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Mai Nguyen-Phuong-Mai,

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A critical analysis of cultural metaphors and static cultural frameworks with insight from cultural neuroscience and evolutionary biology

Mai Nguyen-Phuong-Mai
Amsterdam University of Applied Sciences, Amsterdam, The Netherlands

A critical analysis of cultural metaphors

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Abstract

Purpose – The purpose of this paper is to conduct a critical analysis to address cultural metaphors – a much overlooked aspect of cross-cultural studies. Mainstream cultural metaphors (e.g. the iceberg, the software of the mind, the onion, and the distance) are not only limited in number, but are also overwhelmingly based on the static paradigm – as opposed to the dynamic paradigm that is often sidelined in academic discourse.

Design/methodology/approach – The paper introduces the Diagram of Diversity Pathways – an interdisciplinary framework that sheds some light on how the inherent meaning and heuristic orientation of static cultural metaphors may stand at odds with evidence from the newly emerged field of neurobiology.

Findings – The implications of these metaphors are called into question, namely, culture is all about differences; values are stable; values guide behaviors; and values are seen as binaries.

Research limitations/implications – The paper suggests that theorists and practitioners should pay more attention to the contribution and scholarly work of the dynamic paradigm since there appears to be substantial compatibility between them.

Originality/value – The matching of neurobiology and dynamic paradigm brings into focus alternative metaphors which not only offer insightful perspectives but also may open doors to perceive culture in a new way. Furthermore, cultural metaphors deserve more academic scrutiny because metaphors and theory development can have a symbiotic existence.

Keywords Interdisciplinary, Cultural metaphor, Cultural neuroscience, Dynamic cultural paradigm, Evolutionary biology, Static cultural paradigm

Paper type Research paper

Introduction

Metaphors are powerful instruments of brain functioning. In their widely influential monograph *Metaphors We Live By*, Lakoff and Johnson (1980) pointed out that humans think and frame reality in terms of metaphors, for example, “life is a journey.” Conceptual metaphors can be understood as mapping between a relatively abstract domain called the “target” (life) and a relatively concrete domain called the “source” (journey). Since the study of Lakoff and Johnson, metaphor, as a matter of thought, has reached far beyond the realm of linguistics and become an important rhetorical device in a wide range of multimodal communication situations, studies of management, organization, and society (Gannon, 2004).

Culture is a fuzzy concept, and several metaphors have been widely used to help users understand its complexity. One of the most popular metaphors, initially mentioned by Hall (1976) and later on developed by French and Bell (1995), is a floating “iceberg” with its tip visible above the water and most of its mass submerged under the water. It implies that cultural clashes happen because we could not see this hidden mass. The “onion” (Hofstede and Hofstede, 2005) is another popular metaphor which has three easy-to-change layers (symbols, heroes, and rituals) and the very stable core (values). Hofstede also emphasized the stability of values by proposing another metaphor, the “software of the mind.”



It implies that culture is like a software, deeply installed in the national psyche, guiding actions and behaviors by a set of values. In international management, the metaphor of “cultural distance” introduced by Kogut and Singh (1988) has gained a broad acceptance. It measures the magnitude of differences in national culture with the assumption that these differences are stable, rational, and quantifiable.

Major cultural metaphors are limited to those listed above, and all of them belong to the static paradigm of culture. Literature of this paradigm has dominated the field of international and cross-cultural management (Fang, 2005-2006), with a strong focus on differences, with assumptions that culture is stable over time, using bipolar dimensions (e.g. collectivism vs individualism) and nation-state as a proxy independent variable to analyze national cultures which deem possible to compare using standardized measurements. As a result, cultural metaphors developed by scholars of this paradigm reflect the static characteristics of the approach. Stability and rigid boundaries are notions that triumph in the iceberg, the onion, the software, and the distance. On the contrary, the dynamic paradigm of culture builds upon the notion that culture evolves over time (Adam and Markus, 2001; Hermans, 2001). It questions the static and binary construct of values (Oyserman *et al.*, 2002) and proposes that multiple solutions or opposing values are comparatively existential in an integral context (Osland and Bird, 2000). With a modest standing, the dynamic cultural metaphors are significantly outnumbered by the statics, and none is popular. On the theoretical front, the “war” between these paradigms has been going on for a while (Lowe *et al.*, 2012), but it hardly ever touched the topic of metaphors. Only recently, Bennett (2013a) criticized the iceberg of reification in a popular blogpost. He then called for the metaphor to “retire.” In response, 42 interculturalists discussed the issue and proposed many alternatives: a “building bridge,” the “dark matter,” a “Rubik cube,” the “stance of a person’s will,” even an “Alka-Seltzer dropped into a glass.”

This paper was inspired by this timely dialogue. Its purpose is to lend academic inferences to the discussion with insight from a newly emerging field of cultural neuroscience and related outcomes from the established field of evolutionary/environmental biology. It is with this interdisciplinary approach that we hope to shed light on the way we view cross-cultural research in general and the use of cultural metaphors in particular.

Given that “metaphor” and the insight from “evolutionary biology and cultural neuroscience” provide the defining thread throughout the analysis, this paper begins with a review of metaphor and the role of metaphor in a cognitive process and theory development. Understanding the significance of metaphors and how they work will help us to critically look at the metaphors used in cross-cultural studies and to discuss their impact. The paper then introduces a framework called The Diagram of Diversity Pathways to demonstrate the dynamic role of evolutionary biology and cultural neuroscience in the diversity of culture. Based on this framework, some of the most critical implications of these metaphors are called into question, namely, culture is all about differences; values are stable; values guide behaviors; and values are seen as binaries. The paper concludes with a discussion and suggestions on further research.

The significance of metaphors

The idea that much of our ordinary conceptual system is metaphorical in nature (Lakoff and Johnson, 1980) and metaphorical understanding of situations arises independent of language is one of the seminal moments in the theoretical development of linguistic studies. In essence, the source domains are linked with the target domains via embodied experiences. For example, when one says “warm affection,” the source (temperature) is metaphorically used to describe the target (affection) because of our experience with physical care in early childhood. This embodied experience perpetuates “hugs” and “heat” together. At the level of neural wiring, the experience of hugs and heat links two corresponding nodes in different

brain regions, creating a circuit that will be strengthened through time. Later on in life, “affection” is linked with “warmth” as a result of the neural connection between areas in the brain that corresponds to the source and target domain (Kövecses, 2005).

Metaphor is defined as “a way of seeing a thing as if it were something else” (Lakoff and Johnson, 1980). By making use of an embodied metaphorical thought, we can tie the familiar to the unknown (Inns, 2002). Metaphors serve as a vehicle for contemplating concept at higher levels of abstraction (Morgan, 2006), an explicatory tool to facilitate the creation and interpretation of social reality (Putnam *et al.*, 1996). Since metaphors help constitute reality, they are powerful in guiding action, and vice versa, the employment of metaphors results in behaviors that correspond with the metaphor because we subconsciously want a coherent experience (Burr, 2003; Ford and Ford, 1995; Lakoff and Johnson, 1980; Tsoukas, 1993). In organizational studies, certain metaphors are used to promote morale and cohesion (Akin and Schultheiss, 1990), and managers are advised to purposely change them to influence how individuals perceive and function within an organization (Marshak, 1993, p. 14).

Metaphors are also powerful catalysts for eliciting new insight, encouraging us to think and act in novel ways (Burr, 2003; Cornelissen, 2005; Inns, 2002; Morgan, 2006). For this reason, metaphors play a quintessential role in theory development. In his award-winning article on “disciplined imagination,” Weick (1989) suggested that when theorists design, they conduct and interpret mental experiments where they rely upon metaphors to provide them with vocabularies and images to understand, express, map, and construct complex and abstract phenomena. Imagination takes place through a source, i.e. a simulated image, and theorists can actively select theoretical representations and retain them for the target subject under consideration. In the same vein, many studies have emphasized the heuristic power of metaphors in schematizing new theoretical perspectives, opening up new research directions, and laying out the groundwork for investigation (Cornelissen, 2005; Morgan, 2006; Oswick *et al.*, 2002). Since metaphors constitute one of the primary ways by which theorists frame and analyze phenomena, they have become a staple of social science (Kaplan, 1964).

Benefits withstanding, due to the nature of serving as a substitute for an unobserved reality, the use of metaphors risks oversimplification since they only offer a partial view (Inns, 2002; Morgan, 2006; Shenkar *et al.*, 2008). Their conceptual simplicity carries with them the danger of “premature closure” as “competing or complementary inputs from other disciplines are blocked, confining scholarly treatment to a single, narrow lens that a confining metaphor then serves to freeze” (Shenkar *et al.*, 2008, p. 907).

If we acknowledge the significance as well as the consequence of a metaphor, it should be of special value to consider those cultural metaphors used in the mainstream literature of cross-cultural communication and management such as the iceberg, the software, the onion, and the distance. We should question how they, as metaphors of choice, have come to present culture, the impact they have exerted in theories and practices, and their validity when put in the light of other disciplines. In the next section, we articulate a theoretical rationale of how culture dynamically interacts within a web of driving factors such as environment, gene, neurons, and behaviors. We then proceed to investigate the aforementioned cultural metaphors by matching them with this framework of interdisciplinary approach.

The diversity pathways of culture

In the eighteenth and nineteenth century, the study of human diversity was accelerated with the emergence of two disciplines: evolutionary biology and anthropology. However, the development in these two fields has been very divergent. Only in the last few decades, we start to witness theoretical attempts to integrate cultural and neurobiological approaches (Johnson, 1997), and more recently, with the emergence of a biocultural co-constructivism

theory (Li, 2003). As a result, some of the most impressive interdisciplinary studies on culture have been conducted by natural scientists who pointed out that culture is an inseparable part of biology (Richerson and Boyd, 2005). The situation is “a wee bit of irony,” as commentator McGrew (2006) admitted that we need colleagues from natural sciences to convince us that nothing about culture actually makes sense, unless being put under the interdisciplinary light with biology. So how are culture, environment, genes, and neurons related to one another? The following Diagram of Diversity Pathways (Nguyen-Phuong-Mai, 2017, adapted and further developed from Chiao *et al.*, 2014) visualizes this dynamic relationship and will act as a theoretical rationale for references in the later sections, when we critically look at metaphors in cross-cultural studies (Figure 1).

Pathway: culture – gene – environment

Culture, in terms of traditions passed from one generation to the next, is not limited to humans (Laland and Hoppit, 2003), yet human culture is unique in the sense that it is cumulative. For animals, their tradition is simple. Mostly, their genes tell them how to survive, and this survival is largely dependent on genetic improvements such as better wings, feathers, shells, claws, poisons, etc. For humans, genes have largely given that role to culture – a driving force that enables humans to accumulate knowledge to an extent which could not be achieved by a single generation. Culture, not genes, gives us most of the information we need: the language we speak, the behavior that fits in, the friend to make, and the enemy to kill. In short, as the biologist Pagel (2012) concluded in his study – praised by *Nature* to be “the best popular science book on culture so far” – culture has made the human species a spectacular ecological success.

However, the power transition from genes to culture is not mutually exclusive. In fact, as the gene - culture co-evolution theory posits (Boyd and Richerson, 1985), genes are crucial mechanisms in turning useful cultural values into genetic traits, and vice versa (Richerson and Boyd, 2005). Regions of the world with heightened pathogen prevalence in the environment endorse collectivistic values and practices due to the antipathogen defense they serve (Chiao and Blizinsky, 2010; Fincher *et al.*, 2008; Murray and Schaller, 2010). Similarly, the seven-repeat allele variant of the dopamine D4 receptor is linked with novelty seeking, and is extremely prevalent in South America, which is the result from natural

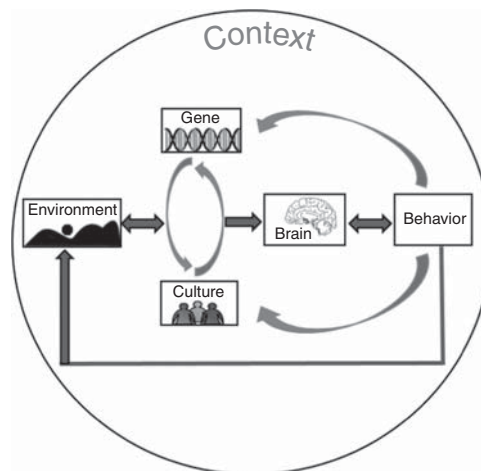


Figure 1.
The diagram of
diversity pathways

Source: Nguyen-Phuong-Mai (2017, p. 34)

selection of a migration gene among nomadic people (Chen *et al.*, 1999). In short, nature and nurture are both active in dynamically shaping the diversity of human cultures. Following a vicious circle of cause and effect, as shown in the study of Chiao and Blizinsky (2010), what has been culturally “nurtured” long enough (collectivistic) will slowly become “nature” with genetic traits (e.g. short allele of the serotonin transporter polymorphism gene (5-HTTLPR)). In turn, environment drives nature with genetic traits (the short allele of 5-HTTLPR) in the direction that reinforces the behaviors that are part of the culture (collectivistic). This dynamic interaction aims at the ultimate goal of evolving a culture that is the survival strategy for humans to advance.

Pathway: culture – gene – brain

The brain takes guidance from genes to direct behaviors. However, brains across different cultures and contexts do not work in the same way, as the neural functions are shaped by cultural circumstances and social experience. Just like a muscle can change with exercises, we can develop our brain and induce changes in both its functions and structure. For example, Buddhists showed reduced neural processing of self-relatedness, arguably due to the doctrine of “anatta” (no-self) in Buddhism (Han *et al.*, 2010); occipital regions in blind people can be recruited to process sound instead of vision (Gougoux *et al.*, 2009); London cab drivers have bigger gray matter volume in their posterior hippocampus as a result of memorizing 25,000 streets (Maguire *et al.*, 2000). Similar change has been found in those who juggle (Draganski *et al.*, 2004), meditate (Tang *et al.*, 2012), or dance (Calvo-Merino *et al.*, 2005) as a profession or regular practice.

The culturally patterned brain enables us to voluntarily take actions that are appropriate in a specific culture (Freeman *et al.*, 2009). Due to this plasticity, our brain can physically rewire itself so we can forge new path ways, create new habits, and respond to various demands of the cultural environment (Rapp and Bachevalier, 2003). In fact, we do not need intensive training to see how malleable the brain is. People who are primed by subtle cultural cues will have responsive neural reactions that correspond with those cues, regardless of their original cultural backgrounds (Wang *et al.*, 2013). The brain’s plasticity enables the acquiring and representing of multiple cultures (Hong *et al.*, 2000) in our mind, so that we can switch between values simultaneously, depending on the given priming culture (Chiao *et al.*, 2010; Peng and Knowles, 2003; Lin *et al.*, 2008; Harada *et al.*, 2010; Obhi *et al.*, 2011; Sui and Han, 2007; Sui *et al.*, 2012; Wang *et al.*, 2013).

Pathway: the impact of behavior

The brain’s plasticity shows that while neurons direct behaviors, repeated behaviors change the very structure and function of the brain as well. In the same bidirectional way, behaviors are not only the result, but also a driving force in the potential change of genes, culture, and environment.

First of all, behaviors can modify the DNA. For example, within a short period of only three months, changes in behaviors could turn on or off 500 good and bad genes (Ornish *et al.*, 2008). In another study, economic status and associated lifestyles showed great influence on genes that control cognitive performance in children (Tucker-Drob *et al.*, 2011). The reason why identical twins have the same genes, yet they can have very different personalities, even physical traits, is because genes can be modified by the choice we make every day.

Second, while culture has mostly replaced genes in giving guidance to our behaviors, this interaction is also a two-way street. Social learning allows behavior to be a dynamic force that both reflects and reshapes cultural values at the same time (Swidler, 1986). For example, the strict state-mandated one-child policy in China has decidedly transformed the entrenched cultural value of gender equality, filial piety, and patrilineality. This policy has created a value shift since daughters are expected to be bread winners and to have just as

many responsibilities as sons do (Sudbeck, 2012). Even when the act is against the belief, repeated behavior can change attitudes and eventually deep-seated values. In order to avoid cognitive dissonance – a profound inconsistency between behavior and belief – people will try to establish their psychic equilibrium by consciously making themselves believe what they have said and done, hence changing their norms and values to make it in accordance with their behaviors (Aronson, 1992).

Context as indicator

Context is represented by a circle that envelops all varieties of interaction. From the viewpoint of culture as a survival strategy that responds dynamically to internal and external factors, context becomes the ultimate power in terms of predicting the “change” within and between cultures. It implies that particular situations and circumstances will influence the interactions, prompting environment, genes, culture, brain, and behaviors to develop, adapt, and change in a particular way. The role of context is so crucial in understanding changes that Osland and Bird (2000) suggested “indexing” context instead of indexing countries, and Oyserman *et al.* (2014) put forward the concept of “culture-as-situated cognition.” Context helps us to understand complex aspects of change such as paradoxes and the dynamic speed of change across various time frames. From this point of view, understanding culture and its diversity becomes a quest of learning not only what culture “is,” but also how culture “responds” and what kinds of circumstances and situations drive these responses. As contexts differ, so do the speed and nature of the change.

To conclude, the Diagram of Diversity Pathways demonstrates five factors that underline the immense diversity we see in culture-related development of the human species, down to the level of gene and neuron. All factors dynamically and simultaneously relate to each other. Each factor is both a driving force and is under the impact of other factors at the same time. None of these factors is static. Cultural, neural, and genetic plasticity lead to an incredible behavioral ability to adapt to novel input and environment pressures across multiple levels of analysis (Chiao *et al.*, 2014). Human beings, hence, are not only the product of culture and its interaction with neurons, genes, and environment, but also active agents in producing culture via our actions, changing our own genetic and neural makeup, while relentlessly shaping and reshaping the surrounding environment.

In the following sections, the paper will critically look at the mainstream cultural metaphors frequently used in cross-cultural studies, bearing in mind: the powerful functions of metaphors that entwine thought, meaning, perception, and behavior; and the contextual, cultural, genetic, neural, and behavioral plasticity and their dynamic interaction in shaping various cultural diversity pathways.

Culture as differences?

The iceberg metaphor was first mentioned in Hall’s (1976) seminal book *Beyond Culture*. Its significance emerged during the Cold War, out of a fierce competition between opposing ideologies and world powers. International diplomacy was characterized by distrust, tension, and readiness for reprisal. However, while 90 percent of all Russian diplomatic staff, including officials, secretaries, and chauffeurs, spoke the local language, the American diplomatic corps seldom learned the language or the culture of the country to which they were assigned (Leeds-Hurwitz, 1990). Hall was employed to educate American diplomats to understand how and why cultural differences could contribute to the failure of their missions. In this context, it is understandable that Hall regarded cultural differences as a starting point, and with great caution. His book opens with an introduction of contemporary conflicts, potential turmoil, and describes the emergence of China, Japan, and Latin America with “the demanding to be recognized in their own right” as “crisis” (p. 2).

Biased theories

Psychologically, the iceberg metaphor tends to emphasize the “dark side” of culture by focusing predominantly on the adverse consequences of differences. It implies the assumption that “culture is more often a source of conflict than of synergy” and “cultural differences are a nuisance at best and often a disaster” (Hofstede, 2008). By indicating that the hidden part of the iceberg is also the most critical component and the true essence of a culture, this metaphor prepares for a defensive and reactionary state of mind, typical of the Cold War era. Culture is important, but it is a danger and a mystery. It is hidden, invisible, unknown, and all about differences.

Understandably, the static paradigm and the “problem-focused view” of culture have guided hypothesis formulation and empirical testing in much of the literature in cross-cultural management and communication. The “generative” quality of metaphors leads to a “promissory note” that once accepted, future research will aim at fulfilling the promise and direct the theories in a certain direction (Soyland, 1994). Influenced by the iceberg, cultural theories have been dominated by this mentality in terms of “cultural distance” (Kogut and Singh, 1988), “cultural misfit,” “liability of foreignness,” or the “consequence” of culture (Hofstede and Hofstede, 2005) when they “collide” (Lewis, 2000). A content analysis of 1,141 articles from 1989 to 2012 reveals a 17:1 imbalance of negative over positive theoretical research assumptions on the role of culture in international business contexts (Stahl and Tung, 2015). Liabilities are associated with cultural differences by the underlying assumption that differences are a source of problem, cost, risk, danger, and difficulty. Most textbooks and training material on intercultural communication use case studies that ask readers to find out “what went wrong?” Culture is treated as an information cost (Caves, 1996) with aspects of conflicts being highlighted to signal the price we have to pay when we fail to invest sufficiently in knowing how we are different from others.

The impact at neural level and the behavioral consequence (pathway: brain – behavior – culture)

The Oxford English Dictionary defines “ice” as “frozen water” or “frozen juice,” and “complete absence of friendliness or warmth in manner or expression.” Since conceptual metaphor uses embodied experiences to link the two domains “target” and “source” (Lakoff and Kövecses, 1987), the iceberg metaphor immediately leads to an intuitive association with primitive concepts of “cold” and “unfriendly.” For those who are familiar with the sinking of the Titanic in 1912, this metaphor consciously or subconsciously triggers neural binding circuits that bind together schemas in parts of the brain that store data of the historic collision, one that resulted in the deaths of more than 1,500 passengers and crew. This activates the brain’s amygdala – a fear-detecting device that creates emotions faster than our own conscious awareness (LeDoux, 1996). This means that before we even manage to evaluate the image, the metaphor has already alarmed our subconscious system.

Because the meaning of concepts comes through embodied cognition, there are consequences in attitudes and behaviors. Following the linkage between the brain and behaviors in the Diagram of Diversity Pathways, neural circuits asymmetrically link two brain regions of source and target, triggering consequential actions. This is shown in a study that used two metaphors, “Crime is a Virus” and “Crime is a Beast.” Participants proposed solutions such as investigating the root causes, education, and eradicating poverty when “crime” was framed as “virus,” arguably because the source implies an illness that needs care and treatments. However, when “beast” was the source, participants proposed to catch, jail the criminals, and enact harsher enforcement laws (Thibodeau and Boroditsky, 2013). A plethora of similar behavioral experiments can be explained with the neural basis of embodied conceptual metaphors. For example, the reason why participants were more likely to choose antiseptic wipes as a gift if they had recalled an immoral act in the past (Zhong and Liljenquist, 2006) can be explained by the embodied cognition of “Morality is Purity.” Similarly, “Psychological pain is Physical pain” triggered participants to show pain

reaction in the brain's anterior insula when their loved ones were in pain, but not when pain was enacted on a stranger (Singer *et al.*, 2006); "Achieving a Purpose is reaching a Destination" triggered people to physically lean forward (Harmon-Jones *et al.*, 2011); "Important is Heavy" influenced judgment on the importance of leadership and the value of currency (Jostmann *et al.*, 2009); "Affection is Warm" prompted positive description of others as friendly (Williams and Bargh, 2008), the room temperature to be 5 degree warmer (Zhong and Leonardelli, 2008), etc. These experiments were mentioned in a review article of Lakoff (2014) in which he offered a long list of other studies that show the effect of metaphors on behaviors through a neural mechanism.

In the same vein, many metaphors used in organizational discipline have been criticized for their repercussions in inhibiting development. For example, in constructing "Sustainability as a Journey," business commentators and other purveyors of corporate rhetoric can avoid becoming embroiled in debates by masking the issue as a progress while maintaining business-as-usual (Milne *et al.*, 2006). In their study, Barter and Russell (2013) argued that the metaphorical use of organization as "organism" or "machine" could result in the objectification and dehumanization of humans as functional components, with the simultaneous raising up of the organization as a prioritized focus. In so doing, humans are removed from a place of stewardship or responsibility.

The embodied cognition and its suggestive power of metaphors in guiding action mean that we should question the impact of cultural metaphors and their behavioral consequence. How likely is it that by framing culture as an "iceberg," the metaphor circuitry linking two brain areas may lead to behaviors deriving from the physical metaphor linkage? One needs to consider the possibility that by metaphorically linking culture with an iceberg or distance, embodied cognition may prompt us to be reactive rather than proactive, defensive rather than cooperative, viewing differences as problems rather than opportunities. Bennett (2013b) further argued that metaphors could guide our collective experience with reification. In a kind of self-fulfilling prophecy, the way we describe culture as differences leads to the way we subconsciously create exactly the culture of seeing "the other" as different and potentially problematic. Thus, beyond acting as a hegemonic tool to influence the perception and interpretation (Inns, 2002, p. 313) through brain's functions, metaphors play a significant role in guiding actions that would impact the very culture they represent. In other words, it is the dynamic interaction illustrated by the brain – behavior – culture pathway of the diagram. The metaphor of choice indirectly creates the very culture we live in.

To conclude, the imbalance between the strong focus on negative outcomes as opposed to the positive impact of cultural differences may undermine the fundamental fact of our sameness as human being. From the evolutionary point of view, similarities should be our starting point in intercultural communication (Nguyen-Phuong-Mai, 2017, p. 69). At the same time, a biased view toward cultural differences can also hinder our understanding of how societies and organizations can leverage the benefit of diversity. The emphasis on knowing cultural differences should be balanced with the need to establish a foundation of fellowship, sameness, like-mindedness, and connection. It is a springboard from which to approach differences more effectively, with the fundamental understanding that we are not different in kind, only in level (Nguyen-Phuong-Mai, 2017, p. 70). If we do recognize the bright side of cultural diversity (e.g. Nielsen and Nielsen, 2013), then the perpetuation of the iceberg and the distance metaphors signifies a misleading interpretation and guiding principle of culture as essentially different and cultural contact points as potentially problematic.

Values as stable?

Static cultural metaphors and the consequence

The theories of cultural change can be classified into four categories: divergence (values are stable), convergence (moving toward global culture), crossvergence (interaction dependent),

and hybridization (integration of cultural elements). By following the static and deterministic paradigm, Hofstede's theory locates firmly within the divergence camp.

Hofstede's software metaphor indicates that once a culture is "installed," the mindset "runs" accordingly. By the age of ten, most of the child's basic values have been programmed into his or her mind: "We assume that each person carries a certain amount of mental programming which is stable over time" (Hofstede, 1980, p. 14). Speaking of national culture, his onion metaphor implies that the core of the onion stays put within many layers of protective customs and practices and will not be touched before these layers have been totally penetrated or peeled apart. National values are "as hard as a country's geographic position" (Hofstede and Hofstede, 2005, p. 13). "Differences between national cultures at the end of the last century were already recognizable in the years 1900, 1800, and 1700, if not earlier. There is no reason they should not remain recognizable until at least 2100" (Hofstede, 2001, p. 36).

The advantage of this divergence perspective is that value stability gives the idea that culture can be predicted and controlled through expected behavioral outcomes (Leana and Barry, 2000; Weick and Quinn, 1999), while a shared knowledge structure can attenuate ambiguity and variability (Erez and Earley, 1993). With Hofstede's theory, "culture" was catapulted in management research as a principle metaphor for "organization" (Morgan, 2006). In a doubled loop of an abstract being used to explain yet another abstract, culture took on the role of a metaphorical source which is supposed to be concrete and rigid. As a result, culture – an abstract, fluid, and ambivalent phenomenon – became "uncorrelated independent and control variables with causal power" (McSweeney, 2009). This has a number of consequences.

First, the view that cultural values are stable has infiltrated how people develop management theories and regard organizations as static, monolithic, and sterile entities (Grant and Iedema, 2004; Hocking and Carr, 1996). The heuristic power of metaphor acted as a precursor and inspired Kogut and Singh (1988) to schematize the metaphor of cultural "distance," accompanied by a simple standardized quantitative measurement that aggregates data from Hofstede's value dimensions (Equation (1)). Their equation put a final touch in reducing culture to a set of discrete variables "that can be documented and manipulated in an instrumental way" (Morgan, 2006). Over time, "distance" has become so entrenched in management research that it forms a basis for many derivatives such as "knowledge distance" (Farjoun, 1998), "technology distance" (Vassolo *et al.*, 2004), and "institutional distance" (Kostova, 1997). Using the study of Beamish and Banks (1987) on the inherent transaction disabilities in joint ventures, Shenkar *et al.* (2008) argued that cultural distance provides a perfect proxy to deal with environmental uncertainty, to cope with the firms' inability to specify transaction contingencies due to the fear that whatever they might gain in terms of knowledge would apparently be lost because of the potential exploitation by the local partner (Beamish and Banks, 1987). The metaphor and its consequential theories thus discourage organizations to look at change, evolution, and learning, because, as McSweeney (2009) explained, value stability only allows two notions of change: no change is ever possible because values "remains stable, and the culture [will] rises from its ashes like the phoenix" (Hofstede and Hofstede, 2005, p. 36); and rare changes can be created through an exogenous shock. Both notions of change are regarded unrealistic because they are either inconsistent with local studies (e.g. Ladhari *et al.*, 2015) or inconceivably preclude endogenous change and internal dynamics (Archer, 1988, p. 6):

$$KS_{ij} = \frac{1}{n} \sum_{d=1}^n \frac{(I_i^d - I_j^d)}{V^d}. \quad (1)$$

The above equation is the standardized quantitative measure of cultural distance based on Hofstede's index (Kogut and Singh, 1988), where KS_{ij} is the cultural distance between

countries; idx is the index of a country x in the dimension d ; V^d is the variance of the index for the dimension d ; and n is the number of cultural dimensions.

Second, the static nature of these metaphors underestimates variations within a culture. Although within-group diversity counts for 80 percent and “nation” only explains 20 percent of the variation (Taras *et al.*, 2016), these differences are often “hidden behind the error stratum in the analysis of variance” (Hong and Chiu, 2001, p. 184).

Next, the “distance” not only carries an ethnocentric attitude and creates a hierarchy of bias (Shenkar *et al.*, 2008), but it also implies that each culture or civilization has its own genealogy by developing separately and independently from others – a view that Hermans and Kempen (1998, p. 1113) used to explain how people “turn names into things and endow nations, societies and cultures with the qualities of internally homogeneous and externally distinctive objects,” such as the onion, the iceberg, or the software of the mind.

Finally, the static view of culture has taken international management into “the vast emptiness of in-between,” and placed other relevant schools of thought and disciplines such as anthropology, sociology, and political science outside the boundaries of international management research (Shenkar *et al.*, 2008, p. 909). This is not only the result of how cross-cultural study has been disconnected from its early roots in anthropology, but also how anthropology and biology have been largely diverged since the nineteenth century. Historically, the deep intrafield antagonism has caused increasing stratification even within a single discipline, so much that some anthropology departments were split into two, one focused on cultural approaches, while the other dealt with biological approach when addressing the very same question (Shenk, 2006). However, in the last two decades, the field of human neuroimaging began to flourish with the advance of technology. This makes psychology a much more effective hub of science to bridge the historical gap between biology and culture. Cultural neuroscience holds a matchless potential to transcend the confines of academic stratification and to understand the mutual constitution of culture and biology (Chiao *et al.*, 2014; Christopoulos and Hong, 2013). In the next section, we will look deeper into how cultural neuroscience, although still in its infancy, can seriously question the traditional understanding of culture and confront the static implication of conventional cultural metaphors.

The multicultural mind (pathway: brain – behavior – culture – environment in context)

Only recently, the brain was considered to be a static product of genes and innate biology. But the emerging field of cultural neuroscience has changed this understanding by pointing out the brain’s capacity for adaption. Under the impact of different social contexts and interactions, the neural connections through synapse clefts (a small space between two neurons) can physically change by growing more dendrites to send out information, creating more ion channels and receptors to receive information, making the nerve terminals bigger, and collecting more supportive glia cells around the axons to speed up nerve impulses (Figure 2). Our brain physically rewires itself so we can adapt to a new environment, adopting new values and practices. The constant morphing and shifting of the brain means that our neural machinery system is intrinsically malleable, or has “plasticity” – a term coined in 1894 by pioneering Spanish neuroanatomist Santiago Ramon y Cajal. Just like a muscle can change with exercises, we can develop our brain and induce changes in both its functions and structures. The idea that brain recreates itself has naturally led to a question of whether there is a fundamental core of identity, now that we can train the brain, reshape, and discover many different aspects of our identities and personalities (Takala and Buller, 2011; Väliäho, 2014).

In fact, we do not need intensive training to see how malleable the brain is. Even very simple cues such as a symbol or the difference in using plural pronouns (e.g. “we” and “our”) and singular pronouns (e.g. “I” and “me”) can activate relevant cultural mindsets and their

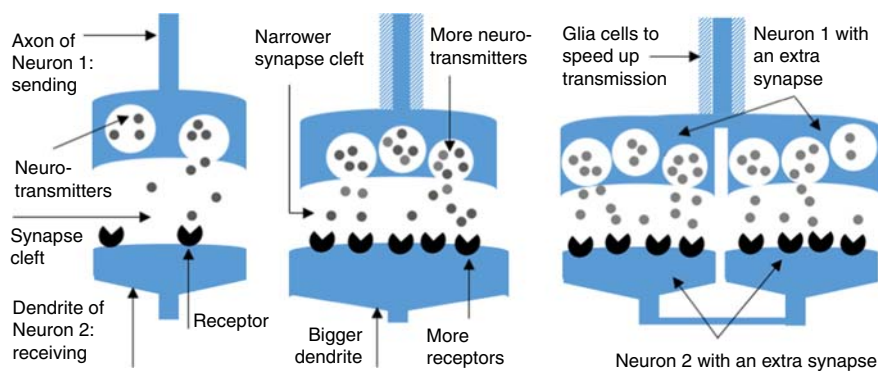


Figure 2. The forming of an adjacent synapse: how the brain changes with long-term potentiation

Notes: Two neurons grow more dendrites and axon terminals, creating more receptors, exchanging more neurotransmitters, and collecting more supportive glia cells around the axon to speed up nerve impulses

Source: Nguyen-Phuong-Mai (2017, p. 31)

associate networks. Behavioral studies have shown that people who are primed by these cultural cues will have responsive reactions that correspond with those cues, regardless of their chronic cultural values (e.g. Hong *et al.*, 2000; Kühnen and Oyserman, 2002; Lin and Han, 2009; Oyserman *et al.*, 2009; Sui and Han, 2007). Following these behavioral findings, neuroimaging studies confirm that our brain is so flexible that we are capable of representing multiple cultures in our mind and switching between values simultaneously, depending on the given priming value. For example, the ventro-medial prefrontal cortex – our selfhood loci in the brain – was more active among the Chinese, following the American individualistic cultural prime, but was inhibited following the Chinese collectivistic cultural prime (Ng *et al.*, 2010). Similarly, in their event-related potential research, Lin *et al.*, (2008) reported that the independent self-construal priming among the Chinese resulted in enlarged occipital activity in local than global targets of visual stimuli. In contrast, the interdependent self-construal priming led to a reverse modulation of occipital activity. Many other neural studies also support this remarkable ability to adapt one’s sense of self to the immediate cultural context (e.g. Chiao *et al.*, 2010; Harada *et al.*, 2010; Obhi *et al.*, 2011; Peng and Knowles, 2003; Sui and Han, 2007; Sui *et al.*, 2012; Wang *et al.*, 2013). Some scholars go further by arguing that the “self” does not exist (Puett and Gross-Loh, 2016). Buddhism has been exerting a similar notion (anatta) for a long time, stating that nothing is constant and the stable selfhood is just an illusion. Neural studies conclude this independently that the brain and body are constantly in flux and there is nothing that corresponds to the sense that there is an unchanging self (Dahl *et al.*, 2015; Rosenberg *et al.*, 2015).

Taken together, evidence from brain-imaging studies supports the indicating power of context in the Diagram of Diversity Pathways, i.e. an individual may identify with multiple cultural systems and switch between them in order to guide behaviors toward what can easily fit into a particular sociocultural context. Accordingly, Nguyen-Phuong-Mai (2017) argues that being intercultural competent is cultivating a multicultural mind. This neurobiological basis enables people to acculturate to novel social and physical environments. Hence, these findings from the field of neuroscience directly challenge the notion of value stability, which is also the essence of the software, the onion, and the distance metaphors. In fact, neuroscientists have begun to exercise caution in picking up the tradition of the static cultural paradigm and perpetuating its impacts. For example, Mateo *et al.*, (2013) argued that by taking an essentialist understanding of culture, functional neuroimaging studies risk “neo-racism” as they associate culture with geographical

territory while blurring the boundaries between “culture” and “race.” It denies the autonomy of the individuals and forces them to correspond to a conceptual essence: “An Oriental man was first an Oriental and only second a man” – as earlier written by Said (1979). With the evidence of the multicultural mind in their neural study, Hong *et al.* (2000) also suggested a less monolithic view of culture, especially now that globalization and technology are causing a drift toward culturally polyglot and pluralistic societies. They implied that viewing values as stable is the consequence of a “strain” in “negotiating cultural complexity” – a challenge neuroscientists should not countervail by efforts of putting individuals into culturally “pure” groups (p. 718). In the same vein, Christopoulos and Hong (2013) called for a dynamic cultural neuroscience and urged researchers to investigate not how cultures are, but how cultures respond and change within an intricate web of influential factors in a particular context. In other words, this neural research direction should see culture not as a static factor such as the iceberg, the software, the onion, or the distance, but an “overarching framework that is constantly evolving” (Han and Humphreys, 2016, p. 13) in the dynamic interaction with the changing environment, the biological plasticity of gene and brain, and the behavior that is both the consequence and the driving factor of culture. The last point “behavior” will be discussed more in detail in the very next section.

Values guide behaviors, vice versa, or a dynamic interaction? (Pathway: behavior – culture)

An aspect of change that has been well researched by psychologists but often neglected in cross-cultural studies is the causal link between “value” and “behavior.” Both the software and the onion metaphor belong to the static paradigm that sees culture-shaping actions by providing “the values toward which action is directed” (Swidler, 1986, p. 273). The idea that values drive and determine behaviors is a prevailing assumption that underlies many cultural and management theories. In the Diagram of Diversity Pathway, the static paradigm does not acknowledge the arrow pointing from behavior to the value component of culture.

However, the field of psychology has witnessed a much more dynamic relationship between belief and behavior. Many psychologists even argue that the belief-behavior relation works the other way around, with behaviors as the horse and belief as the cart (Festinger, 1964, cited in Myers, 2004, p. 110). People fight for what they believe, but also believe what they are fighting for. We forge the definition of the “self” by our deeds. Once given a role, we soon act that role and become that role. We can even demonize others to reduce internal conflict and justify our action as shown with the famous blue eyes-brown eyes experiment of Jane Elliot (Peters, 1987) and the summer camp experiment of Robbers Cave (Sherif *et al.*, 1961). In marketing studies, the “foot-in-the-door” compliance and the “lowball technique” in sales capitalize on this tendency. People are persuaded first to agree with a small request. Once they have spoken and committed with some statements and actions, they would feel an inner need to make their attitude consistent with their words and actions by following through and developing the belief that the deal is actually still a good buy. This tactic is especially effective when combined with the tactic of “but you are free,” giving the customers the feeling they are coaxed, not coerced, into it (Guéguen *et al.*, 2010). Another case in point is how an American company has successfully changed their culture by focusing on desired behaviors (Power, 2013).

Even when the act is against the belief, repeated behavior can change attitudes and eventually deep-seated values. According to Grunberger (1971), the public greeting “Heil Hitler” was a powerful conditioning device. It probably started as an outward token of conformity, creating a profound inconsistency between behavior and belief, called cognitive dissonance. In order to solve this schizophrenic discomfort, people tried to establish their psychic equilibrium by consciously making themselves believe what they have said and done (Bem, 1970), mutating their conscience. Regardless of the nature of the government,

many other public conformities, political rituals, and legal regulations also contribute to develop a change in value instead of waiting for the value to change the action (Aronson, 1992). As mentioned earlier, a case in point is the impressive shift of value in gender's role as the result of the much criticized one-child policy in China (Sudbeck, 2012).

With the evidence of the brain's plasticity, the dynamic interaction between value and behavior is supported by neural studies. Our brain has an astounding capacity to rewire and adjust to a high-level cultural experience. Repeated behaviors can significantly rewire the brain and change both its physical form and functional features. Consequently, the nerve impulses associated with these behaviors get stronger and stronger, and in a vicious circle of causes and effects, trigger associated behaviors that eventually will develop into an entrenched belief. Initial evidence can be found in the study of Derntl *et al.*, (2009) who reported that Asian immigrants to Austria showed a significant response to the emotional facial expressions of Caucasians, but the strength of this response was negatively correlated with the amount of time they had spent in the new culture. In the same vein, some biopsychological studies show that the high-power poses triggered an increase in testosterone and a decrease in cortisol, and that a simple 2 min power-pose manipulation was enough to significantly alter the physiological, mental, and feeling states of the participants (Carney *et al.*, 2010). They performed better and were more likely to be chosen for hire (Cuddy *et al.*, 2012). In other words, we feel powerful because we purposely act powerful.

In short, neuroscience and biology have given us a roadmap to understand the bidirectional way of how behavior can be a dynamic force that both reflects and reshapes cultural values at the same time. Accordingly, the Diagram of Diversity Pathways illustrates how the plasticity of the brain helps human species to voluntarily take actions and adopt behaviors that are appropriate in a specific culture (Freeman *et al.*, 2009). The same malleable neural mechanism also enables us to conduct behaviors that conflict with the social norms or even with our current belief. We gradually resolve that conflict of cognitive dissonance by forging newly developed neural pathways through repeated behaviors. We not only think ourselves into action but also act ourselves into a certain way of thinking (Myers, 2004, p. 116). In essence, we can cultivate new values by starting with our new behavior (Nguyen-Phuong-Mai, 2017, p. 244), or "fake it until you become it." This perspective questions the causal-effect direction implied by the onion (the stable core of values dictates practices at the outer layers) and the software metaphor (the program installs values in people's mind and guides behaviors). The static nature of these metaphors not only undermines phenomenon and cases that contradict the assumed values, and fails to explain societal change and cultural paradoxes, but also stands at odds with suggestions from other disciplines.

Discussion and further research

Attention to the dynamic paradigm

Much shadowed by the studies that follow the static and deterministic perspective, research in the dynamic school of thought rarely influences theory development in the field of cross-cultural communication and international management. However, what these studies offer is some thought-provoking insight that strongly resonates with the evidence given by neurobiology. Rather than seeing culture as stable, the dynamic paradigm sees culture as being made up of relations rather than a stable system of form and substance (Soderberg and Holden, 2002, p. 112). In fact, the word "culture" should be seen as a verb, not a noun (Jones, 2013). Culture consists of cognitive structures and processes that are responsive to the external environment (Hanges *et al.*, 2000; Tinsley and Brodt, 2004), an "ecocultural model" which views culture as being able to evolve and adapt to eco-socio-politico influences (Berry *et al.*, 2002). This adaption results in the evolving and adaption of individuals in response to their cultural context, which is the "system" view as opposed to the "entity" view of the static paradigm (Kitayama, 2002).

Consequently, the metaphors developed by scholars in the dynamic paradigm challenge the treatment of culture as static and reified entities. For example, Hermans (2001) proposed the metaphor of “dialogical self” in which both culture and self are viewed as a multiplicity of constant dialogue positions along which dialogical relationships can develop. In response to this metaphor, Adams and Markus (2001) argued that the problem of reification would be addressed more effectively by conceiving culture as “pattern” instead of groups, and put forward this concept as an alternative metaphor to illustrate how people can engage and be shaped by patterns associated with seemingly incompatible identities. Fang (2005-2006) argued that a culture’s strong tendency toward one extreme of a binary dimension (e.g. femininity) does not preclude its opposite (e.g. masculinity). His “ocean” metaphor indicates that at any given time, some values may be more salient, i.e. rise to the surface, while other values may lie dormant, waiting for the right condition to be awoken. Fang (2012) also advocated “yin-yang,” and put forward the “paradox” framework (Fang, 2005-2006) as a way to understand why a culture often contains values and practices of both extremes. Another study of Osland and Bird (2000) emphasized the need to index context and the notion of “value trumping,” indicating that particular circumstances reign supreme, justification is always tentative, and a specific value may “trump” others, given a specific context. The authors lightly touched on the metaphor of “card game” which implies that depending on the cultural game, previous play, and the hand one is dealt, players respond by choosing specific cards (i.e. value) that seem most appropriate in a given situation. Swidler (1986) envisioned the modern, pluralistic society as a collection of different cultural “tool kit” in forms of publically available symbols, values, languages, practices, etc. It implies that cultures and values are socially contested and the best “tool kit” wins. Last but not least, Nguyen-Phuong-Mai (2017) introduced the tree metaphor embedded in a circle of context. Depending on the circumstances (the age of the tree, the water, the seasons, etc.), the tree grows and changes over time, gaining different attributes, expanding, creating new trees, being transplanted, even uprooted, or disintegrated, and dies. Using the insight from evolutionary biology, Nguyen-Phuong-Mai argued that the trunk of the tree represents a human’s fundamental concerns such as religion, language, politics, power, and arts. In her words:

These concerns are the building blocks of culture as survival strategies. Any human group that failed to acquire these building blocks could find themselves in competition with those who had. It reminds us of the ultimate biological reason why culture ever came to exist in the first place: to replace genes, helping us to survive and advance as a species (p. 51).

A convergent point of these dynamic metaphors is that they embrace a “strategy of action” (Swidler, 1986) with a pragmatic emphasis on people as active and creative problem solvers rather than a passive “cultural dope” (Crane, 1994). Unlike the static metaphors, these theorists “restore human agency to social theory” (Forte, 1999, p. 55), allowing the dynamic of context to reign as a driving factor to predict changes and behaviors instead of predetermined values. Similarly, the neural studies with cultural priming in this paper have demonstrated that the mind can be multicultural and behavioral performances are influenced by priming conditions regardless of the chronicle values.

Furthermore, the aforementioned dynamic metaphors acknowledge the impact of individuals in the course of cultural diversity. Most of the static cultural theories focus on the nation-state unit and do not deal with the individual level of analysis. Hofstede’s country index only explains 2-4 percent of the variance at the individual level (Gerhart and Meiyu, 2005; Hofstede, 2001, p. 50), while “power distance” and “individualism – collectivism” have near-zero inter-correlations (Bond, 2002; Schwartz, 1994). This shortcoming does not go unnoticed by neuroscientists whose work is intensively based on the examination of every single participant’s neural images. Despite being a new discipline, some researchers in cultural neuroscience have begun to pay attention to the remarkable degree of

within-culture variation and individual differences (Chiao *et al.*, 2010). Their call for a “dynamic constructivist approach” (Hong *et al.*, 2000) strongly echoes the voice of theorists from the dynamic paradigm. However, this important call can be undermined as an increasing number of neural studies are adopting the dichotomous and static tradition. This interdisciplinary transition risks essentialism, eurocentrism, and a post-colonial perspective, as pointed out by Mateo *et al.*, (2013). They warned against the danger of a “looping effect” (Hacking, 1995), as the neural evidence based on “hard data” has the status of a great scientific truth in society.

To conclude, evidence from the field of neurobiology suggests that we should pay more attention to the contribution and scholarly work of the dynamic paradigm, since there appears to be a substantial compatibility between them, and the matching of the two could yield new and insightful perspectives. If we acknowledge that metaphors catalyze our thinking and behaviors to approach a phenomenon in a novel way, then invoking different metaphors can enable us to perceive culture and mediate our behaviors in a new manner. With support from neurobiology, dynamic metaphors can prove to be worthy alternatives. However, while holding a powerful potential to transcend the confines of academic disciplines, cultural neuroscience also runs the risk of forming hypothesis on the basis of a single influential review on cross-cultural psychology findings.

More vibrant academic discourse on cultural metaphors

While playing a crucial role in generating ideas and constructing theories, the few cultural metaphors of the dominant static paradigm are subjected to very little academic scrutiny. In contrast, metaphors that indirectly serve as a vehicle to elicit reasoning in organizational studies are plenty and well researched (e.g. Cornelissen, 2006; Gerritsen, 2006; Morgan, 2006; Oswick *et al.*, 2004; Putnam *et al.*, 1996; Tsoukas, 1993; Weick, 1989). We are aware of some discussion on how the static view of culture has influenced organizational and management theories (e.g. Grant and Ledema, 2004; Hocking and Carr, 1996), but there is a clear imbalance between the academic discourse on the cultural vs the organizational metaphors. The insight we have gained by examining cultural metaphors under the light of neurobiology suggests that we should apply more scrutiny in evaluating cultural metaphors, and hold them accountable for the powerful heuristic influence that they exert on the process of theory development.

To start with, we should reexamine the root theory of culture and acknowledge that culture itself is a metaphorical source, derived from the Latin verb “colere,” meaning “to till.” It requires a conceptual blending process to link an action that signifies growth with anything static such as the iceberg, the onion, the software, or the distance. Thus, regardless of their origin from the static or dynamic paradigm, cultural metaphors should be matched against “optimality principles” – a set of constraints proposed by Fauconnier and Turner (2002) and Cornelissen (2006) under which metaphorical blends are most effective: the integration, web, unpacking, good reason, metonymic tightening, distance, and concreteness. These principles are derived from standard pressures that are obtained in all mapping situations (Hofstadter, 1995; cited in Cornelissen, 2006) and have been used to evaluate organizational metaphors (e.g. Joy *et al.*, 2009).

Next, the concept of culture can also be culture specific. Although the word “culture” in many languages is rooted in Latin, we may risk Eurocentrism to assume that this is a universal case. How can we be sure that the deeply philosophical Indonesian word “budi” – understood as culture – triggers the same meaning as the Chinese word for culture “wen-hua” – which separately would mean “language” and “change”? How can we bridge the inherent dynamic in these native versions and the static implication in the mainstream cultural metaphors and theories? Examples like this suggest that further studies should examine the role of culture in the very metaphors for culture, since the same concept can be

valued in various ways. There are many questions that we need to explore: “What is the root meaning of culture in different languages?”; “What are the implications of the culture-metaphor tandem in cross-linguistic communication such as in translation?”; “What is the embodiment experience (if any) of sources such as the iceberg and the software across different cultures and peoples, including those who are not familiar to these objects and concepts?”; “What is the impact of knowledge transfer when native concepts are merged with static metaphors and theories imported from the West?,” etc. Brain-imaging studies can help to put results on the map, and may confront our assumption that when we talk about culture, we talk about the same thing.

Finally, since metaphors lead to emergent meaning and guide behaviors, neurobiology can lend significant support in providing evidence of the neural impact that each metaphor triggers in different brain regions. What will happen in our brain, and how will it guide our behaviors if we are primed that culture is an iceberg, a software, a tree, or a river? In fact, brain-imaging studies have started to examine the neural instantiation of emergent meaning and creativity in relation with metaphors (Benedek *et al.*, 2014; Vartanian, 2012). Whether or not the long-term impact of metaphors can be tested relies on the methods and advances of the field and is beyond the scope of this paper. But as we see in previous sections, results from neuroscience labs have cast doubt on the validity of some of the most solidified cultural assumptions.

Conclusion

In this paper, a critical analysis has been conducted to address the mainstream cultural metaphors – a much overlooked aspect in cross-cultural studies. These metaphors are not only limited in number, but are also overwhelmingly based on the static paradigm – as opposed to the dynamic paradigm that is often sidelined in the academic discourse.

Taking an interdisciplinary approach, the paper sheds some light on how the inherent meaning and heuristic orientation of the static cultural metaphors may stand at odds with evidence from the newly emerged field of neurobiology, namely, culture is all about differences; values are stable; and values guide behaviors. As metaphors play a powerful role in directing scholarly research, the static nature of the iceberg, the software, the onion, and the distance has forced a dynamic phenomenon, such as culture and its theories, into a confining straightjacket of understanding and practice. In a sense, static metaphors and the theories they inspired through “accepted promissory note” (Soyland, 1994) help to mask the inherent weakness in comprehending the immense complexity and diversity of culture (Chiao *et al.*, 2010; Shenkar *et al.*, 2008), as it is interwoven in the constant course of interaction with many other factors such as environment, gene, brain, and behaviors. If we acknowledge that culture is our survival strategy, then we need to come to terms with the notion that culture is dynamic and responsive to different contexts. Brain plasticity is a strong evidence that we are built to adapt, as a Chinese proverb goes: “Uproot a tree, it will die; Uproot a person, (s)he will survive” (Guo, 2017).

The analysis in this paper is not without limitations. Since one of the best-explored areas of cultural psychology regards the differences in how the self is constructed across cultures, consequently, the cognitive representation of the self has become one of the most prolific focuses of cultural neuroscience (Northoff *et al.*, 2006). Therefore, the neural evidence in this paper is mainly drawn from the research on self-construal, and thus, cultural values in focus are limited to collectivism and individualism. Future studies should cover a greater spectrum of values and the long-term effect of metaphors on cognitive and behavioral performances. While the newly emerged discipline of cultural neuroscience has only managed to cover a small area of cultural psychology and cross-cultural studies to date, this analysis, although limited to an extent, may serve to

surface abandoned or neglected findings that have been shadowed by the dominance of the mainstream static paradigm. It is our hope that this modest contribution will open further discussion on cultural metaphors and raise it to the academic extent that organizational metaphors have enjoyed, especially when the former acts as a means to envision, develop, and elaborate the latter. This will signify our willingness to question the very issue we seem to have assumed universal consensus, especially now that technology has erased quite some academic stratification. Cross-cultural management is an interdisciplinary study, and so we need to pose this question in the light of multiple disciplines, updating our understanding and challenging our conventional knowledge. Such healthy skepticism is a natural part of scientific development, and the only way that, in the end, will provide the best answers.

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Corresponding author

Mai Nguyen-Phuong-Mai can be contacted at: dr.nguyenphuongmai@gmail.com

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