



Culture, Social Class and the Dynamics of the Self

Ulrich Kühnen  · Shinobu Kitayama

Received: 17 May 2023 / Accepted: 30 January 2024
© The Author(s) 2024

Abstract In an ongoing cycle of mutual constitution, culture, the self, and associated psychological tendencies dynamically interact. Prior studies show that people from Western individualist cultures construe the self in independent terms (stressing their uniqueness and separation from others), promoting analytic, context-independent ways of thinking. In contrast, people from Eastern collectivist cultures emphasize their interdependence and connectedness with others, promoting more holistic, context-sensitive ways of thinking. Recently, this literature has been extended to study within-culture variations by socio-economic status (SES). This work has suggested that higher SES contexts foster the view of the self as an independent agent and analytic cognitive tendencies. By contrast, individuals from lower SES tend to emphasize interdependence with others while displaying more holistic cognitive tendencies. Of importance, these SES differences are embedded in larger socio-cultural contexts differing in individualism and collectivism. Hence, the relationship among SES, self-construal, and cognitive tendencies can sometimes vary dramatically between cultures.

Keywords Social class · Self-construal · Independence–interdependence · Holistic vs analytic cognition · Mutual constitution of culture and the self

✉ U. Kühnen

School of Business, Social and Decision Sciences, Constructor University Bremen
Campus Ring 1, 28759 Bremen, Germany
E-Mail: ukuehnen@constructor.university

S. Kitayama

Department of Psychology, University of Michigan
1004 East Hall, 530 Church Street, Ann Arbor, MI 48109-1043, USA
E-Mail: kitayama@umich.edu

Kultur, soziale Schicht und die Dynamiken des Selbst

Zusammenfassung In einem fortwährenden Wechselverhältnis konstituieren sich Kultur, das Selbst und die damit verbundenen psychologischen Tendenzen gegenseitig. Zahlreiche Studien zeigen, dass westliche, individualistische Kulturangehörige ihr Selbst durch independente (d.h. die eigene Einzigartigkeit und Unabhängigkeit betonende) Konzepte definieren, die generell analytisches und kontextunabhängiges Denken befördern. Demgegenüber betonen fernöstliche, kollektivistische Kulturangehörige ihre Interdependenz und Verbundenheit mit anderen, was eher holistisches, kontext-sensitives Denken befördert. In jüngerer Zeit sind diese Erkenntnisse auch auf den Vergleich von Personen mit unterschiedlichem sozio-ökonomischen Status (SES) innerhalb von Kulturen angewendet worden. So zeigen Personen mit höherem SES typischerweise eine eher independente Selbstsicht und tendieren zu analytischem Denken. Im Vergleich halten Personen mit niedrigerem SES eher interdependente Selbstkonzepte und zeigen tendenziell stärker holistisches Denken. Allerdings sind diese sozialen Schichtunterschiede ihrerseits wiederum eingebettet in den weiteren kulturellen Kontext individualistischer und kollektivistischer Gesellschaften. Daher kann die Beziehung zwischen SES, dem Selbstkonzept und den mit ihm verbundenen psychologischen Tendenzen stark zwischen Kulturen variieren.

Schlüsselwörter Soziale Schicht · Selbst-Konzept · Independenz-Interdependenz des Selbst · Holistisches vs. analytisches Denken · Wechselseitige Bestimmung von Kultur und Selbst

1 Introduction

Societal inequality is one of the most pressing social issues. It has accordingly been studied in various social science disciplines. A person's social class is defined by their socio-economic status (SES), which refers to their access to affluence, education, and occupational prestige. In addition to such objective indicators, people subjectively perceive and interpret their position on the social ladder (Adler et al. 2000). In this paper, we review recent work addressing how social class shapes the social self and the associated cognitive, emotional, and motivational processes. In doing so, we regard social class as a specific kind of cultural context (Cohen and Varnum 2016; Kraus et al. 2011; Stephens et al. 2014). Culture adds meaning to our lives, favors certain norms and values, and gives rise to affordances, opportunities, as well as various constraints in daily situations. It also has consequences for how people conceive themselves, others, and the relationships between the two. As we shall show, the different ways of construing the self and the relationships with others are related closely to the differences in various psychological tendencies. Our review leads us to make two broader conclusions. First, reflecting the opportunities and challenges linked to their social class, people acquire different psychological tendencies or habitual modes of thinking, feeling, and action. These tendencies are thought to be adaptive in their social-class environments. Second, social class itself is embedded in a larger socio-cultural context. The “cultural imperatives” or

normative ideas about what it means to be a good person vary across societies, and the meaning and implication of social-class membership is partly informed by them. Therefore, in order to understand the impact of social class for their selves and relevant psychological tendencies, we must take a broad cross-cultural perspective.

In this paper, we first describe evolutionary functions of the self and define the concepts of independence and interdependence, which permeate many forms of social relations and the self, including those linked to social class. Second, we discuss social class seen as a type of culture. Our review of the pertinent literature ranges from evidence for social-class differences in the self, over coinciding cognitive tendencies up to different patterns of neural activity. In the third section, we examine whether various psychological correlates of social class are similar or different across various national cultural contexts.

2 Independence and Interdependence of the Self

The human brain evolved such that its mechanisms increase the probability that the body that it inhabits survives and passes on its genes to the next generation. In providing a framework for understanding human nature, Baumeister (2005) argued that many distinctively human traits are evolved as adaptations and serve as an important basis for culture as we know it today. Leading a cultural life in large groups of individuals is as such an evolutionary advantage as it allows the execution of large joint tasks (such as farming or hunting) and provides protection against predators. Yet, in order to function well in such highly complex social systems one must be able to outmaneuver others, which requires psychological mechanisms for regulating action that go far beyond what is needed for the simpler societies of other animals. Only those of our ancestors who gradually evolved the required mental capacities were able to benefit from life in larger collectives, bringing about the “social brain” (Dunbar 1998). In this regard the self plays a central role. According to Baumeister (2022), the self serves three evolved functions. First, there is reflexive consciousness—our ability to think about ourselves. Second, the self has an executive function. It allows us to become agents and make conscious choices for our actions. Third, the self is a member of groups and relationships. Hence, the third basic function of the self is to enable people to relate to others, thus becoming interpersonal beings. These three functions of the self can safely be considered universal adaptations of the human mind that enable cultural life.

Socioecological psychology of the past three decades has suggested that our current cultures emerged during the last several thousand years, partly as adaptations to their ecological conditions including geography and climate (Diamond 1999; Kitayama et al. 2022; Oishi 2014). One important exception to this rule is cultures that have immediate origins in the Modern West—a cultural zone that emerged in the Western corner of the Eurasian continent over the last 1000 years. The Modern West emerged as a result of numerous, often incidental historical factors, such as accumulating wealth, geographies that separated various political centers, and Church authority acting to weaken feudal ties (e.g., Schulz et al. 2019). Many of these factors may have encouraged a unique focus on the independence of the self,

which is in stark contrast to all or at least nearly all preceding civilizations and cultures that emphasized the interdependence of the self with others. The newly emerging cultures—commonly called Western cultures—are likely to have their common heritage in various cultures that prospered in adjacent regions preceding the Modern West. These cultures included Ancient Greek as typically emphasized in most cotemporary analyses. However, they may also include Latin and Arab cultures spread across the Mediterranean, South Asia, and even certain regions in sub-Saharan Africa. Each of these regions must have developed its own culture based on unique ecologies and geographies before the Modern West emerged, as this development can be traced back several thousand years. In support of this observation, close analogs of some of the behavioral traits highly common in contemporary Western cultures (e.g., emotional expression, self-enhancement, and analytic cognition) can be found in these non-Western cultural zones (Kitayama and Salvador 2024).

During the period of several thousand years in which various civilizations emerged in the Mediterranean, South Asia, and sub-Saharan Africa, East Asia seems to have been largely separated or not connected or mixed reproductively, according to the currently available DNA evidence (Reich 2018). Cultures in East Asia seem to have evolved over the same period of several thousand years, heavily influenced by its ecologies and geographies. One major factor was a particular crop suitable in the hot and humid climate of the region, i.e., rice. Originating several thousand years ago in the central regions of contemporary China, rice farming necessitated heavy, socially coordinated labor. Owing to the need to regulate water, irrigation systems soon emerged, which in turn necessitated a strong commitment to the communities regulating such systems. In turn, rice provided nutrition that supported the expanding population. A highly complex and hierarchical social structure encouraged by rice farming may have provided a basis for cultural collectivism that has continued to hold a strong sway over the region (Nisbett et al. 2001; Kitayama et al. 2022; Oishi 2014; Talhelm et al. 2014).

Once societies have developed consistent ways of dealing with the given natural and ecological conditions, these shared patterns of behavior become “behavioral environments” (Hallowell 1955) that guide individual socialization. One of the most widely studied set of such practices of social life refers to the relation between individuals and the social groups to which they belong (Markus and Kitayama 1991, 2010). How much emphasis is placed on the independence of the self from social context or on the self’s embeddedness in this context? How strongly do individuals conceive of themselves as autonomous versus socially connected and mutually dependent beings? This dimension has proved relevant when comparing different cultures, which is then often referred to as individualism versus collectivism (Hofstede 2001), but also when comparing different groups within a society such as different social classes (Kraus et al. 2011). Cultural contexts share certain basic and often implicit assumptions about what it means to be a good person and how to act appropriately. These assumptions guide and shape individual socialization and the formation of identity.

Consequently, individuals acquire two different sets of answers to the question “Who am I?” One way of answering this question is to stress the autonomy and independence of the self, for instance, by defining the self in terms of abstract traits,

personal attitudes or particular personal competencies. Accordingly, this view of the self has been called the independent self-construal. The other kind of self-construal, the interdependent self-construal, relates the self to other people, for example, by using personal relationships or group memberships as self-definitions (Markus and Kitayama 1991, 2010). This difference should not be mistaken as categorical in the sense that a given individual has either an independent or an interdependent self. People everywhere *can* think about the self in either way, but do so with different frequency and probability, partly depending on their cultural background.

Scholars have used various methods to show the variation in self-construal (see Kitayama and Salvador 2024, for a review). First, there is a voluminous body of work using self-report indices of self-construal. One of the most frequently used instruments is Singelis' self-construal scale, a battery of 24 statements about the self to which participants can indicate their level of agreement (Singelis 1994). Half of these statements are independent in content (e.g., "I enjoy being unique and different from others in many respects"), the remaining ones are interdependent (e.g., "I will sacrifice my self-interest for the benefit of the group I am in"). Another and more fine-grained self-construal scale was designed by Vignoles et al. (2016). Based on numerous insights from previous studies it addresses seven different ways of being independent or interdependent respectively. For instance, independence (more than interdependence) not only entails being self-reliant but also being consistent across situations, and expressing the self directly. Although direct measures of independence–interdependence are valuable research tools, they are mainly based on what we know from comparisons between East Asians and Westerners, resulting in certain interpretive problems when applied to regions other than the East and West narrowly construed (Oyserman et al. 2002; Vignoles et al. 2016). Hence, the resulting patterns tend to be variable. Second, independent and interdependent construals are linked to culturally dominant values prioritizing either personal freedom and autonomy or embeddedness in social relations or social welfare (Hofstede 2001; Inglehart and Baker 2000; Sagiv and Schwartz 2022). Cultural variations in individualist versus collectivist values are well documented. Western societies are more individualistic (and thus independent), whereas most non-Western societies are relatively collectivistic (or interdependent). Third, there is an increasing body of evidence showing that implicit psychological tendencies are linked to independence and interdependence (Kitayama and Uskul 2011). For example, when asked to provide spontaneous self-descriptions, Westerners have been found to produce more independent than interdependent concepts, with this difference being reversed for East Asians (Rhee et al. 1995). Furthermore, when comparing East Asians and European Americans, East Asians (a putatively interdependent group) are cognitively more holistic (or less analytic) (Nisbett et al. 2001), socially engaging (versus disengaging) in emotion styles (Kitayama et al. 2006), and prosocial (or less self-promotive) in motivation than Westerners (a putatively independent group) (Heine et al. 1999). Notably, however, there is increasing recognition that the meaning of these implicit psychological tendencies is culture dependent. Hence, outside of the East and West, the association of the respective implicit psychological tendencies and independence–interdependence could be variable (Kitayama et al. 2022). For example, although emotion moderation is typically seen as being linked to interde-

pendence in East Asia, it is emotional expression that is linked to interdependence in Latin America. Kitayama and Salvador (2024) argue that specific behaviors or psychological traits (e.g., emotional expression) must be interpreted and disambiguated within a broad cultural frame of independence or interdependence.

Socioecological psychology investigates on the one hand how mind and behavior are shaped by their natural and cultural ecologies or habitats, and on the other hand how the resulting ways of behavior in turn shape those habitats (Oishi 2014). Individuals are not just passive products of social constitution and socialization, but rather socio-culturally shaped *shapers* of their environments (Markus and Kitayama 2010). This is to say that, depending on their current construal of the self, people think, feel, and act differently, all of which has an impact on their proximal as well as their distal social context(s). As a consequence, culture, and the self are made up in a dynamic cycle of mutual constitution. Thus, understanding the social dynamics of the self means addressing its mutual relationship with changing social systems varying in layers of complexity, including social class and culture.

In the psychological literature, the independence–interdependence distinction emerged based on East–West cultural comparisons (Markus and Kitayama 1991). For example, early research showed that Westerners are likely to use abstract personality trait terms when describing the self (e.g., “I am ambitious”). They appear to define the self in a context-general fashion. By contrast, East Asians are more likely to use group memberships and social roles when defining the self (e.g., “I am a caring husband”), thus defining the self as being embedded in specific relational contexts. Interdependence with others therefore implies that core features of the self are at least partly dependent on the social context. The degree of independence or interdependence of the self has many consequences for thinking, feeling, and action. For example, if one conceives the self primarily as a set of internal, dispositional features independent of the surrounding, other people may be perceived in a similar fashion. In line with this proposition, many studies showed that when explaining observed behavior of others, Westerners tend to explain the others’ behaviors by their internal attributes or dispositions, such as their attitudes, preferences, and goals. Typically, situational factors (e.g., social pressure and role obligations) are discounted even when they can fully explain the behaviors. This so-called fundamental attribution error is typically considered universal and pancultural (Ross 1977). Indeed, Westerners often discount the external pressures even when they are fully aware of such pressures (Gilbert and Malone 1995). However, it has become increasingly clear that people in non-Western cultures, particularly East-Asians, typically stop showing this effect, especially when the external constraints are made quite clear (e.g., Masuda and Kitayama 2004; see Kitayama et al. 2022, for a review).

Moreover, evidence exists that this cognitive difference extends to non-social perceptions as well. Independence fosters a general analytic way of thinking in which attention is focused on objects (or actors) irrespective of their surrounding contexts. Interdependence by contrast promotes a holistic way of thinking where objects (including actors) are perceived by relating them to their context. The initial evidence linking the independent versus the interdependent self to the analytic versus holistic cognition came from cross-cultural work (Nisbett et al. 2001, Kitayama et al. 2003). Easterners are more interdependent or less independent than Westerners, and

correspondingly, the former are cognitively more holistic or less analytic than the latter. However, the dynamic relationship between the self and cognition exists even within any given culture, as may be expected from the fact that every person *can* think about the self in independent and interdependent ways. Indeed, numerous studies show that subtle experimental factors can activate or prime the independent or interdependent self (Kühnen et al. 2001; Kühnen and Oyserman 2002). For instance, Kühnen et al. (2013) tested Western participants and found that they show a greater degree of dispositional explanation of another's behavior when they are primed for independence. Thus, cultural differences are not fixed and stable, but dynamically flexible in nature. Moreover, it is clear that culture and the self shape not only *what* people think about but also *how* people think: their ways of thought.

Although the distinction between the independent and interdependent construal of the self was used to understand East–West psychological differences, these concepts resonate well with a duality of sociality that social scientists in various fields have repeatedly proposed (Dumont 1977; Mead 1934; Triandis 1995). On the one hand social relations can be formed on the basis of instrumental interests of different individuals and their compatible goals in specific domains. This type of sociality has been called *Gesellschaft*, egocentric, individualist, or reciprocity based (Fiske et al. 1998; Shweder and Bourne 1984; Tönnies 1988). The other kind of sociality is based on close bonds between individuals who consider themselves to be inherently connected with others. The importance of this kind of social relationship for creating meaning in life goes much further than through sharing some selected interests that can jointly be reached. It is the interdependence with others that is the basis for experiencing one's life as meaningful. This kind of sociality has been labeled *Gemeinschaft*, sociocentric, collectivistic, or communion-based.

There are long-standing debates about the historical origins and societal factors contributing to the emergence of these two types of sociality. Some researchers stressed the importance of material, ecological, and economic factors, whereas others have emphasized the role of ideologies and world views, such as philosophy or religion. In this article, we aim to specify the *consequences* of these concepts for individual thinking, feeling, and action. In order to conceptualize these consequences, we stress the social dynamics of the self.

As we already emphasized, independence versus interdependence of the self are not mutually exclusive. In their primitive forms, both independence and interdependence can be seen as basic biological requirements for all individuals to survive and reproduce. This is to say that individuals in all cultures can and do conceive the self to be both independent and interdependent. However, these two social functions may not be equally salient or accessible in all social contexts. On the contrary, all cultures include a great variety of contexts that require and hence foster either independence or interdependence. For example, agentic and assertive kinds of behavior (i.e., facets of independence) may be more appropriate and hence adaptive in work-related or business contexts than in private, family life, where interdependence with others is fostered. By implication, both independent and interdependent facets of the self should be available to all individuals in all places regardless of culture, social class, and other demographic variables. Moreover, the *relative* emphasis on one construal of the self or the other may vary across broader cultures. Indeed,

this cultural variation by independence and interdependence may be due to various social and ecological factors over the course of human evolution (Henrich 2017). In particular, one may start explicating this variability by closely examining the most recent 10,000 years of human evolution—a period in which culture as we know it today emerged (Kitayama et al. 2022). Doing so reveals that interdependence with others is not a homogeneous concept across cultures. Kitayama et al. (2022) suggested that four cultural zones (East Asia, the Arab world, Latin America, and South Asia) are all interdependent, yet the way in which interdependence with others is achieved varies markedly. To give an example, maintaining harmony with others and adjusting to their expectations are important modes of interdependence in East Asia. At least partly rooted in the cultural narrative of the nomadic Bedouins, the psychological profile of interdependence in the Arab cultural zone rests on self-assertiveness. It is important to protect one's ingroup, often by displaying power and strength. By doing so, the reputation of one's family or tribe in the eyes of others (i.e., one's honor) is maintained (Uskul and Over 2018). Furthermore, Kitayama and Salvador (2024) argue that specific behaviors or psychological traits (e.g., emotional expression) must be interpreted and disambiguated within a broad cultural frame of independence or interdependence. In Latin America, emotional expressiveness may be an important way in which interdependence with others is achieved, whereas it is typically linked to interdependence in East Asia. Thus, although interdependence with others is important in East Asia, the Arab zone, and Latin America the typical way in which it is achieved varies.

By the same token, within one and the same culture certain groups of people may encounter contexts that foster one view of the self or the other with differing frequencies, paving the way for many recent studies that have applied the independence–interdependence distinction to social-class differences within cultures. In the current article, we review some of the important conclusions of this line of research.

3 Social Class as Culture

In the current social science literature, social class is typically defined by a composite of a person's access to affluence, education, and occupational prestige (Kraus et al. 2012). These three indicators correlate positively in that people with an academic (versus high school) degree often have jobs that are more prestigious and better paid. In operational terms, many studies rely on socio-economic status (SES) in order to compare individuals from different social-class backgrounds. Whether the sole reliance on this factor to measure social class is adequate or causes significant biases has yet to be determined, partly because social class has traditionally been seen as a categorical concept, whereas SES is continuous in nature. Yet, especially in North American contexts (where the bulk of work on the topic is conducted today), educational attainment (i.e., college versus high-school education) correlates highly with affluence, which, in turn, defines two contrasting sets of social and psychological syndromes (Stephens et al. 2014). Hence, in our review we primarily rely on this Anglo-Saxon understanding where the exclusive reliance on SES assessed with educational attainment is a reasonable proxy of social class. Needless to say,

caution is warranted about how generalizable this approximation might be beyond North America. Moreover, this work must be supplemented by more ethnographically oriented work detailing various social milieus in all their full complexity. We should also note that it is increasingly common to define social class by each person's perception of social rank (Adler et al. 2000). One particularly successful index of perceived social class is a measure that requires each person to place a social ladder representing their community broadly defined. The objective markers of status (e.g., educational attainment) and the perceived status correlate only slightly, which invites the interesting question of whether the two facets of social class may have distinct effects.

We hypothesize that people varying in their social-class backgrounds may differ in their propensities toward independence or interdependence due to different socialization patterns. Lower-class individuals tend to stay within the same area as their parents instead of moving to college, often for their entire lives. Hence, they frequently interact with family members in densely structured social networks (Argyle 1994; Lamont 2000; Markus et al. 2004). Stephens et al. (2017) argued that these circumstances foster socialization practices that encourage children to recognize their place in the social hierarchies, to obey social rules and norms, and to be responsive to others' needs. People from lower SES tend to have fewer choices, and are more reliant on the resources of others. Many authors have argued that it is adaptive in such contexts to rely on others and stress the interdependence with them (e.g., Argyle 1994). In contrast, middle class members (in the USA) have been shown to more likely define themselves in terms of socioeconomic status and construe the self as independent than individuals from a lower social class. Compared with middle-class individuals, lower-class individuals are also more inclined to explain social events in situational terms, as a result of having a lower sense of personal control. In addition, lower-class people score higher on measures of empathy and are more likely to help others in distress (Manstead 2018). In line with this, it has been found that middle-class individuals tend to be more likely to make choices that express their own uniqueness to others than working-class individuals (Stephens et al. 2007, 2014). This finding resonates with earlier sociological studies showing that people from middle-class backgrounds tend to be more likely to have greater self-confidence and emphasize self-directed orientation when educating their children than people from low-class (e.g., Kohn and Schooler 1982). High (relative to low) social-class individuals may thus experience more social power coinciding with a reduced sense of interdependence and identification with important ingroups (Chen 2020).

As mentioned above, the construal of the self as independent versus interdependent is linked to social perception. Those with independent views are more likely to show dispositional biases in explaining another's behavior than those with interdependent views (e.g., Miyamoto and Kitayama 2002). What is more, culture and the self shape the general cognitive patterns that coincide with independence–interdependence, i.e., analytic versus holistic thinking respectively. Applied to social class, the above body of work would lead us to expect that people from working-class (low SES) backgrounds should show dispositional explanations less than those from middle-class (high SES) backgrounds. Grossmann and Varnum

(2011) had participants with high versus low SES backgrounds read two vignettes describing a protagonist who engaged in either desirable or undesirable behavior. Subsequently, they rated the extent to which this behavior was due to dispositional or contextual factors. Confirming the predictions, high (as compared to low) SES participants rated dispositional factors to be more important. Notably, recent work has shown that similar cross-class differences can be observed even when cognitive effects are captured by brain markers, consistent with the hypothesis that through socialization, neural networks are plastically formed and modified (Kitayama and Salvador 2017).

Varnum and Kitayama (2017) reviewed the literature on social-class differences in neural activity and identified three relevant themes related to independence–interdependence, all of which have specific markers of neural activity. The first theme is the degree to which high vs low social-class members are attuned to others. Given the greater limitations imposed on individuals from lower social classes, they should be more dependent on others and accordingly attuned to them. In line with this proposition, social-class differences have been found in the activity of two brain signatures of attunement to others: The mirror neuron system (Varnum et al. 2016) and the mentalizing network (Muscatell et al. 2012). The second major theme identified by Varnum and Kitayama (2017) is the level of holistic cognition: If one is habitually attuned to others in the social context, perception may generally be broader and less object focused. As described above, holistic thinking is, among other tendencies, also characterized by reduced dispositional thinking, because the context is more likely taken into account when explaining an action (Miyamoto and Kitayama 2002; Kühnen et al. 2013). One early step of dispositional thinking is spontaneous trait inferences. When reading a description of a behavior that corresponds to a certain trait, people spontaneously infer that particular trait, even when it is not directly mentioned. Varnum et al. (2012) found American middle-class individuals to exhibit stronger brain signatures for spontaneous trait inferences than did members of the working class. Finally, the third theme proposed by Varnum and Kitayama (2017) is threat sensitivity. People from a lower social class may be more threat sensitive, partly because they are more likely affected by threats such as crime, violence, or poverty. In addition, a higher degree of interdependence is linked to threat sensitivity because being harmed by others or doing harm to them has more severe social consequences, if one perceives oneself as a knot of a closely knit social network. Accordingly, recent studies found increased neural activity in response to various external threats for people from low compared to high SES (e.g., Muscatell et al. 2012).

The psychological literature on social class that we reviewed so far seems to presented a consistent pattern: cognitive differences across social-class groups often mirror those from East–West cultural comparisons or priming studies. Like Westerners, people from higher social-class backgrounds conceive the self as being fundamentally independent from others, coinciding with analytic ways of thinking. The interdependent self-construal of individuals from a lower social class and their coinciding holistic perception resemble previous findings for East Asians. And yet, this conclusion needs to be treated with care. Many of the studies investigating social-class differences that we reviewed so far were done with Western participants

only. Social class itself is, however, embedded into the larger national culture, including “cultural imperatives” about what it means to be a good person. Are the consequences of belonging to a certain social class affected by this overarching set of normative beliefs and values and in what way?

4 Social-Class Effects Across Cultures

Undoubtedly, there is a common component of social class across cultures. If this component is assessed, social-class effects may be highly similar across cultures, such that national culture and social class contribute *additively* to observed differences. At the same time, social class might also have meanings and functions that are cross-culturally variable. If such components are tapped, social-class effects may prove highly variable across cultures. In this case national culture and social class may have *interactive* effects on psychological tendencies. One central component of social class is resource availability. People from higher SES tend to enjoy greater resources, economic or otherwise, than those from lower SES. As such resources afford individual freedom, which in turn would make it possible not to depend on others, higher social class may afford greater independence. Hence, as long as one taps this sense of independence, then social-class effects may be similar across cultures.

One prominent index of the sense of independence is the dispositional bias in social explanation, as noted earlier. Our analysis implies that higher social class may afford greater dispositional bias in social explanation. Moreover, this effect may be similar across cultures. Grossmann and Varnum (2011) conducted two studies with participants from an independent culture (USA) where analytic thinking is prevalent and an interdependent culture (Russia) where holistic thinking is predominant. In the first study, individuals from higher versus lower social-class families rated the extent to which both dispositional and situational factors explained desirable or undesirable behavior that a certain protagonist had engaged in. Conceptually replicating previous findings from other independent versus interdependent cultures (e.g., Miyamoto and Kitayama 2002) the authors found more pronounced dispositional attributions for Americans than Russians. However, independent of this cultural effect higher social-class individuals also made more dispositional attributions than low social-class participants in both societies, thus providing evidence for the additive hypothesis. In a second experiment, Grossmann and Varnum extended their measurement of analytic versus holistic thinking using three different dependent variables. One previously studied facet of analytic versus holistic thinking pertains to the relative attention paid to focal objects or their context in the visual field. In order to measure this tendency, Grossmann and Varnum made use of a paradigm developed by Masuda and Nisbett (2006) where participants are asked to detect changes between slightly different but similar images of objects. The number of detected changes to focal objects (i.e., analytic, object-focused attention) or their context (i.e., holistic, context-focused attention) was measured. The second measure captured another facet of the different ways of thought: prediction of change. When presented with graphs showing a trend, analytic thinkers tend to continue the trend, whereas holistic

thinkers tend to reverse it (Ji et al. 2001). The final facet studied was symbolic self-inflation: When drawing oval diagrams to represent the self and people of one's social network, individuals with independent selves have been found to draw the oval representing the self in bigger size relative to those representing others. This difference is less prominent in interdependent people (Kitayama et al. 2009). For all three measures previous findings of cultural differences were conceptually replicated, with Americans exhibiting more analytical thinking and greater independence than Russians. More importantly, however, and independent of this cultural difference, Grossmann and Varnum found that people from lower social-class backgrounds were more holistic than those from higher social-class backgrounds, with regard to contextual versus dispositional attribution, holistic processing of visual information, and prediction of nonlinear versus linear development of events. Furthermore, people from lower social-class backgrounds endorsed more interdependent self-views than did people from higher social-class backgrounds. Thus, together these findings provide strong support for the additive hypothesis of the effect of culture and social-class effects on cognitive tendencies, but not for the interactive prediction.

Although the Grossman and Varnum evidence is important, it does not imply that social class necessarily has the same effect in other domains. Indeed, recent work has begun to identify two ways in which the meanings and functions of social class could vary across cultures. First, people from higher SES may endorse culturally central ideologies more strongly. This effect of SES may be indistinguishable from the resource effect of SES in Western societies whose dominant ideologies center around the self's independence. However, in East Asia, the predominant ideologies emphasize the self's interdependence with others rather than its independence from them. Hence, if one tested the endorsement of interdependence, there may be an important cultural difference in the social-class effect. To examine such a possibility, Miyamoto et al. (2018) assessed value endorsement. Endorsement of self-oriented values was assessed with self-esteem, personal agency, and goal striving. Endorsement of other-orientation was measured using five variables linked to good relations with others, such as sympathy and support given to others. Replicating previous findings from Western cultures, SES was positively linked to endorsement of self-orientation across cultures. The personal freedom that people from high SES can afford owing to resource availability strengthens *self*-orientation, irrespective of the overarching culture. Importantly, however, endorsement of other orientation was greater for higher social-class individuals, but this effect was observed only for East Asian countries.

Second, there is a marked cultural variation in social-class differences in anger expression. The expression of anger has two distinct social functions. First, it can be a venting of frustrations. A large body of work addressing the frustration-aggression hypothesis suggests that when frustrated, people often express their anger. Second, anger can sometimes signal one's dominance and authority over others. Typically, these two functions may go together. For example, frustrated people may show anger in part to vent this frustration and, in part, to assert their dominance and authority thwarted by the frustration. However, two facets of anger could be separated and may vary in magnitude and salience across cultures. Park et al. (2013) hypothesized that the frustration-venting function of anger is more dominant in individualistic

societies, such as the USA, because one's goals are more salient for people with independent construals of the self. In such cultures, anger may be an index of one's frustration. This hypothesis explains why anger expression is more common among lower-status Americans. However, in many other cultures, outside the USA, especially in collectivistic cultures, social status or one's positioning in society may be more salient. Thus, the dominance/authority display function of anger may be more dominant, which could suggest that in such societies, higher-status individuals may show more anger, contrary to the common US findings. To test these ideas, Park et al. (2013) measured social status both objectively (by SES) and subjectively (where one perceives the self to be placed on a social ladder), anger expression, the level of recently experienced frustration, as well as self-rated authority in decision making, from representative samples in the USA and in Japan. In the USA, lower subjective social class predicted greater anger expression. Moreover, this relationship was mediated by the strength of recently experienced frustration. The evidence is consistent with the hypothesis that lower status people are more likely to be frustrated, which in turn precipitates the expression of anger. In Japan, however, there was a positive association between objective social class and anger expression. Higher-status individuals expressed more anger than lower-status individuals. Moreover, this relationship was mediated by perceived decision-making authority. This evidence suggests that higher-status Japanese feel that they have greater authority, which in turn precipitates the expression of their anger. Altogether, the Park et al. (2013) study implies that the link often assumed between lower status and anger expression is contingent on the assumption, common in the USA, that anger is a way to vent frustration. As such, this effect is likely dependent on culture. Indeed, in another context where anger is seen primarily as a show of one's dominance and authority, the relationship between social status and anger is reversed: It is higher status people who express anger more.

In short, everything else being equal, higher social status can and does breed the sense of independence because of resources it affords and the sense of freedom that results. Thus, higher social class may typically be linked to more analytic (rather than holistic) cognitive tendencies. However, everything else is not equal across cultures. Thus, in East Asian societies, interdependence may be endorsed equally more among higher status individuals because these societies hold interdependence (rather than independence) as the most central cultural ideology. Further, higher social status may afford less frustration but more authority. Depending on which of these two correlates of social status is culturally more salient, the social-class effect on anger expression may be dramatically variable across cultures.

5 Conclusions

The current review illustrated recent insights on social-class differences in thinking, feeling, and actions. Although it is hard to draw simple conclusions, it is still possible to identify a few themes. First, one central aspect of social class is the amount of available economic and social resources. The more resources people have, the more independence they may experience. Consistent with this, cross-cultural evi-

dence indicates that higher social-class individuals tend to endorse independence more while showing a dispositional bias in social explanation, an index of perceived independence. Second, higher social status may come with stronger endorsement of central cultural ideologies. Consistent with this, higher social-status people endorse interdependence more in East Asian societies—an effect that is missing in Western countries. Third, there is a cross-culturally variable association between social status and anger expression. One theme that is implicit throughout our discussion is that members of all these societies and subgroups within each encounter different contexts in their daily lives. As a result of this, every individual carries a unique and specific “cultural cocktail,” including both independent and interdependent elements to varying degrees (Fiske et al. 1998; Greenfield 2009; Triandis 1995). Subtle features of the current context can therefore temporarily shift the extent to which either independence or interdependence prevails in a person’s mind-set (Kühnen and Oyserman 2002), with various consequences for thinking, feeling, and action. What is more, as with social class, the implication of other social-group memberships for the individual’s degree of independence–interdependence may differ between cultures as well. One example could be gender. Although many studies show that women (relative to men) tend to be more likely to construe the self in interdependent terms (e.g., Cross and Madson 1997), this difference may be limited to Western societies. Kashima et al. (1995) argued that in many East Asian cultures it is men’s duty to ensure that respect is paid to their ancestors and prosperities of their offspring. Accordingly, they found that men’s self is more strongly connected to their families and thus more interdependent than women’s. As a consequence of this multifaceted complexity, the self can never be meaningfully studied in social isolation. Various social contexts varying in layers of complexity and the self are made up in an ongoing cycle of mutual constitution (Markus and Kitayama 2010). Given that social class is itself embedded into the greater national culture the consequences of belonging to a certain social class may be affected by this overarching set of normative beliefs and values, leading to cross-cultural variability in the meanings and functions of social class and status. We hope that the framework outlined in this article may stimulate further research on the social dynamics of the self to better understand the consequences of being a member of a high versus low social class for individual thinking, feeling, and action.

Funding Open Access funding enabled and organized by Projekt DEAL.

Conflict of interest U. Kühnen and S. Kitayama declare that they have no competing interests.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article’s Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article’s Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

References

- Adler, Nancy E., Elissa S. Epel, Grace Castellazzo and Jeannette R. Ickovics. 2000. Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy white women. *Health Psychology* 23:586–592.
- Argyle, Michael. 1994. *The psychology of social class*. New York: Routledge.
- Baumeister, Roy F. 2005. *The cultural animal: Human nature, meaning, and social life*. New York: Oxford University Press.
- Baumeister, Roy F. 2022. *The self explained: Why and how we become who we are*. New York: Guilford Press.
- Chen, Serena 2020. Social power and the self. *Current Opinion of Psychology* 33:69–73.
- Cohen, Adam B., and Michael E. W. Varnum. 2016. Beyond East vs. West: Social class, region, and religion as forms of culture. *Current Opinion in Psychology* 8:5–9.
- Cross, Susan E., and Laura Madson. 1997. Models of the self: self-construal and gender. *Psychological Bulletin* 122:5–37.
- Diamond, Jared. 1999. *Guns, germs, and steel: The fates of human societies*. New York: W. W. Norton.
- Dumont, Louis. 1977. *From Mandeville to Marx: The genesis and triumph of economic ideology*. Chicago: University of Chicago Press.
- Dunbar, Robin I. M. 1998. The social brain hypothesis. *Evolutionary Anthropology* 6:178–190.
- Fiske, Alan Page, Shinobu Kitayama, Hazel Rose Markus and Richard E. Nisbett. 1998. The cultural matrix of social psychology. In *The handbook of social psychology*, eds. Daniel Gilbert, Susan T. Fiske and Gardner Lindzey, 915–981. New York: McGraw-Hill.
- Gilbert, Daniel T., and Patrick S. Malone. 1995. The correspondence bias. *Psychological Bulletin* 117:21–38.
- Greenfield, Patricia M. 2009. Linking social change and developmental change: Shifting pathways of human development. *Developmental Psychology* 45:401–418.
- Grossmann, Igor, and Michael E. W. Varnum. 2011. Social class, culture, and cognition. *Social Psychological and Personality Science* 2:81–89.
- Hallowell, A. Irving 1955. *Culture and experience (Reprint 2016)*. University of Pennsylvania Press Anniversary Collection.
- Heine, Steven J., Darrin R. Lehman, Hazel Rose Markus and Shinobu Kitayama. 1999. Is there a universal need for positive self-regard? *Psychological Review* 106:766–794.
- Henrich, Joseph 2017. *The secret of our success: How culture is driving human evolution, domesticating our species, and making us smarter*. Princeton: Princeton University Press.
- Hofstede, Geert 2001. *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations (2nd ed.)*. London: Sage.
- Inglehart, Ronald, and Wayne E. Baker. 2000. Modernization, Cultural Change, and the Persistence of Traditional Values. *American Sociological Review* 65:19–51.
- Ji, Li-Jun, Richard E. Nisbett and Yanjie Su. 2001. Culture, change, and prediction. *Psychological Science* 12:450–456.
- Kashima, Yoshihisa, Susumu Yamaguchi, Uichol Kim, Sang-Chin Choi, Michele J. Gelfand and Masaki Yuki. 1995. Culture, gender, and self: a perspective from individualism-collectivism research. *Journal of Personality and Social Psychology* 69:925–937.
- Kitayama, Shinobu, and Cristina E. Salvador. 2017. Culture embrained: Going beyond the nature-nurture dichotomy. *Perspectives on Psychological Science* 12:841–854.
- Kitayama, Shinobu, and Cristina E. Salvador. 2024. Cultural psychology: Beyond East and West. *Annual Review in Psychology* 75:495–526.
- Kitayama, Shinobu, and Ayse K. Uskul. 2011. Culture, Mind, and the Brain: Current Evidence and Future Directions. *Annual Review of Psychology* 62:419–449.
- Kitayama, Shinobu, Sean Duffy, Tadashi Kawamura and Jeff Larsen. 2003. Perceiving an object and its context in different cultures. *Psychological Science* 14:201–206.
- Kitayama, Shinobu, Batja Mesquita and Majumi Karasawa. 2006. Cultural affordances and emotional experience: Socially engaging and disengaging emotions in Japan and the United States. *Journal of Personality and Social Psychology* 91:890–903.
- Kitayama, Shinobu, Hyekyung Park, A. Timur Sevincer, Mayumi Karasawa and Ayse K. Uskul. 2009. A cultural task analysis of implicit independence: Comparing North America, Western Europe, and East Asia. *Journal of Personality and Social Psychology* 97:236–255.

- Kitayama, Shinobu, Cristina E. Salvador, Kevin Nanakdewa, Amelie Rossmair, Alvaro San Martin and Krishna Savani. 2022. Varieties of interdependence and the emergence of the Modern West: Toward the globalizing of psychology. *American Psychologist* 77:991–1006.
- Kohn, Melvin L., and Carmi Schooler. 1982. Job conditions and personality: A longitudinal assessment of their reciprocal effects. *American Journal of Sociology* 87:1257–1286.
- Kraus, Michael W., Paul K. Piff and Dacher Keltner. 2011. Social class as culture: the convergence of resources and rank in the social realm. *Current Directions in Psychological Science* 20:246–250.
- Kraus, Michael W., Paul K. Piff, Rodolfo Mendoza-Denton, Michelle L. Rheinschmid and Dacher Keltner. 2012. Social class, solipsism, and contextualism: How the rich are different from the poor. *Psychological Review* 119:546–572.
- Kühnen, Ulrich, and Daphna Oyserman. 2002. Thinking about the self influences thinking in general: Procedural consequences of self-construal activation. *Journal of Experimental Social Psychology* 38:492–499.
- Kühnen, Ulrich, Bettina Hannover and Benjamin Schubert. 2001. The Semantic-Procedural Interface Model of the self: The role of self-knowledge for context-dependent versus context-independent modes of thinking. *Journal of Personality and Social Psychology* 80:397–409.
- Kühnen, Ulrich, Bettina Hannover, Claudia Pöhlmann and Ute Regina Roeder 2013. How self-construal affects dispositionalism in attributions. *Social Cognition* 31:237–259.
- Lamont, Michèle. 2000. *The dignity of working men*. New York: Harvard University Press.
- Manstead, Antony S. R. 2018. The psychology of social class: How socioeconomic status impacts thought, feelings, and behavior. *British Journal of Social Psychology* 57:267–229.
- Markus, Hazel Rose, and Shinobu Kitayama. 1991. Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review* 98:224–253.
- Markus, Hazel Rose, and Shinobu Kitayama. 2010. Culture and selves: A circle of mutual constitution. *Perspectives on Psychological Science* 5:420–430.
- Markus, Hazel Rose, Carol D. Ryff, Katherine B. Curhan and Karen A. Palmersheim. 2004. In their own words: Well-being at midlife among high school-educated and college-educated adults. In *How healthy are we? A study of well-being at midlife*, eds. Orville G. Brim, Carol D. Ryff and Ronald C. Kessler, 273–319. Chicago: The University of Chicago Press.
- Masuda, Takahiko, and Shinobu Kitayama. 2004. Perceiver-induced constraint and attitude attribution in Japan and the US: A case for the cultural dependence of the correspondence bias. *Journal of Experimental Social Psychology* 40:409–416.
- Masuda, Takahiko, and Richard E. Nisbett. 2006. Culture and change blindness. *Cognitive Science* 30:381–399.
- Mead, George Herbert. 1934. *Mind, Self, and Society from the Standpoint of a Social Behaviorist*. Chicago: University of Chicago Press.
- Miyamoto, Yuri, and Shinobu Kitayama. 2002. Cultural variation in correspondence bias: The critical role of attitude diagnosticity of socially constrained behavior. *Journal of Personality and Social Psychology* 83:1239–1248.
- Miyamoto, Yuri, Jiah Yoo, Cynthia S. Levine, Jiyoung Park, Jennifer Morozink Boylan, Tamara Sims, Hazel Rose Markus, Shinobu Kitayama, Norito Kawakami, Mayumi Karasawa, Christopher L. Coe, Gayle D. Love and Carol D. Ryff. 2018. Culture and social hierarchy: Self- and other-oriented correlates of socioeconomic status across cultures. *Journal of Personality and Social Psychology* 115:427–445.
- Muscattell, Keely A., Sylvia A. Morelli, Emily B. Falk, Baldwin M. Way, Jennifer H. Pfeifer, Adam D. Galinsky and Naomi I. Eisenberger. 2012. Social status modulates neural activity in the mentalizing network. *Neuroimage* 60:1771–1777.
- Nisbett, Richard E., Kaiping Peng, Incheol Choi and Ara Norenzayan. 2001. Culture and systems of thought: holistic versus analytic cognition. *Psychological Review* 108:291–310.
- Oishi, Shigehiro 2014. Socioecological Psychology. *Annual Review of Psychology* 65:581–609.
- Oyserman, Daphna, Hearther M. Coon and Markus Kemmelmeier. 2002. Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. *Psychological Bulletin* 128:3–72.
- Park, Jiyoung, Shinobu Kitayama, Hazel Rose Markus, Christopher L. Coe, Yuri Miyamoto, Mayumi Karasawa, Katherine B. Curhan, Gayle D. Love, Norito Kawakami, Jennifer Morozink Boylan and Carol D. Ryff. 2013. Social Status and Anger Expression: The Cultural Moderation Hypothesis. *Emotion* 13:1122–1131.
- Reich, David 2018. *Who We Are and How We Got Here: Ancient DNA and the new science of the human past*. Oxford: Oxford University Press.

- Rhee, Eun, James S. Uleman, Hoon K. Lee and Robert J. Roman. 1995. Spontaneous self-descriptions and ethnic identities in individualistic and collectivistic cultures. *Journal of Personality and Social Psychology* 69:142–152.
- Ross, Lee 1977. The intuitive psychologist and his shortcomings: Distortions in the attribution process. *Advances in Experimental Social Psychology* 10:173–220.
- Sagiv, Lilach, and Shalom H. Schwartz. 2022. Personal Values Across Cultures. *Annual Review of Psychology* 73:517–546.
- Schulz, Jonathan F., Duman Bahrami-Rad, Jonathan P. Beauchamp and Joseph Henrich. 2019. The Church, intensive kinship, and global psychological variation. *Science* 366(6466):eaau5141.
- Shweder, Richard A., and Edmund J. Bourne. 1984. Does the concept of the person vary between cultures? In *Culture Theory: Essays on mind, self, and emotion*, eds. Richard A. Shweder and Robert A. LeVine, 158–199. New York: Cambridge University Press.
- Singelis, Theodore M. 1994. The measurement of independent and interdependent self-construals. *Personality and Social Psychology Bulletin* 20:580–591.
- Stephens, Nicole M., Hazel Rose Markus and Sarah S. M. Townsend. 2007. Choice as an act of meaning: the case of social class. *Journal of Personality and Social Psychology* 93:814–830.
- Stephens, Nicole M., Hazel Rose Markus and L. Taylor Phillips. 2014. Social class culture cycles: how three gateway contexts shape selves and fuel inequality. *Annual Review of Psychology* 65:611–634.
- Stephens, Nicole M., Andrea G. Dittmann and Sarah S. M. Townsend. 2017. Social class and models of competence: How gateway institutions disadvantage working-class Americans and how to intervene. In *Handbook of competence and motivation: Theory and application*, eds. Andrew J. Elliot, Carol S. Dweck and David S. Yeager, 512–528. New York: The Guilford Press.
- Talhelm, Thomas, Xuemin Zhang, Shigehiro Oishi, Chen Shimin, Dongyuan Duan, Xuezhao Lan and Shinobu Kitayama. 2014. Large-Scale Psychological Differences Within China Explained by Rice Versus Wheat Agriculture. *Science* 344(6184):603–608.
- Tönnies, Ferdinand. 1988 (1887). *Community and society*. New Brunswick, NJ: Transaction Books.
- Triandis, Harry C. 1995. *Individualism & collectivism*. Boulder: Westview Press.
- Uskul, Ayse K., and Harriet Over. 2018. The Role of Economic Culture in Social Interdependence: Consequences for Social Exclusion Experiences. In *Socio-Economic Environment and Human Psychology: Social, Ecological, and Cultural Perspectives*, eds. Ayse K. Uskul and Shigerio Oishi, 33–52. New York: Oxford Academic.
- Varnum, Michael E. W., and Shinobu Kitayama. 2017. The neuroscience of social class. *Current Opinion in Psychology* 18:147–151.
- Varnum, Michael E., Jingkyung Na, Asuka Murata and Shinobu Kitayama. 2012. Social class differences in N400 indicate differences in spontaneous trait inference. *Journal of Experimental Psychology General* 141:518–526.
- Varnum, Michael E. W., Chris Blais and Gene A. Brewer. 2016. Social class affects musuppression during action observation. *Social Neuroscience* 11:449–454.
- Vignoles, Vivian L., Ellinor Owe, Maja Becker, Peter B. Smith, Matthew J. Easterbrook, Rupert Brown, Roberto González, Nicolas Didier, Diego Carrasco, Maria Paz Cadena, Siugmin Lay, Seth J. Schwartz, Sabrina E. Des Rosiers, Juan A. Villamar, Alin Gavreliuc, Martina Zinkeng, Robert Kreuzbauer, Peter Baguma, Marina Martin et al. 2016. Beyond the 'east-west' dichotomy: Global variation in cultural models of selfhood. *Journal of Experimental Psychology: General* 145:966–1000.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Ulrich Kühnen 1968, Dr. phil., Professor of Psychology at Constructor University, Bremen, and spokesperson of the DFG Research Training Group “Social Dynamics of the Self”. Fields of research: Culture, self, and the meaning of choice; values and value change; learning and teaching in multicultural settings. Publications: Existential insecurity and trust during the COVID-19 pandemic: The case of Germany. *Journal of Trust Research* 2023 (with J. Delhey, L. C. Steckermeier, K. Boehnke, F. Deutsch, J. Eichhorn and C. Welzel).

Shinobu Kitayama 1957, PhD, Robert B. Zajonc Collegiate Professor of Psychology at University of Michigan, Ann Arbor, USA. Fields of research: Culture and self; social versus personal representations of cultural values; cultural neuroscience; cultural evolution. Publications: Varieties of interdependence and the emergence of the Modern West: Toward the globalizing of psychology. *American Psychologist* 2022 (with C. E. Salvador, K. Nanakdewa, A. Rossmair, A. San Martin and K. Savani).