

Varieties of Interdependence and the Emergence of the Modern West: Toward the Globalizing of Psychology

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Cultural psychology—the research field focusing on the mutual constitution of culture and the mind—has made great strides by documenting robust cultural variations in how people think, feel, and act. The cumulative evidence is consistent with the hypothesis that Westerners are independent, whereas those in the rest of the world are interdependent. Although this research traditionally examined North Americans and East Asians, recent research has extended this literature to other non-Western regions. We review this emerging research and describe four distinct forms of interdependence in four non-Western cultural zones. Specifically, interdependence is promoted through (a) conflict avoidance (dominant in much of East Asia), (b) self-assertion for ingroup protection (dominant in Arab regions), (c) expression of emotions that promote interpersonal resonance (dominant in Latin America), and (d) argumentation for conflict resolution (dominant in South Asia). Furthermore, we propose that the Modern West adopted the existing signature features of interdependence in the neighboring cultural zones (notably, self-assertion, emotional expression, and argumentation) and redefined the psychological function and social meaning of these features; instead of promoting interdependence, they became means to achieve independence. This theoretical integration suggests that cultural variation in basic psychological processes emerged over the last several 1,000 years under the influence of ecology, migration, and intergroup relations. The current effort underscores the need to globalize psychological science.

Public Significance Statement

In this article, we discuss how various non-Western cultural zones (e.g., East Asian, Arab, Latin American, and South Asian zones) might differ, even though they all share a commitment to the overarching value of interdependence. We then suggest how these non-Western cultural zones preceded and helped shape the psychological profile of independence that characterizes contemporary Western culture. The proposed perspective may help globalize psychological science.

Keywords: culture and self, cultural evolution, globalizing psychology

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The last 3 decades of research in cultural psychology have shown that culture can shape basic psychological processes (Kitayama & Uskul, 2011; Markus & Kitayama, 1991; Nisbett et al., 2001; Triandis, 1995). The key idea is that repeated engagement in culture's practices and meanings (which constitute "behavioral environments" Hallowell, 1955 or "ecological niches" Odling-Smee et al., 2000) gradually shapes various psychological tendencies that comprise mental habits and routines (Wood & Neal, 2007), forming the habitus (Bourdieu, 1977) or the default mode of operation in cognition, emotion, and motivation (Kitayama et al., 2009). One notable conclusion from the cultural psychological work is that cultures vary systematically and robustly in these psychological tendencies (Kitayama et al., 2009, 2018; Kitayama & Uskul, 2011). Although much of the available evidence relies on a comparison between Westerners¹ and East Asians, new lines of work have begun to reveal the psychological profiles of other non-Western regions, particularly Arab (San Martin et al., 2018), Latin American (de Oliveira & Nisbett, 2017; Salvador et al., 2022), and South Asian cultural zones (Lu et al., 2020; Savani et al., 2011). However, it is not clear how this growing body of evidence can be theoretically integrated.

In the current article, we present a theoretical framework to understand the variation in psychological functioning across several cultural zones. Our discussion proceeds in three steps. First, we will present a theoretical overview of the cultural psychology approach to the human mind. Second, we will discuss mentalities associated with four distinct non-Western cultural zones, including East Asian, Arab, Latin American, and South Asian cultural zones. These cultural zones are described as interdependent, and yet, the specific forms of interdependence vary from one another. They evolved over the last 10,000 years, preceding the *Modern West*—a hypothetical cultural zone that emerged in Western Europe over the last 1,000 years through historical events culminating in the Renaissance, Reformation, and Enlightenment (Taylor, 1989).² The culture of the *Modern West* is described as contrastingly independent. In the third section of the article, we will examine how some of the non-Western traditions contributed to the formation of the *Modern West*. This historical analysis reveals how and why some of the non-Western zones bear a degree of resemblance to the Western cultural zone. Notably, however, this similarity will prove more apparent than real. Behind it lies an important psychological difference between the non-West and the West. We will then conclude by underscoring the need for globalizing psychological science.

Theoretical Overview

Mutual Constitution Between Culture and the Mind

The central premise of the cultural psychological approach is that the implicit psychological tendencies of thinking, feeling, and acting are shaped through active participation in environments constituted by the practices and meanings of culture. Moreover, once shaped, these psychological

tendencies are instrumental in reproducing the cultural meanings and practices. As Shweder (1991) stated, culture and the psyche make each other up. To put it differently, culture and psychological processes are mutually constitutive. This perspective conceptualizes humans as culturally shaped shapers of culture (Markus & Kitayama, 2010).

Cultural practices and meanings are dynamically linked and constantly in flux. They can change rapidly, at least, on the surface (Varnum & Grossmann, 2017). Moreover, they are distributed unevenly within any given cultural group: No single person has access to the entire set of practices or meanings (Na et al., 2010). Despite their fluidity, apparent randomness, and the resulting lack of constancy, culture's practices and meanings also maintain a degree of organismic, gestalt-like integration that sustains itself over time. Consequently, they lend themselves to the formation of relatively long-lasting distinct cultural zones across the globe.

The default psychological tendencies, comprising the relatively long-lasting styles of thinking, feeling, and acting, typically defy easy access to conscious awareness and thus self-report (Nisbett & Wilson, 1977). They are thus described as "implicit" (Kitayama et al., 2009). Like water is to fish, culture is powerful in shaping mentality and yet typically remains tacit and even unconscious (Durkheim, 1895/1982). Hence, one crucial component in cultural psychological analysis is to assess the default implicit psychological tendencies, which by definition cannot be studied by merely asking people to report what they like and believe or how they would act. Starting around 1990, some scholars adopted various social and cognitive experimental tasks (Kitayama et al., 2009; Nisbett et al., 2001)—an effort that has been extended to neuroscientific methods in more recent years (Kitayama et al., 2018). This methodological innovation has helped the researchers uncover the profound influences of culture.

The focus on implicit psychological tendencies enabled the field to go beyond more traditional self-report-based measures of attitudes, beliefs, and values (often used by scholars in "cross-cultural psychology," Hofstede, 1980; Oyserman et al., 2002; Schwartz, 2006, see also Vignoles et al., 2016, for a recent example).³ People's attitudes toward cultural

¹ By Westerners, we mean those individuals engaged in cultural groups that carry the tradition of the Modern West, as will be discussed later in this article. In the current psychological literature, this set of cultural groups is largely represented by European Americans and Canadians (called European Americans hereafter). All other regions are called non-Western for the lack of a better term.

² We will italicize the labels of hypothetical cultural zones in the past, including four ancient cultural zones we postulate (e.g., *Arab*, *Latin*, *East Asia*, and *South Asia*) as well as *Modern West* when these cultural zones must be distinguished from contemporary cultures.

³ A sharp distinction between cross-cultural psychology and cultural psychology is neither necessary nor productive. It is important to examine both explicit attitudes and beliefs and the implicit psychological tendencies fostered by culture and integrate theoretical and empirical knowledge from both sources. When this knowledge integration is achieved, the distinction between the two psychologies of culture will be dissolved. The present article represents a small step toward this goal.

constructs such as independence and interdependence and the attendant values are important. Indeed, they have played key roles in identifying widely shared attitudes and values across various cultural groups. However, such attitudes and values pertain only to a small part of culture's practices and meanings. Moreover, people's access to their own habitual behavioral tendencies is imperfect at best, and often negligible (Nisbett & Wilson, 1977). Not surprisingly, self-appraisals of one's own behaviors, as revealed in self-report questionnaires, such as the Singelis' (1994) self-construal scale, are largely unrelated to culture's implicit psychological tendencies when this relation is tested at the individual level (Kitayama et al., 2009; Na et al., 2010). Hence, the assessment of default psychological tendencies with implicit methods has proven indispensable in comprehensively theorizing how culture and the mind are mutually constitutive (Kitayama, 2002; Kitayama et al., 2009).

Eco-Historical Origins of Cultural Practices and Meanings

There is an increasing agreement that ecological conditions over the last several 1,000 years played key roles in constituting the practices and meanings of various cultural zones (Diamond, 1999; Oishi, 2014; Talhelm et al., 2014). That is, existing ecological conditions, such as climate, geography, and crops available, may have fostered certain social institutions, practices, norms, and associated ideologies and lay theories (Kitayama & Uskul, 2011). Once these new developments emerged under the constraints and affordances of the natural ecologies, they must have turned the original primordial natural ecologies into social, human-made ecologies or what may be called "behavioral environments" (Hallowell, 1955), analogous to the notion of "ecological niche" in evolutionary biology (Odling-Smee et al., 2000). These environments present a variety of adaptive goals and attendant tasks that are fundamentally cultural rather than natural, thus called "cultural tasks" (Kitayama et al., 2009). Further, they are composed of mutually reinforcing components such as social institutions and ideologies that support them. Consequently, they become self-perpetuating even when the original primordial ecological conditions cease to exist. For example, an East Asian form of interdependence is based on rice farming, but it persists even where rice farming is no longer a predominant mode of subsistence (Uchida et al., 2019). Likewise, even though certain ecological conditions (e.g., low population density [as in a desert] and portable wealth [e.g., a herd of animals]) might be needed to foster a culture of honor, this culture often persists even after the original ecological conditions have disappeared (Nisbett & Cohen, 1996).

All humans try to adapt to a behavioral environment by addressing cultural tasks needed to survive and flourish therein. This active and repeated engagement in cultural tasks, in turn, shapes spontaneous psychological habits or tendencies, thereby forming distinct mentalities. The key insight here is that mentality is shaped through cultural

participation (e.g., Kitayama et al., 2009). This insight has received support in recent work on neuroplasticity and culture (Kitayama et al., 2020; Yu et al., 2019).

East, West, and the Rest

Much of the evidence available today on cultural variations in independence and interdependence comes from comparing North Americans and East Asians (Kitayama & Uskul, 2011; Markus & Kitayama, 1991). North American cultures have a strong commitment to the self's autonomy or separation from social groups or relationships and to the moral principle that the self's interest is and ought to be the ultimate arbiter of one's conduct (D. T. Miller, 1999). Although North Americans are known for their prosociality (as indicated by charity donations and voluntarism), such seemingly interdependent behaviors are often driven by personal motivations, such as the need to promote positive self-views (Cialdini et al., 1997). In contrast, East Asian cultures share a strong commitment to interdependent social relations and the principle that each person's identity is inseparable from the group or relationship they belong to. Although East Asians are known for their high achievement motivations, such seemingly independent behaviors are driven by other-oriented motivations, such as filial piety (De Vos, 1975). Although, over the last 3 decades, East Asian culture has been considered a prototypical interdependent culture, East Asia is vastly different from other cultural regions that are considered interdependent, such as Latin America, South Asia, and the Arab world. Thus, an inevitable question arises: Is interdependence monolithic across the globe, or alternatively, might it take various forms? To explore this question, we start with two working hypotheses.

First, we hypothesize that cultural characteristics based on the independent view of the self, as reflected and revealed in European Americans' psychological profile, are an outcome of 1,000 years of cultural evolution. Once established in Western Europe over this period, the region's culture and social institutions (*Modern West*) subsequently spread to other regions in the past several 100 years, most notably to North America, Australia, New Zealand, and South Africa. As summarized by Schulz et al. (2019), the available evidence suggests that most (if not all) cultural zones outside of the *Modern West* are collectivistic and interdependent. Hence, it stands to reason that, aside from the *Modern West*, most ancient cultural regions entertained views of the self as embedded and obligated to cooperate with others in the ingroup. The interdependent view must have dominated most of the world's cultures since sedentary forms of life arose approximately 10,000 years ago (Kitayama & Uskul, 2011; Schulz et al., 2019).⁴

⁴ People were also likely interdependent preceding this period. Hunters and gatherers, active in the preceding 40,000 years on the Eurasian continent, are sometimes described as independent and autonomous (Triandis, 1995). However, they may be more adequately described as interdependent with a broader range of people (Myers, 1991), compared to sedentary dwellers, whose interdependence with others is both narrower in range and intensive in the focus. More work is needed to examine these possibilities.

Thus, our first hypothesis is that the view of the self as interdependent predominates for most groups outside of Western cultures.

Even though most non-Western regions are interdependent, they are also highly diverse. For example, we will see that the dominant climate of East Asia (e.g., moderate to hot and highly humid) promoted rice farming, the form of subsistence supported by this ecology, thereby resulting in a particular style of interdependence. However, this form of interdependence is rooted in a specific configuration of various macro-level factors, and therefore, it is unlikely to be prototypical of all forms of interdependence around the world. Other regions could be very different even though they are interdependent. Our second hypothesis, then, is that depending on the specific configuration of social, ecological, geographic, historical, and demographic conditions, non-Western regions are extremely diverse in terms of their basic psychological characteristics even though they are united in their commitment to interdependence. With these two hypotheses in mind, we now move on to discuss research on both North America and East Asia in some detail first, followed by emerging research on Arab, Latin American, and South Asian cultural zones.

Independence and the Four Forms of Interdependence

Independence in Western Societies

Numerous scholars have suggested that Western societies, particularly the middle-class segments of these societies, emphasize the independence of the self (Markus & Kitayama, 1991; Schulz et al., 2019; Triandis, 1995). Many historical forces, most prominently Protestantism and various ideas of the Enlightenment philosophers, played a major role in shaping this emphasis. Today, the resulting ideology valuing individual autonomy and freedom permeates every aspect of society, most importantly, business and the power structure related to it (Weber, 1930). That is, it is hegemonic (Gramsci & Rosengarten, 1994). Moreover, this form of life (i.e., individualism) is oriented toward personal success, wealth, and the pursuit of happiness, which has motivated and been reinforced by widespread voluntary settlement in, and subsequent colonization of, North America in the 18th and 19th centuries (Kitayama et al., 2010). As may be expected, in large-scale international surveys, Western societies are consistently high in individualism, including autonomy and self-expression (Hofstede, 1980; Inglehart & Baker, 2000; Schwartz, 2006). Importantly, however, this Western emphasis on independence comes with higher prosociality (Vignoles et al., 2016) or altruism (Rhoads et al., 2021) and strong general trust (Schulz et al., 2019) because altruistic tendencies are seen as required to maximally serve each person's self-interest.

The psychological characteristics of people engaged in Western, individualistic societies, particularly those of

European Americans and Canadians, have been well documented. Westerners are committed to personal autonomy, choice, and freedom (Savani et al., 2010). For example, they work harder on a task when they choose the task freely than when they are assigned the task (Iyengar & Lepper, 1999; Na & Kitayama, 2012). Because of their strong personal orientations, Westerners' cognition is focused on goal-relevant objects, and conversely, they pay less attention to contextual information—that is, they are less holistic in their cognitive style (Kitayama et al., 2003; Masuda & Nisbett, 2001). Correspondingly, their reasoning tends to be more analytic, relying heavily on the use of logical rules (Norenzayan et al., 2002). Moreover, for Westerners, the self's internal attributes carry a greater value and priority over social duties and roles. Thus, they value the expression of such attributes, including emotions (Niedenthal et al., 2019; Salvador et al., 2022) and preferences (Kim & Markus, 1999). The tendency to express and experience emotions is particularly pronounced for emotions that disengage and separate the self from others, such as pride and anger, rather than for those that engage and connect the self with others, such as friendly feelings toward others and guilt (Kitayama et al., 2006; Salvador et al., 2022). Last, the propensity toward the positivity of the personal self lends itself to self-enhancement, which is well documented among Westerners (Heine et al., 1999). For example, they have high self-esteem and show various cognitive biases protecting and enhancing self-esteem.

Although the evidence is multifaceted and diverse, it points to three signature features of Westerners' psychological functioning. First, Westerners think analytically, are generally logical, rather than intuitive, and are more focused rather than holistic in their attention. Second, they tend to express emotions, especially socially disengaging emotions such as pride and anger. Third, they are highly self-enhancing. In what follows, we examine four other culture zones and, in so doing, we highlight these three aspects.

Four Forms of Interdependence

Self-Effacing Interdependence (East Asia)

The cultural psychological literature over the last 3 decades has provided ample evidence that East Asian societies emphasize the interdependence of the self with others. These societies are consistently low in individualistic orientations (implying high collectivism) when these orientations are assessed in large international surveys (Hofstede, 1980). People in East Asian societies have a strong commitment to social harmony, interpersonal obligations, and adjustment to social norms and expectations (Weisz et al., 1984). Conflict avoidance is the primary strategy to maintain the interdependence with others (Rothbaum et al., 2000). Social norms are generally tight and well-regulated (Gelfand et al., 2011).

As shown in Figure 1, this form of interdependence is likely related to sedentary living in densely populated communities made possible by the temperate, generally warm, and humid climate of the area and the rice farming this climate supports (Talhelm et al., 2014; Uchida et al., 2019). This mode of living was linked to power, prestige, and wealth, thereby forming a hegemonic cultural narrative. Moreover, rice farming necessitated tightly-knit, highly sedentary communities (Talhelm et al., 2014). Strict rules and hierarchies were set in place to ensure the efficient functioning of this system (Gelfand et al., 2011; Talhelm & English, 2020). This arrangement of life minimized the need to cultivate relations with strangers outside of one's ingroup, resulting in low levels of social openness or relational mobility (Thomson et al., 2018). In combination, rice farming likely promoted an East Asian form of interdependence realized through self-effacement and moderation of the personal self (Heine et al., 1999; Kitayama et al., 1997).

The psychological characteristics of people engaged in East Asian societies have been well studied. As interdependence typically requires attending to various elements of the situation, such as norms and expectations, East Asians tend to be more holistic in attention than Westerners (Kitayama et al., 2003; Masuda & Nisbett, 2001). Dispositional bias is attenuated or nonexistent in social explanation (Choi et al., 1999; Kitayama et al., 2009). Inferences are based more on relationships between objects than on logical rules (Norenzayan et al., 2002). Strong emotions are frowned upon because they disrupt social harmony (Tsai et al., 2006), and conversely, restraint in emotional expression is positively sanctioned (Kraus & Kitayama, 2019; Salvador et al., 2022). East Asians also experience socially engaging emotions (e.g., close feelings

and guilt) more than socially disengaging emotions (e.g., pride and anger; Kitayama et al., 2006). Their happiness depends on social connections more than personal achievement (Uchida & Kitayama, 2009). Finally, East Asians are rarely self-enhancing and often self-effacing (Heine et al., 1999).

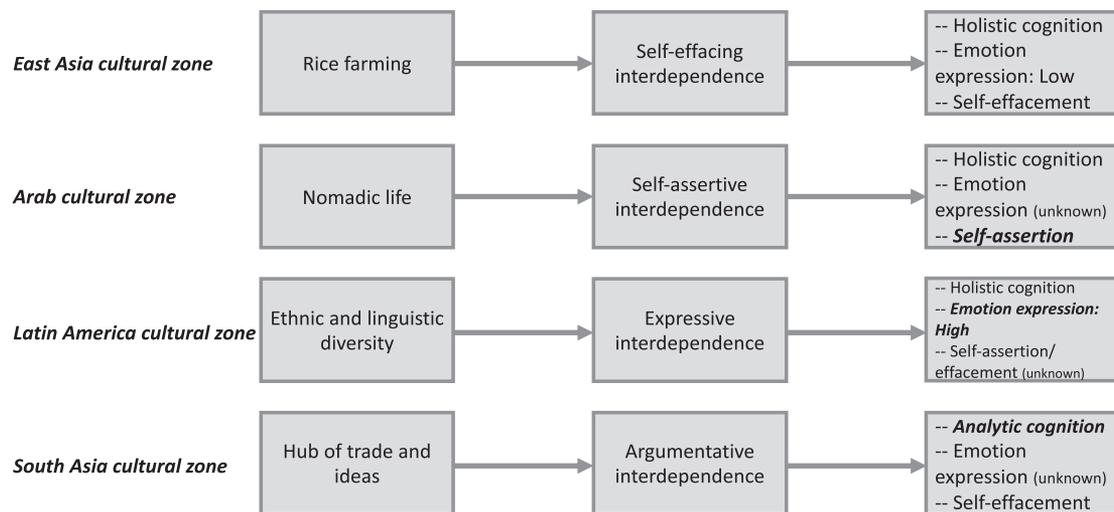
In short, it is fair to summarize this work by saying that East Asians think holistically rather than analytically. They are emotionally restrained and value low-arousal emotions and the suppression of emotional expression. Further, they are not self-enhancing. In fact, they are often self-effacing. This profile is summarized in the first row of Figure 1. In all three features, East Asians are diametrically the opposite of Westerners.

Self-Assertive Interdependence (Arab Zone)

Contemporary Arab societies are centered around the Middle East, spanning from the Atlantic coast of Northern Africa in the West to the Arabian Peninsula in the East. The use of the Arabic language unites these societies. Although highly diverse, we hypothesize that there is a common cultural thread running through these societies (San Martin et al., 2018). One critical source of the contemporary Arab culture, which preceded the emergence of Islamic religion, is a cultural narrative grounded in the nomadic mode of life exemplified by the Bedouins. This mode of living was (and still is) linked to power, prestige, and wealth, both in reality and in imagination. This narrative highlights the necessity of survival of tribal groups in an extremely harsh desert ecology that is sparsely populated, as the desert does not support life easily.

There is an emerging body of work addressing the resulting psychological profile typical in Arab regions. As shown in

Figure 1
Four Varieties of Interdependence in Four Cultural Zones: Relevant Social and Ecological Conditions, Dominant Types of Interdependence, and Associated Psychological Profiles of Cognitive Style, Emotional Expression, and Self-Relevant Motivation



Note. The psychological tendencies that are shared between the Western and non-Western groups are bolded.

the second row of [Figure 1](#), Arabs are distinct from both Westerners and East Asians. Compared to East Asians, they appear more similar to Westerners in that both groups are highly self-enhancing or assertive. The goal of protecting the ingroup through personal resourcefulness and strength is fundamental in Arab societies. People have a deep commitment to their ingroup because they would not survive without it. They are thus highly interdependent with one another and yet, display personal strength and power, often in the form of masculine honor that goes beyond the self and is applied to ingroups, such as one's family and tribe ([Uskul et al., 2019](#)). That is, they are highly assertive of the self's prowess since this assertiveness is seen as group-serving, which makes it honorable. We have thus characterized this form of interdependence as self-assertive ([San Martin et al., 2018](#)).

Testing multiple Arab groups, [San Martin et al. \(2018\)](#) showed that Arabs are no different from East Asians in both holistic cognition and situational social explanation, indicating that they are as attuned to social expectations and norms as East Asians are. In this respect, Arabs were different from Westerners, who are less holistic in cognition. However, unlike East Asians (who are self-effacing), Arabs are more self-assertive and enhancing. In particular, Arabs reportedly experience disengaging emotions (e.g., pride and anger) more than engaging emotions (e.g., close feelings and guilt) supposedly because disengaging emotions are also self-assertive. In this respect, Arabs are no different from Westerners in their self-enhancing tendencies (as highlighted in bold in [Figure 1](#)). However, [San Martin et al. \(2018\)](#) hypothesized that the motivations behind these tendencies are diametrically different. Whereas Westerners self-enhance to display and confirm their independent self, Arabs do so to show the self's resourcefulness for ingroup protection and thus affirm their interdependence. To test this possibility, the authors primed either the self's independence or interdependence by having participants list their differences from family and friends (known to prime independence) or similarities to them (known to prime interdependence; [Trafimow et al., 1991](#)). For Westerners, when the independent mindset was primed, they self-enhanced more strongly than when the interdependence mindset was primed. Conversely, Arabs showed the opposite pattern—they self-enhanced more when the interdependent (rather than the independent) mindset was primed.

Expressive Interdependence (Latin America)

Contemporary Latin American societies are defined by a mixture of heritages. Due to colonization, there is a strong European influence, primarily from Latin regions of Europe, particularly Spain and Portugal. Latin societies, including both countries in the Mediterranean and in Latin America, are

known for high levels of emotional expressivity ([Niedenthal et al., 2019](#)). [Niedenthal et al. \(2019\)](#) suggest that emotional expressivity is linked to historical levels of ethnic and linguistic diversity. Such diversity plausibly existed in the ancient Roman Empire, which emphasized inclusion and diversity of both ethnicity and language to achieve the political agenda of territorial expansion. The regions covered by the empire were plausibly highly diverse in both ethnicity and language ([Eckstein, 2007](#)). This ancestral Roman tradition might have influenced the Spanish and Portuguese policies in the colonization of Latin America. Today, Latin America is quite high in ancestral diversity, with contemporary population coming from a large number of ancestral ethnic groups ([Putterman & Weil, 2010](#)). Indeed, most Latin Americans consider themselves of mixed race, having European, Indigenous, and African ancestry ([Martínez-Echazábal, 1998](#)). In combination, Latin cultural zones, both in Europe and Latin America, are thought to have developed a set of cultural practices and conventions designed to use the expression of emotions as a means for social communication and coordination ([Niedenthal et al., 2019](#)).

Recent work has identified the psychological profile typical of Latin Americans. Latin Americans are cognitively holistic ([de Oliveira & Nisbett, 2017](#)). Importantly, consistent with the hypothesis that Latin Americans are emotionally expressive, they value highly arousing emotions as strongly as Westerners do ([Ruby et al., 2012](#)). However, this similarity between Latin Americans and European Americans conceals an important difference. Latin Americans may express emotions to be amicable and fit in with social relations ([Campos & Kim, 2017](#); [Triandis et al., 1984](#)), whereas Westerners express emotions to show their inner passion.

To obtain support for this point, [Salvador et al. \(2022\)](#) compared Latin American participants with both European Americans and Japanese. The participants reported how strongly they would express various emotions in varying social situations. Three patterns emerged. First, when all emotions were collapsed, Latin Americans (Chileans, Colombians, and Mexicans) were more expressive than European Americans. East Asians (Japanese) were the least expressive of the three cultural groups. Second, this overall cultural difference was significantly moderated by the social orientation of the emotions. Both Latin Americans and East Asians expressed socially engaging emotions more than socially disengaging emotions, indicating that they are interdependent. In contrast, North Americans expressed socially disengaging emotions more than socially engaging emotions, suggesting that they are independent. Third, the Latin American tendency to express engaging emotions was most pronounced for positive emotions (e.g., close feelings), but the seemingly identical Japanese tendency was most pronounced for negative emotions (e.g., guilt).

In short, Latin Americans are distinct from both Westerners and East Asians. Similar to East Asians and unlike Westerners, they are holistic in cognition. Unlike East Asians, yet like Westerners, they are emotionally expressive (as highlighted in bold in Figure 1). However, this apparent similarity between Latin Americans and European Americans in emotional expression seems to conceal a deeper difference because these psychological tendencies are in the service of independence for Westerners, but in the service of interdependence for Latin Americans.

In apparent contradiction to the present analysis, Krys et al. (2022) concluded that Latin Americans are at least as independent or even more so than Westerners. The researchers arrived at this conclusion because Latin Americans hold positive attitudes toward certain behaviors seen as indices of independence. In particular, Latin Americans are higher in self-uniqueness (indicated by perceived differences of the self to others) and self-enhancement (marked by attitudinal consistency and coherence) than East Asians. Moreover, they are equal to or even higher than Westerners on these dimensions.

As noted above, however, emotional expression does not universally signify independence, especially outside the *Modern West*. Indeed, emotional expression (an important element of self-uniqueness) is in service of interdependence in Latin America, as indicated by the aforementioned evidence by Salvador et al. (2022). Moreover, as also noted in our discussion of the Arab cultural zone, self-enhancement can be a marker of the willingness and capacity to protect an ingroup (San Martin et al., 2018). Hence, it is premature to conclude that Latin Americans are independent.⁵ Additionally, Latin American countries are strongly collectivistic (Hofstede, 1980). Interdependence and collectivism are often used interchangeably in the current literature. For example, many scholars use independent vs. interdependent self-construal scales to assess individualism vs. collectivism (Oyserman et al., 2002). Hence, the Bayesian prior for the Krys et al.'s (2022) conclusion is quite low. In combination, the available evidence suggests that emotional expression defines the specific form of interdependence typical in the Latin American cultural zone.

Argumentative Interdependence (South Asia)

South Asian countries are located in and around the Indian subcontinent. While ecologically diverse, the area includes hot fertile plains. Parts that receive sufficient precipitation lend themselves to rice farming, and others with more moderate precipitation are suitable for wheat farming. Moreover, the area is located at the intersection of multiple major civilizations: It is connected to Arab societies in the west and to Central Asia in the north. By sea, it is directly linked to the Horn of Africa, the Arabian Peninsula, and Southeast Asia.

Its geographic location places South Asia at the intersection of various cultural, religious, and linguistic groups during times of both peace and war. A diverse array of people interacted with each other and engaged in negotiations, especially in commerce (Seland, 2013).⁶ Moreover, an equally diverse range of philosophical ideas and thoughts emerged, including multiple ancient Indian schools of thought. The schools of thought engaged with Persian, Arabic, and Greek civilizations on the west, the Tibetan civilization on the north, and South East Asian civilizations on the east. The mixture of diverse intellectual traditions is thought to foster argumentation among different schools (Sen, 2013). Over several millennia, this culture of argumentation likely shaped how interdependence is achieved in this region. Today, unlike most other countries tested, debating is the most popular extracurricular activity among students in both India and Pakistan (Cambridge Assessment International Education, 2018). The cultural tradition of argumentation appears alive and well among South Asian Americans in business settings. They are far more argumentative than East Asians by peer ratings, which in turn predicts the likelihood to be chosen into leadership positions (Lu et al., 2020). Notably, this tradition of argumentation coexisted hand in hand with closely knit interdependent social systems. Social systems prevalent in South Asia were and still are highly hierarchical (Dumont, 1970). This social system appears to be reflected in the tendencies of Indians to be deferential to authority (Savani et al., 2012; Storti, 2015).

It is commonly held in the current psychological literature that argumentation is related to an assertive independent self. For example, one of the items commonly used to assess independent self-construal (Singelis, 1994) reads, "I prefer to be direct and forthright when dealing with people I've just met." Likewise, interdependence is indexed by another similar, but reversely worded item, "Even when I strongly disagree with group members, I avoid an argument." Given

⁵ At stake here is the polysemic nature of behaviors such as emotional expression and self-enhancement. It is crucial to analyze how these behaviors take on different meanings when included in varying cultural styles of interdependence (or independence). The question of how high or low given cultures might be in this or that trait is secondary, becoming meaningful only when the cultural meanings of relevant behaviors have been clarified and identified. In the third section of this article, we will argue that both emotional expression and self-enhancement had originally been constructed as signatures of interdependence in relevant non-Western cultural zones, but they have since been reconstituted as significant markers of independence in the *Modern West*. This discussion will highlight another notable case of polysemy of cultural behaviors. Whereas the emphasis on "inclusion and diversity" signifies social justice in Western societies today, it likely meant a political desire for territorial expansion in the ancient Roman Empire.

⁶ Commerce historically was very active in Arab regions. As we noted, however, in Arab regions, the ecology encouraged low population density and relatively portable goods, which in combination made it essential to protect one's ingroup physically (Nisbett & Cohen, 1996). In contrast, in much of South Asia, agriculture is far more dominant, supporting larger populations while rendering the economic goods (e.g., plants and trees) far less portable, which may have lent itself to negotiating with competitors. Future work must address these possibilities more thoroughly.

the premise that argumentation is linked to independence, the combination of argumentativeness and interdependence may come as a surprise. However, unlike North Americans who argue to assert the personal self, when Indians argue and thus try to influence others, they tend to do so with others' needs in mind (Savani et al., 2011). Consistent with this observation, Indians actively modulate and adjust their behaviors to accommodate the preferences of others, particularly authority figures (Savani et al., 2012). Moreover, Indians regard adjustment and accommodation to significant others' preferences and desires as uncontested duties (J. G. Miller & Bersoff, 1992). Last, Indians tend to abide by social norms instead of following their preferences (Savani et al., 2008, 2015).

Altogether, whereas Westerners are also argumentative (Lu et al., 2020), they are not as accommodative as Indians. Unlike Indians, Westerners prioritize their personal preferences over social norms in their behavioral decisions (Savani et al., 2008, 2015). Hence, it may be the case that Indians, and perhaps South Asians in general, achieve interdependent social relations in part by exercising their argumentative skills (Mercier & Sperber, 2011). These skills are employed to promote the interest of one's ingroups in commercial transactions. Moreover, they are also used to promote ingroup members' interests in close relationships, as prescribed by sociocentric and hierarchical social norms.

What psychological profiles might be expected of argumentative interdependence? Full evidence is lacking at the moment. However, emerging evidence suggests that Indians are more likely than Westerners to explain others' behavior by invoking social roles and associated duties (J. G. Miller, 1984). Further bolstering the assumption that Indians are interdependent, recent evidence shows that Indians are as self-effacing as East Asians (Nanakdewa et al., 2022). Notably, however, argumentation requires analytic thinking as people need to identify strong arguments and invoke evidence supporting their argument (Mercier & Sperber, 2011). If argumentation is deployed to foster interdependence, interdependence in Indian contexts may be supported by analytic cognition, particularly logical reasoning.⁷ Prior work examined cultural differences in the extent to which people generalize rules from categories to exemplars (e.g., "All fruits contain magnesium sulfate, therefore, all plums contain magnesium sulfate"). East Asians are influenced by the degree to which the instance is prototypical of the category. They are thus more likely to judge the second statement as convincing if the exemplar was "plum" (a typical fruit) than if it was "okra" (an atypical fruit). Reflecting their analytic reasoning style, Westerners are less influenced by the typicality of the exemplar than East Asians (Norenzayan et al., 2002). Building on this finding, Nanakdewa et al. (2022) found that Indians are even less likely to be influenced by the exemplar typicality than North Americans.

In short, South Asians seem to fall between East Asians and Westerners (see Figure 1). Unlike East Asians, but similar

to Westerners, South Asians are analytic, especially in the reasoning domain (as highlighted in bold in Figure 1). However, unlike Westerners, this analytic cognition appears to serve the goal of interdependence rather than independence.

Taking Stock

By adopting various implicit measures, including neuroscience measures, a new breed of psychological research on culture has revealed that culture's impact goes deep under the skin (Kitayama et al., 2009, 2018; Kitayama & Uskul, 2011). Moreover, using these measures, more recent work has identified four distinctive forms of interdependence in four non-Western cultural zones (see Figure 1). Our review of this work suggests two broad generalizations.

First, the cultural variation is maximal when Westerners are compared with East Asians.⁸ The remaining three non-Western groups share at least one of the three features with Western samples (bolded in Figure 1). The resemblance between each of these non-Western groups and the Western group is noteworthy. Because of this apparent resemblance, some scholars have concluded that Latin Americans are at least as independent as Westerners since both groups are expressive of the self, including the self's emotions (Krys et al., 2022). Further, one might also be tempted to conclude that both Arabs and Indians are likewise independent because they are self-enhancing and argumentative, respectively. However, in each case, the resemblance conceals deeper differences that lie beneath. This observation leads to our second generalization: Certain features that constitute interdependence in the non-Western cultural regions (bolded in Figure 1) are regarded as features of independence in Western populations. In these cases, the psychological features recognized as defining independence in the current literature (analytic cognition, emotion expression, and self-enhancement) are serving the cultural goals of interdependence in the respective non-Western regions. In all likelihood, they served interdependent functions in the corresponding ancient cultural zones before they were adopted in the *Modern West*. Taken together, these two generalizations—apparent similarities between Western samples and three of the four

⁷ In the current literature, dispositional versus situational attributions are seen as part of analytic versus holistic reasoning styles, raising a question of how Indians can be both analytic (in reasoning) and situational or holistic (in social attribution). However, the situational attribution common in India (Miller, 1984) comes primarily from an emphasis placed on social roles and norms, which by themselves are rule-based. Thus, instead of forming a holistic representation of the context (like East Asians would do), Indians may apply their knowledge about the rules emphasizing social norms in the attribution task. Research focusing on mechanisms underlying situational attributions among South and East Asians would be warranted.

⁸ Cultural distance could vary dramatically with different measures. Using explicit attitudes in the domains of contemporary politics (those covered in the World Value Survey), Muthukrishna et al. (2020) find that some Arab countries (e.g., Saudi Arabia) are more different from Western Europe than East Asia. These attitudes are arguably influenced by more contemporary political dynamics.

non-Western groups and deeper dissimilarities that are hidden beneath the similarities—lead us to a thorny question regarding the origins of the *Modern West*: Where did it come from and how has it established itself over the last 1,000 years?

Understanding the Western Ethos of Independence

Cultural Evolution Over the Last 10,000 Years

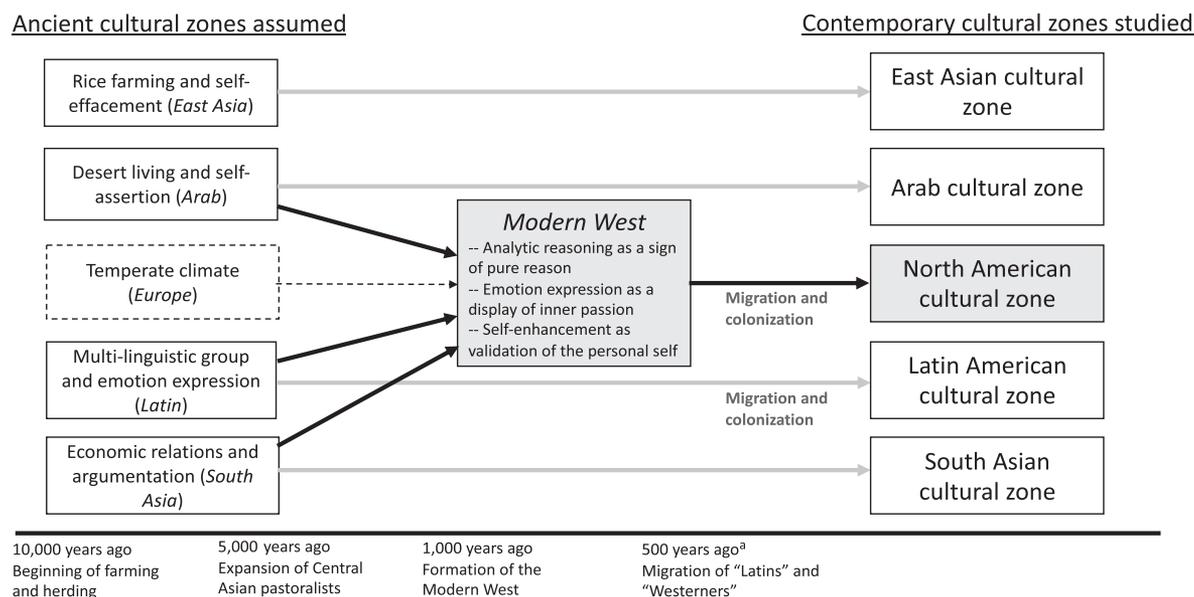
Figure 2 illustrates our theoretical framework. Although it glosses over many potentially important details, this framework highlights four crucial assumptions. First, we assume that the five contemporary cultural zones of interest (listed on the right-hand side of the figure) have historical precursors in five hypothetical ancient cultural zones (provisionally called *East Asia*, *Arab*, *Europe*, *Latin*, and *South Asia*, italicized to mark their hypothetical status) and one more recent hypothetical cultural zone (called the *Modern West*). Notice that as a representative of Westerners, most of the available studies test North Americans and Canadians of European heritage, people with Western European cultural roots. The immigration of Western Europeans to North America and subsequent colonization of the continent played a pivotal role. Likewise, Latin American culture has been heavily influenced by Latin traditions (rooted in the ancient Roman Empire) in the Mediterranean through an analogous history of migration

and colonization. Second, there has been a broad population differentiation between *East Asia* and the remaining four ancient zones (*Arab*, *Europe*, *Latin*, and *South Asia*) over the last 10,000 years. Third, the latter four ancient zones have strong relations with one another and with the *Modern West* when the latter emerged over the last 1,000 years. Fourth, *Europe* was “backward,” compared to the Mediterranean (including Latin and Arab regions) and South Asian regions during the ancient time under discussion, with less wealth, less prestige, and less status (as indicated by the dotted box and arrow; Frank 1993; Wallerstein, 2004). Europe’s moderate and dry climate, affording herding, might have contributed to the later development of individualism (Uskul et al., 2008). To establish the plausibility of these assumptions, we must start with a brief review of what is known about population movements on the Eurasian continent over the last 50,000 years.

Ancient Population Movements

To address how various ancient cultural zones emerged and sustained themselves, we must go back at least 50,000 years. There is substantial literature on cultural evolution during this period in both archeology (Bellwood, 2004) and linguistics (Anthony & Ringe, 2015). A recent computerized analysis of

Figure 2
A Model of the 10,000-Year Cultural Evolution



Note. The model shows the time course by which the five contemporary cultural zones of interest have emerged over the last 10,000 years. The five hypothesized ancient cultural zones (*East Asia*, *Arab*, *Europe*, *Latin*, and *South Asia*, italicized to mark the hypothetical nature of these zones) are only approximate. The *Europe* zone receives less emphasis because of its relative lack of wealth, power, and status in the ancient time under strong discussion. Moreover, another hypothetical cultural zone of the *Modern West* emerged in the last 1,000 years under strong influences from three ancient cultural zones. The paths leading to the contemporary Western cultural zone are highlighted in Black arrows.

^a Ages noted are only approximate.

ancient DNA, examining the degree to which specific strings of mutated single-nucleotide polymorphisms are shared across different groups, has shown that anatomically modern humans spread out of Africa in multiple waves (Reich, 2018).

The analysis of ancient DNA shows that around 50,000–60,000 years ago, anatomically modern humans, having evolved in Africa, went out of the African continent to the Eurasia continent. Notably, they were split into two broad lines (Villanea & Schraiber, 2019). One line migrated to the Western regions of the Eurasian continent, and the other went east. The latter group populated East Asia (and eventually Americas) and Oceania (Lazaridis et al., 2016). These hunters and gatherers survived and flourished over the next 40,000 years. In addition to the influx of anatomically modern humans from Africa into the Eurasian continent and beyond, two later migratory movements significantly impacted subsequent cultural evolution.

First, around 10,000 years ago, farming and herding took hold in the Near East (Graeber & Wengrow, 2021), including Anatolia and Iran. These farmers proved highly successful and quickly expanded their territories. Whereas farmers in Anatolia migrated westbound to the Mediterranean and eventually Western Europe, farmers in Iran migrated to India (Lazaridis et al., 2016). Agriculture and all technologies associated with it went with the migratory movements. However, this spread did not reach East Asia. In fact, around the same time when farming started in the Near East, it also started in East Asia, near the Yellow and the Yangzi Rivers (Bellwood, 2004). From this evidence, it is to be expected that East Asia was largely separated from the rest, including the contemporary West, Mediterranean, Arab, and South Asia, over the last several 1,000 years. The farming traditions originating in the Near East and East Asia were only to “meet” in South Asia several 1,000 years later, around 2,000 Before the Common Era (BCE; Bellwood, 2004).

Second, another major migration occurred much more recently around 5,000 years ago that massively affected the Western regions, particularly South Asia, the Mediterranean, and Europe. Pastoralists in the Central Asian steppes (the Yamnaya), the putative inventors of wagons and the wheel, spread westbound to reach much of Europe. They also migrated to the southeast to reach South Asia. This bifurcated migration had massive consequences, one of which is to form the Indo-European language family—a broad range of languages that share a common heritage, encompassing three major cultural zones today (Gimbutas, 1991; Lazaridis et al., 2016). These cultural zones correspond to the three cultural traditions we discussed above, namely, (a) the Western cultural zone (including Western and part of Eastern Europe included in *Modern West*), which was transplanted to North America (among other regions, including Australia, New Zealand, and South Africa) in the 15th century onward, (b) *Latin* culture (including France and much of the Mediterranean), which was transplanted to South America with

colonization by Spain and Portugal in the 15th and 16th centuries onward, and (c) *South Asian* culture.

Originally suggested by the available archeological and linguistic evidence (Gimbutas, 1991), the hypothesized migratory movement of the Central Asian pastoralists (the Yamnaya) is consistent with a recent analysis of ancient DNA (Lazaridis et al., 2016). These pastoralists mixed with the existent farmers who had originated in the Near East several 1,000 years earlier. Exact details remain murky, yet we may safely conclude that there have been extensive interactions among three of the four non-Western cultures under discussion (*Latin*, *Arab*, and *South Asia*) over the last several 1,000 years. Although the Arab language does not belong to the Indo-European language family, the Arab regions are right next to the Latin and South Asian regions. East Asia was geographically separated from these interactions.

Historical Cultural Differentiation

These historical considerations shed light on why the cultural divide today is maximal when Western culture is compared with East Asian culture. First, East Asia has been distinct ecologically over the last 10,000 years. This ecology afforded rice instead of wheat and other crops available in the Near East, thereby offering an important impetus to foster a self-effacing form of interdependence (Talhelm et al., 2014). Moreover, the two migratory movements that encompassed much of Eurasia outside of East Asia (first by the original farmers in the Near East and second by the Yamnaya pastoralists) resulted in a broad cultural area encompassing India, Arab, the Mediterranean, and Europe. This area arguably excluded East Asia.

It is more challenging to figure out how we might understand both similarities and differences among the four interconnected cultural regions, namely, Arab, Latin, South Asian, and North American. To address this question, we note that the three non-Western regions have histories that go back several 1,000 years. In contrast, Western culture (of which North America is part) is far more recent: It emerged in Europe and became the dominant power on the globe only in the last several 100 years (Frank, 1993; Kennedy, 2017; Wallerstein, 2004). When this Western culture (the *Modern West*) began to emerge and take hold, the non-Western cultural zones, particularly *Arab*, *Latin*, and *South Asian* zones, were arguably more advanced technologically, militarily, and economically. This power asymmetry was in stark contrast to the asymmetry that became more common in the most recent few 100 years.

Insofar as cultural practices and artifacts transmit from more prestigious regions and groups to the ones that are less so (Henrich & Gil-White, 2001; Kitayama et al., 2010), we may posit that during the emergence of the *Modern West*, more influences went from the non-West to the West. For

example, there are massive Latin influences realized by the occupation of the vast area of Europe by the ancient Roman Empire. Moreover, Arabic influences are also extensive in middle-age Europe, particularly, in Spain. Some other influences from these and other regions, including India, are culinary, such as tea and spices. We may add behavioral habits or routines to this list of various “imports.” These behavioral routines include self-assertion, emotional expression, and argumentation. Westerners may have actively “imported,” that is, “mimicked” and “adopted” these behavioral routines of more powerful, prestigious regions before their regions attained power and became hegemonic in the most recent past.

According to this hypothesis, *Latin*, *Arab*, and *South Asian* cultures had developed their respective styles of interdependence before the *Modern West* emerged. The *Modern West* adopted the behavioral patterns from the areas that carried greater prestige while the non-Western regions retained greater power and wealth. This analysis explains why Westerners are similar to Latin Americans in emotional expression, to Arabs in self-enhancement (or assertion), and to South Asians in argumentation. However, in psychology today, we recognize these features as prima-facie signs of independence rather than interdependence. How can this be?

The Same Behavior, Different Meanings

The key to addressing this puzzle lies in the fact that any given behaviors that appear identical are potentially polysemic, subject to multiple interpretations. Imagine a group of people, who have adopted certain behavioral patterns, say, playing baseball. They may already know what this complex set of behaviors means. But such knowledge is more typically missing or at least not fully available to them when this adoption occurs across different cultural areas. To be more specific, baseball is one of the most popular sports in both the United States and Japan today. However, when Japanese adopted the sport approximately 100 years ago from the United States, they understood the “spirit” of the sport by using their own cultural conceptual framework. Thus, they had no choice but to understand the sport in terms that were most familiar, namely, those of bushido (the samurai ethic), which explains why the sacrifice bunt (which involves a batter’s attempt to allow a runner to earn an extra-base by bunting and sacrificing his chance of earning a base) is very common and has been symbolically elevated to the status of virtue in the baseball in Japan—something unheard of in the United States (Whiting, 2005).⁹

An analogous process of cultural adoption might have occurred when people in the Western regions of the Eurasian continent (the *Modern West*) “imported” and “adopted” the behavioral signatures of interdependence from the *Latin*, *Arab*, and *South Asian* cultural zones. *Westerners* might

have interpreted these behaviors in a conceptual framework they had developed, namely, in the framework of independence rather than interdependence. To understand this process, we must consider the deep transformative influence modernity entailed.

Perspectival Transformation and the Making of the Modern Independent Identity

Western individualism emerged in various European regions over 1,000 years, particularly, due to the confluence of numerous sociopolitical, economic, ideological, and religious factors, including, most notably, the Renaissance in the 14–15th centuries, the reformation that led to the emergence of Protestantism in the 16th century, and Enlightenment movements and ideas of the 17–18th centuries. These historical events may have been prepared by the generally dry and moderate climate that supports herding, fostering an independent mentality (Uskul et al., 2008). More importantly, they likely had numerous historical precursors. For example, it is possible that the religious ideal of renunciation, already actively practiced in ancient India (Dumont, 1970), may define an early form of individualism, which may have gradually shifted from being the ideology of those detached from mainstream society to the governing principle of society. Christianity may have played a key role in this transformation. Schulz et al. (2019) argue that starting around 500 Common Era (CE), the Christian Church that was to become the Roman Catholic Church issued a series of decrees designed to weaken clans, tribes, and other feudal kin-based ties by prohibiting, among other things, cousin marriages. It may be the case that this move was motivated in part by the ideal of renunciation of secular family ties.¹⁰ This apparent effort of the Church to weaken the feudal social institutions sustained over the long period may have laid an important seed for an individualistic ethos to emerge centuries afterward. In all likelihood, other historical events, especially those preceding the Western Church’s actions, will be uncovered in the future.

Nevertheless, the available evidence is consistent with the contention that through the last 1,000 years in Western regions of the Eurasian continent, a massive transformation in perspective emerged. Simply put, earlier sociocentric perspectives were replaced with more modern egocentric

⁹ Another example is an American practice of “show and tell,” which involves children demonstrating how their favorite toy is unique and special in front of their peers. When Chinese progressive preschools adopted this practice, they transformed them into a memorization contest (Tobin et al., 1989).

¹⁰ Other factors may have influenced the motive of the Church. In certain cases, these decrees might have helped the grips of the Roman Empire over its wide-ranging territory. In certain other cases, they might have helped the Church compete with feudal lords for control of territory. In other cases, they might have promoted the unity of a vast range of groups under the banner of the papal authority. Historical precursors of the Church’s actions await further investigation.

perspectives. To illustrate this transformation, consider some traditional regions, including Arab regions and the Mediterranean, where honor ethic is prevalent. Honor is said to arise when respect is bestowed on the self by others. In other words, it is public esteem granted by others. Note the self is seen as respectable from the perspective of others (Uskul et al., 2019). However, in the *Modern West*, this idea of honor was gradually replaced with an idea of dignity (Taylor, 1989). Dignity is constituted primarily by the self's belief that one is good and respectable. Dignity therefore is private esteem that commands others' respect. Note that both honor and dignity share two critical components, affirmation of the self and respect of the self by others. However, these two components are combined in different ways. In honor, the affirmation of the self is conditional to and thus secondary to the respect accorded on the self by others. However, in dignity, the affirmation of the self is primary, which then (is imagined to) leads to respect by others. Thus, honor is sociocentric, and dignity is egocentric. Some important cultural variations in self-evaluative processes can be explained by this contrast between honor and dignity (Leung & Cohen, 2011).^{11,12}

Insofar as the *Modern West* entailed a radical switch of perspective from outside-in (sociocentric) to inside-out (egocentric), we may begin to understand why and how the behavioral patterns of interdependence in the respective non-Western regions, such as self-assertion, emotional expression, and argumentation, were also interpreted in radically different manners when the *Modern West* adopted them. Specifically, as illustrated in Figure 2, once transplanted in the *Modern West*, self-assertion may have no longer been in service of ingroup protection. Instead, it became a culturally sanctioned means to affirm and enhance the self (thus typically characterized as “self-enhancing,” “self-serving,” or “egoistic”). Likewise, logical reasoning was no longer a means to negotiate, resolve business conflicts, and thus relate to one another. Instead, it became a window into each individual's pure reason and thus has since served as a marker of intellectual independence. The act meant to foster interdependence in ancient South Asia and its vicinities, including Ancient Greece, is now seen as a hallmark of “independent reason” as symbolized in “The Thinker”—Auguste Rodin's classic sculpture toward the end of the 19th century. A similar case may be made for emotional expressivity, which was no longer a way to communicate with people who do not easily understand each other with language alone due to varying linguistic backgrounds (Niedenthal et al., 2019). Instead, this concept of emotion as a regulator of social relations was transformed into a radically new idea of it as a window into one's soul, likely through romantic movements championed by, for example, Jean-Jacques Rousseau, the 18th-century Enlightenment-period philosopher. That is, the emphasis was shifted from using emotions to form and promote social relations to the use of emotions to reveal inner feelings.

Toward Global Psychology

Much of psychology so far has focused on Westerners. Therefore, unbeknownst to the researchers themselves, both theories and data in psychology may have also been profoundly biased by what is taken for granted in contemporary Western culture. This state of affairs might suggest why standard findings in mainstream (Western) psychology often fail to replicate (Markus & Kitayama, 1991; Muthukrishna & Henrich, 2019). This failure, however, is not a failure of science. To the contrary, it is an opportunity to expand the discipline's theoretical scope. To capitalize on this opportunity, we must bring to the forefront the nature of the tacit assumptions and practices of this culture and thus of our discipline. We have addressed this challenge in two ways. First, we spelled out cultural variations in four distinct cultural zones (Western, East Asian, Arab, Latin American, and South Asian). Westerners are more independent or less interdependent than East Asians. The remaining three non-Western regions fall “in-between.” However, what is understood as a feature of interdependence in the respective non-Western regions is seen as the signature of independence in the West. This observation led us to our second point, which involves a broad history or cultural evolution that took place on the Eurasian continent over the last 50,000 years. Informed by cumulative knowledge in archeology, linguistics, and genetics, we proposed that the non-Western regions emerged over the last several 1,000 years, reflecting unique social and ecological conditions. Moreover, the non-Western regions other than *East Asia* had massive influences on the *Modern West*, which emerged over the last 1,000 years. The *Modern West* adopted non-Western signatures of interdependence and transformed their meanings from those of interdependence to those of independence. Psychological knowledge makes sense only within this broad diachronic perspective (Muthukrishna et al., 2021).

Several caveats are in order. First, more analysis is needed about how the ethos of the *Modern West* was transmitted to North America. The same applies to the *Latin* influences in Latin America. Immigration has its own psychological effects (Kitayama et al., 2010). Moreover, each continent

¹¹ Another related construct of shame is defined by the loss of public esteem. Whereas honor is defined by an aggressive pursuit of public esteem to be gained, shame is defined by a failure of protecting public esteem (e.g., status or prestige).

¹² Similar transformations can be identified in other cases too. Trilling argues that sincerity, defined as the correspondence of the public self to an internally held belief, is more ancestral and supposedly transformed into authenticity, the perceived integrity of the personal self (Trilling, 2009). Thus, the two components of private belief and public action are seen from a more sociocentric viewpoint in the case of sincerity. In contrast, authenticity is distinctly egocentric—so much so that the public action component is relatively secondary once the integrity of the private self is assured. A similar case is evident in another contrast between appreciation (of the self by others) and affirmation (of the self by the self, commanding respect from others). It is likely that appreciation is more ancestral and has been replaced with affirmation throughout the *Modern West*. Consistent with this analysis, evidence shows that the feelings of being understood (similar to the sense of being appreciated) contribute more to life satisfaction for those with interdependent self-construal (Lun et al., 2008).

carried unique and dynamic interactions with other forces, including the influences of both indigenous cultural traditions and slavery, among others. Indeed, the current work did not do any justice to the significant roles of local indigenous cultures that were likely often suppressed, dominated, and even replaced, sometimes with violence, by cultural groups that migrated from somewhere else. This consideration is not only important in understanding racial diversity in the contemporary United States and Latin America but it is also undoubtedly central to understanding all long-term cultural changes, including the formation of the Indo-European language group (Lazaridis et al., 2016). In addition, there has been an unmistakable trend toward globalization in the last 10s of 1,000 years of human history. Globalization has shrunk the globe in many ways through technological advancements and business connections, from which many have benefited. However, the wealth generated through this trend is concentrated in some limited regions (e.g., global North today). Hence, it may necessarily result in severe poverty across the rest of the globe (e.g., global South today; Frank, 1993; Wallerstein, 2004), a dynamic that deserves more attention in the future.

Second, the available data focused on implicit psychological tendencies that defy easy access to conscious awareness and thus self-report (Kitayama et al., 2009, 2018; Kitayama & Uskul, 2011). These measures have expanded the scope of the field beyond self-reported attitudes, values, and beliefs and clarified how deep cultural influences might go under the skin. At the same time, it is important to examine sources of cross-cultural variations in self-reported attitudes, beliefs, and values, which often show anomalous patterns (Kitayama et al., 2009), even though they are broadly consistent with the proposal that the West is more individualistic than the rest (Oyserman et al., 2002; Schulz et al., 2019; Vignoles et al., 2016).

Third, our analysis has excluded sub-Saharan Africa. Existing evidence suggests that Africans are interdependent (Thomas et al., 2020), consistent with the existing attitude and value surveys, which show African societies to be highly collectivistic (Inglehart & Baker, 2000; Hofstede, 1980; Schwartz, 2006). But the interdependence in Africa may take yet another form governed by the need for vigilance against sabotage by ingroup members (Adams, 2005), a dynamic also identified among East Asians (Liu et al., 2019). More work is needed to examine interdependence in this region.

To conclude, we wish to highlight one fundamental insight from our current effort: To expand the discipline's geographic scope, we must understand the historical and evolutionary origins of different cultural zones, thereby extending the discipline diachronically (Henrich, 2015; Kitayama & Uskul, 2011). The traditional focus on self-report-based assessment of attitudes toward cultural constructs (e.g., Hofstede, 1980; Oyserman et al., 2002; Schwartz, 2006; Vignoles et al., 2016) is limited in its capacity to capture the dynamic formative influences of culture on mentality. The current cultural psychological toolkit of various experimental

tasks (Kitayama & Uskul, 2011) and neuroscientific methods (Kitayama et al., 2018) holds significant promise. However, the field must move beyond the existing tools and actively incorporate methodological innovations, including computerized analysis of ancient texts and cultural artifacts (Cowen et al., 2019; Jackson et al., 2019) and online assessment of various cognitions and biomarkers with portable wearables (Nahum-Shani et al., 2020). Moreover, in addition to archeology and linguistics, the emerging science of what ancient genes tell us about human history and cultural evolution (Reich, 2018) would significantly inform the analysis of how human culture has evolved over the last several 1,000 years—the period largely ignored even in the evolutionary branch of both biology (Laland et al., 2010) and psychology (Cosmides & Tooby, 2013) today. By bringing the analysis of this histo-evolutionary period to bear on the examination of contemporary mentality, we may be able to achieve the truly global science of the human mind.

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