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CROSS-CULTURAL DIFFERENCES VERSUS UNIVERSALITY IN COGNITIVE DISSONANCE: A CONCEPTUAL REANALYSIS

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INTRODUCTION

Festinger's (1957) theory of cognitive dissonance is probably one of the most significant and influential theories in the history of social psychology. The central tenet of Festinger's theory is that inconsistency between cognitive elements elicits aversive feelings of dissonance, which in turn promote actions aimed at reducing these feelings.[1] According to Festinger, such reductions can be achieved

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[1]Somewhat ironically, Festinger (1957) himself was inconsistent in his use of the term *dissonance*, in that it was sometimes used to describe the inconsistency between cognitive elements and sometimes to refer to the aversive feelings arising from inconsistency. For the sake of conceptual clarity, we will use the term *inconsistency* to describe the relation between cognitive elements, and the term *dissonance* to describe the aversive feelings arising from inconsistency.

either by changing one of the inconsistent cognitive elements or by adding a new cognitive element that reconciles the existing inconsistency. More specifically, cognitive dissonance can be reduced by (a) changing one's attitudes, (b) changing one's behavior, (c) searching for consonant information, or (d) trivializing the importance of inconsistency. Whereas the first two cases represent examples of the aforementioned change strategy, the latter two represent examples of the addition strategy.

Even though Festinger (1957) was convinced that the need for cognitive consistency in humans is as basic as hunger and thirst, the universality of cognitive dissonance has recently been challenged by cross-cultural researchers (e.g., Heine & Lehman, 1997; Kitayama et al., 2004; Hoshino-Browne et al., 2005). For example, Heine and Lehman (1997) claimed that "cognitive dissonance, as it has been investigated in the literature, is more likely to be experienced by North Americans" (p. 391). This assumption is based on earlier theorizing by Markus and Kitayama (1991) who argued that dissonance arising from counterattitudinal behavior may not be experienced by individuals with interdependent self-construals. According to these authors, interdependent self-construals, which are common in East Asian cultures, are characterized by lower importance of internal attributes (e.g., attitudes) as self-defining characteristics compared to external attributes (e.g., social roles). As such, inconsistency between attitudes and behavior may be regarded as less significant in Eastern compared to Western cultures, thereby limiting the generality of dissonance arising from counterattitudinal behavior. More recently, Hoshino-Browne et al. (2005) claimed that both Easterners and Westerners experience aversive feelings of cognitive dissonance, even though cultural differences may shape the particular situations in which dissonance is aroused. Specifically, these researchers argued that dissonance is aroused whenever important aspects of one's self-concept are threatened (see Steele et al., 1993). Thus, to the extent that there is cultural variation in the relative importance of a given self-attribute, the particular instances that elicit dissonance experiences may be different for Easterners and Westerners.

In this chapter, we provide a conceptual reanalysis of inconsistency processes that aims at specifying different sources of cross-cultural differences in dissonance-related phenomena. The central claim of our reanalysis is that the general *processes* associated with cognitive inconsistency are universal, even though cross-cultural differences pertaining to the *contents* of belief systems may function as important moderators of the outcomes of these processes. For this purpose, we will first review our conceptualization of cognitive consistency as an inherently propositional phenomenon (Gawronski & Strack, 2004; Gawronski et al., in press-a). Drawing on the distinction between associative and propositional processes (Strack & Deutsch, 2004; Gawronski & Bodenhausen, 2006a), we argue that the contents of the cognitive elements described by Festinger (1957) have to be regarded as either true or false in order to acquire the potential for being consistent or inconsistent with each other. Based on this specification of inconsistency, we propose a three-stage model of inconsistency processes that

distinguishes between (a) the identification of inconsistency, (b) the elicitation of dissonance experiences, and (c) the resolution of inconsistency to reduce dissonance experiences. This three-stage model is then used as an organizing framework for our discussion of cross-cultural differences in dissonance-related phenomena. Specifically, we argue that the proposed processes are culturally universal, even though cross-cultural differences may moderate the respective outcomes of each of the three stages. From this perspective, cross-cultural differences in dissonance-related phenomena (e.g., dissonance-related attitude change) often remain nondiagnostic as to whether they are due to (a) differences in the inconsistency of culturally diverging systems of beliefs (i.e., *inconsistency identification*), (b) differences in the experiences elicited by an inconsistent belief system (i.e., *dissonance elicitation*), or (c) differences in the employed strategy to resolve inconsistency (i.e., *inconsistency resolution*). The implications of this conclusion are further addressed in the last section of this chapter, which discusses some directions for future research based on the present reanalysis.

THE PROPOSITIONAL NATURE OF COGNITIVE CONSISTENCY

Before addressing cross-cultural differences in cognitive dissonance, it seems essential to specify its underlying precursor: cognitive inconsistency. According to Festinger (1957), two cognitions are inconsistent with each other if, considering these two alone, one of them follows from the opposite of the other. Festinger further specified this definition in a formal manner, stating that "x and y are dissonant if not-x follows from y" (p. 13). We argue that such logical relations play a crucial role in the definition of (in)consistency. Specifically, we claim that the relation between two cognitive elements cannot even be defined without reference to the syllogistic rules of logic (Gawronski & Bodenhausen, 2006a). Thus, any claim regarding consistency or inconsistency between cognitive elements makes (implicit or explicit) reference to the abstract notion of logical implication (see also Jones & Gerard, 1967; Kruglanski, 1989).

Even though the crucial role of logical implication tended to disappear in recent reformulations of dissonance theory (Greenwald & Ronis, 1978), it has important implications for the psychological nature of cognitive consistency. In a general sense, logical implication is defined as the deductive transfer of truth values from one proposition to another. For instance, to say that "not-x follows from y" simply means that, if y is true, then not-x must be true as well. If the truth value of y is unknown, nothing can be said about not-x. From this perspective, logical implication – and thus cognitive consistency – essentially depends on the assignment of truth values. In that sense, the *subjective* nature of personal beliefs supplements the *objective* nature of logical implication, such that (in)consistency within an individual's system of beliefs is determined by the application of logical principles to what this individual believes to be true or false (Quine & Ullian, 1978).

This dependency on truth values led Gawronski and Strack (2004) to conclude that cognitive dissonance is an inherently propositional phenomenon (see Strack & Deutsch, 2004; Gawronski & Bodenhausen, 2006a), such that the cognitive elements involved in dissonance have to be regarded as either true or false (cf. Sakai, 1999). Specifically, Gawronski and Strack (2004) argued that dissonance emerges when two propositions are regarded as true, and one follows from the opposite of the other. Moreover, dissonance can be reduced by either (a) changing the (subjective) truth value of one proposition (resembling Festinger's strategy of changing cognitions) or (b) searching for an additional proposition that resolves the inconsistency (resembling Festinger's strategy of adding cognitions). The dependency on truth values that characterizes propositional reasoning stands in contrast to the nature of associative processes, which can be defined as mere activation independent of subjective truth or falsity (Strack & Deutsch, 2004; Gawronski & Bodenhausen, 2006a). That is, associations can be activated in memory irrespective of whether one considers these associations as accurate or inaccurate (cf. Sakai, 1999). Thus, the qualitatively distinct nature of associative and propositional processes (see Gawronski & Bodenhausen, 2006b) can lead to dissociations between the two when the content of activated associations is rejected as a valid basis for a propositional judgment (Gilbert, 1991; Deutsch et al., 2006a). In support of these claims, Gawronski and Strack (2004) demonstrated that dissonance arising from counterattitudinal behavior (Festinger & Carlsmith, 1959) influenced only propositional evaluations reflected in explicit measures, but not associative evaluations reflected in implicit measures (in this case, the Implicit Association Test; Greenwald et al.,1998). Moreover, ("implicit") associative and ("explicit") propositional evaluations were highly correlated under control conditions and when participants had a situational explanation for their counterattitudinal behavior (and thus relied on activated evaluative associations). However, correlations significantly dropped – and even showed a tendency for negative relations – when participants did not have a situational explanation for their counterattitudinal behavior (and thus rejected the content of activated associations as invalid). Taken together, these results support the assumption that cognitive dissonance is an inherently propositional phenomenon, requiring the assignment of truth values to the involved cognitive elements.

Notwithstanding the supportive evidence for these claims, one could object that dissonance-related attitude changes have also been shown for participants who did not have any explicit memory for the behavior that has caused these changes in the first place. Specifically, Lieberman et al. (2001) found that amnesic participants who did not have any recollection of an earlier decision showed the same spreading-of-alternatives effects in the post-decisional dissonance paradigm (Brehm, 1956) that have previously been shown for participants with full memory for their decision. These findings seem difficult to explain in terms of the present framework, which requires a conscious assignment of truth values to the relevant cognitive elements. Obviously, it does not make sense to argue that Lieberman et al.'s amnesic participants consciously reflected on their behavior despite the
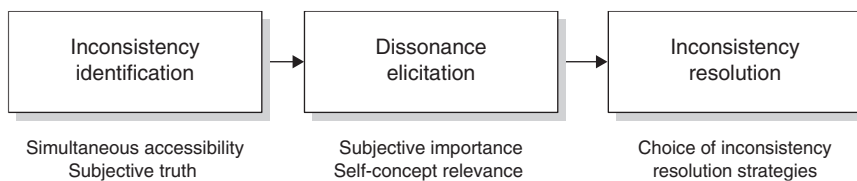
lack of any memory for that behavior. However, in contrast to Lieberman et al.'s interpretation in terms of post-decisional dissonance, a recent study by Gawronski et al. (2007) suggests that post-decisional attitude changes in amnesic participants may not be driven by cognitive dissonance, but by an alternative, low-level process of associative self-anchoring (see also Gawronski et al., in press-a). Specifically, Gawronski et al. (2007) showed that the act of choosing an object creates a mental association between the chosen object and the self. By virtue of this association, associative evaluations of the self tend to transfer to the chosen object, such that attitudes toward the chosen object depend on associative evaluations of the self. Given that associative self-evaluations tend to be highly positive (Bosson et al., 2000; Greenwald & Farnham, 2000; Koole et al., 2001) and given that new associations to the self are created rapidly during the act of choosing an object, this process of associative self-anchoring can lead to post-decisional attitude change without requiring conscious recollection of the decision or the type of higher-order propositional processes implied by dissonance reduction (for a more detailed discussion, see Gawronski et al., in press-a).

A THREE-STAGE MODEL OF INCONSISTENCY PROCESSES

Once cognitive dissonance is specified as an inherently propositional phenomenon, the psychological dynamics proposed by Festinger (1957) can be incorporated into a general three-stage model of inconsistency processes. Specifically, we argue that inconsistency processes involve the following three sequential steps: (a) the identification of inconsistency, (b) the elicitation of dissonance experiences, and (c) the resolution of inconsistency to reduce dissonance experiences (see Figure 13.1).

INCONSISTENCY IDENTIFICATION

The first important step in the sequence of inconsistency processes is the identification of inconsistency. People often hold various inconsistent beliefs, but they may not realize the inconsistency between these beliefs when they are

Inconsistency identification	Dissonance elicitation	Inconsistency resolution
Simultaneous accessibility Subjective truth	Subjective importance Self-concept relevance	Choice of inconsistency resolution strategies

FIGURE 13.1   Three-stage model of inconsistency processes. Identification of inconsistency within one's system of beliefs is assumed to elicit aversive feelings of dissonance, which in turn motivate agents to resolve the inconsistency that has led to these feelings. General variables influencing the three steps are depicted below the respective boxes.

not activated simultaneously (McGregor et al., 1999). For instance, many of our attitudes may be inconsistent with our behavior. Nevertheless, we may fail to experience any dissonance resulting from this inconsistency, if we fail to think about one of the two elements. That is, there will be no inconsistency identified if we fail to think about our behavior every time we reflect on our attitudes; and there will be no inconsistency identified if we fail to think about our attitudes every time we reflect on our behavior. For inconsistency to arise, both types of thoughts need to be accessible simultaneously.

However, even though simultaneous accessibility is *necessary* for inconsistency to occur, it is *not sufficient*. As outlined above, the contents of the relevant cognitions have to be regarded as true or false in order to acquire the potential of being (in)consistent with each other (Gawronski & Bodenhausen, 2006a). For instance, negative stereotypic associations pertaining to a disadvantaged minority group may not result in inconsistency with explicitly endorsed egalitarian goals when accessible stereotypic associations are rejected as inaccurate or false (Gawronski et al., in press-b). Hence, the two major determinants of inconsistency identification are (a) the simultaneous accessibility of potentially inconsistent cognitions (McGregor et al., 1999) and (b) the assignment of truth values that makes these cognitions factually inconsistent (Gawronski & Strack, 2004).

The relevance of these determinants can be illustrated with the experimental situation in the hypocrisy paradigm (e.g., Stone et al., 1994; Fried & Aronson, 1995; Stone et al., 1997). In this paradigm, participants are first asked to indicate their general opinion about a specific issue in a pro-attitudinal manner (e.g., advocating the importance of safe sex), and are then made aware of past failures to behave in line with their attitudes (e.g., past failures to use condoms). The common finding in this paradigm is that the inconsistency between personal attitudes and past behavior influences subsequent behavior in a manner consistent with the endorsed attitude (e.g., buying more condoms). In other words, the inconsistency between participants' attitudes and their cognitions about past behavior leads them to change the cognitions about their behavior, in this case by actually changing their behavior.[2] However, for this behavioral change to occur, it seems necessary that (a) the attitude and the cognitions about past behavior are made simultaneously accessible by the experimental procedure and (b) both of them are explicitly 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 dissonance-related changes in behavior.

DISSONANCE ELICITATION

If inconsistency in one's system of beliefs has been identified, this inconsistency may arouse aversive feelings of cognitive dissonance. However, according

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[2]An alternative means of changing cognitions about behavior that does not imply actual changes in behavior would be a reinterpretation of the meaning of past behavior to make it consistent with one's attitude. To our knowledge, this possibility has not yet been investigated empirically.

to Festinger (1957), the relative magnitude of dissonance experiences depends on the subjective importance of the involved elements. In line with this claim, several reformulations of dissonance theory state that inconsistency between cognitions elicits uncomfortable feelings of dissonance only when these cognitions involve aversive consequences (Cooper & Fazio, 1984; but see Harmon-Jones et al., 1996) or threatens important aspects of one's self-concept (Aronson, 1968; Steele & Liu, 1983; Steele et al., 1993). For instance, Aronson (1968) claimed that people generally strive to maintain a sense of self that is both consistent and positive. Thus, if self-consistency is violated by negative behaviors, people's positive self-image will be threatened, thereby resulting in particularly high levels of dissonance experiences (compared to behaviors that are irrelevant to one's self-concept).

Applied to the present question of cross-cultural differences, a particularly important reformulation of dissonance theory is Stone and Cooper's (2001) self-standards model. This model asserts that cognitive dissonance depends on the type of standard that is used to evaluate one's behavior. Specifically, Stone and Cooper argued that people compare their behavior to either personal or normative standards. Which of the two kinds of standards is used in a given situation depends on their relative accessibility. The discrepancy between the behavior and the employed standard then determines the relative magnitude of dissonance experiences, which may therefore differ as a function of the momentarily accessible standards.

Despite significant differences between different reformulations of dissonance theory (for a discussion, see Stone & Cooper, 2003), most of them share the assumption that aversive feelings of dissonance are aroused only for particular types of inconsistencies. As noted above, some of these boundary conditions have been anticipated by Festinger (1957), who argued that the magnitude of dissonance experiences depends on the subjective importance of the involved elements. Applied to the present question of cross-cultural differences, it suffices to note that not all types of inconsistency are created equal. Rather, people may differ in terms of what types of cognitions they regard as important, which in turn can lead to differences in the magnitude of dissonance experiences elicited by the same inconsistency. In addition, people may differ in terms of the relative importance they attribute to personal versus normative standards they habitually employ to evaluate their behavior (Stone & Cooper, 2001), which may further contribute to cross-cultural differences in cognitive dissonance.

Notwithstanding these potential sources of inter-individual differences in the elicitation of dissonance experiences, it is important to note that empirical studies guided by the aforementioned reformulations primarily focused on dissonance-related attitude change. Specifically, these studies investigated whether a given moderator increased or decreased dissonance-related attitude change in a manner consistent with the predictions derived by a given reformulation (e.g., Cooper & Fazio, 1984; Aronson, 1997; Stone & Cooper, 2003). If dissonance-related attitude change occurred, this outcome has typically been taken as evidence for the arousal of dissonance experiences. If, however, no attitude change occurred, this

outcome is often interpreted as indicating absence of dissonance experiences. From the perspective of our three-stage model, such interpretations seem premature as long as dissonance experiences are not directly assessed (for notable exceptions, see Croyle & Cooper, 1983; Losch & Cacioppo, 1990; Elliot & Devine, 1994; Harmon-Jones, 2000; see also Zanna & Cooper, 1974). Specifically, we argue that any moderating effect on dissonance-related attitude change may also be due to the changes in the employed strategy to reduce inconsistency, thereby remaining nondiagnostic about the actual elicitation of dissonance experiences. This issue represents the tenet of the final stage of our three-stage model.

INCONSISTENCY RESOLUTION

If inconsistency has been identified within one's system of beliefs and if this inconsistency has indeed aroused aversive feelings of cognitive dissonance, these feelings are assumed to motivate people to resolve the inconsistency that gave rise to dissonance experiences. According to Festinger (1957), there are two general strategies to resolve inconsistency. First, people may resolve inconsistency by changing one of the involved elements. Second, people may add a cognitive element that resolves the inconsistency. As outlined above, the first strategy can be descried as a change in the (subjective) truth value of one of the involved propositions, whereas the second strategy can be regarded as the search for an additional proposition that resolves the momentary inconsistency (Gawronski & Strack, 2004). Examples of the first strategy include changes in attitudes or behavior; examples of the second strategy include the search for consonant information or trivializing the importance of inconsistency (Festinger, 1957).

A useful example to illustrate the significance of these strategies is Festinger & Carlsmith's (1959) induced compliance paradigm. In this paradigm, participants are first asked to engage in some obviously counterattitudinal behavior (e.g., writing a counterattitudinal essay). In one condition, participants are implicitly provided with a situational explanation for their counterattitudinal behavior (e.g., high situational pressure); in another condition, they are implicitly given the impression that they have freely chosen to engage in the counterattitudinal behavior (e.g., low situational pressure). The well-replicated finding is that participants tend to change their original attitudes when they do not have a situational explanation for their counterattitudinal behavior, but not when they do have a situational explanation. According to Festinger (1957), these changes are driven by aversive feelings of cognitive dissonance arising from attitude–behavior inconsistency, which motivates participants to reduce this inconsistency by means of changing their original attitudes.

The interpretation of attitude changes under low situational pressure is widely accepted and relatively uncontroversial among dissonance researchers. What has received less attention is the underlying mechanism in the high situational pressure condition. Even though researchers tend to regard this condition as a simple control condition, an implicit assumption seems to be that there is no inconsistency in

the first place, and therefore no arousal of dissonance experiences. Alternatively, however, one could argue that counterattitudinal behavior *generally* gives rise to inconsistency, thereby eliciting dissonance experiences under both high and low situational pressure. From this perspective, the primary difference between the two conditions is whether the dissonance-arousing inconsistency is resolved by means of either (a) attitude change or (b) consonant information, in this case a situational explanation for the counterattitudinal behavior. Hence, it remains an open question whether the availability of a situational explanation for one's counterattitudinal behavior prevents inconsistency – and thus the elicitation of dissonance experiences – in the first place (i.e., *inconsistency identification*) or whether the availability of a situational explanation simply provides an alternative means to resolve the present inconsistency (i.e., *inconsistency resolution*). Even though the available evidence tends to support the former interpretation (e.g., Croyle & Cooper, 1983; Harmon-Jones, 2000; see also Zanna & Cooper, 1974), the important message of these considerations is that inconsistency can be resolved in multiple ways, which implies that any factor that influences the use of inconsistency resolution strategies may influence the emergence of dissonance-related attitude change (see also Steele et al., 1993; Simon et al., 1995; Gosling et al., 2006). In other words, the mere absence of dissonance-related attitude change remains nondiagnostic as to whether there was a lack of dissonance arousal in the first place, or whether participants simply used a different strategy to resolve inconsistency. As we will outline in the next section, this ambiguity has important implications for the interpretation of cross-cultural differences in dissonance-related attitude change.

CROSS-CULTURAL DIFFERENCES VERSUS UNIVERSALITY IN COGNITIVE DISSONANCE

The proposed three-stage model of inconsistency processes seems particularly useful for identifying potential sources of cross-cultural differences in dissonance-related phenomena. As outlined in the introduction, we argue that the general processes involved in cognitive inconsistency are culturally universal, even though cross-cultural differences pertaining to the contents of the involved elements may moderate the respective outcomes of each of the three stages, thereby leading to corresponding differences in dissonance-related phenomena.

DIFFERENCES IN INCONSISTENCY IDENTIFICATION

A central assumption of our three-stage model is that inconsistency depends on the assignment of truth values, such that the contents of potentially inconsistent cognitive elements have to be regarded as true or false (Gawronski & Strack, 2004). Thus, a relatively trivial source of inter-individual differences in dissonance-related phenomena resides in diverging opinions about the same state of affairs.

In the domain of science, for example, empirical evidence challenging the validity of a scientific theory may produce inconsistent cognitions in researchers who believe in the accuracy of that theory, but not in those who rejected that theory in the first place (Kruglanski, 1989). Needless to say, similar differences may emerge at the level of cultural traditions. For instance, the cognitions "I love my wife" and "I am attracted to another woman" will be inconsistent in cultures with monogamous relationship norms, but they may be perfectly consistent in cultures with polygamous relationship norms. As already outlined by Festinger (1957), any difference in the sets of culturally accepted beliefs can determine whether or not the acceptance of a particular proposition results in inconsistency, thereby leading to corresponding differences in dissonance experiences.

Aside from this rather trivial cause, there is a somewhat deeper source that may account for cross-cultural differences in the identification of inconsistency. As outlined above, inconsistency essentially depends on the truth values assigned to a given set of propositions. A common finding in cross-cultural research is that Eastern cultures differ from Western cultures in their relative emphasis of situational contexts (Markus & Kitayama, 1991; Choi et al., 1999). Applied to the notion of truth values, this difference can result in a contextualized interpretation of truth, such that whether or not a given statement about an object is regarded as true depends on the particular context of that object. This interpretation stands in contrast to the predominantly decontextualized way of thinking in Western cultures, implying that the truth or falsity of a given statement about an object is determined by the inherent properties of that object, rather than by the particular context in which it is encountered. Thus, what may appear as inconsistent from a Western, decontextualized point of view may be perfectly consistent from an Eastern, contextualized point of view (Peng & Nisbett, 1999). For instance, a decontextualized negative attitude toward abortion may be inconsistent with any kind of behavior favoring abortion, whereas a contextualized attitude may be sensitive to particular circumstances, thereby leading to a positive evaluation in some contexts and a negative evaluation in others (see Schwarz, 2007). From this perspective, decontextualized attitudes have a much stronger potential to result in inconsistency than contextualized attitudes, thereby increasing the likelihood of dissonance experiences. Thus, to the extent that Eastern cultures have a stronger tendency to contextualize attitudes and beliefs (Markus & Kitayama, 1991; Choi et al., 1999), inconsistency in belief systems – and thus dissonance experiences – may be less likely in Eastern compared to Western cultures.

This decontextualized assignment of truth values resembles the notion of dialectical reasoning that is often attributed to East Asian cultures. According to Peng and Nisbett (1999), East Asian ways of reasoning can be characterized by their willingness to accept the truth of two inconsistent views, thereby tolerating apparent contradictions. Instead of discounting, differentiating, or denying the involved elements, East Asian philosophy regards such contradictions as an inherent feature of our world, which tends to be "in constant flux" (Peng & Nisbett, 1999, p. 742). This ontology is often contrasted to Western conceptualizations

of the world as constant and stable. From our point of view, these divergent perspectives can be described in terms of the aforementioned contextualization of truth, such that East Asian philosophy implies a contextualized assignment of truth values, whereas Western cultures tend to decontextualize the assignment of truth values. Thus, as outlined above, what may appear as inconsistent from a Western, decontextualized point of view may be perfectly consistent from an Eastern, contextualized point of view. Importantly, the proposed contextualization of truth values does not imply that consistency is completely irrelevant in East Asian cultures. Rather, inconsistency is simply less likely to occur given that the truth value of a proposition is always considered in relation to its context.

DIFFERENCES IN DISSONANCE ELICITATION

If inconsistency is identified, this inconsistency is assumed to elicit aversive feelings of dissonance. However, as outlined by Festinger (1957), the relative magnitude of these feelings depends on the subjective importance of the involved elements. Such differences in subjective importance can also function as the source of cross-cultural differences. In support of this assumption, Hoshino-Browne et al. (2005) found that European Canadians tended to rationalize choices more when these choices were made for themselves than when they were made for a friend. Conversely, Asian Canadians tended to rationalize choices more when they were made for a friend than when they were made for themselves. In Festinger's (1957) terms, these results can be explained with the higher importance of social relations compared to individual needs in East Asian cultures, which tends to be the opposite in North American cultures. In a nutshell, relative importance influences the magnitude of dissonance aroused by a given inconsistency, and relative importance often depends on cultural norms and traditions.

Another source of cross-cultural differences at the dissonance elicitation stage may be the standard employed to evaluate one's behavior. As outlined above, Stone and Cooper (2001) argued that people compare their behavior to either personal or normative standards and that the magnitude of dissonance experiences is determined by the discrepancy between one's behavior and the momentarily employed standard. Thus, to the extent that Westerners show a stronger emphasis of personal standards, whereas East Asians tend to exhibit a stronger emphasis of normative standards, the differential importance of personal and normative standards for evaluating one's behavior could affect the magnitude of dissonance experiences elicited by a given behavior. For instance, making a career-related decision that is in line with the expectations of one's parents but inconsistent with one's personal preferences may elicit more dissonance in Westerners compared to Easterners. Conversely, deciding for a career that is in line with one's personal preferences, but inconsistent with the expectations of one's parents may elicit more dissonance in Easterners than Westerners.

DIFFERENCES IN INCONSISTENCY RESOLUTION

If inconsistency has been identified and if this inconsistency has elicited aversive feelings of dissonance, people will typically try to resolve the inconsistency that gave rise to these feelings. According to Festinger (1957), inconsistency can be resolved either by changing one of the involved elements or by adding a cognitive element that resolves the inconsistency. Whereas the first strategy can be described as a change in the (subjective) truth value of one of the involved propositions, the second strategy can be regarded as the search for an additional proposition to resolve the momentary inconsistency (Gawronski & Strack, 2004). Examples of the first strategy include changes in attitudes or behavior; examples of the second strategy include the search for consonant information or trivializing the importance of inconsistency (Festinger, 1957).

As outlined in the general description of inconsistency resolution, the presence versus absence of dissonance-related attitude change is often equated with the presence versus absence of dissonance experiences. Given Festinger's (1957) emphasis on different inconsistency resolution strategies, this equation seems premature. In fact, any change in the chosen strategy to resolve inconsistency is likely to affect the emergence of dissonance-related attitude change (e.g., Simon et al., 1995; Gosling et al., 2006). From this perspective, reductions in dissonance-related attitude change often remain nondiagnostic as to whether these reductions are due to a lack of dissonance experiences or a change in the strategy to resolve inconsistency.

These considerations have important implications for cross-cultural differences in dissonance-related attitude change. For instance, in their overview of cross-cultural studies on cognitive dissonance, Heine and Lehman (1997) cited several studies that failed to show any effect of induced compliance (Festinger & Carlsmith, 1959) in East Asian participants (e.g., Hiniker, 1969; Kudo & Mitsui, 1974; Mondon, 1980; Hirose & Kitada, 1985). Heine and Lehman (1997) interpreted these findings as preliminary evidence showing that East Asians may not experience cognitive dissonance and that cognitive dissonance may be a phenomenon that is limited to Western cultures (but see Sakai, 1981). From the perspective of our three-stage model, this conclusion seems premature. Rather, the obtained differences may also be due to differences in the strategy to resolve inconsistency, such that Westerners may be more likely to reduce inconsistency via attitude change, whereas Easterners may be more likely to reduce inconsistency by means of one of the other three strategies. In our opinion, the most plausible candidate for such strategy differences is the differential tendency to explain behavior in situational terms (Choi et al., 1999). A number of cross-cultural studies on causal attribution have shown that Easterners have a stronger tendency to explain behavior in situational terms than Westerners (e.g., Miller, 1984; Morris & Peng, 1994). Thus, Easterners may explain their counterattitudinal behavior in situational terms regardless of whether situational pressure is high or low (e.g., "the experimenter asked me to do it"), whereas Westerners may explain

their counterattitudinal behavior in situational terms only when situational pressure is high (e.g., "I got a lot of money for doing it"), but not when situational pressure is low. As situational explanations for counterattitudinal behavior can function as additional cognitions that resolve inconsistency (Stalder & Baron, 1998), a potential lack of attitude change obtained for Easterners remains nondiagnostic as to whether it is due to a complete lack of dissonance experiences or to the use of a different strategy to resolve inconsistency. This question can be answered only by including measures of dissonance experiences (e.g., Croyle & Cooper, 1983; Elliot & Devine, 1994; Harmon-Jones, 2000; Losch & Cacioppo, 1990), but not by the mere presence or absence of dissonance-related attitude change. Moreover, even if there is no evidence for dissonance-related affect in East Asians, this lack of aversive feelings could also be related to the identification of inconsistency, such that the enhanced tendency for situational explanations in East Asians could prevent the emergence of inconsistency in the first place (see Harmon-Jones, 2000). In other words, the mere emergence of cross-cultural differences in dissonance-related attitude change does not provide any information as to whether these differences are due to (a) differences in the inconsistency of culturally diverging systems of beliefs, (b) differences in the experiences elicited by an inconsistent belief system, or (c) differences in the employed strategy to resolve inconsistency.

IMPLICATIONS

Our conceptual reanalysis suggests that the general *processes* involved in cognitive dissonance may indeed be universal, as proposed by Festinger (1957), even though cross-cultural differences pertaining to the *contents* of belief systems may function as important moderators of the respective outcomes of these processes. Drawing on a conceptualization of cognitive dissonance as an inherently propositional phenomenon (Gawronski & Strack, 2004), we proposed a three-stage model of inconsistency processes that distinguishes between (a) the identification of inconsistency, (b) the elicitation of dissonance experiences, and (c) the resolution of inconsistency to reduce dissonance experiences (see Figure 13.1). We further argued that the respective outcomes of these steps depend on several important factors. The first step, identification of inconsistency, depends on the simultaneous accessibility of potentially inconsistent cognitions (McGregor et al., 1999), and the assignment of truth values that makes these cognitions factually inconsistent (Gawronski & Strack, 2004). The second step, elicitation of dissonance experiences, depends on the subjective importance of the involved cognitive elements (Festinger, 1957) and the particular standards employed to evaluate one's behavior (Stone & Cooper, 2001). Finally, the third step, inconsistency resolution, depends on the particular strategy used to resolve inconsistency (Festinger, 1957).

Several of these determinants can be related to well-established differences between Eastern and Western cultures. As such, culture may function as an important moderator of the outcomes of each of the three steps, even though the general processes may be universal. With regard to the first step, identification of inconsistency, we argued that cultural differences in accepted beliefs can determine whether or not the acceptance of a particular proposition results in inconsistency. In addition, the contextualized nature of evaluations and beliefs in East Asian cultures may reduce the general likelihood of inconsistency compared to the decontextualized way of thinking in Western cultures. With regard to the second step, elicitation of dissonance experiences, we argued that cultural norms and traditions influence the relative importance of a particular cognition, thereby affecting the relative magnitude of dissonance experiences elicited by the same inconsistency. In addition, the differential use of personal versus normative standards can lead to cross-cultural differences in dissonance experiences arising from the same inconsistency. Finally, with regard to the third step, inconsistency resolution, we argued that culturally transmitted habits may influence the strategies employed to resolve inconsistency, with East Asian cultures showing a stronger tendency to explain counterattitudinal behavior in situational terms, thereby reducing the likelihood of dissonance-related attitude change.

These conclusions have important implications for the study of cross-cultural differences in cognitive dissonance. Specifically, our reanalysis suggests that accurate interpretations of cross-cultural differences require a consideration of the particular mechanisms that underlie these differences. For instance, simply showing that Easterners exhibit less attitude change in the induced compliance paradigm (Festinger & Carlsmith, 1959) than Westerners does not say anything about whether such cultural variations are due to (a) differences in the identification of inconsistency, (b) differences in the dissonance experiences elicited by cognitive inconsistency, or (c) differences in the employed strategy to resolve inconsistency. To address this question, researchers would need to include additional measures tapping into the relevant components of each of the three steps. For instance, measures assessing the aversive feelings arising from inconsistency may provide important information about the elicitation of dissonance experiences (e.g., Croyle & Cooper, 1983; Losch & Cacioppo, 1990; Elliot & Devine, 1994; Harmon-Jones, 2000). Such evidence seems particularly important for current controversies regarding the universality versus cultural dependency of cognitive dissonance (e.g., Sakai, 1981; Heine & Lehman, 1997; Kitayama et al., 2004; Hoshino-Browne et al., 2005; see also Norenzayan & Heine, 2005). Future research distinguishing between the three steps of inconsistency resolution may provide a deeper understanding of cross-cultural differences in cognitive dissonance.

Aside from cross-cultural differences, our conceptual reanalysis of inconsistency processes also has important implications for dissonance research in general. Thirty years ago, Greenwald and Ronis (1978) complained that the notion of logical consistency got lost in modern reformulations of dissonance theory, which in their view have more similarities to theories of self-esteem maintenance compared to Festinger's (1957) original formulation. As such, these reformulations seem

unable to integrate many of the original studies and illustrations that Festinger used to specify his definition of cognitive dissonance. Our three-stage model of inconsistency processes captures Greenwald and Ronis' (1978) concern by emphasizing the crucial role of logical relations in the definition of inconsistency. This emphasis has led to the discovery that dissonance arising from counterattitudinal behavior (Festinger & Carlsmith, 1959) influences ("explicit") propositional evaluations, but not ("implicit") associative evaluations (Gawronski & Strack, 2004; see also Wilson et al., 2000). Notwithstanding this reintegration of logical consistency, our three-stage model seems flexible enough to incorporate many of the assumptions made by reformulations of dissonance theory (e.g., Aronson, 1968; Cooper & Fazio, 1983; Steele & Liu, 1983; Steele et al., 1993; Stone & Cooper, 2001). In fact, our model may even help to refine these assumptions by specifying the particular stage of inconsistency processes that is affected by a given variable. Thus, future research relating the three steps to the variables identified in modern reformulations of dissonance theory may help to further clarify the interplay between cognitive and motivational processes in cognitive dissonance. Such research may also provide deeper insights into the sources of cross-cultural differences pertaining to these variables (e.g., Heine & Lehman, 1997; Kitayama et al., 2004; Hoshino-Browne et al., 2005).

CONCLUSION

In summary, we argued that the general *processes* related to cognitive inconsistency – and thus cognitive dissonance – may indeed be universal, even though cross-cultural differences pertaining to the involved *contents* may function as important moderators of dissonance-related phenomena (e.g., dissonance-related attitude change). This assumption echoes theoretical considerations by Harmon-Jones and Harmon-Jones (2002), who claimed that the motivating force in the resolution of cognitive inconsistency is the dysfunctional effect of inconsistent cognitions on effective action. In line with this notion, we believe that inconsistency may function as a cue to inaccurate components in one's system of beliefs (Quine & Ullian, 1978). Thus, to the extent that inaccurate belief systems can undermine effective action, inconsistency acquires an important function from a pragmatic point of view. As William James (1890, p. 333) described it: "My thinking is first and last and always for the sake of my doing." In our view, cognitive consistency plays a significant role in this regard by facilitating context-appropriate action – a requirement that we deem universal.

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