

Studying Human Cultures through Nonwritten Materials

KAWADA Junzo

- 1) Man as a sensorimotor organism
 - 2) Culture bred from the interaction between the senses and movement
 - 3) The meaning of writing in the culture of mankind
 - 4) Comparison within a continuum and over disconnected cultures
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- 1) Sensorimotor organisms range from amoebas to modern humans (*Homo sapiens*), whose ancestors dwelled in trees with other *primates*. By living on trees, which is rare for mammals, the human being has evolved as an animal capable to grasp things with his forelimbs, and to recognize precisely close-range objects with his eyes, which are positioned flat on the face next to each other. In the savannahs of Africa, about six million years ago, the human being separated himself from chimpanzees by coming down from the trees, standing on his feet and walking. This freed his hands and allowed the position of the vocal cord to descend, allowing to develop articulators to pronounce doubly articulated utterance which is specific to the human being. These two abilities, unique to man, combined to allow him to migrate to various parts of the globe, and to settle and create diverse cultures suited to the natural conditions of each region.
 - 2) Culture – meaning representations created by the interaction between perception and motion that man subsequently developed – may be understood and studied according to the following indexes of sensory domains. (However, there are some temporary omissions: the internal organic sensations and the senses of perception derived from acts such as sexual intercourse, childbearing, and defecation, which are linked closely with instincts but which, though primitive and sometimes working as a driving force for techniques of the body in some cultures, do not directly work to create cultural representations.)

Visual representation: Names of basic colors. Varieties of pigments and their formulas. Symbolism of colors, forbidden colors, colors directly associated with a particular direction or season. Representation of two-/three-/four- dimensions. Expressions using surface (as in western oil painting) as opposed to using lines (as in eastern monochrome drawing “*Sumi-e*”). Ideographical iconography, ideograms / phonetic iconography, phonograms. Vocabulary expressing visual impressions.

Auditory representation: Vocal sounds and instrumental sounds, *umi-ji* (elongated vowels in songs), singing techniques (such as melisma), the importance of percussive / durative sounds; beating / strumming / scraping / blowing in instrumental sound. Rhythm, two-two / triple/ four-four times, additive rhythm / polyrhythm, eight-pulse with *tenuto* (chanting). Single / multiple sounds (harmony, polyphony, tone cluster, etc.) Vocabulary expressing auditory impressions.

Gustatory representation: Spices. Material and taste of fat and oil. Processing of staple food: grain / powder; dry / moist. Presence or absence of gummy taste. Raw or heated. Alcohol made from grain (germination, fermentation) / fruit. Vocabulary expressing taste.

Olfactory representation: Incense / perfume. Aroma-testing in traditional Japanese incense-burning ceremonies. Vocabulary expressing smell.

Tactile representation: Tactual sensations from the entire body (various bathing methods), vocabulary expressing the sense of touch. Movement of hands and fingertips (reading braille, playing keyboard instruments (piano), manipulating typewriters and word processors.)

Of these sensations, visual and auditory sensations and the sense of touch at the fingertips are connected to the cerebral neocortex, which is in charge of adaptive behavior and creative activities, and has segmental cognitive abilities, so that these sensations may correspond to language. Gustatory and olfactory sensations are directly connected to the older cerebral limbic system, which controls instinct and emotions, and only partly reach the neocortex. Therefore, the senses of taste and smell tend to evoke emotional associations that are vague but powerful.

Physical representation: Descriptive / rhythmic dance movements; one unit trunk / polycentric; earth-oriented dances (*henbai*: a stamping action to calm underground demons; shuffling) with tilted upper torso / skyward orientation, jumping, upright standing. Vocabulary related to physical representations.

Synesthesia (a combination of different sensory domains): Expressions such as *Ao-nisai* (literally, “blue two-year-old”, meaning “arrogant youth”), *makka-na-uso* (“scarlet lie”, meaning “bald-faced lie”), *kiroi-koe* (“yellow voice”, meaning “shrill shouts”), *otsu-na-aji* (“taste like a subdued sound”, meaning “refined taste”), *shibui-kao* (“bitter face”, meaning “unfavorable facial expression”), *amai-kaori* (“sweet fragrance”, meaning “romantic smell”), etc. The association of aromas with landscape in memory (device to mark around 3000 aromatic impressions used by a famous French perfumer Michel Roundnitska); associations of auditory and visual representations (piano keyboards linked with color-projection by Alexandr Skryabin), etc.

Synthesized sensations, such as the distinction of cleanliness / dirtiness, or purity / impurity, and reflexive aversion, are deeply rooted in the culture from which they emerge. Topographical features of the land captured in human culture such as in scenes of trails and the countryside, which evolve out of a long interaction between the natural environs and the culture, and the various sensations, vocations, clothing, food and housing, are an important means of studying cultures.

Representations may also be studied according to their forms, such as whether they are tangible or intangible. Tangible representations and material culture are critical for the study of human culture. For example, materials and techniques needed to create various forms of material culture are representations of human concepts on nature and on labor. Also, tangible representations, such as houses, temples and shrines, monuments, settlements, public wells, communal laundries or mills, and traditional tools, may be investigated to discover how they came to be valued as collective strongholds for groups of people.

As for intangible representations: physical techniques seen in everyday life (such as how people walk, sit, sleep, or laugh, manners when eating or greeting, how people show courtesy), the handing down of techniques and ceremonial actions, and oral dissemination of songs and preaching; are all continuously transmitted from generation to generation, and are enormously important in the study of human culture.

- 3) Seen from the entirety of human culture, writing and written culture accounts for a very limited area, given its historical antiquity and the extent of its geographical and social reach. Even so, the written word, which is unique to man, has played an important role in and had a huge impact on the culture of human being. This is why the study of “nonwritten” cultural materials is considered especially interesting.

At the base of written culture lies a strong orientation toward the two-dimensional. Two-dimensional mediums such as paper, plates of wood or bamboo, clay plates, papyrus, sheepskins, and the surface of stone monuments and walls, allow information to be more easily fixed, and later handled, than one-, three-, or four-dimensional mediums. Moreover, the two-dimensional is oriented towards visually identifiable means of encoding. These methods rely on vision, which has stronger discriminative qualities than hearing and touch, the other two senses that connect to the cerebral neocortex.

Attempts have been made to fix and visualize one-dimensional data such as sound, voice, spoken

words, and the transition of time into the two-dimensional. Among different musical notation systems, the western staff notations mark chiefly quantitative aspects of the sounds, such as pitch, duration, and stress, which remarkably contrasts to the way of the traditional Japanese verbal notation systems like *kuchi-shōga* and *hushi-hakase*, used for the performance of various instrumental and vocal arts, which concern chiefly qualitative aspects like timber. Sundials, clocks, calendars and chronologies are also two-dimensional representations of time, and recording discs and magnetic tapes are methods of fixing the transition of one-dimensional sound into two-dimensional media to allow repeated reference and handling. Maps and blueprints (floor plans, diagrams, cross-sectional drawings) also allow three-dimensional information to be shrunk in size and dimension so that they may be represented in a reduced size and studied with ease. In these aspects, two-dimensional representations including writing contributed greatly to the refinement, dissemination, and accumulation of human culture.

Dancing, which is a four-dimensional physical representation (though some characteristics may be digitized into graphs by methods such as motion capturing techniques), is extremely difficult to convert in its entirety into two-dimensional media. Even with Labanotation, which has been deemed the best of these methods, only high-skilled operators can handle the encoding and decoding process, as they are so meticulous and highly analytical. Moreover, this method fails to record the sounds as musical scores parallel to the physical movements of the dance. Classical Japanese dance, which is made up of numerous predefined conventions, can be noted down two-dimensionally to a great extent with the use of simple diagrams and written words; there is, however, no determined system to do the same to its dance scores, despite the numerous attempts to develop one.

For the *Bharata Natyam* of south India, there is no two-dimensional musical notation. A series of movements have corresponding singing phrases, and the entire song is sung along with the movements, beating time with handclaps. In this case, a notation system can be used to reduce four-dimensional representation into the first dimension. In creative dancing, “choreographic emulation”, or a life-size imitation of a choreographer, is currently deemed the most suitable method for communicating dance movement. My hypothesis states that *écriture*, or the two-dimensional representation, which negates the concept of time by symbolizing an image outside the body to fix it, is antithetical to eurhythmic dancing, in which the dancer's entire being is committed into time to relive the image. Incidentally, this hypothesis may show us how the great world religions that have written scriptures prohibit the act of dancing, but we will not go into this here.

The origin of writing in a narrow sense, when broadly categorized into East and West Asia, started with symbolism. In the west writing was specialized into phonographic approaches, mainly working in the realm of bureaucracy and contracts within society. In the east, the characters developed into ideographic writing, mainly working in the realm of mantic prophesy, as seen in inscriptions on animal bones and tortoise carapaces. These have specialized into ideograms which are still used in China and Japan. In the primitive symbols, the pictograms that were to become the basis for the later cuneiform characters of the Mesopotamia (the oldest form of writing in the West) are obviously based on reality; this can be seen in the expressions of male and female, which symbolically represent the sexual organs of each sex. In the case of Chinese characters, on the other hand, the characters take on a stronger sense of social meaning; the character for male “男” is a combination of “田” or “rice field” and “力” or “spade”, and female “女” is a pictograph of a woman on her knees.

It should be noted that the highly phonographic western writing, with the alphabet as its terminus, now has a closed system where all words can be phonemicized according to a limited number of constituent elements, whereas the eastern ideographic writing system, including tens of thousands characters, is open

to further additions through combinations of radicals, each of which has distinct meanings.

The perception that a certain range of targets exist within a closed system, where they are perceived as combinations of simple constituent elements, is represented in the atomism, and shares its basis with the phonetic notation of the alphabet. This idea has developed in the West, and has become one of the foundational bases of what is called the modern civilization. At the same time, I believe that there is another method of perception widely seen in non-western cultures, where the known is metaphorically applied to the unknown, in order to find a new meaning in the latter – a method that has much in common with the role of poetic language. These two ways of perception raise questions about the methodology of cognition, which surpass the argument between the alphabet and Chinese characters.

In comparison to the vocal utterance, the four basic qualities of writing and written culture may be defined as follows: (a) remote communication is possible over time and space; (b) repeated reference of the same message is possible; (c) individual reference is possible; and (d) there is freedom to pause while sending or receiving a message.

“Drum language”, which developed as a means to broadcast the praises of the royal ancestors in some monarchical societies of West Africa, shares the basic qualities of (a) and (b) with writing. I have positioned this language as the “*écriture en négative*”, meaning reverse writing, since the segmental features of the phonetic language are deleted and the context is passed on through its prosodic features. I qualified it as a reverse writing, because the drum language does not have the qualities of (c) and (d). However, the historical representations made possible through drum language holds a distinct position, separate from writing or voice but a third category on its own. This is obvious when I compare “writing” and “voice”, through the opposition of two models of “epic”, as means to vocally revive the past in the present, and “chronicle”, where written words send the present into the past.

In discussing writing, voice, and drum language in this context, I would suggest using the word “marking – *shirusu*” in place of “writing – *kaku*”. The very first evidence of writing, such as cuneiform letters scratched onto clay boards and characters inscribed onto animal bones and tortoise carapaces, were “scratched” onto the surface. In the case of the Greek “*graphô*” and the Latin “*scribere*”, both of which are the source of many words related to writing in European languages, their Indo-European etymology indicates the meaning to “scratch”. On the other hand, “marking – *shirusu*” literally means to “make notable – *shiruku-suru*”, honoring the names of ancestors through voices and instrumental sounds, and is linked closely with the aforementioned models of “epic and chronicle”, and explains the grounds for why a “name” is synonymous with “writing” in Japanese.

When considering the remote communicability mentioned in (a) as a basic quality of writing, the medium of communication is important. In handing down physical movements such as sending sound messages in drum language, or dancing and ceremonial performance, or in the transmission of vocal actions such as songs or narratives, the unit of dissemination is the life span of a person. In handing down two-dimensional writing, the level of continuity varies greatly according to the material on which the message is noted, be it paper or stone. Just as the stone monument inscribed with the achievements of the first Qin Emperor Shi Huangdi was copied onto paper and after the loss of the monument passed on to later generations, the degree of remote communicability over time is not related to the sustainability of the message medium itself. This is why the pursuit of man's culture through written culture can be so diverse in its relationship to nonwritten resources. As opposed to the one-time-only characteristic of the inscriptions on stone monuments, messages handed down through methods where repeated regeneration is possible, such as hand-copying or spoken language, are supported by the same remote communicability of figurative messages over time as that seen in the ceremony of *Shikinen-sengu* at the Grand Shrine of Ise,

where all the temples and votive objects are replaced with newly made ones every twenty years.

- 4) In setting the research target on a subject of such magnitude as human culture, comparative studies are necessary for its various components. The comparison of cultures, in my opinion, needs to be made both within a continuum and over disconnected cultures. Comparison within a continuum would focus on the effects, diffusion, acceptance or rejection of, and transformation between cultures that have a history of interactions. On the other hand, as proposed in my method of “triangulation of cultures”, cultures that have had no important interactions until the latter half of the 19th century – such as Japan, France, and inner West African society (more specifically, the Mossi kingdom) – and have had totally different value orientations, are compared despite their obvious discontinuity over time and space. Such a comparison holds heuristic value in finding hidden meanings, and is “logical” as opposed to the “historical” nature of the comparison within a continuum, and will pose fundamental questions on the nature of human culture.

The triangulation of cultures, the initial idea of which is derived from the geodesic technique, aims to facilitate to objectify and relativize the subjectivity of a culture, by taking three points of reference. At the same time, also like the geodesic triangulation, the triangulation of cultures aims to measure the entire human cultures by adding on points for triangulation. Needless to say, this will only be made possible through the combined efforts of many researchers from various cultures.

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