbett, 1999). Because a decontextualized acceptance or rejection of a given proposition involves a higher likelihood of inconsistency with other propositions, inconsistency is more likely within belief systems that involve decontextualized beliefs. Yet, inconsistency is less likely within belief systems that involve contextualized beliefs. Importantly, the latter does not imply that consistency would be irrelevant; it simply means that what may be inconsistent from a Western, decontextualized point of view may be perfectly consistent from an Eastern, contextualized point of view.

Another important aspect in the interpretation of cross-cultural differences concerns the preferred strategy to resolve inconsistency. Several studies on causal attribution have shown that participants from Eastern cultures have a stronger tendency to explain behavior in situational terms than participants from Western cultures (e.g., Miller, 1984; Morris & Peng, 1994), and this tendency may reduce the likelihood of dissonance-related attitude change. For example, whereas Easterners may explain their counterattitudinal behavior in induced compliance situations (see Festinger & Carlsmith, 1959) by means of situational demands regardless of whether situational pressure is high or low (e.g., *The experimenter asked me to do it*), Westerners may explain their counterattitudinal behavior in situational terms only when situational pressure is high (e.g., *The experimenter gave me \$20 for doing it*), but not when situational pressure is low (e.g., *The experimenter gave me \$1 for doing it*). Importantly, such differences in attributional tendencies do not imply that inconsistency is irrelevant in East Asian cultures; it simply means that inconsistency is more likely to be resolved by means of situational attributions.

Although the current proposal agrees with developmental and comparative psychologists who argue that the need for consistency is a universal phenomenon that can even be observed in infants and animals, the evidence that is frequently cited in support of this claim also has to be interpreted with caution. Many of these studies relied on the free choice paradigm (Brehm, 1956) to demonstrate the

emergence of a spreading-of-alternatives effect in infants and animals (e.g., Egan et al., 2007). However, the mere demonstration of a spreading-of-alternatives effect is insufficient to establish the presence of cognitive inconsistency, because this effect can be due to various other factors, including artifacts of the experimental design (Chen & Risen, 2010). These confounds resonate with the above concern that behavioral effects (e.g., attitude change) should not be confused with their underlying mental mechanism (e.g., inconsistency resolution).

Despite these concerns, it is important to note that responses to cognitive inconsistency are a central component of developmental research with preverbal infants. In this research, enhanced visual attention is often interpreted as an indicator of expectancy violation to study various aspects of cognitive development. Such expectancy violations can be interpreted as cases of cognitive inconsistency, in which a prior belief about a particular state of affairs conflicts with a new observation (for a similar approach in animal research, see Tinkelpaugh, 1928). Thus, although research demonstrating dissonance-like phenomena in animals and infants should be interpreted with caution for the reasons outlined above, the need for cognitive consistency represents the foundation for a wide range of paradigms to study the cognitive development of preverbal infants. To be sure, animals and infants may have lower working memory capacity than human adults, which may constrain the complexity of mental models to identify inconsistency (see Johnson-Laird et al., 2004). However, this constraint does not imply the absence of a universal need for cognitive consistency. After all, any organism requires an accurate representation of the world for context-appropriate action, and inconsistency serves as an important signal of inaccurate representations.

## COGNITIVE CONSISTENCY AND MOTIVATED REASONING

The current analysis is based on the premise that cognitive inconsistency serves as an important signal for errors in one's system of beliefs. However, a large body of research suggests that people are often more concerned with what makes them feel good than what is accurate (for an overview, see Alicke & Sedikides, 2010). For example, Kruglanski and Shteynberg (2012) have argued that consistency is not a motivational force in itself, but the accidental outcome of epistemic processes that aim at validating propositions that are desired and invalidating propositions that are undesired. The affective consequences of (in)consistency are further assumed to depend on the nature of people's goals, not on (in)consistency per se. Specifically, consistency should elicit positive feelings when it validates a desired belief, but negative feelings when it validates an undesired belief. Conversely, inconsistency is assumed to elicit negative feelings when it invalidates a desired belief, but positive feelings when it invalidates an undesired belief.

Although Kruglanski and Shteynberg's (2012) analysis highlights the importance of considering the relation between cognitive consistency and motivated reasoning, it conflates the consistency of unqualified propositions with the consistency of subjective propositional beliefs. As outlined at the beginning of this article, cognitive consistency refers to propositions about states of affairs that are regarded as true or false by the individual, not to the unqualified content of propositions independent of their subjective truth or falsity. Of course, a person may be motivated to invalidate an undesired proposition by identifying its inconsistency



with another proposition that is regarded as true. In such cases, however, the contents of the relevant propositions are qualified, in that the undesired proposition is rejected as false whereas the invalidating proposition is regarded as true. Thus, it is not the (in)consistency between unqualified propositions that functions as a core motivational force (cf. Kruglanski & Shteynberg, 2012), but the (in)consistency of a person's subjective propositional beliefs. Using the above example of Lucy and Linda, a person might be motivated to believe in the unconditional support provided by good friends, and thus search for information that questions the quality of Lucy's friendship. In this case, the sought-after information would be inconsistent with the unqualified content of the proposition about Lucy's friendship to Linda. However, because the latter proposition is rejected as false, the overall system of beliefs remains consistent, although motivational influences clearly influenced the particular manner in which inconsistency has been resolved.

Another important aspect in this context is that inconsistency can often be resolved in multiple ways, leaving enough flexibility for influences of motivated reasoning (Kunda, 1990). For example, whereas some peers of Lucy and Linda may be motivated to maintain a positive impression of Lucy, others may be less concerned about that. Thus, the former group might selectively search for information suggesting that Linda rejected Lucy's offers for help, whereas the latter group might consider information that questions the quality of Lucy's friendship. Yet, what is important in both cases is that the resulting systems of subjective beliefs are consistent. Although many cases leave enough flexibility to resolve cognitive inconsistency in ways that involve the retention of desired beliefs and the rejection of undesired beliefs, consistency imposes a universal constraint on any belief system. After all, motivated reasoning involves a motivation to believe in the truth of desired beliefs and the falsity of undesired beliefs, and inconsistency would signal that there is an error in the overall system of beliefs.

## COGNITIVE CONSISTENCY AND THREAT-COMPENSATION

The proposed relation between cognitive consistency and motivated reasoning also provides a conceptual integration of various instances of threat-compensation. Specifically, the current analysis suggests that many compensatory responses to threatening information can be understood as cases in which newly acquired information conflicts with an existing belief (see also Proulx et al., 2012). To the extent that people are motivated to retain their prior beliefs, they may resolve the implied inconsistency in a manner that confirms the subjective validity of these beliefs.

A useful example to illustrate the role of cognitive consistency in threat-compensation is the derogation of innocent victims as a result of just-world beliefs. The belief in a just world reflects the conviction that the world is a just place in which people get what they deserve: good things happen to good people and bad things happen to bad people (Lerner, 1980). A common finding in the literature on just-world beliefs is that innocent victims tend to be derogated or blamed for their misfortune (e.g., Lerner & Simmons, 1966), and this tendency has been shown to increase as a function of just-world beliefs and to decrease when justice is restored. For example, women who were raped by a male perpetrator are often accused of being partially responsible for the crime (e.g., as implied by claims that they

sexually provoked the perpetrator by the way they dressed), and such attributions of blame tend to increase as a result of just-world beliefs and decrease when the perpetrator is punished for his crime.

From a cognitive consistency perspective, one could argue that information about an innocent victim creates a conflict between the general belief that the world is a just place in which people get what they deserve and the belief that the victim is a good person who did not deserve his or her misfortune (Van den Bos & Maas, 2009). To the extent that people are motivated to retain their belief in a just world (because it provides a sense of justice and fairness), a potential way to resolve this inconsistency is to reject the proposition that the victim is a good person who did not deserve his or her misfortune. Moreover, if justice is restored (e.g., when the perpetrator of a crime is punished), the initial inconsistency is resolved, thereby reducing the need to restore consistency by blaming or derogating the victim. Yet, to the extent that people do not believe in a just world to begin with, there is no inconsistency, and therefore no need to restore consistency by blaming or derogating the victim.

Similar considerations can be applied to other instances of threat-compensation. For example, defensive responses to negative information about the self usually involve a conflict between an existing positive belief about the self (e.g., *I am a good student*) and a newly acquired specific belief (e.g., *I got a low mark on the essay*). To the extent that people are motivated to retain their prior views about themselves, they may resolve this inconsistency by searching for information that questions the diagnosticity of the newly acquired information (e.g., *The instructor doesn't like me*). As demonstrated in research on self-verification, however, such defensive responses are limited to cases in which people hold positive beliefs about themselves. If their self-beliefs are negative, there is no inconsistency to begin with, thereby reducing the need to restore consistency by searching for discounting information. In fact, people with negative self-views usually accept the validity of negative feedback, but question the validity of positive feedback (for a review, see Swann & Brooks, this issue). In either case, people seem to be motivated to retain their prior beliefs about the self which leads them to restore inconsistency in a manner that questions the validity of newly acquired information that is inconsistent with their prior self-view.

Another illustrative example is the tendency to justify the current social order even if the status quo goes against one's personal interests (Jost, Banaji, & Nosek, 2004). A common finding in the literature on system justification is that the members of disadvantaged groups often adopt a negative stereotypical view of their ingroup, thereby protecting their beliefs about the fairness of the current social structure. From a cognitive consistency perspective, one could argue that such reactions to social inequality have their roots in the conflict between the general belief that the existing social structure is fair and the specific belief that one's ingroup is disadvantaged. To the extent that people are motivated to retain their general belief about the fairness of the current system, they may restore consistency by adopting the belief that the ingroup is inferior, and therefore deserves to be in a lower social position. Yet, if people reject the idea that the current system is fair, there is no inconsistency to begin with, thereby eliminating the need to restore consistency by derogating one's ingroup. Similarly, the status quo may be defended by complementary beliefs, such as ascriptions of positive and negative attributes along different dimensions (e.g., poor but happy; see Kay, Jost, Mandisodza, Sherman,

Petrocelli, & Johnson, 2007). In either case, processes of motivated reasoning bias the resolution of inconsistency in a manner that helps to retain one's beliefs about the fairness of the existing social order, thereby protecting these beliefs against potential counterevidence.

## THE UBIQUITY OF CONSISTENCY PROCESSES

Although cognitive consistency has been mostly studied in the context of dissonance-related attitude change, its ubiquitous role is evident in a wide range of phenomena that are rarely considered as examples of consistency effects. The final section of this article reviews three illustrative examples, showing that many social psychological phenomena can be understood in terms of consistency processes. These examples include the role of cognitive consistency in (a) prejudice-related belief systems, (b) correspondent dispositional inference, and (c) the stability of first impressions.

## COGNITIVE CONSISTENCY AND PREJUDICE

Over the past decades, research on prejudice has been guided by various constructs, such as *old-fashioned prejudice* (Swim, Akin, Hall, & Hunter, 1995), *modern prejudice* (McConahay, 1986), *aversive prejudice* (Dovidio & Gaertner, 2004), and *implicit prejudice* (Rudman, Greenwald, Mellott, & Schwartz, 1999). However, the conceptual relation between these constructs has rarely been the subject of theoretical and empirical investigations. Recent work by Gawronski, Peters, Brochu, and Strack (2008) illustrates how a conceptualization in terms of cognitive consistency can provide an integrative framework for understanding the relation between the proposed constructs (for a review, see Gawronski, Brochu, Sritharan, & Strack, 2012). A central assumption of their framework is that automatic negative associations elicit negative affective reactions toward targets of prejudice. These affective reactions may serve as a basis for a negative propositional evaluation of the target group, unless a negative evaluation is inconsistent with other prejudice-relevant beliefs (see Gawronski & Bodenhausen, 2006, 2011), including perceptions of discrimination and egalitarianism-related, nonprejudicial goals. With regard to racial prejudice against African Americans, for example, the set of judgment-relevant beliefs may include the following three components:

- (1) I dislike African Americans.
- (2) African Americans are a disadvantaged group.
- (3) Negative evaluations of disadvantaged groups are wrong.

These three propositions are inconsistent with each other in that they cannot be endorsed simultaneously without violating the basic notion of cognitive consistency. Thus, inconsistency may be resolved by rejecting either one of the three propositions. First, a person may reject Proposition 1 by not relying on his or her negative affective reaction as a basis for an evaluative judgment (e.g., *I like African Americans*). Because not relying on an affective reaction does not necessarily

eliminate the affective state, such a rejection results in a conflict between affective states and endorsed beliefs, as it is implied in the concept of aversive prejudice (Dovidio & Gaertner, 2004). Second, a person may reject Proposition 2 by disavowing the proposition that African Americans are a target of discrimination (e.g., *African Americans are not a disadvantaged group*). Such perceptions play a central role in the concept of modern prejudice, which involves the denial of continued discrimination in modern societies (McConahay, 1986). Third, a person may reject Proposition 3 by disagreeing with the general disapproval of discriminatory behavior (e.g., *Negative evaluations of disadvantaged groups are okay*). Such a rejection of egalitarianism-related, nonprejudicial goals resonates with the concept of old-fashioned prejudice, such that people may reject egalitarian values and openly support racial discrimination (Swim et al., 1995). Importantly, all of these cases are based on the premise that automatic negative associations elicit a negative affective reaction toward targets of prejudice, which can be equated with the concept of implicit prejudice (Rudman et al., 1999). Integrating different concepts of prejudice in such a manner not only illustrates the significance of cognitive consistency in prejudice-related belief systems; it also implies novel predictions about the relation between implicit prejudice and the explicit endorsement of prejudiced beliefs, which received empirical support in several independent studies (for a review, see Gawronski et al., 2012).

#### COGNITIVE CONSISTENCY AND DISPOSITIONAL INFERENCE

The correspondence bias is defined as the tendency to draw correspondent dispositional inferences from situationally constrained behavior (for a review, see Gawronski, 2004). A frequently cited example is the case of attitude attribution (Jones & Harris, 1967), in which perceivers tend to infer a corresponding attitude from an endorsed position even when the author was not free to choose the position (e.g., when the author of an essay was assigned to defend a particular position). The common interpretation of this finding is that perceivers tend to underestimate the role of situational factors (e.g., the fact that the author was not free to choose the endorsed position) in drawing correspondent dispositional inferences (Gilbert & Malone, 1995).

Counter to this interpretation, Gawronski (2003) argued that attitude attributions are guided by perceivers' general beliefs about the ability to convincingly defend an assigned position. To the extent that an endorsed position was freely chosen by an author, this position is usually sufficient to infer that the author has a corresponding attitude. If, however, the endorsed position was assigned, perceivers have to rely on alternative cues to infer the author's attitude. An important cue in this regard is the persuasiveness of the author's arguments. Specifically, perceivers seem to assume that only people with a corresponding attitude are able to generate convincing arguments for an assigned position. In contrast, weak arguments may be generated by anyone regardless of their attitude (see Reeder & Brewer, 1979). Thus, when the endorsed position was not freely chosen by the author, convincing arguments are highly diagnostic for inferring a corresponding attitude. In contrast, unconvincing arguments remain ambiguous, in that the author

may have an attitude that is either congruent or incongruent with the endorsed position.

To test these assumptions, Gawronski (2003) told participants that the author was asked to write (a) an essay in favor of a position that was determined randomly or (b) an essay that was counter to his or her attitude. Consistent with the above assumptions, participants drew strong correspondent inferences from randomly assigned essays when the arguments in the essays were convincing, but not when they were unconvincing. More importantly, when participants were told that the author was assigned to write a counterattitudinal essay, unconvincing essays led to strong inferences of attitudes that were opposite to the endorsed position, but this effect was significantly reduced when the arguments in the essays were convincing. From a consistency perspective, one could argue that a strong essay conflicted with participants' belief that only people with a corresponding attitude are able to write a persuasive essay. This information should lead them to expect a relatively weak essay when the author was ostensibly assigned to write a counterattitudinal essay. Thus, if the essay turns out to be highly persuasive, perceivers are confronted with three inconsistent propositional beliefs (Gawronski, 2009):

- (1) Only people with a corresponding attitude are able to write a persuasive essay.
- (2) The author has been assigned to write a counterattitudinal essay.
- (3) The essay is highly persuasive.

These three propositions are inconsistent, in that each of them is in contradiction with the logical implication of the other two (for a similar analysis of moral attribution, see Gawronski, 2004). Because Proposition 3 is based on relatively "hard" evidence (i.e., the available essay), this proposition may be quite robust against rejection. This leaves the possibility that either Proposition 1 or Proposition 2 need to be rejected. That is, the author may have refused to write a counterattitudinal essay, or people are indeed able to write highly persuasive essays in favor of a counterattitudinal position. Because the available evidence is insufficient to determine which of the two possibilities is the correct one, the perceiver is left with a state of uncertainty resulting from the inconsistency between the three propositions. Hence, dispositional inferences and subjective confidence are significantly reduced (Gawronski, 2003). This example demonstrates not only that the processes underlying correspondent dispositional inferences are much more complex and sophisticated than it is implied by the widespread assumption that people underestimate the role of situational factors (see Gawronski, 2004). It also illustrates the pervasive role of consistency processes in a domain that has rarely been related to the notion of cognitive consistency (for a notable exception, see Kruglanski & Klar, 1987).

## COGNITIVE CONSISTENCY AND FIRST IMPRESSIONS

A final example of how an application of consistency principles can provide deeper insights into classic social psychological phenomena is the stability of first impressions. Although the importance of first impressions is widely accepted in lay

psychology, it is not clear why first impressions tend to be so persistent to revision. A recent study by Rydell and Gawronski (2009) suggests that new experiences that contradict one's first impression of another individual become bound to the context in which they were made. Specifically, their findings showed that counter-attitudinal experiences with another person influence evaluative responses only in the context in which these experiences were made, whereas initial attitudes continue to guide evaluative responses in any other context. Drawing on basic principles of cognitive consistency, Gawronski, Rydell, Vervliet, and De Houwer (2010) argued that expectancy violations enhance perceivers' attention to contextual cues to identify potential explanations for the observed deviation (see Roese & Sherman, 2007). Thus, experiences that contradict a first impression tend to be stored in contextualized representations, which leaves initially formed context-free representations intact. As a result, the content of expectancy-violating experiences will become activated only in the particular context in which these experiences were made. Yet, encountering the target in any other context, be it the context of the first impression or a novel context, should activate the initial context-free representation, thereby leading to a dominance of the first impression. From a cognitive consistency perspective, one could argue that expectancy violations lead perceivers to search for a situational explanation for the unexpected experience to resolve the inconsistency between the expectancy and the expectancy-violating event. To the extent that the identified "cause" is integrated into the representation of the newly acquired information, the initial expectancy can be retained for any situation that differs from the situation in which the expectancy has been violated. Interestingly, the contextualization of expectancy-violating experiences also prevents cognitive inconsistency from the simultaneous activation of conflicting representations, because the context modulates which representation will be activated in a given situation, the initial context-free representation or the subsequently formed contextualized representation.

## CONCLUSIONS

The main goal of the current article was to revive Festinger's (1957) seminal hypothesis that cognitive consistency represents a core motive underlying thinking and reasoning. I argued that cognitive inconsistency serves as an epistemic cue for errors in one's system of beliefs that require a reassessment of their validity. Because there are always multiple ways to resolve inconsistency, motivated reasoning can bias belief systems toward desired conclusions, although the need for consistency imposes a basic constraint on any such distortions. Acknowledging the fundamental nature of cognitive consistency not only opens the door for a conceptual integration of various instances of threat-compensation; it also provides novel insights into a wide range of phenomena that have rarely been studied from a consistency perspective.

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