

Chapter 6

The East and the West



Abstract This chapter reviews the cultural aspects of the East and the West. A wide range of differences between the East and the West is discussed in terms of the extrinsic and intrinsic differences. The extrinsic differences comprise architecture, the mode of clothing, everyday practices, and language and script, while the intrinsic differences consist of culture and value systems, attention and perception (holistic vs. analytic), problem solving (relation vs. categorization), and rhetorical structure (linear vs. roundabout). The locus of these differences is identified with respect to philosophical foundations and the characteristics of Eastern and Western cultures. The prevalent interpretations of the differences between the East and the West center on Diamond’s (1999) guns, germs, and steel, Nisbett’s (2003) geography of thought, and Logan’s (2004) alphabet effects. However, these interpretations cannot explain differences in ideologies, religious practices, and societal values among Chinese, Japanese, and Koreans. Therefore, script relativity becomes a new interpretation of the engine behind the differences among the three East-Asian nations and between the East and the West.

Keywords East · West · extrinsic differences · intrinsic differences · philosophical underpinnings · new interpretation

The origin of and differences between Eastern and Western cultures have been extensively discussed in such disciplines as anthropology, philosophy, archeology, psychology, and applied linguistics. Nisbett (2003) asserts, as shown in the epigraph above, that Westerners find their intellectual heritage from the Greek, while Easterners give credit to Chinese tradition. This chapter does not aim to be a comprehensive survey of the characteristics of the East and the West. Although there are multiple ways to understand the two hemispheres of the globe, my discussion in this

“More than a billion people in the world today claim intellectual inheritance from ancient Greece. More than two billion are the heirs of ancient Chinese traditions of thought. The philosophies and achievements of the Greeks and Chinese of 2,500 years ago were remarkably different, as were the social structures and conceptions of themselves. And the intellectual aspects of each society make sense in light of their social characteristics.” Richard E. Nisbett (2003, p. 1)

chapter is based on empirical findings in social psychology regarding Eastern and Western cultures. First, cultural differences between the East and the West are illustrated in light of extrinsic manifestations and intrinsic indications. Differences in architectural structures, clothing, everyday practice, and language and script are reviewed as extrinsic exhibitions. Culture and value systems, attention and perception, problem solving strategies, and rhetorical structures are discussed under intrinsic indications. As a way to explain the underlying workings for the overt and covert differences, the major philosophical underpinnings in the East (Confucianism, Taoism, and Buddhism) and the west (Aristotle) are discussed, along with Diamond's (1999) view of human history and civilization, Nisbett's (2003) analysis of geographical and social psychology, and Logan's (2004) claim on the alphabet effect. Ultimately, I look at the differences between the East and the West through the lens of *script relativity*, which mainly rests on findings by other scientists who have studied the differences between the East and the West from the perspectives of social psychology, cognitive psychology, applied linguistics, and communication.

Since empirical findings reviewed in this chapter primarily come from adult studies, criticisms may arise for the skewed pool toward adult participants in research. However, relying on adults rather than children for measuring particular constructs makes more sense because adults show more *stabilized* characteristics than children's still developing (relatively) transient traits. The dichotomy of the East and the West can also invite criticisms because cultures and human characteristics are not monolithic. However, a generalization or grouping can be the first step toward an understanding of a given phenomenon. Although the use of dichotomous concepts can simplify the phenomenon, the binary distinction can also provide insights into group differences. Taking more variables, such as age, gender, educational systems, religion, and ethnicity, into account would be the next step to investigate the intricacies of the given phenomenon. As operationalized definitions are provided in [Chapter 1](#), the term *Asians* used in this chapter refers to peoples from the three East-Asian countries of China, Japan, and Korea. Likewise, the word *Westerners* refers to European Americans, as the modern United States is a European-molded society (Diamond, 1999).

6.1 Differences between the East and the West

It is difficult to explain differences between the East and the West within a single chapter. The differences can be discussed largely by two dimensions, however: extrinsic and intrinsic dimensions. The first is a phenomenon that is overtly seen and tangible, while the other is a covert and hidden engine that drives us to live our lives in our own ways. The Chinese, Japanese, and Koreans share a common culture in general, but their languages and scripts are different from one another. This point of the *common culture yet different languages and scripts* has rarely been addressed collectively, although culture and language/script have been treated as separate constructs or approaches to the understanding of the East Asian people and traditions.

6.1.1 *Extrinsic Differences*

6.1.1.1 Architecture

Architecture is one example of an overt and extrinsic cultural product that reveals esoteric qualities manifested differently in the East and the West. Architecture is an art form of synthesis that communally reflects our values, aesthetics, culture, and surroundings. The architecture of modern days has become homogeneous in the East and the West such that the city landscapes of Beijing, Tokyo, Seoul, New York, and London are pretty much similar to one another. However, ancient architectural structures were different in the two hemispheres of the globe. Architecture not only reveals the philosophical and aesthetic standards of the builder, but also displays materials that were available at the time of construction.

Every society has the religious place in the form of the church, the mosque, or the temple (or shrine) at which people are gregarious for spiritual maturity. The places are architecturally elaborate and intricate monuments of spiritual sanctuaries. The ecclesiastical architecture is the prototype of architecture in each society, given that the religious architecture is imbued with arts, beliefs, and values of the particular culture and society. Although architectural styles have changed in response to changing beliefs, practices, and traditions, there are salient differences in the ecclesiastical architecture between the East and the West. Old Asian temples are generally built with wood, and are round and circular and not overly protuberant from the surroundings. They are rather harmonized with Nature and the natural scenery and have symmetry-driven structures with variations. However, Western churches are in general rectangular and have sharp pinnacles with geometric shapes. These differences between the East and the West can be an expression of subliminal workings of social member's mind.

6.1.1.2 Clothing

Just like language and architecture, clothing is a human-specific practice. Evidence suggests that humans began wearing clothes that were made up of animal skins or other natural resources somewhere from 100,000 to 500,000 years ago. Primitive bone needles are dated back to 61,000 years ago and were discovered in Sibudu Cave in South Africa (Backwell, dErrico, & Wadley, 2008). The earliest silk production from the cocoon of domesticated silkworms was made in China in sometime between 5000 and 3000 B.C. Silk Road was the route for exchange of luxury textiles between the East and the West, which facilitated the development of the great civilizations of China and the West. Lemire and Riello (2008) make note of a long interaction between Asia and Europe in the fashion system. The European use of silk and printed cotton textiles from Asia took place in the early establishment of modern fashion. The Europeanization of Asian textiles reflects intellectual, commercial, and aesthetic relationships between Europe and Asia (Lemire & Riello,

2008). Despite the long history of interaction between the East and the West, the tradition of clothing is still different across cultures.

Most human societies have their own forms of clothing that adapt to geographical and meteorological conditions. Different cultures use clothing in different ways depending on climate, ecosystem, religion, and value systems. The trajectory of changes over time also varies across cultures due to the difference in their values. Clothing also reflects a society's beliefs and customs, and expresses the member's sense of beauty and aesthetic qualities. In some cultures, clothing is used for specific purposes, such as the expressions of prestige and decorations of magic or cult. For example, emperors used excessively decorated garments with golden crowns. Top officials in ancient dynasties had different animal prints embroidered on their gowns to demonstrate their power and rankings within the system. Shamans wore clothes of extraordinary colors and patterns with brightly decorated accessories or beaded fringes. Archeological findings and arts illustrate different clothing customs across cultures and societies, especially between the East and the West.

Beyond these differences between the East and the West at the global level, idiosyncrasies are found among people from China, Japan, and Korea at the regional level. Although the physical appearance of East Asians is similar to one another, I can quickly discriminate Koreans from Chinese and Japanese people more by the way they dress than by facial features or other physical characteristics. The way we dress is likely to underpin the mode of expressions of personal and group values.

6.1.1.3 Everyday Practice

Social psychologists have shown that Eastern culture is group-oriented, while Western culture is individual-centered (Hofstede, 1980; Hofstede, Bond & Minkov, 2010; Nisbett, 2003; see *Intrinsic Differences* below for more detail on collectivism versus individualism). This idea is demonstrated in language use as well as other social and cultural practices. The use of the first-person singular pronouns "me" and "my" is generally discouraged in Asian culture. For example, the Koreans emphasize the plural concept and discourage the first-person singular use. The Koreans use the phrase "our mother" or "our brother" instead of "my mother" or "my brother" (when the singular form is used in Korea, it is understandable but sounds awkward). An extreme example for the reluctance of the first person singularity is found in the phrase "our lover" or "our sweet heart" to refer to "my lover" or "my sweet heart." This is an example of how language expresses the speaker's ideology and value systems of a culture, especially the group-oriented mindsets of the Koreans (see Culture and Value Systems below for more detail).

Another example of group orientation found in everyday practice in China, Japan, and Korea is the order of information arrangement for the sender and the receiver that we place on the envelope for mail. The American way is to write the receiver's and sender's names first and then gradually move on to a larger unit ending with the state name or the country name. The East-Asian way is completely opposite to this practice. Chinese, Japanese, and Koreans write the largest unit first

(i.e., the country or city names) and then gradually narrow it down to the sender or the receiver name on the envelope for mail. This example shows how our value systems are expressed in our everyday activities.

6.1.1.4 Language and Script

Each language has its own unique characteristics. Given that it has been time-tested and endured for a long period of time, language is inextricably connected to the speaker's mind and cognition (Lenneberg, 1967; Levinson, 2003). A debate over the causal path of effects from language to thought or from thought to language would be a chicken-egg debate at the surface level, but what is obvious is its indispensable link between the language we speak and our mind. Benjamin Lee Whorf already conceptualized this in the early 1940s. As discussed in [Chapter 3](#), the Linguistic Relativity Hypothesis (i.e., language shapes thought) was dismissed prematurely and inadequately. Recent evidence from the acquisition of a second or additional language has been added to the reinvigoration of the Linguistic Relativity Hypothesis. Another layer is the writing system or script we use in our everyday lives. Reading has become an integral part of our lives in the twenty-first century with the immense use of hypermedia and social media. Not a single day does pass by without reading traditional text or digital text. The habitual and long-term use of written text is likely to affect the undercurrents of our cognition and the way we process information. Since language and script are continuously discussed throughout this book, no further elaboration on language and script is made in this section.

6.1.2 Intrinsic Differences

6.1.2.1 Culture and Value Systems

One's identity is largely a function of one's role and membership in a group or within a culture. Culture refers to shared values among a group of people. Depending on the value system a group of people shares, cultural orientation is broken down into collectivism and individualism. A collectivistic society is characterized on group cohesion, interdependence, moderation, self-control, and group identity over the self. Collectivistic people work together to create group harmony and consensus, and seek benefits for the whole group over the individual. Viewing the group as a super-organism, collectivists emphasize group cohesiveness and harmony, advocate common values, and demonstrate in-group orientation. In contrast, members of an individualistic society are oriented around the values of self-determination, self-expression, freedom, and independence (Hofstede, 1980).

According to Hofstede (1980), the construct of collectivism or individualism is neither right or wrong nor opposite, but it is considered two distinct values. Not every society or culture is at one end or the other end of the continuum of social

values, but the majority of social members tend to lean toward one over the other in many sectors of their lives. Dominant values in each society shape individuals' intricate software for the development of social values, communication styles, and shared consciousness. Although each nation's value systems can be traced back to its early history, a multitude of recurring factors contribute to the foundation of the culture.

A couple of proverbs poignantly deliver the contrast between collectivistic and individualistic norms. The Asian proverbs "The nail that stands out gets pounded down" and "Pointy stone meets chisel" are sharply juxtaposed with the American adage "The squeaky wheel gets the grease." This contrast further signifies the difference between the East and the West. Standing out among group members or seeking personal attention and benefits is not encouraged in Asia in general because the virtues of modesty and humility supersede the individual benefit. However, speaking up and being heard are encouraged in America.

Hofstede (1980) conducted a seminal cross-cultural study making comparisons along the continuum of collectivism and individualism with each cultural dimension representing an opposite pole. The dichotomy of collectivism and individualism was challenged by other theorists because the nature of culture is more complex than the binary unidimensional aspect. However, Hofstede's (1980) conceptualization is still influential and has a useful point in a sense that it is one way to explain the phenomenon. According to him, individuals who endorse a high degree of collectivism prioritize communal goals over individual goals. Its contrasting tendency is found in individualists.

The criticism that collectivism-individualism is unidimensional has been addressed in a more recent study by Hofstede and colleagues. Hofstede, Bond, and Minkov (2010) have conducted one of the most comprehensive cross-cultural studies of 76 countries and scored each country on a scale of 1 to 120 (1 representing the lowest and 120 representing the highest) for six dimensions using factor analysis. According to Hofstede (1980), culture is the programming of the mind that is shared by a distinct group of people. Six dimensions of culture are covered in the model of national culture as follows: (1) power distance, (2) individualism versus collectivism, (3) masculinity versus femininity, (4) uncertainty avoidance, (5) long-term pragmatic orientation versus short-term normative orientation, and (6) indulgence versus restraint.

The dimension of *power distance* concerns how a society handles inequity among people. It refers to the extent to which less powerful members of the society accept the unequal distribution of power within a culture and tolerate a hierarchical order and the unequal distribution of power. Individualists are likely to be self-sufficient and self-reliant. They tend to have a low power distance rather than the unequal distribution of power. They prioritize individual goals over communal goals. Collectivistic individuals tend to show the opposite.

The second scale of *individualism* versus *collectivism* refers to the extent to which loosely-knit or close-knit social frameworks are accepted by social members. The self-image tends to be expressed in the use of the pronoun "I" or "we." Individualists prefer to use the singular pronoun "I", while collectivists are likely to

use the plural form “we.” Regarding the third dimension, *masculinity* prefers competition, heroism, assertiveness, and material rewards for success, while *femininity* favors cooperation, modesty, caring for the weak, and consensus. The fourth dimension of *uncertainty avoidance* refers to the extent to which social members bear uncertainty and ambiguity to cope with the future. It is usually manifested by rigid or relaxed codes of belief, behavior, and attitude. The existential goals of *long-term* or *short-term orientation*, which is the fifth dimension, involve interpreting the past to deal with the challenges of the present and the future. The long-term orientation involves fostering virtues related to effort, persistence, and frugality, and tends to have futuristic mentality by focusing on relational order, interrelatedness, perseverance, and thrift. It also maintains time-honored traditions and norms with a more conventional mentality emphasizing face-saving and personal stability. The short-term orientation values virtues related to instant gratification, personal steadfastness and stability, and the past and present. The last dimension, *indulgence versus restraint*, refers to the degree to which members have control over desires and impulses in pursuit of happiness. The former tends to allow for free gratification, while the latter suppresses or regulates impulses or needs gratification using stringent social norms.

Figure 6.1. shows a comparison of the scale scores of the three East-Asian people and Americans by dimension. Consistent with Hofstede’s (1980) original hypothesis, Chinese people show the highest level of power distance, while Americans show the lowest. High power distance tends to be observed in collectivistic cultures. The higher scale of the Chinese than those of the Japanese and South Koreans may have to do with the difference in their political climates. Collectivistic people are less likely to challenge authority or people in power in order to protect group wellbeing and established order. Individualistic people are inclined to challenge authority, by calling for the legitimate use of power and a reduction of power differences between or among social classes. As shown in Figure 6.1., differences are found among the four groups of people across Hofstede’s dimensions. Notable differences between Easterners and Americans are observed in the dimensions of Individualism,

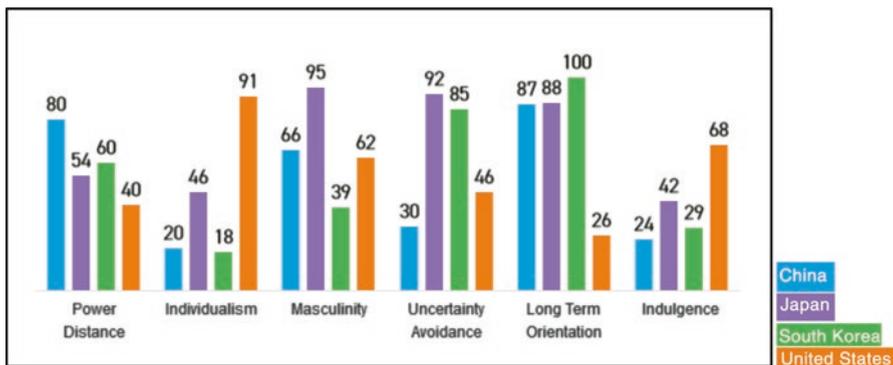


Figure 6.1. Cultural Scales among Chinese, Japanese, Koreans, and Americans.

Table 6.1. Traits of Collectivistic and Individualistic Cultures

Dimension	Collectivism	Individualism
Identity	“We” identity	“I” identity
Control	Relational	Independent
Goals	For Group	For Oneself
Sense of Being	Sense of Belonging	Sense of independence
Preference	Consensus	Freedom
Thrust	Harmony with others	Sense of Competition
Pursuit	Harmony	Uniqueness
Social Relationship	Hierarchy	Horizontal
Actualization	Group goals	Personal needs and desires
Social Communication	Indirect communication	Direct communication
Work	Work in group	Work alone

Indulgence, and Long-Term Orientation. Americans show higher scores on Individualism and Indulgence, but lower scores on the Long-Term Orientation. Within the three Asian groups, there are variations in Individualism, Masculinity, and Uncertainty Avoidance. This demonstrates that the three cultural groups are not monolithic.

Based on Hofstede’s (1980) and Hofsted et al.’s (2010) studies, Table 6.1. summarizes the characteristics of collectivistic and individualistic cultures. The contrastive traits can be directly and indirectly observed among ethnic groups within the U.S. and among people from different continents around the globe. Under the framework of cultural differences between the East and the West, empirical studies in relation to attention and perception, problem-solving strategies, and rhetorical structures are reviewed below.

6.1.2.2 Attention and Perception: Holistic versus Analytic

Differences in attentional and perceptual patterns between Easterners and Westerners have been investigated in social psychology. Predominant findings converge on robust differences in cultural members’ attention to the foreground and the background of the scene for Westerners and Easterners, respectively. Easterners tend to attend to context-dependent information in a holistic way, while Westerners are likely to pay attention to context-independent information in an analytic fashion (Masuda & Nisbett, 2001; Miyamoto, Nisbett, & Masuda, 2006; Nisbett, Peng, Choi, & Norenzayan, 2001). Specifically, Masuda and Nisbett (2001) showed Japanese and American students short video clips of underwater scenes including fish, small animals, water plants, and small rocks, and asked them to describe what appeared in the video clips. American students primarily described the characteristics and motions of the fish (i.e., the focal object) in the foreground (e.g., large, rapidly moving, bright colored). In contrast, Japanese students paid more attention to the context and relationships between the fish and the context (e.g., background

objects, location of the fish in relation to other objects). East-Asians' tendency to focus more on the context is also found in conceptual tasks. Chinese and other East Asians are more likely to attribute individuals' behaviors to situational conditions, while Americans tend to attribute behaviors to individuals' dispositional characteristics rather than uncontrollable situational factors (Choi, Nisbett, & Norenzayan, 1999). This line of findings has been consistent with the evidence from neuroscientific research (see Goto, Ando, Huang, Yee, & Lewis, 2010; Masuda, Russell, Chen, Hioki, & Caplan, 2014) and eye movement data (Ueda & Komiyama, 2012).

Using the change-blindness paradigm (i.e., people are at times blind to changes happening in the environment), Masuda and Nisbett (2006) investigated how perception and cognition are qualitatively different between East Asians and Westerners using still photos and animated vignettes with changes in the focal object and the context. Results showed that American participants were more sensitive to changes in the focal objects than in the periphery or context, while East Asians were sensitive to contextual changes by attending to the entire field and relations among objects within the field. Americans were less likely to detect changes made in the background than in the foreground, on average, and were less sensitive to situational cues or constraints on a speaker's behavior than East Asians. Asians tended to show the opposite. These results suggest that cultural variations exist as a function of basic perceptual processes.

As an extension of Masuda and Nisbett's (2006) study, Miyamoto, Nisbett, and Masuda (2006) conducted a study that examined the role of the physical environment in perception using still pictures of scenes from small, medium, and large cities in Japan and the U.S. Both objective and subjective analyses of the pictures showed that Japanese settings have more ambiguous contours of buildings and more complexity in settings than American counterparts. Consistent with previous findings, Japanese students were more attentive to the context than were European Americans (Study 1). When the pictures of the three cities were presented as primes, the group difference disappeared. In other words, both Japanese and American students who were primed with Japanese settings paid more attention to contextual features than those who were primed with American scenes. The researchers interpreted the results as the physical environmental effects on perceptual patterns. The implication of this result is important in that Miyamoto et al. (2006) have identified the physical setting as a (causal) factor that affects (or reinforces) the patterns of perception. More studies are needed to corroborate the findings of this study. If Miyamoto et al.'s claim is correct, it is possible that reading, in which we pay more conscious attention and effort in a daily activity, would exert a greater effect than scenes due to more cognizant attention we pay in reading than in looking at scenes. We hardly pay mindful attention to buildings or physical environments unless we have specific intention to do so.

Easterners' collective and interdependent tendency is consistent with their worldview and beliefs that things are not monolithic. Westerners' individualistic and independent traits accord not only with their focus on particular objects in isolation from the context, but also with their belief that they can control the object's behavior because all events are governed by rules (Nisbett, 2003). The force or drive

that makes differences between the East and the West is a self-reinforcing homeostatic system that is related to the fundamental nature of the mind (Nisbett, 2003). According to Nisbett (2003), the effect is a domino-like sequence as in “the social practices promote the worldviews; the world views dictate the appropriate thought processes; and the thought processes both justify the worldviews and support the social practices” (p. xx).

In a similar vein, my doctoral students and I are conducting a cross-cultural study of argument structures and descriptive tendencies using a picture book (Sun, Luo, & Pae, 2020). A picture book, *Frog, Where Are You?*¹, was shown to adult native speakers of Chinese, Korean, and English to examine how these language groups conceptualize the story based on a series of pictures. One of assumptions is that the two Asian groups would use more hedges, such as *sort of*, *a little*, *kind of*, *maybe*, and *seem*, than does the American counterpart. Hedge words in the forms of adjectives, adverbs, or clauses are a tool used to soften the degree of confidence, passion, or tension associated with an expression or to express politeness. They can be viewed as a form of euphemism or a tool of epistemic modality. Asian students seem to use more hedge words in order to mitigate assertiveness in a message, which accords with the predominant Asians’ tendencies mentioned earlier. This is consistent with the finding that Japanese speakers show “greater reliance on what is arguably as general a noun as could be chosen” with the overuse of *thing* instead of specifying what it is (Schanding & Pae, 2018), as shown in an argumentative essay written by a native Japanese speaker: “The majority of Japanese may think that **it is not [a] good thing** that public matter assumes religious image and [that] also Japan becomes a religious nation” (bold in original, p. 72).

Consistent with Masuda and Nisbett’s (2006) study, the results of our study also show that Asian students are more likely to describe the surroundings of the scene than the main characters’ activities or attributes. For example, in the description of a scene depicting a boy (main character) and a dog looking at an empty jar in the bedroom, a Korean participant stated the following: “It’s dark outside because there’s a moon and the window is a little open. There’s one bed with the lights on. Beside the kid, there’s a piece of clothes.” This participant’s account is filled with background descriptions rather than the main character’s unexpected finding that his pet frog has run away (Sun et al., 2020).

A typological difference is also found. The Chinese and Korean languages are topic-prominent languages, whereas English is a subject-prominent language. Asian students tend not to produce an extraposed subject clause (i.e., a subject clause that is moved to the end of the sentence) by using the nonreferential subject “it.” For example, the sentence “Finding the frog was difficult” tends to be produced, as opposed to a sentence like “It was difficult to find the frog,” which is more likely to be produced by a native speaker of English as a standard expression (Sun et al., 2020).

¹This is a wordless black-and-white picture book containing 24 pictures with a storyline of a boy and his dog’s effort and adventure in finding their pet frog that ran away from their house.

In most cases, the subject in Japanese and Korean is not mentioned in the sentence when the subject is obvious within the context. For example, the sentence “I love you” can be understood by the speaker and the listener with the verb only (“love”) without the subject and the object in Korean. The subject omission is possible in Korean and Japanese because who does what to whom is decipherable without mentioning within a particular context. This is different from English, which has the more rigid sentence structure in that the subject is mandatory except for imperative sentences. The omission of the subject (and object at times) shows Asians’ focus on the situation rather than the actor or agent of the verb action. This is consistent with findings of previous studies showing Asians’ attention being placed more on contexts than main characters (Masuda & Nisbett, 2006).

6.1.2.3 Problem Solving: Relation versus Categorization

Reasoning and problem solving styles are found to be different across cultures as well. Research shows that East Asians prefer identifying relationships in information processing, while Westerners prefer categorizing objects (Nisbett & Miyamoto, 2005; Chua, Boland, & Nisbett, 2005; Ji, Zhang & Nisbett, 2004). The tendency of East Asians to focus on relationships between objects and events as well as contexts is consistent with previous findings. European Americans tend to categorize objects based on their properties and tend to decontextualize objects from their contexts in an orderly way (Chua, Boland, & Nisbett, 2005; Ji, Peng, & Nisbett, 2000; Nisbett, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001).

Ji, et al. (2004) conducted two mini-studies of categorization. In Study 1, they included four groups of participants including speakers of (1) Chinese residing in Mainland China, (2) Mainland and Taiwan Chinese residing in the U.S., (3) Hong Kong and Singapore Chinese in the U.S., and (4) European Americans. The researchers presented to participants a set of three words (e.g., *monkey*, *panda*, and *banana*; *postman*, *uniform*, and *policeman*) and asked them to find which two of the three words were most closely related to each other. Results showed that Chinese bilinguals tended to organize objects in a more relational way (i.e., monkeys eat bananas) than in a categorical way (i.e., monkeys and pandas are both animals) regardless of the language in which they were tested (i.e., Chinese or English). When Chinese-English bilinguals were compared by locality, Chinese students residing in the mainland and Taiwan where Chinese was the societal language were more likely to focus on relations when being tested in Chinese than in English. However, Chinese students from Hong Kong and Singapore where both Chinese and English were spoken as the societal languages tended to be equally relational when they were tested in Chinese and English. In Study 2, they also used a categorization task, but it was slightly different from that of Study 1, such that either relational or categorical grouping was possible within a set of three words (e.g., *carrot*, *rabbit*, and *eggplant*; *teacher*, *doctor*, and *homework*) with the two groups of participants: Chinese in Mainland China and Hong Kong Chinese in Hong Kong.

Consistent with the findings of Study 1, the results showed that Chinese participants from Mainland China showed a stronger tendency for recognizing or identifying relationships in Chinese than in English. In contrast, Hong Kong Chinese participants showed a preference for strong relationships in both Chinese and English with no language effect.

Of interest in the results of Ji et al.'s (2004) study is a significant language effect found in Chinese students from Mainland China and Taiwan. The two groups of Chinese students seem to differentiate categorizations depending on the language they use at hand. They categorized the word stimuli in a more relational way when they were tested in Chinese than when tested in English. The same results were found regardless of the localities of the U.S. or China. However, the language effect disappeared in the bilingual groups from Hong Kong and Singapore. The researchers interpreted the age of English acquisition and the living environment as the sources of the difference found in the Chinese participants between the two Chinese-spoken localities (Mainland and Taiwan), which showed a language effect, and the dual-language-spoken localities (Hong Kong and Singapore where both Chinese and English are spoken), which showed no language effect.

Westerners' tendency to pay attention to categorization as a way of problem-solving strategies leads to the assumption that they use rules and principles or follow linear logic to understand the properties of objects and behaviors of animals and humans. Easterners focus on relationships and functions within the context. Although it may be overgeneralization to conclude that Westerners tend to attend to categories and that Easterners are more likely to focus on relationships within the context, this comparison gives rise to important implications for understanding the nature of thought, thought processes, and cognitive tools that each cultural group uses to make sense of the world. Overall, these research findings furthermore offer a global understanding of the sense of self, the mind's workings, and belief systems between Westerners and Easterners.

6.1.2.4 Rhetorical Structures: Linear vs. Roundabout

Kaplan (1983) observes that "speakers of different languages use different devices to present information, to establish the relationships among ideas, to show centrality of one idea as opposed to another, to select the most effective means of representation" (pp. 140–141). This observation is summarized in the notion of *contrastive rhetoric* (a.k.a., intercultural rhetoric), indicating that, when an individual expresses his/her ideas in a second language (L2), the individual's first language and culture have an impact on L2 writing in terms of discourse structures and the organization of writing. Contrastive rhetoric has become a research interest in cultural thought patterns and the ways in which an individual's rhetorical structures influence argument or rhetorical patterns in L2. Studies of contrastive rhetoric examine similarities and differences in writing across cultures. Contrastive rhetoric has been criticized for its theoretical foundation and methodological practice as well as overgeneralization. Kubota and Lehner (2004) assert that "...contrastive rhetoric has

tended to construct static, homogeneous, and apolitical images of the rhetorical patterns of various written languages” (p. 9).

With the publication of *Contrastive Rhetoric: Cross-Cultural Aspects of Second-Language Writing* (Connor, 1996), contrastive rhetoric has been reinvigorated in L2 writing. Regardless of its criticism for oversimplification and skewed use of adult subjects, Kaplan (1966) had a valid point in cross-cultural differences of rhetorical or narrative structures. According to him, English speakers (including Germanic languages, such as German, Dutch, Norwegian, and Danish) tend to communicate in a direct and linear way without much digression. In contrast, Asian people are likely to beat around the bush to avoid a direct statement and to take various perspectives into consideration. The notion of contrastive rhetoric is consistent with empirical findings that have been reviewed in this chapter.

Hall (1989) also noted that collectivists tend to subscribe to a high-context communication style relying on relationship dimensions. Reading between the lines is at times necessary for Asians because beating around the bush is not uncommon. Being direct or getting right to the point can be regarded as disrespectful or being rude. In contrast, individualistic individuals are likely to have a low-context communication style, showing a tendency of precise, direct, and specific modes of communication. The ability to articulate thoughts and ideas eloquently is encouraged in individualistic cultures. The explicit mode of communication among individualists is used focusing on content in order to avoid misunderstandings and confusions between the speaker and the listener.

To summarize, the differences between the Easterners and Westerners have been found in behavioral research in social psychology, applied linguistics, and communication. Irrespective of research methods, tasks employed, participant groups, and the modes of inquiry, fairly consistent findings have been accumulated to indicate robust differences existing between Easterners and Westerners. In the following section, I attempt to tease apart reasons behind the difference from several perspectives.

6.2 What Makes the Differences between the East and the West?

Observational and empirical evidence has shown that distinct differences exist between the East and the West in cultural milieus, group members’ attention and perception, problem-solving strategies, and rhetorical structures. If Eastern and Western cultures are truly different from each other and if Easterners and Westerners think in a truly different way, what makes the differences? What are the underlying sources of the variations? Notwithstanding several ways to answer these questions, the discussion in the rest of this chapter primarily relies on philosophical considerations, Diamond’s (1999) interpretation of the world civilization, Nisbett’s (2003) view of the geographical difference between the two hemispheres of the globe, and Logan’s (2004) alphabet effects.

6.2.1 *Philosophical Underpinnings*

The word philosophy derives from the Greek word *philosophia* (φιλοσοφία; *philein*, φιλεῖν <to love> and *sophia*, σοφία <wisdom>), meaning the *love of wisdom*. Since wisdom is the ability to think and act appropriately based on accumulated knowledge, experience, insight, and common sense, the way in which the *love of wisdom* is manifested within a group of people would become an underpinning of a particular culture. The way to seek wisdom was dissimilar between the East and the West in antiquity.

6.2.1.1 Aristotle in the West

Western philosophical thinking centers around the Greek philosophies of Socrates, Plato, and Aristotle, although a pre-Socratic philosopher (Thales of Miletus, 624–546 B.C.) existed. The key figure was Socrates (469?–399 B.C.) who studied under Sophists, but transformed the Greek philosophy into a modern philosophy. He used the so-called *Socratic Method* by questioning everyone in order to examine people's views and philosophical problems in logic, and to enlighten them by asking questions in a way that they would get to realize that they knew nothing. He died in 399 B.C. from an execution of drinking a poison hemlock for allegedly corrupting the youth through his philosophical logic and enlightenment.

Plato (429?–347? B.C.) was a disciple of Socrates. He founded the Academy of Athens. Although Socrates did not record his teaching, Plato recorded a number of dialogues that used the Socratic method of inquiry. Plato established a school, which remained for 900 years, and was dedicated to teaching philosophy, mathematics, and theoretical astronomy. Plato's student was Aristotle (384–322 B.C.). He was considered an astute philosopher and scientist. His accomplishment spanned a wide range of disciplines, including aesthetics, poetry, theater, music, rhetoric, logic, physics, biology, metaphysics, zoology, and politics. He crystalized a rule of logic called syllogism. A syllogism refers to a logical argument that comprises a main premise (general statement), a minor premise (specific statement), and a conclusion that is deduced from the two premises, based on deductive reasoning (e.g., Main premise: *All humans are mortal*; Minor premise: *Socrates is a human*; Conclusion: *Therefore, Socrates is mortal*). Aristotle devised syllogisms in order to prevent bad arguments made in the political assembly and the agora. Given that logic is applied by pruning all irrelevant branches in order to leave only the principle or the formal structure intact, syllogisms were a continuation of the Greek tendency to decontextualize arguments as a way to solve contradictions.

Aristotle followed Plato's footsteps by opening his own school in Athens in 335 B.C. The caliber of Aristotle's teaching included all-encompassed subjects, consisting of biology, medicine, anatomy, psychology, meteorology, physics, chemistry, mathematics, music, metaphysics, rhetoric, political science, ethics, and literary criticism. His wide range of knowledge and philosophy made him the most

influential philosopher and scientist of Western civilization under the influence of Socrates and Plato. Aristotle's syllogism formulated the history of Western logic and thought by laying a foundation for the major branches of Western philosophy. It is not surprising that geometry was much developed by the Greeks because proofs rely on formal logic and the resolution of contradictions (Nisbett, 2003).

6.2.1.2 Confucianism, Taoism, and Buddhism in the East

While Aristotle was the foundation of the Greek philosophical tradition, Confucianism (also known as Ruism; {儒教} /rújiào/, <Ru Doctrine>) and Taoism (or Daoism²; {道} /dào/, literally <the Way>) established the Chinese philosophical groundwork. The founders of Confucianism and Taoism, Confucius (551–479 B.C.) and Laozi (exact year unknown), respectively, lived in the same era, but were different in their philosophical emphases. Confucianism emphasized rigid rituals, social order, and male dominance, while Taoism emphasized harmony with the universe and egalitarian ideology by rejecting rigidity and boundaries. Both philosophies were human-based and offered practical guides to living, but lacked a deity.

The tradition of Confucianism was developed based on the teachings, values, and theology of Confucius. Confucianism emphasizes humanistic values in order to be in harmony with the law of the universe or heaven ({天} /tiān/), including familial and social harmony, filial piety ({孝} /xiào/), benevolence ({仁} /rén/), and ritual norms (simplified character{礼} traditional character{禮} /lǐ/). Confucianism accepts unequal relationships between people with little resistance to maintain the stability of the group or society. It also values the family's prototype and promotes virtuous behaviors, such as education, tenacity, perseverance, and patience. Confucianism has five key canons, focused on obligation between emperor and subject, between parent and child, between husband and wife, between older brother and younger brother, and between friend and friend. These canons require the child's respect for the parent, the wife's obedience to her husband, and a younger sibling's submission to an older one.

Taoism was different from Confucianism with respect to the goal of philosophy. The two traditions permeated into Chinese culture in different degrees for more than 2,500 years. Confucianism seeks to gain social harmony in a structured society primarily focusing on five relationships mentioned above. In contrast to Confucianism's adherence to social rules, Taoism pursues harmony and balance in life under the *yin* and *yang* forces of Nature. Taoism focuses on the *Tao*, which is translated into the *Way*. The *Tao* denotes the principle of everything that exists, comprising the source, the pattern, and the substance of Nature. Taoism is pantheistic with a philosophical emphasis on the formlessness of the *Way* rather than anthropomorphic concepts of God. It focuses on *compassion, frugality, and humility*

²Given that pinyin notation is *Dào*, Daoism may be more suitable than Taoism.

as the Three Treasures of basic virtues, as well as naturalness, simplicity, and freedom.

Laozi used the metaphor of flowing water to explain the ideal path to wisdom, as shown in his words “[t]he great Tao flows everywhere, both the left and to the right...it holds nothing back. It fulfills its purpose silently and makes no claims” (Tao Te Ching, no. 34; cited in Shlain, 1998, p. 187). Laozi emphasized *wu-wei* (simplified characters {无为}, traditional characters {無爲} /wú wéi/), where *wu* refers to “nothing” or “there is no...,” and *wei* refers to any intentional or deliberated action. A common translation would be “action without intention.” *Wu-wei* is in accordance with the *I Ching* or *Yi Jing* ({易經} /yìjīng/ <The Book of Changes> or <The Classic of Changes>) that proposes that the universe works harmoniously with Nature according to its own way without exerting the person’s *will*. Breaking the natural rhythm against the cycles of changes or disrupting the natural harmony is discouraged. Harmony with the natural universe is accomplished by nonaction (*wu-wei*). The opening lines of the *Tao Te Ching*, a keystone book of Taoism, are as follows:

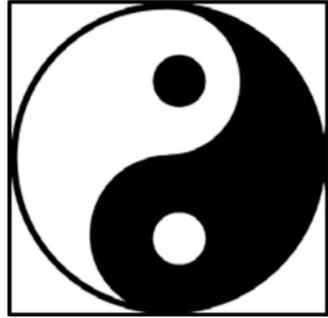
道可道非常道 (dào kě dào fēi cháng dào)
 “The Tao that can be told is not the eternal Tao”
 名可名非常名 (míng kě míng fēi cháng míng)
 “The name that can be named is not the eternal name.”

From the viewpoint of Taoists, anything that is to tell is to assign meaning within the context. There is always *something* unsaid or undescribed, or that *cannot* be said nor described. Anything that is to name is to *define* the characteristic of something or to set the parameter of a given object or concept. However, there is always *something* in the object or construct that *cannot* be named or defined accurately and universally. Therefore, Taoists rise above the visible entity by not defining or categorizing *Tao* or anything.

Early Taoism drew its cosmological ideas from the notion of *yin* and *yang*, which was influenced by the oldest classic of Chinese culture, *I Ching*, which illustrates a philosophical system about how to be in harmony within the cycles of Nature. The two accompanying forces of *yin* (the feminine, dark, shadow, and passive force) and *yang* (the masculine, bright, light, and active force) come together to achieve complementarity and to reach completeness. As shown in Figure 6.2, the *yin* and *yang* wholeness contains two connected parts of a white swirl and a black swirl, which make the sum of a perfect circle³. This signifies that everything in the universe has two opposite forces (*yin* and *yang*). Notably, a black dot is inside the white twirl to signify “*yin* within *yang*,” while a white dot is inside the black twirl to signify “*yang* within *yin*.” The whole symbol indicates the interdependent nature of the *yin* and *yang* opposites and the concept of interpenetrating opposing forces to complete

³This *yin* and *yang* symbol is embedded in the Korean national flag.

Figure 6.2. Ying and Yang Symbol



each other for a harmonious wholeness. Mutual influences and wholeness are more valued than the individual's self-benefits.

The Asian philosophy of wholeness and wholesome harmony is permeated in social norms as well as medical practices. The old Asian medicine is based on *yin-yang* and five universal elements, including soil {土}, tree {木}, fire {火}, metal {金}, and water {水}. The *soil* is the balancing element for the four seasons (connected to bodily organs *spleen* and *stomach*); the *tree* is the first expanding element⁴ symbolizing life and growth (connected to bodily organs *liver* and *gallbladder*); the *fire* is the second expanding element symbolizing the origin of energy (connected to bodily organs *heart* and *small intestine*); the *metal* is the first shrinking element symbolizing justice (connected to bodily organs *lung* and *large intestine*); and the *water* is the second shrinking element and the source of life energy (connected to bodily organs *kidney* and *bladder*). Herbal medicine focuses on promoting the equilibrium of the body and on preventing physical problems through harmony and wholesome relationships among all body parts rather than on putting interventions on health problems. Hence, Asian medicine shows reluctance to perform surgery, which is different from Western medical practice. Dissection was not introduced to China from the West until the nineteenth century (Nisbett, 2003). Acupuncture works in a similar practice with the philosophy of harmony between the body and Nature. The principle of acupuncture is based on the body's vital energy and the interconnectedness of all body organs as a holistic organism, and, in turn, the human body represents the universe as a miniature. Acupuncturists believe that each area in the palm and the bottom of a foot represents a particular body part and insert small needles at the right pressure point for the body part to be taken care of.

Another illustration of the emphasis of organic relationships within the universe is found in the practice of *fengshui* (simplified characters {风水} traditional characters {風水}, literally meaning <wind-water>). *Fengshui* refers to Chinese geomancy, which is a pseudoscience. It claims to use energy ({氣} /qi) or invisible forces that bind the universe, earth, and humans to harmonize the individual with his/her surroundings. It covers the altitude, prevailing wind, orientation toward the

⁴As the yin-yang opposites signify, all things of the world move in the cycle of appearing-and-dissolving or contracting-and-expanding.

compass, and proximity to various bodies of water in the surroundings. There is no equivalency to *fengshui* or its counterpart found in the West⁵ (Nisbett, 2003).

Along with Confucianism and Taoism, Buddhism was another key philosophy that contributed to the culture and the people's minds in China and the East. The Buddhist philosophy consists of the teachings and reflections of Buddha (between sixth and fourth century B.C.). As Buddhism was spread across Asian countries beyond India, it became trans-regional and trans-cultural. It endorses the concept of *self-less* (i.e., no fixed personal identity due to constant changes) and *emptiness* (i.e., nonexistence or the ephemerality of everything). Buddhism involves beliefs and practices of transcendental divinity and the spiritual insight of natural *emptiness*. The Buddhist philosophical tradition traveled to China from India and continued to develop in the Tibetan and East Asian Buddhist traditions.

Taoism, along with Confucianism and Buddhism, has permeated into Chinese history, tradition, philosophy, and public wisdom. Confucianism has gone through a rise and fall according to China's political doctrines and regime's politics. Despite the differences across Confucianism, Taoism, and Buddhism, the three philosophical traditions share commonalities in seeking harmonization. There is an old painting that can be found on the Internet, which portrays three men, Confucius, Laozi, and Buddha, laughing by a river stream, which is entitled "Confucianism, Taoism, and Buddhism Are One". The painting symbolically shows Chinese people's tolerance and agreeable interpenetrations of religious ideas such that different views can come together in harmony. Hence, religious wars in the East have been rare in history (Nisbett, 2003; Shlain, 1998).

6.2.2 *Characteristics Typically Found in Easterners and Westerners*

Based on the aforementioned empirical findings in social psychology, cognitive psychology, and applied linguistics, Table 6.2 summarizes key characteristics demonstrated by Easterners and Westerners. The nature of the characteristics is not binary. However, they were summarized for the purpose of juxtaposition.

For Asians, the world and Nature are simply too complex and their subcomponents are too interactive to be categorized in a simplistic way. Therefore, they focus on relationships among subcomponents of the world and Nature. The lack of interest in categories and classifications might have prevented Asians from discovering laws that allow them to explain classes of events or objects. Under the traditions of Confucianism and Taoism, the Chinese were inclined to look outward toward their peers and upward toward authorities in carrying out their economic, social, and political business (Nisbett, 2003). As research shows, Westerners have the tendency

⁵A reviewer pointed out Western geomancy as a possible equivalent to *fengsui*. I view that Western geomancy and *fengsui* are different from each other, as Nisbett (2003) mentions.

Table 6.2. Characteristics Implicitly and Explicitly Demonstrated by Westerners and Easterners

Dimension	Easterners	Westerners
Attention and Perception	Relationship	Objects
Habits of organizing the world	Relationships	Categories
Organization of Knowledge	Inductive	Deductive
Reasoning	Proposition	Logic
Application of logical rules	Not likely	Use of logical rules
Composition of the world	Substances	Objects
Beliefs about controllability of the environment	Incontrollable/Adaptable	Controllable
Tacit assumptions about Nature	Change	Stability
Preferred patterns of explanation for events	Cast a broader net of the environment	Focus on objects
Debate	Avoid conflict and dissonance	The free marketplace of ideas
Application of dialectical approaches	Seek the <i>Middle Way</i>	Insist on correctness of one's belief
Causal Inference	Context-centered	Specific item-centered
Science and Mathematics	Algebra and Arithmetic	Geometry
Medicine	Holistic approach; Prevention-oriented	Analytic approach; Intervention-focused
Conflict Resolution	Intermediaries; Hostility reduction and compromise	Legal confrontations; Right or wrong and principle of justice
Rhetoric Structure	Roundabout	Linear
Religion	Both/And Orientation; Pantheism; Cycles and recurrences	Right/Wrong mentality; Monotheism

of attending to objects and events in a way that objects are taxonomically arranged and categorized. This can be one explanation of research findings by Nisbett and colleagues about Asians' focus on relationships and European Americans' tendency to categorize stimuli (Chua, Boland, & Nisbett, 2005; Ji, Peng, & Nisbett, 2000; Nisbett, 2003; Nisbett, Peng, Choi, & Norenzayan, 2001).

As briefly mentioned earlier, the West has a tradition of syllogism, which is based on deductive reasoning. Westerners are generally in the habit of applying logical rules to ordinary events and are likely to forego the plausibility of conclusions. In contrast, East Asians are more likely to set deductive logic aside in favor of the desirability and plausibility of conclusions. Each case is understood within context, which allows inductive reasoning to set in. Conclusions tend to be reached by understanding the context first and then subscribing to the general standard and complying with it.

Logic can be seen as a cognitive tool that is developed to understand the principles of natural and social operations and to deal with social matters. A style of

reasoning was developed as a Chinese way of logic, which is called dialecticism, that focuses not only on contradictions, but also on how to resolve them, transcend them, or find the truth in both (Nisbett, 2003). This is different from the Hegelian dialectic because the Chinese dialectic deals with contradictions to understand relationships among objects or events in order to transcend oppositions (Nisbett, 2003). The Hegelian dialectic uses the cycle of *thesis-antithesis-synthesis* to obliterate contradictions instead of embracing or transcending them in order to understand objects or events better.

Social practices can influence habitual thinking and the way of conflict resolution. Under the traditions of Confucianism and Taoism, debate is not encouraged and is considered disrespectful in Asian culture; hence, the combative rhetoric was absent in Asian ideology. Whenever conflict arises, Asians tend to be oriented toward a *Middle Way* to reduce animosity between both parties instead of seeking fairness. Asians have the tendency of considering both other people and their own goals in search of the benefit of themselves by not being overly constrained by their relationships with other people (Nisbett, 2003). The difference in the ways of conflict resolution and the priorities placed in the East and the West is observed in the current practice of law in Asia and the U.S. According to Nisbett (2003), not only is the ratio of attorneys to engineers 40 times lower in Japan than in the U.S., but also the expected role of lawyers is different between the U.S. and Asian countries. The U.S. lawyers' emphasis is placed on confrontations and defense as well as on demands for justice in terms of winners versus losers within the legal system. However, lawyers in the Eastern countries serve more as intermediaries or mediators to reach compromises (*Middle Way*) in order to reduce hostilities between both parties involved in the legal system (Nisbett, 2003).

Due to their foci on rules for conducting debate, the principle of non-contradiction, and formal logic, Westerners might have been able to develop scientific modes of inquiry and thus yield modern scientific achievements. It is natural to make an advancement from logic to science, because science can be viewed as an extension of logic and rhetoric. Since the standard logic *hypothesis-evidence-conclusion* that is used for geometric proofs applies to debate and rhetoric, a geometric proof essentially involves rhetoric (Cromer, 1993; Nisbett, 2003). In contrast to their advances in algebra and arithmetic, the Chinese made little advancement in geometry-related realms because formal logic and the principle of contradictions, which were crucial components for geometric proofs, were not considered important for them (Logan, 2004; Nisbett, 2003). Cromer (1993) also argued that “‘It [science] originated in the democratic practices of ancient Greece, which replaced private dogma with public debate” (p. 250)

In summary, since the Eastern orientation toward Nature and humanity is concrete, abstract speculation was discouraged. This is different from the abstraction infused in the Greek philosophy. Given the order of existence (i.e., scripts preexisted all philosophical and cultural groundworks), the predated scripts might have influenced the cultural differences between the East and the West because Chinese characters are relatively concrete, compared to the alphabet's arbitrariness and abstraction.

6.3 Interpretations of the difference between the East and the West

6.3.1 *Diamond's Guns, Germs, and Steel*

Diamond (1999) is a keen observer of the different developmental trajectories of human societies and human history across continents on the globe. Diamond (1999) questions why history has unfolded differently on different continents in the world. This is a fundamental question to understand human history and historical inequalities and to predict a future path. The continents of sub-Saharan Africa, the Americas, Island Southeast Asia, Australia, New Guinea, and the Pacific Islands have shown the various trajectories of civilization and historical inequalities among the continents. Some societies developed literate industrial systems, while other societies developed only non-literate farming systems for a long time. Some societies still remained in a hunter-gathers stage with stone tools (Diamond, 1999). Diamond examines a large set of contrasts of the regions in light of colonial expansions, technical and political differences, different rates of development, linguistic reverberations, mode of civilization, and environmental differences across continents from the lens of anthropology, behavioral ecology, epidemiology, archeology, and linguistics.

In order to identify a chain of courses to explain why human development has proceeded at different modes and different rates of civilizations on the different continents in history, Diamond provides several explanations. First, biological differences in innate abilities among peoples, such as intelligence, can be a factor behind the advancement of modernized societies or the disparate rates that different societies have shown in the course of civilization. Based on his 33 years of work with New Guineans, however, Diamond completely dismisses a genetic factor as a determiner of the mode and rate of civilizations among the continents. He claims that IQ test results are the outcomes of cultural learning based on childhood environments and learned knowledge, which are not a true measure of pure innate intelligence.

Second, the seasonally variable climate can be a cause that explains the process of civilization because it is assumed that human creativity and energy are stimulated by a cold climate but are fended off by a hot, humid, and tropical climate. The assumed stimulatory effects of the cold climate and the inhibitory effects of hot and humid climate might have stemmed from the view that the seasonally variable climate tends to pose more diverse challenges for living than does a seasonally constant tropical climate. The challenges in the cold climate, coupled with the long winter at high latitudes that left people with more time to stay indoors and invented necessities, might have resulted in more technological invention for survival. However, Diamond dismisses this explanation as well because "...the peoples of northern Europe contribute nothing of fundamental importance to Eurasian civilization until the last thousand years..." (p. 22).

Third, irrigation systems in agricultural regions, such as China, India, and Peru, can be another explanation because large-scale irrigation system required centralized bureaucracies, and, in turn, centralized political systems. However, archaeological evidence shows that political centralization arose before controlled complex irrigation systems for other reasons (Diamond, 1999).

The fourth explanation has to do with factors including European guns, infectious diseases, steel tools, and manufactured products, which enabled Europeans to invade other peoples to conquer for imperialism. In short, it boils down to the effects of guns, germs, and steel on the disparate routes taken in different continents. Such an explanation is plausible for explaining the pathways of civilizations in the world. However, Diamond claims that this explanation is still incomplete because it does not offer an ultimate explanation for the identification of responsible causes for the unequal rates and modes of civilization in world history. In other words, this account does not explain *why* Europeans, rather than other groups, were able to make guns, ended up with germs, and were able to use steel. According to Diamond, the query continues until we have a convincing, comprehensive, and agreed-upon explanation to account for the broad pattern of world history.

Diamond (1999) summarizes his book, *Guns, Germs, and Steel: The Fates of Human Societies*, in one sentence as follows: "History followed different courses for different people because of differences among people's environments, not because of biological differences among peoples themselves" (p. 25). He might as well adopt the notion of environmental geography and biogeography in order to explain the lopsided historical and developmental trajectories across societies in world history. The notion of geography is directly linked to the gist of Nisbett's (2003) argument. In the following section, Nisbett's book entitled *The Geography of Thought: How Asians and Westerners Think Differently...and Why* is briefly discussed.

6.3.2 Nisbett's The Geography of Thought

Nisbett (2003) meshes cultural intricacies with a broad concept of geography situated in the East and the West. Nisbett (2003) claims that human behavior is a function of culture and that the difference between the East and the West results from the difference in ecological systems, along with social structures, philosophies, and educational systems. Nisbett (2003) attempts to understand how Asians and Westerners think differently and explains the reason behind the variabilities in his book *The Geography of Thought*. He finds the source of the differences between the East and the West in the geography of Greece and China. Greece is viewed as the cradle of western civilization as well as the birthplace of democracy, Western philosophy, literature and drama, major scientific and mathematical principles, and historiography. Greece is a transcontinental country situated at the crossroads of Europe, Asia, and Africa, comprising a mountainous peninsular mainland and numerous islands. Greece is one of the most mountainous countries in Europe with

about 80% of the land covered with mountains and hills. This ecology made the Greek rely more on hunting, herding, fishing, shipping, and trade than other options.

Nisbett (2003) notes that Greece was uniquely different from all contemporary civilizations in the development of individuality, personal freedom, objective thought, rational argument, and political systems. Greece's geographical ecosystem was suitable to maritime trade, which was lucrative for the Greeks in antiquity. This led to the Greeks' focus on shipping and oceanic industries that have been a key element of Greek economy since ancient times. Activities, such as hunting, fishing, shipping, and trade require a comparatively low level of cooperation with others. The geographical environment made the ancient Greeks develop a strong sense of individual identity as well as a sense of personal agency, which led the Greeks to a firmly individualistic mentality.

The ancient Greeks subscribed to plays, poetry readings, and philosophies by attending gatherings to share knowledge for personal growth at Epidaurus from dawn till dusk for several days in a row as special occasions in the period from the sixth to the third century B.C. (Nisbett, 2003). A theater built into a hillside at Epidaurus, which was known as the birthplace of Apollo's son Asclepius in Greece, held about 14,000 people. With the tradition of attending plays and poetry sharing on special occasions, it is not surprising that the word "school" comes from the Greek word for "leisure" *scholé*. The legacy of Aristotle made the Greeks coalesce the classical ideal for education with Greek philosophy in pursuit of knowledge. Under Greek philosophy, individual freedom and curiosity about the world were encouraged, coupled with a sense of agency. The Greeks' sense of agency and individuality also helped establish the tradition of debate. The logic of debate influenced the approach to law and order. This laid a foundation for democracy in the fifth century B.C. (Nisbett, 2003). Science or the scientific mind was also reinforced by logic, and, in turn, shaped the Greek style of rhetoric.

The geographical ecology in ancient China was different from that of ancient Greece. China was the cradle of Eastern civilization as the birthplace of Eastern philosophical traditions. Ancient China had relatively low mountains compared to Greece, fertile grasslands, and rivers, which encouraged the people to adopt agriculture especially in southern China. Agricultural people need to live and work in harmony in a reasonably cooperative fashion to deal with seasonal labor-intensive agricultural work (Nisbett, 2003). As opposed to the Greeks' attendance at plays and poetry readings as special occasion events, Chinese special-occasion events were primarily visiting and spending time with friends and family (Nisbett, 2003). These activities reinforced a sense of group harmony and the importance of consensus among members. In addition, rice farming required irrigation to be regulated, which resulted in the society's centralized control over irrigation systems. This means that environmental ecology affected Chinese livelihood, modes of living, social structures, and state involvement in people's everyday lives, resulting in central control of irrigation systems. The Chinese's acceptance of the centralized control in antiquity might have to do with their tolerance of top-down governance. This is consistent with the aforementioned Hofstede's cultural scales. Specifically, Chinese people tend to show a higher scale score on Power Distance than that of the

Japanese (80 vs. 40, respectively) on Power Distance (Hofstede et al., 2010). This means that the Chinese are more tolerant of the unequal distribution of power in society than the Japanese.

The implied *homeostasis* is also an important implication of the view of the causes of Greek and Chinese mental differences (Nisbett, 2003). With the agricultural tradition in China, which requires cooperation with others, the Chinese are less concerned with personal goals or self-aggrandizement than are Westerners. As a result, group goals and coordinated actions are more often their concerns than individual gratification and growth.

6.3.3 Logan's The Alphabet Effect

Diamond's analysis of different routes taken for civilizations among the continents in the world as well as Nisbett's geographical and social-psychological interpretation of differences in the East and the West have keen points in their own right. Masuda and Nisbett (2001) claim that cultural systems influence the mode of attention and further the culture-specific patterns of attention. A series of cross-cultural studies converge on Easterners' holistic and Westerners' analytic thinking styles (Miyamoto et al. 2006; Nisbett, 2003; Nisbett & Masuda, 2003; Nisbett et al., 2001). What is still unknown is a more microscopic enabler of perception, cognition, and thought patterns than culture, because culture is still a broad term.

The writing system has played an instrumental role in the development of the styles of information processing in the East and the West. In a study of the evolution of writing systems, Logan (2004) describes how phonetic writing, the alphabet in particular, has molded the development of Western civilizations and intellectual and cultural growth, particularly compared to the Chinese writing system. He claims, in an attempt to understand the making of Western civilization, that the alphabet promotes cognitive skills in the dimensions of abstraction, analysis, coding, and classification. Although Logan meshes Western civilization with the alphabet effect, the influence of written language has already been fermented by Innis (1972) and Ong (1982) in earlier days, who explored the changes in our thought processes and social structures as a result of literacy.

Since the alphabet uses a smaller number of graphs to represent spoken language (i.e., the economy of symbols in alphabetic systems), a greater level of abstraction and analytic skills is required to decode phonemic symbols, than in Chinese characters, which, in turn, contributes to the user's cognitive development in a particular way. Given that the West primarily uses the alphabetic writing system, the alphabet has made a significant impact on Westerners' cognition and thought patterns. Logan (2004) suggests that, due to the use of alphabet, the ancestors of Westerners were able to develop codified law, monotheism, abstract science, deductive logic, and individualism. In contrast, Chinese characters promote holistic, intuitive, polytheistic characteristics of the Chinese due to the logographic characteristics of the Chinese written language.

Logan (2004) has received criticisms by the public and Chinese scholars for the sweeping overgeneralization and for degrading Chinese characters and cultural characteristics based on his claim that Westerners are generally rational and analytic and that the Chinese are mystical and holistic due to the different writing systems. It is worthwhile to reassess the role of the writing system in our cognition and thought because we are bombarded with text and are constantly reading in print or online. According to Logan (2004), reading in alphabetic scripts is under influence of the intellectual by-products of reading or scientific and logical thinking, such as abstraction, rational analysis, and classification, which are predominantly provided by the alphabet. Despite this contentious claim, research findings in social psychology support Logan's claim (see the Attention and Perception as well as Problem-Solving Strategies sections in this chapter). The counterargument from the alternative hypothesis (i.e., the writing system has *no* effect on cognition⁶) is difficult to prove. Since the alphabet effect is covered again in [Chapter 7](#), the Consequences of Reading, further discussions are reserved to the following chapter.

6.4 Toward the New Direction, *Script Relativity*

Although it is not an exhaustive review of the differences between the East and the West, this chapter has provided a condensed survey of philosophical underpinnings as well as cultural and behavioral characteristics of the peoples in the two hemispheres of the globe based on empirical research, collective views of scholars, and my anecdotal observations. Masuda (2017) notes that it is time to explain the sub-components of holistic versus analytic culture as well as the thought patterns of cultural members and to go beyond the dichotomous characterization. She also calls for further research on other dimensions of a society that influence culture and group members' social behaviors.

Diamond (1999) notes that “[a]s of the year A.D. 1500, ... Europe's worldwide colonial expansion was just beginning...” (p. 15) and continues to state that “... those technological and political differences as of A.D. 1500 were the immediate cause of the modern world's inequalities. Empires with steel weapons were able to conquer or exterminate tribes with weapons of stone and wood. How, though, did the world get to be the way it was in A.D. 1500?” (p. 16). Diamond answers the question with the identification of the three factors of *guns*, *germs*, and *steel* that contributed to the pathways of civilizations in world history. He also asserts that the “[d]ifferent rates of development on different continents from 11,000 B.C. to A.D. 1500 were what led to the technological and political inequalities of A.D. 1500” (p. 16). Although he does not point it out, it is not coincidental that 11,000 B.C. was about the time writing started to emerge and that A.D. 1500 is around the time when

⁶A reviewer states that that “cognition had an effect on the development of the writing system and not the other way round.” This assertion needs to be scientifically backed up. So far, there is no research evidence that supports this claim.

information dissemination was revolutionary more than ever before due to the invention of metal movable printing in the West⁷. The 42-line-per-page Gutenberg Bible was first published in 1455. These two timepoints bear a significant meaning that gives rise to script relativity.

Diamond (1999) also explains the civilization of Australia while dismissing a genetic factor as an explanatory cause of the disparity in the rate and mode of civilizations. European immigrants to Australia built a literate, industrialized, politically centralized, and democratic society within a century, whereas the aborigines remained the same tribal hunter-gatherers stage. Diamond poses a question “What further proof could be wanted to establish that the differences between Aboriginal Australian and European societies arose from differences between the peoples themselves?” (p. 19), after pointing out that “the environment was identical and the sole variable was the people occupying that environment” (p. 19). Diamond elucidates how metal tools and food production allowed the Europeans immigrants to Australia to spearhead the civilizations and conquer the aborigines who did not use metal. Despite the valid point, what is missing in Diamond’s argument is the presence and effect of written language. When they occupied the Australian tribes, Europeans had a solid form of written language, while the Australian tribes did not.

Diamond (1999) also notes that China was technologically more advanced and more innovative than Western Eurasia until A.D. 1400. Again, this period coincides well with the explosion of literacy due to movable metal printing in the West. During the dynastic period in China, which ended in 1911, literacy was confined to “a tiny upper crust of males while preventing the spread of functional literacy among the masses” (Taylor & Taylor, 2014, p. 89). The Confucius classics and other books were the main subject of the institutionalized civil-service examination in ancient China, which was the royal ticket for social upward mobility. Since Chinese characters are complex and are not easy to learn, it was easy for the upper class to monopolize literacy. As shown in the following poem written by a Song emperor, “books” were considered a means to “enrich your family” as “houses of gold,” which is different from that of industrialized capitalist societies.

To enrich your family, no need to buy good land:
 Books hold a thousand measures of grain.
 For an easy life, no need to build a mansion:
 In books are found houses of gold....
 A boy who wants to become somebody
 Devotes himself to the classics, faces the window, and reads (Miyazaki, 1963/1981, p. 17,
 cited in Taylor & Taylor, p 91).

⁷Korea was the first country in the world to invent a movable *metal* type printing machine during the Goryo dynasty in 1377. This was 78 years earlier than the Gutenberg 42-line Bible published in 1455. The first publication that used the movable metal type printing technology was a book of Buddhist teachings, *Jikji*, written by a monk named Baekun (白雲), as mentioned in Chapter 5. This historical feat had been buried for a long time because a French missionary to Korea took *Jikji* to France and the book had been in the Collection of the National Library of France since 1890. The credit for the first movable metal printing in the world was finally granted in 1972 when a Korean scholar found it in the national library in France.

After the dynastic period, China was still able to restrict literacy with the establishment of the communist People's Republic from 1949. However, the West has gone through a different trajectory due to the phonetic writing system which was much easier to learn to read than Chinese characters and due to metal printing that was instrumental for promoting literacy among the masses. In short, the alphabetic writing system contributed to the establishment of democratic information sharing (Logan, 2004; Wolf, 2007). In this line, it is not surprising to find that current information-sharing endeavors and open-access information have begun and been materialized by individuals whose written language is the alphabet.

As indicated in the Prologue and [Chapter 1](#), oral languages that do not have corresponding written languages are more likely to disappear in the world. If there is a truth to Logan's (2004) claim regarding the alphabet effect on promoting more deductive, linear, scientific thought, the recent surge of Chinese economy and technological development may have to do with the supplementary use of Pinyin to their characters and, in turn, recently gained high literacy rates. This phenomenon is not remote from script effects, which is the *script relativity hypothesis*, the main thesis of this book.

In a similar vein, as mentioned in the Prologue, South Korea's economy rapidly boomed into a developed country within less than 50 years from a war-torn developing country after the Korean War (1950–1953), which is dubbed the “miracle on the Han river.” Factors, such as strong political leadership, healthy nationalism or patriotism, and hard work of the labor force stemming from Confucius values and ethics, can be attributable to the rapid transformation. However, I truly believe that Hangul was behind the phenomenal socio-economic growth, because the Koreans had already had those characteristics in history but had never achieved such a success before the “miracle on the Han river” in recent decades. With the high literacy rate due to Hangul's great learnability and its effect (i.e., alphabet effects), the Koreans were able to achieve such a success. Notwithstanding the small size of the population (51 million), compared to that of any developed country, the Koreans continue to excel in the many sectors, such as mobile devices, K-pop, K-drama, films, and cosmetics.

The findings of social psychological studies are particularly related to *script relativity*. As reviewed earlier, Easterners have tendencies to rely on context-based and background information in a holistic fashion, while Westerners tend to zero in on particular information presented at the center in an analytic way (Masuda & Nisbett, 2001; Miyamoto, Nisbett, & Masuda, 2006; Nisbett, Peng, Choi, & Norenzayan, 2001). These findings may be attributable to the script characteristics of Chinese and English. Chinese characters are processed holistically and, as a result, Chinese readers process objects and situations more holistically than Westerners. In the same vein, the alphabet is processed serially⁸ (Coltheart et al.,

⁸White et al. (2008) indicated that “letters within words are processed serially rather than in parallel, at least for early word processing” (p. 1274). Since reading models, such as the dual-route model (Coltheart et al., 2001), the SERIOL model (Whitney, 2001), or the connectionist model, are beyond the scope of this book, no further discussion is provided here.

2001; White, Johnson, Liversedge, & Rayner, 2008; Whitney, 2001), unless words are orthographically irregular, and, as a result, alphabetic readers process objects and situations more analytically than Chinese. In particular, Ji et al.'s (2004) study shows significant language effects among adults from Mainland China and Taiwan and from the U.S. and Mainland China when they were tested in Chinese compared to when tested in English, but no language effects were found among the bilingual groups from Hong Kong and Singapore. These language effects can be further extended to script effects because all participants in the aforementioned studies are university students who have been literate for about two decades.

From a microscopic view, variations are also found within the three East-Asian cultures. Although some East-Asian culture is shared in general, social values, modes of operating societal norms, and ideological or religious preferences are different among the Chinese, Japanese, and Koreans. Historically, Chinese characters were used in all three nations until the Korean government removed Hanja from the national curriculum in K-12 settings (some Korean parents still make their children Hanja learn through private lessons). The common use of the morphosyllabary might have generated the shared East-Asian culture among the three nations. However, the Koreans' Hangul use might have been reinforcing the aforementioned differences in the East-Asian nations. The existing interpretations of the locus of the differences (i.e., geography and environment), as reviewed earlier, cannot explain those specific differences among the three cultural groups. Script relativity would be an alternative or the best account to explain them.

In the following chapter, the consequence of reading is discussed from an ecosystem perspective. [Chapter 8](#) discusses script effects based on psycholinguistic research findings. [Chapter 9](#) discusses script relativity using the findings of neuro-imaging studies.

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