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Chapter

Toward a Systems Perspective of Culture and Communication in the Field of International Business Studies

Cheryl Marie Cordeiro

Abstract

Biology and culture co-evolve, affecting collective social behaviors in the way we interact with others and with our environment. The working assumption in this study is that biology and culture provide the environment in which individuals interact/communicate. Human communication is thus both created and circumscribed by culture. Cultural values differ between different groups of individuals. This relativity in culture is illustrated by various social artifacts and resulting differences in socio-communicative behaviors that often leads to miscommunication between individuals of different cultures. This inherent relativity of culture has also posed a methodological challenge for researchers who study culture and thus communication management, particularly within the field of international business (IB) studies, where transactional behavior makes up for much of human behavior. Global challenges and a changing business environment due to converging technological platforms place increasing pressure on the need to revisit the cultural dimensions construct. The aim of this chapter is to give readers an overview of current frameworks of how culture is studied within the field of IB and how this perspective can be broadened with ideas drawn from other disciplines including social-biology, quantum theoretical physics and psychology. It revisits current culture research strategies and suggests a model in which relativity in culture can be addressed through a systems perspective of research.

Keywords: global challenges, culture collective behavior, communication management, international business, research methodology, system theory

1. Introduction: culture in international business

Biology and culture coevolve. The gene–environment coevolution has been established as foundational knowledge in different disciplines from language and cognitive studies [1, 2], social biology [3], sociology [4], philosophy [5] and systems theory/perspective of life that views all biological, cognitive, social aspects of human and animal behavior in an ecological dimension [6]. When it comes to human communication and social organization, the concept of organization 'climate' was discussed and studied mainly in the field of psychology in the early 1900s [7] where the authors spoke of 'group norms'.

International business (IB) and trade is part of a socio-biological human activity where communicating across cultures is increasingly inevitable. In that sense, IB is both an agent and recipient of cultural change [8] due to that IB and trade processes are inherently uncertain and evolving [9, 10], requiring a nuanced understanding of communication processes across cultures. With a large part of human activities being involved in daily transactions and exchange as a means of living, today's economic theories, developed in an era of energy and material wealth from the 1800s onwards, is today largely out of sync with advancements in digitalization, climate change, biodiversity loss and rising social inequality [11, 12]. What is needed in address to global challenges is for a change in collective thinking and belief, i.e. a change in our culture, the way we communicate between ourselves and our environment, and how we conceive to manage our global resources as part of our daily transactions.

Because of our evolving business environments, there has been an interest in scholastic literature since the late 1990s, for new perspectives in the study of culture in the field that includes communicating across cultures in trade negotiations [13], cultural dynamics in goods and services consumption such as what constitutes as luxury foods [14–16], culture in organization behavior and applications of the cultural dimensions construct to the study of culture [17–23].

This chapter contributes to the current debate on how to frame future studies of a relative concept such as culture. It begins with giving a synopsis of the current paradigm of research methodology of the study of culture within IB, going on to address the two research questions of:

- How and what can the field of IB studies gain with a broader definition and perspective of culture through a systems perspective? And,
- Is there a means to operationalize a systems perspective framework to the study of culture (and thus the processes of communicating across cultures) within IB?

1.1 Current research paradigm of culture within international business studies

The discourse of organization culture in the field of international business (IB) began around the late 1970s with the work of Geert Hofstede [24–26]. In the 1950s, 'cultural ecology' was a focal concept in anthropology, evolving in response to the natural environment [27] anchored in the context of social life [28]. Culture was studied as an adaptive system with ecological and ideational dimensions [29].

As culture and communication processes are intricate features of groups of individuals and manifests itself on various dimensions and levels of society, it is not an easy concept to decipher or measure [30, 31]. This challenge is further compounded today by advancing developments in information communication technologies (ICTs) that are digitally enabled. Digital infrastructures, wireless technology and social media platforms on the Internet for example, allow for the forming of virtual groups with instant contact that further blur concrete geographic boundaries of groups of individuals. It is these developments in technology coupled with the continued divergent views on the concept and definition of 'culture' that has proved to be one of IB's biggest challenges. Already in 1952, Kroeber and Kluckhohn [32] had uncovered 164 definitions of 'culture', with their own being classified by Allaire and Firsirotu's ([33]; p. 196) as "historical diffusionist" under culture as a "sociocultural system" though personally, their definition of culture that considers patterns of behavior and ideas reflects too, an acknowledgement of culture as a product of the mind through shared meanings and symbols:

"Culture consists of patterns, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, and on the other as conditioning elements of further action." ([32]; p. 357).

Today there would be more definitions to contend with [34], as expressed by anthropologist Hall ([35]; p. 210), "I have come to the conclusion that the analysis of culture could be likened to the task of identifying mushrooms. Because of the nature of the mushrooms, no two experts describe them in precisely the same way, which creates a problem for the rest of us when we are trying to decide whether the specimen in our hands is edible."

Perhaps in address to the myriad definitions of culture, IB literature from the 1980s onwards suggests that culture has been investigated in a form that could be explicitly measured. The methodology is based on Hofstede's cultural dimensions/ distance (CD) construct that measures how distant cultures are when compared against certain constructs such as power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity and long-term vs. short-term orientation for relations [36–43]. The effect of the CD construct was to provide the field with knowledge of culture that is mostly delineated by geographic region with a tendency toward average cultural values with an 'either/or' perspective that dichotomized similarities and differences between nationalities. Current global challenges today however, puts pressing need on a redefinition of culture study frameworks where culture needs to be understood from a systems network perspective.

2. Culture in the context of systems theory

In the Hofstedian CD construct, the notion of values is intricately tied to the radius of national culture that is operationalized in the cultural dimensions construct of culture applied to organization and management, to which culture is defined as "the collective programming of the mind which distinguishes the members of one category of people from those of another" ([25]; p. 389). There are however, complementary alternative views of how culture can be studied:

"National identities are not predetermined. They emerge at particular points in time, under specific circumstances, ... according to 'a standard plot' (Ting, 2008; p. 463), and these regularities form a basis for comparison of otherwise disparate cases (Laponce, 2008)" ([43]; p. 146).

There has also been a suggestion that culture can be studied at different levels, using several frames of references, from geographical territorial boundaries and regions [44] to global cultural flows [45], whilst others advocate a multiple culture perspective that beyond the national and regional, also included organizational and professional cultures [22].

"Obviously, we can study culture at different levels, just as we can adjust the focus of a camera to account for a large landscape or a small detail. Cultural analysis may result in a more or less fine-grained picture, every succeeding focus bringing additional information. The challenge is to define at each level a consistent approach to culture, which may account for what is shared and what is not." ([46]; p. 170).

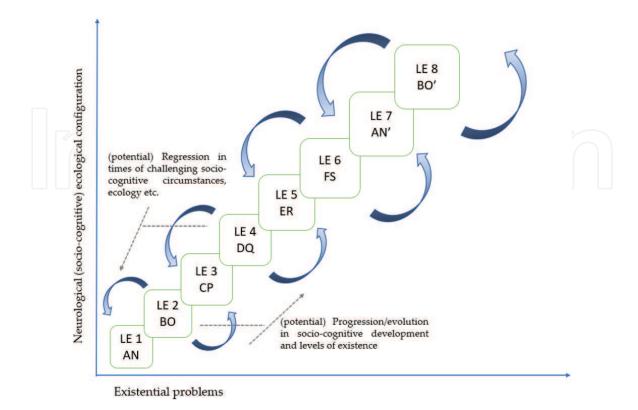
Chevrier's idea that it is varying sizes of groups of individuals who make up these levels, seem to run parallel to the life's work of American psychologist Graves on his

theory of human psychological development and stages of maturity he entitled the Emerging Cyclical Level of Existence Theory (ECLET). ECLET defines a value system that depends upon the interaction of two entities, (i) the socio-environmental context that Graves labels A, B, C, D, E, F, to A' and N' etc. and (ii) the neuropsychological capacities of the organism (individual, group or organization) to cope with (i) that Graves labels N, O, P, Q, R, S, to N' and O'.

The aspects of (i) when interacting in combination with (ii) produce the 8 systems of values and levels of existence that Graves labels AN, BO, CP, to A'N' and N'O'. These systems of values and levels of existence provides a varying radius of framework as a way for man to conceptualize reality, consolidate their set of beliefs and corresponding behavior. These value systems can be found both at individual and group/national/regional levels. The Gravesian model is emergent, developing in an oscillating fashion in a double-helical structure (**Figure 1**). It illustrates sociocognitive behavior in a systems-level approach to understanding culture and values. The level of existence model by Graves postulates that a level of living circumstance once stabilized over a period will tend to create its own existential problems to be solved, so that a next level of existence is necessarily sought for:

"Overall, psychosocial development can indeed be seen as a complex wave-like phenomenon. But development does not occur in the smooth and flowing manner [but rather in] more a spurt-like, plateau-like, more a progressive, steady state, regressive movement in which certain demarcation points can be identified in the flowing process."—Graves ([47]; p. 178)

Figure 1 shows a double helical representation by Graves of the oscillating, spiraling development of the human psychosocial existential states. The value systems develop in a fixed order, though there can be progression or regression within this order. The space in between the areas within the two lines created by the alternating



A double helix representation adapted from Graves [47; p. 187, 48] of the emergent development of the human psychosocial, existential states with potential development/evolution into more mature levels of existence and regression in times of socio-ecological challenges.

spurt and plateau of development phases, indicate increasing degrees of conceptual space. Each developing space on the spiral is larger than the one prior, developing in entropic fashion, in an emergent, open-ended system.

Table 1 shows the value systems in brief with its corresponding labels and resulting problems of existence. The information in **Table 1** and its levels of existence do not represent pure characteristics in which individuals can be

Level of existence (LE)	Existential state	Nature of existence	Description of existential state	Problems of existence
LE 8 Second being	B'O'	Experientialistic	A new order of 'we' and 'us' is understood; the Self sees all elements as interconnected; a recognition of interdependence in the System	Accepting existential dichotomies, and entropic relativities
LE 7 First being	A'N′	Cognitivistic	Return in new and higher order form to new survival problems in an age of scarcity; focus on reorganizing for interdependent existence	Restoring viability to a disordered world
LE 6	FS	Personalistic	Equal trade sacrifice with a focus on the Inner Self that cooperates with Others; an understanding of cooperation	Living with the
LE 5	ER	Materialistic	Focuses on the Outer Self of expressing things in the interest of one's Self; pretense that what is of interest to Self is also in the interest of Others	Conquering the physical universe to overcome wan
LE 4	DQ	Differentialistic	Faith in authority; sacrifice Self for others; postponement of reward; focus on Inner Self	Achieving everlasting peace of mind
LE 3	СР	Egocentric	Self is all important at cost of Others; need to control the external world	Living with self-awareness
LE 2	ВО	Tribalistic	Self-subsumed in Others; sacrifice to clan and survival of clan is important; focus is on the control of the Inner world	Achievement of clan safety
LE 1	AN	Automatic	Survival on automatic basis; no awareness of Self or Others; no differentiation of Outer and Inner world	Maintaining physiological stability

Table 1.

An adaptation of Graves' levels of existence and their corresponding existential states from Cowan and Todorovic ([47]; p. 169).

pigeonholed neatly even if evolution occurs in an ordered hierarchy. Newer, higher level systems necessarily subsume lower level ones. Within this model, an element of regression is accounted for. Individuals/groups when confronted with a problem to be solved, may wish to withdraw into their 'comfort zones'. Once realizing that this comfort zone no longer exists and when faced with increasing problems, they are then coerced into finding new solutions that thus push themselves into greater heights of the evolutionary double-helical structure of maturation and growth. As such, each value system is necessarily associated with a specific perspective of reality or 'world-view', thus generating multiple truths/cultures. The Gravesian model is useful because it points toward a generic model of human biological socio-cognitive development, where similar values can be mapped across national geographical boundaries. This lends a broader, more encompassing manner in which to understand how humans manage resources and live together. The individual being a unique and complex biological organism can be described to have layers upon layers of level building as they mature from the Automatic (AN) core, upwards and outwards in entropic fashion. The successive layers are not uniform, but rather they are flexible, dynamic and flow under various biological and contextual stresses as the individual reacts and relegates behavior in their own spacetime accordingly. Graves likened the individual's evolution and maturing psychology as a "wrinkled plastic onion", with layers of various flexible thicknesses that undergo continuous adjustment depending on perspective, frame-of-mind and surrounding context.

Connecting knowledge across disciplines, the Gravesian system of levels of existence in the field of socio-cognitive science has related concepts from the field of quantum theoretical physics, that of (i) Niels Bohr's "phenomenon" and (ii) Werner Heisenberg's uncertainty principle illustrated in "wave-particle" duality. Bohr's 'phenomenon' refers to that no elementary phenomenon is a phenomenon until it is a registered (observed) phenomenon. This, Bohr had raised in his years of friendship with Albert Einstein when Einstein was at Princeton between the 1930s and 1950s. At the beginning, Einstein was none too comfortable with the concept of quantum physics and tried to show that quantum physics was incompatible with any form of reasonable understanding of reality, to which Bohr's reply in brief was that Einstein's concept of reality was too limited ([49]; p. 182). Bohr maintained that "what answer we get depends on the question we put, the experiment we arrange, the registering device we choose. We are inescapably involved in bringing about that which appears to be happening." ([49]; p. 184).

Heisenberg's uncertainty principle has historically been confused with the "observer effect" which notes that measurements of any system cannot be made without affecting the systems. While Heisenberg offered that account at a quantum level as an explanation to quantum uncertainty, what should be highlighted is that the uncertainty principle is inherent in the properties of all wave-like systems where in quantum mechanics, all objects possess at the same time, a matter wave or wave-particle nature. Thus, the uncertainty principle in effect states a fundamental property of quantum systems and it is not about the observational interferences from the observer toward the system. All particles have at the same time, wave qualities, regardless of observation. In that sense, it is nonsensical to discuss the precise location of a wave on a string because particles do not have perfectly precise positions; just as likewise nonsensical to discuss the wavelength of a "pulse" wave traveling down a string since particles do not have perfectly precise momenta. When a position is relatively well defined, the wave is pulse-like and has a very ill-defined wavelength and thus momentum. Conversely, when momentum and thus wavelength is relatively well defined, the wave looks long and sinusoidal and therefore it has a very ill-defined position.

The study of culture and communication strategies within the field of IB has thus far been delineated in relation to a collected set of values that belong to a group of individuals which tends to discount that individuals can behave and communicate differently in different groups and contextual settings. If we combined the perspectives of Bohr's "phenomenon" and Heisenberg's uncertainty principle with Graves' levels of existence and human development, culture and how humans communicate with each other and their surrounding environment can be studied in relativity. Culture and communication processes can be viewed as dialogic processes between Individual and Group, each would define and perpetuate the other without which, neither would exist.

Since values, motivation and beliefs define the individual and thus a group of individuals who share the same values and manners of communication, then these same levels of existence or system values necessarily go across borders, where the borders remain ill-defined (similar to Heisenberg's uncertainty principle and in address to Hofstede's micro-level analysis of cultures reflected in **Table 2**), defined only in relation to the observation point in relation to a specific purpose (similar to Bohr's "phenomenon"). As such, the concept of culture and communication processes reflect both Individual and Group at the same time, the measurement of similarities or differences between the people of different groups of cultures defined only in relation to point and purpose of observation.

The conceptualization of culture and manners of communication within such a framework of systems theory drawn from the fields of quantum physics, socio-cognitive science/psychology and IB, depending point of observation of the phenomena, seemingly draws together the two dominant metaphors of culture in IB, as that of the layers of an 'onion' [50] and as that of the 'ocean' [51–54]. Within this system perspective framework, culture and communication processes can be studied as inherently emergent.

Unit/ level of analysis	Purpose of analysis	Goals of analysis	Research strategy/design outcomes
Group	To investigate/understand micro- level variables across societies	1. Prove universality of micro-level laws	Culture is viewed as a black box with need to define micro-variables. Could be too complex to be fully explained. Vulnerable to ethnocentricity
Group	To investigate/understand micro- level variables within societies	2. Illustrate uniqueness of each group/society	Culture is viewed as a black box with too many variables lacking specificity. Polycentric perspective
Society	Concerned with ecological variables between societies. Focus on similarities/differences between societies	3. Determine types of subsets of societies	Culture specified in cultural dimensions construct. Polycentric perspective
Society	Concerned with ecological variables between societies. Focus on similarities/differences between societies	4. Determine dimensions of societies and macro-level laws	Culture specified in cultural dimensions construct. Geocentric perspective

Four available research strategies with their goals numbered 1–4 for comparative multisociety studies, and the advantages/disadvantages of the research design outcomes.

Table 2.Adapted from Hofstede's Culture's Consequences ([24]; p. 35).

2.1 Conceptualizing culture beyond the cultural dimensions construct

In critique of the CD construct, the metaphor of culture as an 'ocean' was proposed by Fang [51, 54]. Fang proposed a switch from Hofstede's metaphor of culture as "onion" to "ocean" to "propose an alternative approach to the study of national cultures and international cross-cultural management in the era of globalization" ([51]; p. 72). The "onion" metaphor used by Hofstede [50, 55] illustrates how culture can be viewed as layers. These different layers of characteristics can be learned through teaching and practice, and can be displayed by rituals, in admiration of heroes (both real and fictive) and through (status/material) symbols. These outer manifestations, of layers of culture radiate from and surround a somewhat stable and defined core of the 'onion' that are the basic socio-cultural values that is what people tend to believe things 'ought to be', where in accordance of culture as a programming of the mind, Hofstede argued that by age 10, most children would have had their basic values in place, set with their foundation orientation toward society's dominant ideology. Fang saw the "onion" metaphor as "a product of the cold war era during which national cultures were like "black boxes" (self-contained, tangible and rigid "onions"). Few cultures knew what other cultures were thinking and doing." ([51]; p. 84) But in the era of globalization, he felt that a better metaphor would be to view culture, with all its inherent paradoxes and internal variations, as an "ocean", where the ocean "has no boundaries, and its various waters are both separate and shared, both different and similar, and both independent and dependent" ([51]; p. 88).

Uncomfortable with the "functionalist" [56, 57] and "deterministic" [20] paradigm that seeks objectivity, measurement and prediction, Fang felt that research frameworks in IB had philosophical foundations heavily influenced by Karl Popper's "analytical logic" that continued to encourage the tradition in literature of a bipolarized perspective of culture with "either/or" dimensions. He preferred instead, "a dialectical approach that sees each national culture as having a life of its own full of dynamics and paradoxes" ([51]; pp. 71–72) where an eastern 'dualities' approach to culture theory with a "both/and" perspective would be more useful considering today's global challenges and changing business environments.

3. Revisiting research strategies and frameworks of analysis

The previous sections addressed the first research question posed in this chapter. By incorporating perspectives from other disciplines (social biology, physics and psychology) on how culture is studied, the field of IB can move toward a systems theory understanding of culture and communication processes in address to global challenges and changing business environments.

Comparative studies of organizations inherently favor a binary approach to what is being studied [24, 58]. In address to the second research question, one way of beginning to operationalize a systems perspective to culture and communication processes is to revisit the foundations of the CD construct reflected in Hofstede's Figure 1.6 ([24]; p. 43) shown in **Table 2**, where Hofstede illustrates four types of research strategies and their goals (numbered 1–4 in **Table 2**) for studying universal and specific characteristics of culture at different levels of analysis.

Cells 1 and 2 are studies that focus on either similarities or differences among and between groups in societies. These studies are concerned with micro-level variables and their relationship, meant to be measured both within and across different societies. Cell 1 studies try to prove the universality of micro-level laws with a nomothetic-etic orientation [59], whilst Cell 2 studies are more idiographic-emic

where showing the differences among societies also means showing the uniqueness of each [60]. Hofstede argues that studies in Cells 1 and 2 can go across cultures [61, 62] but do not necessarily specify what "culture" stands for, thereby likening it to a "black box", else stating that it is set against a "culture-free context". Microlevel group studies can also go across cultures by comparison of the average scores of each group. This he acknowledged is problematic since in the broader sense of research strategy, the variables considered may be too many to be known and too complex to be fully understood. These uncertainties thus contribute to inaccurate measurements and difficulties in operationalizing a research framework that can be applied to practical use.

Cells 3 and 4 are studies that focus on either similarities or differences among societies based on "ecological variables and their relationships" measured at the level of societies. In Cell 3, subsets of cultures are studied in relation to others similar among themselves but differ from other types or subsets [63–65]. Hofstede recognizes Cell 4 studies, as "geocentric" in nature, whereas Cells 2 and 3 are "polycentric" and Cell 1 studies as "ethnocentric". Cell 4 research strategies would be comprehensive enough to cover various geographical regions, with the assumption that focusing on differences will also highlight similarities between societies/nations and regions.

Still, in this debate is the recognition that studies situated in their own respective Cells are seldom, if ever, provide an adequate overview of the study of cultures per se, where Hofstede deemed it positive to have studies situated across all Cells with the results thereafter compared, where the approach to the study of culture and organization should not just be multidisciplinary but multi-leveled. In his pioneering efforts, Hofstede [24] lends examples to studies situated in all four cells, clearly defining that his own efforts with IBM and the formulation of cultural dimensions as belonging to studies "concerned with determining dimensions of societies and laws at the level of societal variables" ([24]; p. 43).

4. Operationalizing research strategies for the study of culture from a systems perspective

Viewed from an integrated systems perspective, **Table 3** illustrates how studies an be done in each quadrant whilst scholars even when using different approaches to the study of culture and communication processes, would continue to cross-reference the works of colleagues both within and across disciplines to gain broader insights into culture, communication and eco-organization management. The main difference between the research strategies perspective in **Tables 2** and **3** is that studies in Cell 2 in **Table 3** allows for a re-formulating of the current cultural studies framework that take into consideration how culture and communication processes are studied in other disciplines. The resulting framework to the analysis of culture for studies in Cell 2 of **Table 3** can be approached by using both quantitative and qualitative methods.

	Within groups/constellations	Across groups/constellations
Concerned with micro-level variables	1. Determine types of subsets of societies	2. Determine global values, including in virtual spaces
Concerned with macro-level variables	3. Illustrate uniqueness of each group/constellation	4. Determine cultural dimensions of group/constellation

Table 3.Reworking the framework to research strategies for comparative studies on culture, communication processes and organization at micro and macro levels, within and across national boundaries, in the era of globalization.

Using the research strategies outlined in **Table 3**, the previous works of other outstanding scholars in the field of cultural studies that began in the 1930s with studies in cultural anthropology in relation to organization [66–70].

To this end, both Hofstede's CD construct and Fang's Yin Yang approach provide a platform toward a larger integral system of studying culture. The CD construct provides neatened frameworks for cultural averages to be studied and the eastern dualism approach provides for an overarching theoretical framework to explain the anomalies within the CD paradigm. Considering current global challenges and an increasing inequality, humans from various regions and parts of the globe will need to increasingly learn to co-exist and co-evolve with the ecological dimension.

5. Reflections, limitations and conclusion

Current research strategies of studying culture and communication processes that bolster dominant economic theories within the field of IB seems inadequate in addressing challenges faced by evolving business environment and global challenges, from the management of the global resources to the management of our ecology. The purpose of this chapter is to contribute to the debate on finding means toward an integrated systems approach in culture theories toward an assimilated co-existence with remaining global resources and ecology where IB and trade makes up a large part of human living and management.

In address to the first research question posed in this chapter, this study works with the assumption that international business and trade are inherent human activities that constitute a large part of living, managing and co-evolving with other global systems. The field of IB can work toward a system-network understanding of culture and communicating across cultures for IB studies by incorporating perspectives of culture and communication processes as studied in the fields of social-biology, quantum theoretical physics and psychology.

In address to the second research question, operationalizing a systems perspective to culture and communicating across cultures, would require a revisit of current research strategies of culture in studies as applied to the field of IB and organization management. It is the Gravesian perspective of the evolution of human psychological maturity (that extends to groups, companies and societies) and levels of existence set within the context of the fundamental theoretical points of quantum physics—Heisenberg's uncertainty principle and Bohr's "phenomenon"—that can help define a concept of culture and manners of communication that go across geographical boundaries. The triangulation of theoretical perspectives from these different fields enables an explanation where perspective and point of observation is important in defining the radius of culture and communication strategies. Both Individual and Group are dialectically related in defining group culture and their communication processes, where one would not exist without the other.

Addressing global challenges from rapid climate change, biodiversity loss and rising social inequality in a context of uncertainty and changing business environments lend increasing pressure to understand and study culture and human-ecology communication processes from a systems perspective. Understanding cultural values across geographical boundaries and what we today would call a miscommunication between cultures due to cultural friction could be re-perspectivized as differences in levels of socio-cognitive and ecological maturity development, rather than as differences in national cultures and identities. There is after all, only one globe in which we are all a part.





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