

CHINESE CONCEPTUAL MODELING OF TIME AND SPACE: A HEURISTIC APPROACH TO THE STUDY OF SEMIOTICS AND SEMIOLGY

Orjinta Aloysius Ikechukwu

Department of Foreign Languages and Literary Studies, University of NIGERIA,
NSUKKA, NIGERIA.

aaiggonzagas@googlemail.com

ABSTRACT

Using Semiology as a theoretical framework, this paper tries to have a perception of time and space as they are depicted inter alia in linguistic and literary forms. This work tries to analyze how mental images are formed and translated into concepts which in turn are translated into conceptual models. Such models assist man to reason and solve problems by observing his environment and the objects in them in a given time: past, present and future. As our case study we shall study the Chinese worldviews. This paper tries also to study the influence of time, space and distance on communication and how this effect differs from one society to the other. This study has the goal of alerting the reader of the social distancing that emanate from the use of time and space and the need to avert misunderstanding between initiates and non-initiates.

Keywords: Semiotics, semiology, proxemics, chronemics, time, space

INTRODUCTION

Time and space can be perceived through their depiction and translation in other sign systems like the numerical, geometrical and linguistic functions. These sign systems are socially used for modeling time and space. Models are things used to represent something else. Models could be objects, but when they are conceptualized, they become conceptual models. Such a conceptual model assists us to comprehend the thing it stands for. Human intentions or semantics find their concretization in conceptual models. Human beings reason and solve problems by observing the environment and the objects in them in a given time through the means of conceptualization and conceptual modelling. The resultant human intention or mental image (semantic) are transported and passed on from the locator to the interlocutor through concepts. These concepts become intelligible through signs and symbols - language. Most models are generally concepts that relate to given real world situation of a past, present or future potential or actual condition of things. Our discourse will dwell on conceptual modeling of time and space. We shall apply semiotics as our theoretical framework. Our target is to study time and space conceptualization of the Chinese.

THEORETICAL FRAMEWORK

Semiotics and semiology share a common Greek root: *semeion* which means *sign*. The science of sign cannot be studied without two personalities who loom large in this discipline, namely the philosopher Charles Pierce (1839-1914) and the linguist Ferdinand de Saussure (1857-1913). Both terminologies take particular interest in the theory of sign system in language and all forms of communication and convention. In a manuscript (1894), Saussure

explains semiology as the science that studies signs in a given society and language which defines time and space is part of semiology (1915:33):

Language is a system of signs that expresses ideas, and is therefore comparable to writing, to the deaf-mute alphabet, to symbolic rites, to codes of good manners, to military signals etc. It is simply the most important of these systems. A science that studies the life of signs in society is therefore conceivable: it would be a part of general psychology; we shall call it semiology (from the Greek *semeion*, *sign*). Semiology would teach us what signs are made of and what laws govern their behavior. [...] Linguistics is only a part of the general science of semiology: the laws discovered by semiology will be applicable to linguistics, and the latter will therefore find it linked to a well-defined area within a totality of facts in the human sciences.

While the North American scholars remained with the more ancient term semiotics, the European tradition preferred the newer term semiology. Saussure's semiology lays emphasis on the social function of the sign while the American philosopher Peirce's semiotics emphasizes the logical function of the sign. The literary critic understands semiotics as the wholistic signifying system of a given text, code and convention which are sine qua non in the reading, understanding and appreciation of the text. Pierre Guiraud (1975:1) believes that semiology "is the science which studies sign systems: language, codes, sets of signals etc. Our area of study takes its bearing from the social codes and conventions since particular customs and traditions as well as nationalities and regions follow their own perception of time and space according to their world views and levels of development. Hence the 11th World Congress on Semiotics notes:

In this way, *time* and *space* can be understood as conceptually constructed forms, which are sustained by social means and are inherited by way of mastering systems of signs in which they are encoded. Since we use these sign systems we are forced to use these forms for modeling time and space. In our language, the nature of discussion about time and space involves the correlation of various co-existing and overlapping sign systems.

Any modeling of time and space is possible only against a previously existing background of time or space. This implies a mandatory overlap of time and space systems of which one will be a model of time and space and the other will serve as their meta-model.

Proxemics and Chronemics,

Thanks to the study of proxemics and chronemics, we are able to research deeper into Linguistic Communication with a view to discovering that non-verbal communication develops tentacles far beyond gestures into time and space. Hence the distance between the emitter and the receiver relates to space and this space could be personal or territorial. Similarly the period of time expended in this non-verbal communication between the emitter and the receiver or the actor and the reactor constitute sign and this sign language is this time around highly conventional. Every society in our planet occupies a space on this globe. The conglomeration of societies has each a quota of living beings. These beings occupy personal spaces within their communal territories. Nothing is said but something is understood and exchanged. Room for misinterpretation is taken for granted among non-initiates while for initiates the convention is crystal clear. This applies to both man and beasts. Guiraud (1975:88) has this to write in the above regard:

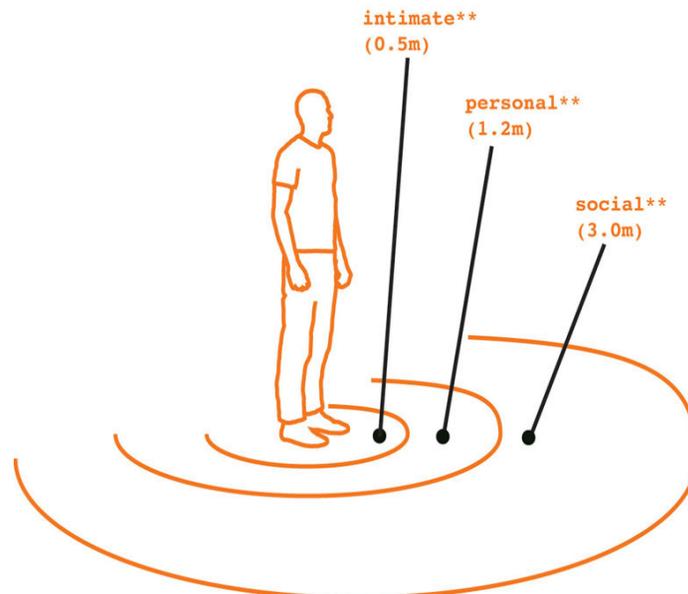
Linguistic communication uses not only gestures but space and time; thus the distance that we place between ourselves and the person we are talking to, and the time we take to consider or reply to his remarks, in them constitute signs. These are the signs which are studied under

the name of proxemics. The 'language' of proxemics are is particularly interesting because, although like all sign systems, it is conventionalized, it varies from culture to culture and thus may give rise to numerous misunderstandings. [...]. The distance is thought to be determined by acoustic reasons but is in fact more a matter of convention.

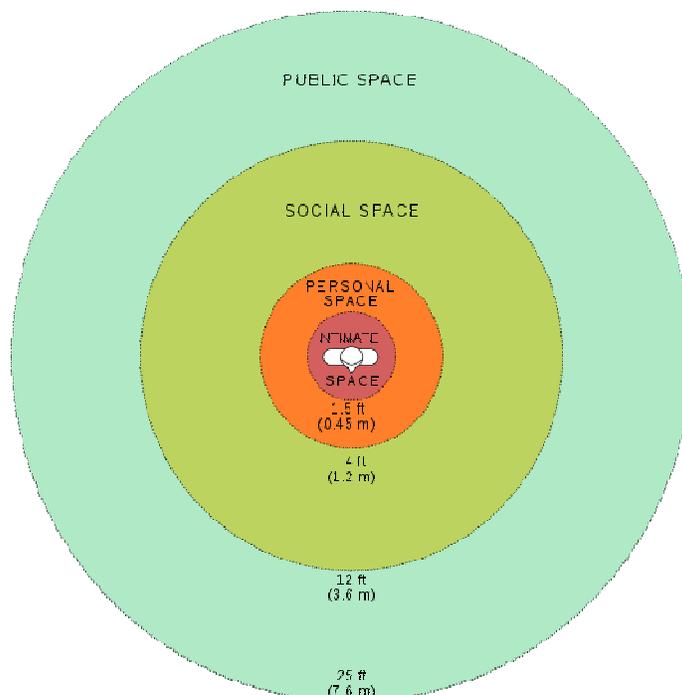
Edward T.Halls, a cultural anthropologist was the guru who invented the term proxemic in 1963. He observed the importance of the study of man's acquisition and use of space because of its influence in the understanding of man's interpersonal relationship as well as the development of space from virgin forests through rural localities to urbanization, town planning and extended space management (Hall, 1966):

Proxemics can be defined as "the interrelated observations and theories of man's use of space as a specialized elaboration of culture". Edward Hall the cultural anthropologist, who coined the term in 1963, emphasized the impact of proxemic behaviour (the use of space) on interpersonal communication. Hall believed that the value in studying proxemics comes from its applicability in evaluating not only the way man interacts with others in his daily life, but also "the organization of space in his houses and buildings, and ultimately the layout of his towns.

Hall's application of his theory through a comparative study of the Americans and the Latins' conceptual model of space becomes quite enriching to our analysis since the Latins are nearer the Africans in their perception of space. The Asians share cultural affinity in the way they are influenced by space more than the way the Euro-Americans are impacted by space. The latter are said to be cold, while the former are seen to be warm. Halls diagrams are typical euro-American perception of non-verbal behavioural convention which may be alien to the Africans, Latins and Asians. According to Hall there are eight major distances between the North Americans: The distances may be doubled or tripled as the case may be as one passes through countries like Germany, Norway, Iceland etc. The social distances have certain relationship with the physical distances. Though cultural Studies may stress that regular communication closes the social distances:



Edward. T. Halls Diagram on phases of social and spatial distancing of *personal bubbles* 1966.
Sources: freie Wikipedia



Edward T. Halls: Diagram of personal bubbles 1966. Sources: freie Wikipedia

According to Guiraud (1975:89) the above diagrams could be explained via the under listed format:

- **Intimate distance** for embracing, touching or whispering
 - *Close phase* – less than 6 inches (15 cm)
 - *Far phase* – 6 to 18 inches (15 to 46 cm)
- **Personal distance** for interactions among good friends or family members.
 - *Close phase* – 1.5 to 2.5 feet (46 to 76 cm)
 - *Far phase* – 2.5 to 4 feet (76 to 120 cm)
- **Social distance** for interactions among acquaintances
 - *Close phase* – 4 to 7 feet (1.2 to 2.1 m)
 - *Far phase* – 7 to 12 feet (2.1 to 3.7 m)
- **Public distance** used for public speaking
 - *Close phase* – 12 to 25 feet (3.7 to 7.6 m)
 - *Far phase* – 25 feet (7.6 m) or more.

Chronemics

Chronemics is the science of time perception and usage in non-verbal communication process. Individuals, societies and cultures perceive and value time differently. What is common in all races is that time is precious and waits for no body. Hence such dicta and proverbs as delay is dangerous, time is money, make haste while the sun shines, time waits for nobody abound in all cultures. However while some cultures use time monochronically, that is executing one task at a time, others use it polychronically, in the sense of doing more than one thing at a time. The former is applicable to most Euro-American cultures while the latter applies to African and Asian nationalities. As usual stereotypes, prejudices and

condescension make some races to make superior and positive claims about their own use, value and structure of time and to apportion inferior and negative perception and attention to time to others. What is evident is that at one time or the other in every culture all over the globe, time is always abused. According to the Wikipedia the influence of time in interpersonal and intercultural communication cannot be overemphasized:

[...] time is a precious resource not to be wasted or taken lightly. "We buy time, save time, spend time and make time. Our time can be broken down into years, months, days, hours, minutes, seconds and even milliseconds. We use time to structure both our daily lives and events that we are planning for the future. We have schedules that we must follow: appointments that we must go to at a certain time, classes that start and end at certain times, work schedules that start and end at certain times, and even our favourite TV shows, that start and end at a certain time"

CHINESE CONCEPTUAL MODEL OF SPACE AND TIME

We depended fully on the material provided by the *YeYoung Culture Studies under* <http://www.literati-tradition.com/time.html> for our appreciation of the Chinese concept of time and space. Confer also the sources that are provided by the same research under <http://www.literati-tradition.com/space.html>. We are highly appreciative to them for allowing us to borrow and incorporate their work into this specialized research. The organizers of the 11th World Congress on semiotics with the theme: *Global Semiotics bridging different civilizations* who invited me to present this work for their Congress at the Nanging Normal University, China are really prophetic and visionary to have known that this area of linguistics falls under the emergent studies in the literary sciences as well. Unfortunately I could not make it to China due to unforeseen circumstances.

Chinese conception of Time

Shi is commonly translated into English as "time". Time is an intellectual concept that requires a metaphoric model since time has no concrete reality. "Before 1915 space and time were thought of as a fixed arena in which events took place, but which was not affected by what happened in it," "space and time are now dynamic quantities...space and time not only affect but also are affected by everything that happens in the universe," Stephen Hawking remarks, on the personal level, "it was natural to think that space and time went on forever." (Hawking, 33) Most of us conceptualize time, and conceive time as something we can spend, save, invest, or borrow, even win or lose.

There are essentially two "root metaphors" used to establish the Western conceptual schemes of time. In the Judaic-Christian tradition, God created the mortal world at a particular time and it will come to an end one day. In this scheme, God's eternal time contrasts the bounded time of the mortal world. In other words, people conceive the lives of individuals as discrete corps, with a beginning (birth) and an end (death). In this duration, each person is morally responsible for one's acts before the God who made him/her. The God will judge each individual according to one's acts at end of this time span. On the other hand, in the traditional Western philosophical-scientific tradition, both Aristotle and Newton believed in absolute time, moments of absolute time are understood as analogous to the continuous sequence of points on the line. Such model is associated with a progressive idea of history in which time moves forward without repeating itself.

In The Analects, Confucius said by a river: "It is what passes like that, indeed, not ceasing day or night." (The Analects, SZ, 2491) Here, the term *shi* 逝 denotes "what passes" or

“passes by”, what we call time is absent. Confucius simply contrasts the passing river with “passing.” What “passes” is both that which we call time and life. “Passing” associated with the ultimate truth, is one of names of Tao, or the nameless Way in Tao Te Ching: “I do not know its name, so style it Tao. Forced to utter it a name I call it the Great. Great means passing by, passing by means going far away, and going far away means returning.” (Gao, 350)

There is no Classical Chinese word equivalent in meaning to the English word *time*. The original meaning of *shi* is “timeliness” or “seasonality,” in which both time and space are affected. In other words, the Chinese idea of time is understood within the specific space. According to Yuelin 月令, or the *Monthly Order*, written no later than third century B.C., spring affects cardinal point east, and is dominated by the agent of wood; summer affects south, and is dominated by fire agent; autumn affects west, and is dominated by metal agent; winter affects north, and is dominated by water agent. The earth agent affects the central location of the intersections of the four cardinal directions, and dominates the four seasons. (Yuelin, SZ, 1352-87) By extension, *shi*, seasonality or timeliness refers to doing something at the appropriate time (which is determined by harmonious associations with the theory of the Five Agent), and at which time an action can succeed.

In the early Chinese texts, there is no story that describes the creation of the world out of nothingness and marks the beginning of time. In Chinese chronologies, time is not counted from a single date, such as the birth of Christ, but from repeated historical beginnings, or the foundation of a dynasty, or a royal family. On the personal level, individual lives, certainly bounded by birth and death, but each person's life is regarded as a link within the continuum of the ancestral lineage, which includes both of the living and the dead. However, the ancestral spirits related directly to the living through rituals, such as food offering etc. These spirits were not gods like those of ancient Greece, nor were they souls who stood before an almighty God to be judged. The approach of describing Chinese idea of time as cyclical, or sometimes, of spiral by sinologists derives from a play on the Western geometrical metaphor for time is the alternative of a straight line. It is helpful as a means of differentiating the Chinese concept from the Western metaphor of a straight line, but not a Chinese metaphor of time.

Chinese conception of space

Like time, space is an abstract term for a complex set of ideas. Different cultures differ in how they divide up their world, assign values to its parts, and measure them. In the biblical viewpoint, Genesis describes the creation of the world out of nothingness, God dwells in heaven, and part of his creation humankind dwells on earth. Alternatively, cosmological speculation is at the beginning of Greek philosophy, in Ptolemy's cosmos, the four agents of earth, fire, air, and water are subordinated to cardinal points of planetary gods, and the colors of the agents are attached to the gods. Although the European spatial grid of cardinal points existed since antiquity, its role in the structure of the cosmos was less important than that in China. Whereas the Chinese used a spatial frame of cardinal points to organize the components of nature, the Greeks used the planetary gods. On the personal level, wrote Yi-Fu Tuan, “Space is a common symbol of freedom in the Western world. Space lies open; it suggests the future and invites action.” (Tuan: 55)

Just as there is no Classical Chinese word equivalent to the English *space*, there is no English word that may be readily to translate the Chinese *yuzhou* or *tiandi*. *Yuzhou* commonly translated into English as space or universe. The original meaning of *yu* is the eaves of house, and *zhou* is the top of roof. *Tiandi* commonly translated as heaven and earth. However,

according to *Huainan zi* 淮南子, or *Prince Huainan*, written in the second century B.C., “The way of heaven is round, and the way of earth is square.” (Liu, 80) This account takes the plane of earth to be a projection into space of the equator. The round heaven is “defined by the circle of the celestial equator,” and the square earth is “defined by the solstitial and equinoctial points projected onto the celestial equator.” (Major, 133) For a long time, archeologists and historians were puzzled by the Neolithic (3000-2000 B.C.) jade *cong* 玉琮 that is a square section with a circular, central hole and short collars to the ends. The new studies indicate that *cong* as a ritualistic object represents the old Chinese cosmological idea of “circular sky and square earth.” Thus *cong* functions as a power object that connects heaven and earth, humans and divine.

The Chinese spatial model, with its center as its main point, places at the intersection of the four cardinal directions of the compass. Animal symbols lie at the four sides. To the east is *qinglong* 青龍, or the Blue Dragon that is associated with the color of blue, the agent of wood, and season of spring. The south is *zhuque* 朱雀, or the Red Phoenix, summer, and fire agent. The west is *baihu* 白虎, or the White Tiger, autumn, and metal agent. The north is *xuanwu* 玄武, or the Black Turtle, winter, and water agent. At the center of cosmos is man of the yellow earth agent. Each of the four animals resonates each seven of the twenty-eight asterisms of stars and constellations with the North Dipper in the center. These Han dynasty (206 B.C. - 220 A.D.) roof tiles are the spiritual animal symbols. *A* the blue dragon, *B* the red bird, *C* the white tiger, *D* the black turtle

Nevertheless, the essential idea here is *ganying* 感應, or the “sympathy” among man, events, and stars. In this cosmological order, things and events belonging to the same category affect each other. The process, however, is not mechanical causation but rather “resonant.” For instance, the direction of west resonates human emotions (sorrow and regret), organs (lungs, skin, and hair), and certain human or social activities. It is symbolic of weapons, war, death, and harvest, of fruitful conclusion and calmness of twilight, of memory and regret... Therefore, in fall, “the emperor wears white outfit, offering ancestors with livers of animal, riding black tailed white horse with white flag, sleeping in the west palace, he engages in war, hunting...” (Liu, 172) The idea stresses how human behavior can influence nature, but the converse is also believed to occur.

Scholars have argued that the origin of Chinese cosmological thinking was established by the time of Zou Yan 鄒衍 School of cosmology (ca. 250 B.C.). In 1987, a Neolithic tomb (*yangshao* period ca. 5000 B.C.) was unearthed in Henan, China, which evidently predated the Chinese cosmological thinking to a much earlier time. The tomb represents a microcosm of the ancient Chinese world. The south side of the tomb that was above the head of the skeleton was round-shaped, while its north side at the skeleton's feet was square shaped. More importantly, the remains of the body were accompanied by two figures assembled in shells, a dragon to the east and a tiger to the west. To the north side next to the feet of skeleton, a triangle assembled in shells as the representation of the North Dipper. Harvard anthropology professor K. C. Chang remarks that the discovery of the tomb not only predates the Chinese cosmological concepts to a much earlier time (as early as 6000 years ago), but also reflects the later Taoist practice of *sanjiao* 三躡, or “flying on dragon or tiger traveling through the boundaries of space and time.” This notion indicates the *sanjiao* practice, stated in both *Baopu zi* 抱朴子 and the Taoist Canon 道藏, originated in the Neolithic Shamanic practice. (Chang, 148). The *yangshao* 仰韶 culture (7000-5000 B.C.) tomb was unearthed in 1987.

The Chinese conceptual schemes, or “root metaphors” of time and space may be concluded by Mircea Eliade's remarks: “As for the structure and rhythms of universe, there is perfect unity and continuity among the various fundamental conceptions from the time of Shang to the revolution of 1911. The traditional image of the universe is that of the Center traversed by a vertical axis connecting zenith and nadir and framed by the four quarters. Heaven is round (it has the shape of an egg) and the Earth is square. The sphere of Heaven encloses the Earth. When the earth is represented as square body of a chariot, a central pillar supports the dais, which is round like Heaven. Each of the five cosmological numbers—four quarters and one Center—has a color, a taste, a sound, and a particular symbol. China is situated at the center of the world, the capital is in the middle of the kingdom, and the royal palace is at the center of the capital.” (Eliade, 15)

CONCLUSION

From the foregoing we have used the science of Semiology as a theoretical framework in having a perception of time and space as they are depicted *inter alia* in linguistic and literary forms. This paper tries to analyze how mental images are formed and translated into concepts which in turn are translated into conceptual models. Such models assist man to reason and solve problems by observing his environment and the objects in them in a given time: past, present and future. As our case study we tried to venture into the Chinese worldviews on time and space. The second version of this research will make some inroad into the francophone African literary analysis of time and space in fiction. This area of research has not been accommodated here for want of space. This paper tried also to study the influence of time, space and distance on communication and how this effect differs from one society to the other. From our studies it has become very clear that our whole life and virtually all studies in all disciplines are tailored to fit into a given time and space. Nature indeed abhors vacuum and time waits for nobody. We are conditioned by time and space in whatever we do. While therefore delay is dangerous, procrastination serves as the thief of time. The Chinese are aware of these dicta. Hence they and the so called Asian Giants have applied this philosophy and wisdom into their world view with the resultant scientific and humanistic harvest. Africa has a lot to learn from the Chinese and the Asians if she must come out of the woods. This will form the second part of this research.

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