Papers on Social Representations
Volume 27, Issue 2, pages 3.1-3.24 (2018)
Peer Reviewed Online Journal
ISSN 1021-5573

[http://psr.iscte-iul.pt/index.php/PSR/index]

Bridging Cognitive Polyphasia and Cognitive Dissonance: The Role of Individual Differences in the Tolerance and Negotiation of Discrepant Cognitions

RAMONA MARTINEZ[1]
[1]School of Social Sciences, Ethics Center, University of California, Irvine

ABSTRACT

Cognitive dissonance refers to a mental state in which contradictory cognitions or behaviors cause psychological discomfort (Festinger, 1957). In 1961, Moscovici introduced an alternative phenomenon for cognitive treatment of discordant information: cognitive polyphasia, a state in which an individual retains and utilizes multiple systems of knowledge in making sense of a given social object. Prima facie, these two psychological phenomena appear to be contradictory, with cognitive dissonance theory suggesting individuals maintain cognitive balance through achieving agreement between their cognitions and behavior, and with cognitive polyphasia implying that individuals strategically employ various rationalities, as needed by environmental negotiation. Social representations theorists have yet to fully reconcile how these distinct cognitive phenomena coexist, but have suggested cultural differences may explain preferences for cognitive coherence or the use of multiple knowledge systems. In the present article, I assert that whether one is disposed to experiencing cognitive dissonance or engages in cognitive polyphasic strategy is not only a cultural consideration, but is also guided by individual differences in self-standards, self-monitoring, self-consciousness/self-awareness, and preference for consistency. I attempt to offer theoretical foundations for the integration of cognitive polyphasia and cognitive dissonance perspectives by elucidating how individual differences may explain variance in

Correspondence should be addressed to: Ramona Martinez (Email: ramonam1@uci.edu)

tolerance of inconsonant cognitions. To this end, I recover focus on the *social individual* as the unit of analysis.

Keywords: cognitive dissonance, cognitive polyphasia, individual differences, cognition

Cognitive dissonance refers to a mental state in which contradictory cognitions or behaviors cause psychological discomfort (Festinger, 1957). This psychological tension serves as a motivational force that impels an individual to resolve the dissonance by changing one's behavior, changing one's attitude, or in engaging in cognitive strategies to minimize the perceived discordance. The dissonance-reduction approach selected is typically that which requires the least amount of effort, both cognitively and in relation to external constraints.

In 1961, Moscovici introduced an alternative phenomenon for cognitive treatment of discordant information: cognitive polyphasia, summarized by Jovchelovitch (2007) as "a state in which different kinds of knowledge, possessing different rationalities, live side by side in the same individual or collective" (p. 69). Provencher (2011) elaborates that this "simultaneous use of different types of knowledge" serves to "make sense of a specific social object" (p. 390). As opposed to displacement, in which already-held cognitions are replaced by new or 'evolved' ways of thinking, cognitive polyphasia entails that individuals maintain varying modes of thinking, which are contextually activated based on social setting, enabling individuals to navigate across various social situations (Jovchelovitch, 2007; Moscovici, 2001a).

Prima facie, these two psychological phenomena appear to be contradictory, with cognitive dissonance theory suggesting individuals maintain cognitive balance through achieving agreement between their cognitions and behavior, and with cognitive polyphasia implying that individuals strategically employ various rationalities, as needed by environmental negotiation. Social representations theorists have yet to fully reconcile how these distinct cognitive phenomena coexist, with some psychologists (Jovchelovitch & Priego-Hernandez, 2015) briefly addressing cultural differences (i.e., Western preferences for non-contradiction) in accounting for proclivities for cognitive dissonance and cognitive polyphasia among different public spheres. Jovchelovitch and Priego-Hernandez (2015) suggest cognitive dissonance is "one among various

other ways of coping with" the "dynamic coexistence of ideas," and is particularly aligned with Western thinking (p. 178).

In the broader literature of cognitive differences between Western (interdependent) and Eastern (dependent) cultures, Markus and Kitayama (1991) have observed that those in interdependent cultures are less fixated on internal attributes of the self, and are more so dependent on the social environment in regulating expressive behavior. Self-enhancement, or the practice of distorting of one's self-view to a more positive image, has also been noted as being more characteristic of North American (independent) populations, as opposed to Asian (interdependent) cultures (Heine & Lehman, 1997). Wong (2009) has provided a review on the established body of research indicating cultural differences in cognitive process, particularly dissonance processes. As Markus and Kitayama (1991) note, however, individuals within given cultures will vary in how they construe the self.

My intention in the present article is to expand the conversation regarding differential experiences in cognitive treatment of contradictory knowledge by focusing not only on cultural explanations, but also in exploring individual differences and allowances in tolerance of dissonance. Particularly, I assert that whether one is disposed to experiencing cognitive dissonance or engages in cognitive polyphasic strategy is not only a cultural consideration, but is also guided by individual differences in self-standards, self-monitoring, self-consciousness/self-awareness, and preference for consistency. In order to discuss these levels of difference, I intend to recover the social individual as the unit of analysis of these cognitive phenomena, furthering Provencher's (2011) contention that Moscovici intended to develop cognitive polyphasia from a "more cognitive and individual perspective," as opposed to the group and community levels at which it is so commonly addressed (p. 378). An integration of cultural and personality perspectives may provide the needed theoretical refinement that cognitive polyphasic theory requires. Secondly, in finding lines of convergence between cognitive polyphasia and dissonance theories, I suggest they are not incompatible and hopefully provide the foundation for conciliation of these two distinct literatures. Cognitive dissonance refers to a specific mental state in the confrontation of contradictory information, while cognitive polyphasia is broader in application and refers to the many cognitive outcomes implicated in the negotiation of competing rationalities.

In the sections that follow, I first provide theoretical foundations of cognitive polyphasia and cognitive dissonance, respectively. I then justify my focus on the social individual as the unit of analysis in cognitive polyphasic and cognitive dissonance research before detailing individual differences that may account for differential treatment of inconsonant cognitions among individuals. I next review extant research on cognitive polyphasia and identify areas of rapprochement with cognitive dissonance and individual difference factors. I close in reaffirming complementary theoretical lines between cognitive dissonance, cognitive polyphasia, and the theories of self-regulation identified in this article before suggesting prospective avenues for further research.

COGNITIVE POLYPHASIA: FOUNDATIONS

As alluded to, Moscovici originally noted the existence of cognitive polyphasia in his study on the social representations of psychoanalysis in France. In this formative study, he first systematized his broader theory on social representations: "a system of values, ideas, and practices" which enable "members of a community" to make sense of their environment and communicate with the same "code for social exchange" (Moscovici, 1976, referenced by Duveen, 2001). In his investigation, he found that individuals address a social object utilizing multiple points of reference and varying knowledge systems which become activated based on context and the communicative goals of a given situation (e.g., exerting influence). He termed this phenomenon "cognitive polyphasia" and has suggested that cognitive polyphasia is a necessity in mental life; while Jovchelovitch and Priego-Hernandez (2015) have echoed that cognitive polyphasia is a "basic property of all sociocognitive functioning" necessitated by the plurality of knowledge systems that inhabit the public sphere (p. 164). In extending Moscovici's hypothesis, Jovchelovitch and Priego-Hernandez (2015) proposed that there are three varieties of cognitive polyphasia, or three ways in which an individual can address competing logical systems:

1. Selected prevalence: Contrasting systems of knowledge are retained but retrieved separately at different times and contexts
2. Hybridization: Contrasting systems of knowledge are utilized simultaneously and become intertwined

3. Displacement: One system of knowledge is elected over other knowledge systems in attending to a given social object

Their proposed system provides more specificity as to the possibilities of strategic use of multiple systems of knowledge. While not operating from a cognitive polyphasia perspective, Legare, Evans, Rosengren, and Harris (2012) have also proposed how different explanatory frameworks might be used in tangent by the same individual in identifying three modes of thinking:

1. Target-dependent thinking: different frameworks are used to explain different aspects of a given phenomenon
2. Synthetic thinking: different frameworks are used at once without addressing how such frameworks fit together
3. Integrated thinking: different frameworks are used to explain proximate and ultimate causes of a given phenomenon (i.e., the frameworks have varying levels of explanatory power, with one framework exercising superordinate rationale)

Cognitive polyphasia does not only relate to the existence of multiple rationalities that coexist in society, but also responds to the polyphony of the self as a multifaceted idiographic and social entity that entertains multiple identities and participates in various social groups (Oyserman & Markus, 1998; Wagner et al, 1999). Cognitive polyphasia, then, is a reflection of the multidimensionality of the social self, which is required to adroitly navigate various social circles and their representational fields. The cognitive dissonance approach also appreciates the importance of self-construal. I outline this significance in the following section.

COGNITIVE DISSONANCE: FOUNDATIONS

As previously introduced, cognitive dissonance refers to the psychological discomfort felt when one finds the "existence of nonfitting relations among cognitions" (Festinger, 1957/1989, p. 206). Such dissonance can be derived along multiple lines of disagreement including logical inconsistency, contradiction with cultural mores, exhibiting counterattitudinal behavior, incongruity of a specific opinion against a more general opinion a person holds, or inconsistency with experiences from the past. To experience dissonance, one does not necessarily have to be aware of such discrepancies. Indeed, Festinger (1957/1989) specifies, "only rarely, if ever, are they accepted psychologically *as inconsistencies* by the person involved" (p. 205). The nature of

cognitive dissonance, then, is not unamenable to the previously outlined modes of polyphasic thinking (Jovchelovitch & Priego-Hernandez, 2015; Legare et al, 2012) in which individuals are not forced to confront the inconsistency of their thinking. Only in the instance of cognitive displacement does an individual expressly reject one explanatory framework for another.

Elaborations on the original articulation of cognitive dissonance theory illuminated the importance of other factors in the experience of dissonance. Linder, Cooper, and Jones (1967) identified the significance of choice within dissonance processes and established choice as a prerequisite for feelings of dissonance, as actors must feel their counterattitudinal beliefs or behaviors are freely performed. Moreover, Cooper and Worchel (1970) found that dissonance is only induced when individuals find their counterattitudinal beliefs or behavior produce undesirable consequences. Otherwise, actors appeal to the sentiment of "no harm, no foul." Such findings provide further refinement on the conditions which produce cognitive dissonance.

Cognitive dissonance is also contingent on self-knowledge and self-relevance. Festinger (1957/1989) acknowledged there are multiple "knowledges," which can include "knowledge about oneself" and knowledge about the "world in which one lives," and that various forms of knowledge might include beliefs, values, or attitudes (p. 210). Self-knowledge is particularly important, as different self-concepts cause differential experiences of dissonance. As Festinger noted (1962), if a self-confident person fails, this instance of failure might inspire of feelings of dissonance as it contrasts with his/her expectation of success. However, if a person of low self-efficacy fails, an instance of failure might be consonant with self-expectations and consequently will not induce dissonance. As Stone and Cooper (2000) specified, dissonance requires evaluation of something that is "aversive or threatening to the self" (p. 22). One's self-knowledge, therefore, is crucial in determining what experiences or cognitions inspire dissonance for a given individual.

As summarized by Provencher (2011), social representations theorists also recognize there are multiple kinds of knowledge, such as Moscovici's (1992) typology of the four mental formations (science, religion, ideology and magic), and de-Graft Aikins' (2005) identification of six kinds of knowledge (cultural, political, scientific, scientized/practical biomedical, religious, and emotional). However, these notably lack self-knowledge as a domain of knowledge. This omission, and its integration into the cognitive polyphasic model, may assist in providing needed theoretical elaboration. In the section that follows, I establish the appropriateness of these

individual-level considerations for incorporation in cognitive polyphasic theory by highlighting evidence from contemporary literature and Moscovici's original articulation of social representations theory.

THE SOCIAL INDIVIDUAL AS A UNIT OF ANALYSIS

In their observations of the use of natural and supernatural explanations for phenomena such as illness, death, and the origin of species, Legare, Evans, Rosengren, and Harris (2012) suggest that "certain cognitive characteristics" involved in development will "influence whether a child adopts a single consistent explanation, a coexistence explanation, or attempts to unify seemingly contradictory ideas" (p. 790). They conclude in saying they "anticipate substantial individual differences in coexistence reasoning" (p. 790). Within the social representations tradition, Provencher (2011) has made strides in elucidating the role of individual differences in the selection of cognitive strategy in confronting conflicting information by tying principles of cognitive polyphasia to dual-process theories, particularly the heuristic-systematic model (Eagly & Chaiken, 1993, as referenced by Provencher, 2011) (elaborated on more fully later in this article).

Beyond these contemporary insights, there are several indications in Moscovici's original theorizing in *Psychoanalysis* (1961/1976/2008) signifying that social representations and the concept of cognitive polyphasia may be investigated at both the levels of groups and individuals. Moscovici (1961/1976/2008) notes that individuals are tasked with the complicated undertaking of "elaborating a coherent vision of [their] actions and situation on the basis of derivative elements of diverse origins," and that in such an enterprise, they "constantly find [themselves] in the position of a patient who, after having consulted a number of different specialists […] has been left alone to make the final diagnosis and prognosis that will tell [them] how things stand" (p. xxvii). Such illuminating remarks reveal that while there are various competing social influences that dictate how an individual should interpret phenomena, in the end, the individual must grapple with how to make sense of knowledge communicated from disparate sources of social life. Epistemologically speaking, social representations exist a priori to the individual to serve as initial guides in making objects intelligible, but such representations are not determinate; the individual must still distill meaning for his/herself.

As Moscovici interviewed various social groups in the French public regarding their conceptions of psychoanalysis, he found an emerging theme: that individuals of various walks of life (e.g., students, professionals, and clergy) utilized psychoanalysis for introspection and self-discovery. Psychoanalysis, he observed, helped these individuals shed "light on things they do not know," as well as "to resolve problems and to structure the world. In that sense, it is part of a subjectified collective experience, a cultural habitus" (Moscovici, 1961/1976/2008, p. 120). His analysis illustrates two points of importance. Firstly, it highlights the importance of seeking self-knowledge and clarified self-concept, which is both an important psychological goal and domain of knowledge. Secondly, his analysis interweaves subjective and intersubjective considerations in the study of social representations. Social representations are collectively held (intersubjective) and are internalized and individually re-presented in idiographic sense-making processes (subjective).

Moscovici also noted that social individuals access representations from distinct "zones" of life through their varied roles as such as students, teachers, and professionals. He affirms that "the subject's main efforts are devoted not to understanding that theory in terms of its specific framework, but to emphasizing those perspectives that are in keeping with his or her basic orientation" (Moscovici, 1961/1976/2008, p. 165). Moscovici concludes, "an individual or a collective is, in a word, focused, because in the course of social interaction, they are implicated or engaged in the substance and effects of their judgments or opinions" (Moscovici, 1961/1976/2008, p. 165). In his original articulation of social representations phenomena, Moscovici blended consideration of the individual and collectives as subjects of consideration, and often referenced the individual with his respect to his/her social context and identity.

As subjects negotiate representational fields, they often rely on the "primacy of the conclusion." That is, in evaluating the content and value of an object, subjects often leverage pre-judgments on the object so that it conforms to "norms or social or individual preferences" (Moscovici, 1961/1976/2008, pp. 172-173). More specifically, Moscovici found that the interviewees *began* their assessments of psychoanalysis with their conclusion (e.g., that psychoanalysis is harmful), then proffered premises to support their already-held assumptions. Through the principle of "primacy of the conclusion" and identifying mutual influences of social and individual preferences on one's evaluative process, Moscovici extends, as he does throughout

his initial elaboration on the social representations framework, the complementary nature of individual and social considerations in the negotiation of knowledge.

With respect to disciplinary orientation, Moscovici's social representations theory is decidedly social psychological, with strong appreciation for genetic (i.e., developmental) psychological factors. A cornerstone of social representations theory is that representational structures and processes are ever-evolving. As Jovchelovitch (2007) explicated, such influence is drawn from Moscovici's appreciation of Piaget's developmental framework for cognitive development of the child. As the child interacts with and makes discoveries within her/his world, (s)he must assimilate newly acquired information into his/her existing cognitive schemas, or reinvent his/her world entirely be redefining the known via accommodation. As Jovchelovitch (2007) notes, these ontogenetic processes permeate social representations theory, reflecting the fact that "psychological structures have a history that is both ontogenetic and sociogenetic," with representations being no different (p. 26). When expanding cognitive polyphasic theory, then, ontogenetic and individual-level factors are consistent with levels of analysis within social representations theory.

Lastly, Moscovici's methodology in exploring social representations is individual in nature. With use of questionnaires and interviews, Moscovici studied social representational phenomena as revealed through individual-focused methodologies. Since his example, several studies documenting instances of cognitive polyphasia followed suit and used interviews as their primary modes of inquiry, including Wagner and colleagues' (2000) investigation of social representations of mental illness in India, Priego-Hernandez's (2017) study of social representations of sexual health among young Mexican women, Jovchelovitch and Gervais's (1999) exploration of conceptualization of health among the Chinese of Britain, and Hildering, Consoli, and van den Born's (2012) study of Dutch Protestant Christians' perceptions of evolution. Priego-Hernandez (2017), specifically identifies three general levels of analysis in her study: macro-level (society), relationships (conversations between partners), and micro-level (i.e., "personal understandings"). Such observations offer promise that individual/micro-level considerations may be appropriate within the cognitive polyphasia and social representational framework. In the following section, I further describe the role of self-knowledge and individual differences in dissonance processes while proposing potential approaches for integration with cognitive polyphasia.

THE ROLE OF INDIVIDUAL DIFFERENCES

Individual Differences in Cognitive Polyphasia

Provencher (2011) has provided initial indications of the significance of individual differences in cognitive polyphasic processes in introducing a new conceptual model that marries socio-cognitive approaches and cognitive polyphasia theory. Within the umbrella of dual process theories, the heuristic-systematic model (Chaiken, 1987; Eagly & Chaiken, 1993, as cited by Provencher, 2011) identifies two modes of thinking: heuristic (automatic, fast, unconscious), and systematic (slow, deliberate, conscious). Under this model are two key principles: 1. The least-effort principle (articulating that individuals prefer to operate with the least cognitive effort), and 2. The sufficiency threshold (the level of confidence a person wishes to attain in making a judgment). The sufficiency threshold will vary according to individual difference, such as need for cognition.

In Provencher's proposed model, social representations provide initial orientation for individual thinking regarding a social object, while individual factors such as ability (to acquire and utilize relevant information), need for cognition (the need to partake in challenging cognitive activities), personal relevance, and motives influence subsequent cognitive process. With this, Provencher suggests that cognitive polyphasia might assist individuals with strong need for cognition and high ability satisfy their sufficiency thresholds. I wish to extend insights from this illuminating proposal by pointing to other individual differences that more explicitly address idiosyncratic tolerance and treatment of contradictory information.

Self-Standards in Cognitive Dissonance

Since Festinger's introduction of cognitive dissonance, there have been several theories articulating the role of the self and self-knowledge in dissonance process. These have been reviewed and synthesized by Stone and Cooper (2000) in their proposed self-standards model of cognitive dissonance. Competing theories have viewed self-cognitions as either standards for self-evaluation (self-consistency theories; e.g. Aronson & Carlsmith, 1962, as referenced by Stone & Cooper, 2000), as resources to bolster overall positive self-image upon experiencing dissonance (self-affirmation theories; e.g. Steele, 1988, as referenced by Stone & Cooper, 2000),

or as irrelevant, when self-judgments are based on societal, normative standards (New Look Model, e.g. Cooper & Fazio, 1984, as referenced by Stone & Cooper, 2000).

Stone and Cooper (2000) recognized that empirical evidence has supported all three theoretical positions on the role of self-knowledge in dissonance processes, and have thus integrated them into a single self-standards model by identifying the conditions under which self-cognitions serve as self-standards, resources, or are irrelevant in cognitive dissonance processes. Put succinctly, whether one uses self-standards or societal/normative standards in judging discrepant behavior/cognitions depends on what standards (personal or normative) are most readily accessible at a given time, and if such personal standards are relevant.

In articulating their theory, Stone and Cooper (2000) cite the scholarship of Markus and colleagues (Markus & Kunda, 1986; Markus & Wurf, 1987) and their conception of the "working self-concept," which recognizes the self is a "multifaceted dynamic organization of knowledge," and as such, one's working self-concept is a "subset of self-knowledge" that is retrieved in a given situation (p. 233). This notion of the multidimensional self whose various facets are activated based on context are amenable to the cognitive polyphasic conception of the self as a complex entity that is host to multiple rational frameworks that are employed judiciously based on environmental stimulation. This is one many areas of rapprochement that can bridge these two traditionally divergent theoretical bodies.

Self-Monitoring

Self-monitoring, referring to the tendency to observe, control, and regulate the appearance of the self in social situations (Snyder, 1987), is another matter of individual difference that may illuminate individual variation in the tolerance of dissonant information. Snyder's self-monitoring theory recognizes there are two general types of self-monitoring propensities: 1. Low self-monitors, who "value congruence between who they are and what they do," and 2. High self-monitors, who "monitor or control the images of self they project in social interaction to a great extent" and are highly concerned with situational appropriateness (p. 5).

These varying self-monitoring tendencies are rooted in different conceptions of self or "personal theories" individuals entertain about their own natures. Low self-monitors are said to hold a principled sense of self and value an enduring "'me for all times and places,'" while high self-monitors are recognized as having a pragmatic sense of self that adapts to social contexts as

needed (p. 50). Low self-monitors are thus more likely to be affected by exhibiting behavior that is discrepant from their internal attitudes, while high self-monitors are less concerned with the fidelity of their beliefs and their displayed behavior. The implications of these differences in cognitive dissonance processes have been elaborated on by DeBono and Edmonds (1989), who affirm different situations elicit dissonance among high and low self-monitors. In particular, high self-monitors are most susceptible to feeling dissonance when their chosen counterattitudinal behavior is shown to be against the belief of peers.

The theory of self-monitoring pays particular deference to lay psychology and acknowledges the importance of lay theories, particularly in the context of understanding the self. Operating theories of the self and one's self-knowledge set differential self-standards and expectations for consistency of behavior and cognitions within the self and across contexts. By recognizing this organizing principle of self-knowledge, theories of cognitive polyphasia can be enhanced by considering not only cultural variations in allowance of discrepant information, but also individual thresholds for the tolerance of dissonance.

Self-Consciousness and Self-Awareness

How easily cognitive and behavioral discrepancies are discovered might be dependent upon one's level of self-awareness. Fenigstein, Scheier, and Buss (1975), have identified dispositional differences in self-consciousness, or the tendency to attend to the self. Individuals vary with respect to the extent that they are preoccupied with their own internal states and engage in introspection. It may be reasonable to extract that those who have greater self-consciousness may more easily detect inconsistencies between their cognitions and behaviors.

Duval and Wicklund (1972), who focus on situational self-awareness (as opposed to dispositional/trait self-consciousness), have articulated in their objective self-awareness theory that individuals will tend to avoid self-evaluation, as realized discrepancies between the self and self-standards may induce negative affect. The discovery of this gap between the self and the ideal would also motivate correction of the incongruent behavior or attitude. The extent to which people avoid such self-discovery may inhibit identification of discrepant cognitions and behavior, and hence, feelings of dissonance. Whether discovery of inconsistency incurs psychological discomfort, however, is more directly addressed by the preference for consistency measure.

Preference for Consistency

Individual inclinations for consistent information are more expressly captured in Cialdini, Trost, and Newsom's (1995) measure of the preference for consistency. In addressing the lack of predictive ability and reproducibility of cognitive dissonance research, Cialdini and colleagues identified preference for consistency as a modifier of consistency effects. The researchers identified three elements of preference for consistency:

1. Internal consistency - preference for consistency within the self
2. Public consistency - desire to appear consistent to observers
3. Others' consistency - preference for others to remain consistent

Newby-Clark, McGregor, and Zanna (2002) have found that those with high preference for consistency are more likely to experience negative affect when confronted with inconsistent cognitions, and are also more likely to engage in self-distraction from such inconsistency. Similarly, Senemaud, Mange, Fointiat, and Somat (2014) noted that those who hold high preference consistency are less able to tolerate their discrepant behavior and are more likely to change their behavior to conform to expressed beliefs, particularly when one's preference for consistency is made accessible.

In a review of research findings in preference for consistency research, Guadagno and Cialdini (2010) suggest that future research should investigate whether preference for consistency serves as a moderator of dissonance effects across cultures and suggest it "is conceivable that individuals in collectivist cultures may report lower levels of preference for consistency" and that "individuals high in individualism are more susceptible to consistency-based influence appeals" (p. 161). Their suggestion further highlights the need for integration for cultural and personality perspectives, and supports the current author's contention that rapprochement of macro- and micro-level considerations will provide much needed theoretical elaboration for cognitive polyphasia and dissonance theories. In the next section, I review previously mentioned case studies of cognitive polyphasia in further depth and identify areas which may be supplemented with explanations from individual differences, as well as cognitive dissonance dynamics.

CASE STUDIES: COGNITIVE POLYPHASIA, COGNITIVE DISSONANCE, AND INDIVIDUAL DIFFERENCES

Knowledge Encounters and the Resolution of Contradiction

Cognitive polyphasia is often found at the meeting of cultural fronts. Wagner and fellow researchers (2000) analyzed notions on the etiology and treatment of mental illness in north India, where the introduction of Western medicine stood in juxtaposition to long-standing applications of ayurveda, tantra, and bhuta-vidya traditions to issues of mental health. Likewise, Priego-Hernandez (2017) observed cognitive polyphasia among female Mexican adolescents who wrestled with biomedical and folk knowledge in tending to issues of sexual health. Finally, Jovchelovitch and Gervais (1999) investigated the interaction between use of traditional Chinese medicine and Western medicine among Chinese inhabitants in the UK. In each of these instances, cognitive polyphasia emerges with the negotiation of difference between knowledge systems. When logical registers compete, their co-existence entails a "potential source of contradictions requiring some adaptive or constructive elaboration" (Wagner et al, 2000, p. 303).

Both cognitive dissonance theory and cognitive polyphasia are concerned with the resolution of difference. These theories also share some common elements in their prescriptions for achieving cognitive balance, with cognitive polyphasia further appreciating the complexity of cognitive 'balance.' Cognitive dissonance implicates that the discovery of inconsonant cognitions or counterattudinal behavior invites correction of behavior or thinking to produce alignment, or in engagement in cognitive tactics to protect the self (i.e., defend behavior or belief). Moscovici (1961/1976/2008) also appreciates that people seek non-contradiction, but specified that beyond internal agreement, social agreement is the "ultimate basis of the principle of non-contradiction" (p. 178). The goal of non-contradiction, he says, "is the avoidance of social or individual conflict, and the preservation of uniformity," and particularly, "to ensure that opinions and judgments converge around a point of equilibrium" (pp. 178-179).

Festinger also appreciated that individuals seek social agreement to confirm their views. In studying the adjustment of a religious group whose prediction of the end of the world proved false, Festinger, Riecken, and Schachter (1956), theorized that the group would further promote their beliefs (i.e., proselytize) following the invalidating event in attempts to persuade others and confirm their systems of belief. Following their initial disillusionment about the end of the world (or lack thereof), the religious group behaved as Festinger and colleagues theorized. Between cognitive dissonance and social representations theory more broadly, there is consensus that achieving social agreement is a desirable cognitive outcome. The key distinction between

cognitive dissonance and social representation notions of 'agreement' is the latter's appreciation of the complexity of reaching such agreement. As Moscovici (1961/1976/2008) explicates, it is easier to achieve 'agreement' if things relate to and occupy two bipolar classes; however, in complex social life, objects hold multiple intricate relations between one another, making 'agreement' difficult to determine. Per Moscovici, how people determine what classes objects and ideas occupy is largely a reflection of their social or individual identities. While I have pointed out there are certain micro-level phenomena that social representations and cognitive polyphasia may consider, cognitive dissonance theory might do well to consider the complex notion of agreement that Moscovici proffers.

Intergenerational Tension and Psychological Discomfort

Research on cognitive polyphasia often finds that generations on the cusp of two representational fields (e.g., traditional vs. modern; or cultural heritage vs. host culture) face particular challenges in negotiating incongruities between multiple logical systems. Priego-Hernandez (2017) notes this negotiation requires a "careful handling of tension" (p. 667). Echoing this sentiment, Jovchelovitch and Gervais (1999) affirm that as younger Chinese generations negotiate Western (British) and Chinese frameworks for health, that they face "psychological pain" accompanied with feelings of "guilt, loneliness, and feelings of 'being torn'" (p. 257). Both Wagner and colleagues (2000), as well as Jovchelovitch and Gervais (1999) refer to these tensions as "ambivalence," with Jovchelovitch and Gervais stating this compels individuals into "rethinking themselves and negotiating new identities" (p. 257).

While cognitive polyphasia may serve as an adaptive mechanism for responding to multiple social demands, it is not free from the psychological discomfort. Such psychological discomfort may be considered cognitive dissonance. According to Marková (2003), tension is not a "yes-no concept;" rather, tension may be high or low or may sometimes solely appear as "internal polemics" (p. 156). Such conceptualization of tension is in alignment with cognitive dissonance's contention that dissonance has *magnitude* and that they are varying "degrees of dissonance and degrees of pressure to change" one's attitudes or beliefs (Cooper, 2017, p. 49). Jovchelovitch and Priego-Hernandez (2015) suggested "cognitive dissonance is one possible outcome of cognitive polyphasia," which invites further corroboration of the relationship of these two cognitive phenomena, perhaps placing them more explicitly within a single explanatory

framework (p. 178). The construction of a coherent self-narrative is a psychologically important task (Bruner, 1985), and this is perhaps not yet fully incorporated into the cognitive polyphasic agenda. This presents one possible area of elaboration.

Differential Individual Responses to Cultural and Material Constraints

It is also evident from the case studies that culture places constraints upon individuals' exhibited beliefs and practices. Participants in Wagner and colleagues' study (2000), for instance, "acknowledged that traditional Indian healing has its proper place in the context of the family," "even if they expressed a strong personal preference for 'modern' psychiatric treatment" (p. 308). Such attempts to act in accordance with family expectations may reflect self-presentational or self-monitoring goals to be in alignment with socially significant others. Not all actors value acting in accordance with cultural or familial heritage, however. Wagner et al (2000) noted Nunley's (1996) characterization of Indian psychiatrists as "individuals with motives and attitudes that are in large part culturally determined, and whose choices are socially constrained" (p. 310). In order to defy constraints, these actors "engage in a "competition or comparison" by actively encouraging drug prescriptions to "establish difference from folk PR actioners" (p. 310). These varied actions point to individual differences in reaction to cultural prescriptions for behavior and thinking. While some individuals in a given cultural environment favor social cohesion, others opt to protect personal identity instead. If these differences are explored in depth, they may be attributed to variances in self-standards or preference for consistency. More broadly, Wagner and colleagues' recognition of the "existence and use of competing representations" as "self-protective strategy" corresponds to the cognitive dissonance principle that individuals engage in a range of cognitive tactics in preserving one's sense of self, whether that self-concept is one that is socially harmonious or desires individuation.

Attention and Choice

Other potential areas of convergence between cognitive polyphasia and cognitive dissonance include the matters of attention and choice. When reflecting on disagreements between Western and traditional orientations towards mental health treatment in India, Wagner and researchers (2000) asserted, "the cognitive contradiction between the two representational fields is probably only felt when attention is explicitly directed towards it" (p. 311). As with cognitive dissonance

and theories of self-awareness, feelings of dissonance are induced via self-reflection. Given this, people are often motivated to avoid the self-reflective state to avoid finding and attending to such discrepancies. In Jovchelovitch and Gervais's (1999) investigation of representations of health among Chinese inhabitants of the UK, the researchers observed that "few had any *reflexive awareness* of their own practices," and elaborated "it is not necessary or even desirable for the Chinese to be able to explain their practices" (p. 255; italics in the original). Moreover, the researchers did "not find any evidence of a troubled identity in this group" and noted they "comfortably declare themselves Chinese and use both Chinese and Western knowledge" (p. 256). If we are to extend insights from self-awareness theories to this phenomena, we might posit that this lack of psychological tension may be ascribed to lack of awareness of potential contradictions, or choosing not to see them.

With respect to choice, Priego-Hernandez (2017) noted that that her "rural participants emphasized the practical use of traditional knowledge [over biomedical knowledge]" and that such a decision was "influenced by tangible material needs, rather than preference for one type of medicine" (p. 668). As the researcher expressed, "Established medicine was seen as authoritative and sought after" (p. 668). Given the choice, then, the women she interviewed might opt for 'modern' medical care if not confronted with material limitations. Since true choice was absent in their course of action, this may explain the lack of cognitive dissonance in performing counterattitudinal behavior (i.e., seeking traditional methods of care when Western approaches are deemed desirable).

Joining Explanatory Accounts: Cognitive Polyphasia and Cognitive Dissonance

The possibility of combining cognitive dissonance and cognitive polyphasia treatments of the confrontation of competing cognitions is most expressly illustrated in Hildering et al's (2012) inquiry into Dutch Protestant Christians' rejection of evolutionism and Darwinism. The research team found that while the interviewees generally had favorable views of science, they rebuffed evolution specifically, citing it as incompatible with Biblical truth. More particularly, they rejected evolution as being non-scientific despite demonstrating limited understanding of scientific method. The study utilized the Public Understanding of Science framework (Bauer, Allum, & Miller, 2007, as referenced by Hildering et al, 2012) to investigate this phenomena. In summarizing their findings, the researchers commented that their interviewees exhibited

cognitive polyphasia, but also found it "curious that all respondents in the interviews seem to need the scientific rationale for their non-scientific decision to reject evolution" (p. 996). They posited that this line of reasoning "suggests that the respondents are not entirely comfortable with the consistencies between the religious and scientific modes of knowledge" (p. 996). Elaborating further, Hildering and colleagues suggest this reveals urges for consistency and addresses subjects' need for reduction of dissonance. This study best demonstrates that cognitive dissonance phenomena can be considered in tandem with cognitive polyphasic theory. To reiterate Jovchelovitch and Priego-Hernandez's point, cognitive dissonance is just one potential outcome of cognitive polyphasia. In the present section, I have identified some specific instances in which observations in cognitive polyphasic research may be supplemented by explanations from cognitive dissonance and individual difference factors. I now close the present article in affirming general lines of theoretical agreement between these two theoretical bodies and proposing future areas for research.

CLOSING REMARKS AND AREAS FOR FUTURE RESEARCH

In terms of theoretical orientation, both cognitive dissonance and cognitive polyphasia are phenomenological, that is, they are concerned about the world as experienced by actors. Cognitive polyphasia in particular is concerned with the intersubjective reality created between actors, while cognitive dissonance is concerned with mental representations of individuals (including representations of other people, social groups, and the world more broadly) (Cooper, 2017). From the onset of his articulation of social representations theory, Moscovici (1961/1976/2008) was keen to distinguish between individual representations and social representations (as established by his intellectual ancestor, Durkheim). However, representational activity consists both of intersubjective and subjective creation, which in turn creates both social and intrapsychic tensions that must be resolved. A comprehensive theory on human cognition might do well to consider both levels of analysis.

The origins of the notion of the 'self' in both self-awareness and social representations perspectives are held in common. Within self-awareness theories, the concept of self originates with Mead (1934) and symbolic interactionist perspectives (Pyszczynski, Hamilton, Greenberg, & Becker, 1991; Silvia & Duval, 2001). Self and self-reflection is possible, Mead articulated,

through imagining one's self from the perspective of real and imagined others (i.e., the "generalized" other). Likewise, social representations theorists appreciate Mead's contribution in uniting the individual and social (Moscovici, 1961/1976/2008; Jovchelovitch, 2007). Per Jovchelovitch (2007), the internalized ability to take perspective of the generalized other is "integral to the development processes of individual and socialization" (p. 86). The self, as articulated in self-awareness and social representations theories, is one of individual and social constitution.

Finally, both theories appreciate the role of motivation in knowledge negotiation. Individual differences exert their influence in cognitive process, as dispositional tendencies guide how individuals perceive, respond to and craft their lifeworlds. As Snyder (1987) expressed, people "structure the circumstances of their lives to maximize the fit between their self-conceptions and their social behavior" (p. 32). The theories of cognitive dissonance, cognitive polyphasia, and of the self that are utilized in this article all recognize that the social actor does not disinterestedly acquire information, but bends them to his or her purpose (e.g., to confirm belief, to maintain cognitive balance, to enhance one's vision of one's self). The construction of representations of the self in particular is no disinterested task, and is always marked by "concrete motives such as power, status, self-esteem, etc." (Jovchelovitch & Glăveanu, 2012, p. 175). Those who have pragmatic or principled conceptions of self, or high or low preferences for consistency, will interpret information and construct representations to serve their personal theories of self. Cultural prescription, along with individual thresholds, inform whether a person might utilize or reject contradictory cognitions.

The present exploratory article highlighted areas of convergence between cognitive polyphasia and cognitive dissonance theories, affirming they are not inherently incompatible. While social representations theory provides a guide in understanding knowledge of cultural objects, it is also important to consider self-knowledge and how idiosyncratic theories of self influence behavior and construal of information. Such considerations may enhance cultural explanations for variance in the treatment of inconsonant cognitions or rationalities. Perhaps new research can integrate social representations and traditional cognitive perspectives to create unified accounts of socio-cultural/socio-personal explanation.

In continuing in the spirit of other works on cognitive polyphasia, future endeavors might seek to uncover cognitive polyphasia at the meeting of cultural fronts, especially with respect to

issues of intergenerational significance. As these analyses are pursued, researchers might point to cognitive dissonance and individual differences to account for phenomena not explicitly addressed by cognitive polyphasia, such as differential experiences of tension or reactions to cultural constraint (as in the case of the Wagner et al, 2000). The elements of self-monitoring and self-consciousness can be identified and measured directly, as these constructs have been mapped to scales (see Snyder, 1974 for self-monitoring scale; Scheier & Carver, 1985 for self-consciousness scale). Perhaps one might find that low-self monitoring or high self-consciousness is associated with cognitive dissonance, or that high self-monitoring or low self-consciousness co-occurs with cognitive polyphasia. However, introduction of empirical scales with the qualitative nature of social representations theory should be carefully incorporated; although they are not entirely incompatible with previous quantitative methodologies (e.g. use of questionnaires, Moscovici, 1961/1976/2008).

Moscovici (1961/1976/2008) advised that if behavior and knowledge are to be understood, they should be understood in an instrumental way. Social representations serve to make social life intelligible. How we understand objects or ideas is in relation to the stock of other known objects, and this constellation is a reflection of both social influence and personal identity. The next phase of research may more fully uncover the relation of internal polemics and social tension, as well as more fully flesh out a theory of cognitive agreement, further unifying social representation and cognitive dissonance viewpoints.

REFERENCES

Bruner, J. (1985). Narrative and paradigmatic modes of thought. In E. Esiner (Ed.) *Learning and teaching the ways of knowing* (pp. 97-115). Chicago, IL: University of Chicago Press.

Cialdini, R.B., Trost, M.R., & Newsom, J.T. (1995). Preference for consistency: The development of a valid measure and the discovery of surprising behavioral implications. *Journal of Personality and Social Psychology*, *69*, 318-328.

Cooper, J. (2017). Cognitive dissonance: Revisiting Festinger's end of the world study. In J. R. Smith & S. A. Haslam (Eds.), *Social psychology: Revisiting the classical studies* (2nd ed., pp. 43-57). London, UK: Sage.

Cooper, J., & Worchel, S. (1970). The role of undesired consequences in the arousal of cognitive dissonance. *Journal of Personality and Social Psychology*, *16*, 312-20.

DeBono, K.G., & Edmonds, A.E. (1989). Cognitive dissonance and self-monitoring: A matter of context? *Motivation and Emotion, 13*(4), 259-270.

Duval, T. S., & Wicklund, R. A. (1972). *A theory of objective self-awareness*. New York: Academic Press.

Duveen, G. (2001). The power of ideas [Introduction]. In S. Moscovici (Author) & G. Duveen (Ed.), *Social representations: Explorations in social psychology* (pp. 1-17). New York, NY: New York University Press.

Fenigstein, A., Scheier, M.F., & Buss, A.H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology, 43*(4), 522-527.

Festinger, L. (1957). *A theory of cognitive dissonance.* Evanston, IL: Row, Peterson.

Festinger, L. (1962). Cognitive dissonance. *Scientific American*, *207*(4), 93-106.

Festinger, L. (1989). A theory of cognitive dissonance. In S. Schachter & M. S. Gazzaniga (Eds.), *Extending psychological frontiers: Selected works from Leon Festinger* (pp. 201-237). New York, NY: Russell Sage. (Original work published 1957)

Festinger, L., Riecken, H.W., & Schachter, S. (1956). *When prophecy fails.* Minneapolis, MN: University of Minnesota Press.

Guadagno, R.E., & Cialdini, R.B. (2010). Preference for consistency and social influence: A review of current research findings. *Social Influence, 5*(3), 152-163.

Heine, S.J., & Lehman , D.R. (1997). The cultural construction of self-enhancement: An examination of group-serving biases. *Journal of Personality and Social Psychology*, *72*, 1268-1283.

Hildering, P., Consoli, L., & van den Born, R. (2012). Denying Darwin: Views on science in the rejection of evolution by Dutch Protestants. *Public Understanding of Science*, 22(8), 988-998.

Jovchelovitch, S. (2007). *Knowledge in context: Representations, community and culture*. East Sussex, UK: Routledge.

Jovchelovitch, S., & Gervais, M-S. (1999). Social representations of health and illness: The case of the Chinese community in England. *Journal of Community & Applied Social Psychology, 9*, 247-260.

Jovchelovitch, S., & Glăveanu, V.P. (2012) Motivation and social representations. In: R. Harre & F.M. Moghaddam (Eds.), *Psychology for the third millennium: Integrating cultural and neuroscience perspectives* (pp. 166-181). London, UK: Sage.

Jovchelovitch, S., & Priego-Hernandez, J. (2015). Cognitive polyphasia, knowledge encounters and public spheres. In G. Sammut, E. Andreouli, G. Gaskell, & J. Valsiner (Eds.), *The Cambridge handbook of social representations* (pp. 163-178). Cambridge, UK: Cambridge University Press.

Legare, C.H., Evans, E.M., Rosengren, K.S., & Harris, P.L. (2012). The coexistence of natural and supernatural explanations across cultures and development. *Child Development*, *83*(3), 779-793.

Linder, D.E., Cooper, J., & Jones, E.E. (1967). Decision freedom as a determinant of the role of incentive magnitude in attitude change. *Journal of Experimental Social Psychology, 26*, 228-243.

Marková, I. (2003). *Dialogicality and social representations: The dynamics of mind.* Cambridge, UK: Cambridge University Press.

Markus, H.R., & Kitayma, S. (1991). Culture and the self: Implications for cognition, emotion and motivation. *Psychological Review, 98*, 224-253.

Mead, G. H. (1934). *Mind, self, and society* (C. W. Morris, Ed.). London, UK: University of Chicago Press.

Moscovici, S. (1998). The history and actuality of social representations. In U. Flick (Ed.), *The psychology of the social* (pp. 209-247). Cambridge, UK: Cambridge University Press.

Moscovici, S. (2001a). Ideas and their development: A dialogue between Serge Moscovici and Ivana Marková (Interview by I. Marková). In G. Duveen (Ed.), *Social representations: Explorations in social psychology* (pp. 224-286). New York, NY: New York University Press.

Moscovici, S. (2001b). The phenomenon of social representations. In G. Duveen (Ed.), *Social representations: Explorations in social psychology* (pp. 18-78). New York, NY: New York University Press. (Original work published 1984).

Moscovici, S. (2008). *Psychoanalysis: Its image and its public*. Cambridge, UK: Polity Press. (Originally published in 1961 and 1976).

Newby-Clark, I.R., McGregor, I., & Zanna, M. P. (2002). Thinking and caring about cognitive inconsistency: When and for whom does attitudinal ambivalence feel uncomfortable? *Journal of Personality and Social Psychology*, *82*, 157–166.

Oyserman, D., & Markus, H. R. (1998). Self as social representation. In U. Flick (Ed.), *The psychology of the social* (pp. 107-125). Cambridge, UK: Cambridge University Press.

Priego-Hernandez, J. (2017). Sexual health in transition: A social representations study with indigenous Mexican young women. *Journal of Health Psychology*, *22*(5), 661-673.

Provencher, C. (2011). Towards a better understanding of cognitive polyphasia. *Journal for the Theory of Social Behaviour*, *41*(4), 377-395.

Pyszczynski, T., Hamilton, J.C., Greenberg, J., & Becker, S.E. (1991). Self-awareness and psychological dysfunction. In C.R. Snyder & D.R. Forsyth (Eds.), *Handbook of social and clinical psychology: The health perspective* (pp. 138-157). New York, NY: Pergamon Press.

Scheier, M. F., & Carver, C. S. (1985). The Self-Consciousness Scale: A revised version for use with general populations. *Journal of Applied Social Psychology*, *15*, 687-699.

Sénémeaud, C., Mange, J., Fointiat, V., & Somat, A. (2014). Being hypocritical disturbs some people more than others: How individual differences in preference for consistency moderate the behavioral effects of the induced-hypocrisy paradigm. *Social Influence, 9*(2), 133-148.

Snyder, M. (1974). Self-monitoring of expressive behavior. *Journal of Personality and Social Psychology, 30*(4), 526-537.

Snyder, M. (1987). *Public appearance, private realities: The psychology of self-monitoring.* New York, NY: W.H. Freeman.

Silvia, P.J., & Duval, T.S. (2001). Objective self-awareness theory: Recent progress and enduring problems. *Personality and Social Psychology Review, 5*(3), 230-241.

Stone, S., & Cooper, J. (2001). A self-standards model of cognitive dissonance. *Journal of Experimental Social Psychology, 37,* 228-243.

Wagner, W., Duveen, G., Verma, J., & Themel, M. (2000). 'I have some faith and at the same time I don't believe' — cognitive polyphasia and cultural change in India. *Journal of Community & Applied Social Psychology*, *10*(4), 301-314.

Wong, A.H.C. (2009). Cognitive dissonance: A comprehensive review amongst interdependent and independent cultures. *The Journal of Educational Thought (JET) / Revue De La Pensée Éducative*, (3), 245.

RAMONA MARTINEZ is a Tobis Fellow at the Ethics Center at University of California, Irvine. Trained as a socio-cultural psychologist, her previous research centered on political lay knowledge and moral economy. Her current research addresses self-knowledge, individual differences, cognitive/affective processes, and self-regulation. University of California, Irvine – ramonam1@uci.edu