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journal or publication title	Senri Ethnological Studies
volume	45
page range	1-8
year	1998-03-24
URL	<a href="http://doi.org/10.15021/00002932">http://doi.org/10.15021/00002932</a>

## Time, Language and Cognition —By Way of Introduction

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What is *time*? This paper summarizes a presentation in a symposium which was held for the purpose of pursuing this particular question through the analysis of linguistic phenomena in the world based on a perspective of social sciences. There are various approaches to be taken for the analysis of languages or cultures based on social sciences. I aim to identify an interface between different methods or observations in this discipline in order to better understand what *time* is. The participants in the symposium were those who committed themselves to the study of specific languages and cultures. In some part of the programme, the discussions focused on where and how researchers can share a common interface of analytic methods as well as observations of their target subjects, while they were specialized in certain areas. In this context, there is keen interest in my mind in identifying both the universality and idiosyncrasy of various languages and cultures, thereby defining the process of perception of *time* in human mind. To be honest, I have high aspiration in this undertaking so that I can make some contribution to the exploration of an innovative perspective for the study of *time* and *language*.

1. For many centuries in human history, it has mainly been philosophy and literature that have been deeply involved with time. In fact, there are a huge number of books written on *time* in these two disciplines, which have been accumulated since the days of Aristotle. At the same time, in modern physics, since the stage of its initiation, *time* has always been a subject of extreme importance for researchers. *Time* has always been placed in the centre of this science as an indispensable function for the whole structure.

More recently, the issues such as the 'black hole' in the universe and the work on 'time machines' have inspired rigorous debates on *time* in society. Further, in the area of biology, the concept of 'biological time' has been clearly established. The advancement of modern sciences like neuropathology or psychoneurology has triggered rapid progress in the study of how the perception of time can be achieved by human beings. For example, Tatsuo Motokawa has proposed an interesting hypothesis that the pace of progression of time varies from one species of animals to another, depending on the size of each species. Thus there has been increasing interest in society focused on time. This trend was evidenced in a recent month,

when a scientific magazine was published, exclusively featuring the issue of 'time for living creatures'.

One question to which we might be exposed under these circumstances would be "What bearing is there in the effort to review *time* in a perspective of social sciences, particularly by using *language* as a means of analysis?" The answer to that question would be as follows:

Whether it is physics or philosophy, discussions in these disciplines tend to regard *time* as an object of human cognizance, thus taking it for granted that the study would aim at the examination of time as an *object*. Especially in physics, the most representative theme would be *objective* time or *physical* time, which means that the study would be centered round *measurable* time, or time of the clock and watch. In other words, those *times* could be manifested in linearity. Sequences or gaps of these *times* would be readily analyzed within a linear structure. The problem is that, when such an approach is taken, what one could see is not genuine time, but rather something else which could be named 'homogenized space of coordinates'. It is quite distant from 'time for human beings' which we are seeking for.

As a matter of fact, there was a philosopher in ancient Greece who had noticed this problem and articulated a voice of warning on human cognizance. It was Zeno of Elea, who propounded the theory of paradox in the distant past. Although there are several versions of this reasoning, I would like to take the example of a race between Achilles and a tortoise, which is well known as *the Achilles* in his set of paradoxes on motion. There is a race between Achilles and a tortoise that has been given a head start. The paradox is that Achilles will never overtake the tortoise, since he must first reach the tortoise's starting point, by which time the tortoise will have advanced to a new point, and so on; thus the tortoise must always remain ahead. According to this reasoning, Achilles would never be able to catch up with the tortoise.

Why wouldn't this reasoning work? It is because, although motion could not be fixed at a stationary point in space due to its nature, this reasoning tries to force it to be stagnated on the homogenized coordinates of space so that man could conceptualize it as an object. Despite the fact that motion is a temporal phenomenon, this reasoning purports that it is a spatial phenomenon.

On the other hand, researchers in the humanities or social sciences might claim that, unlike physics, their approaches are focused on the pursuit of time for man, and not physical time, and therefore that they share the same objective as the one for this symposium. They might emphasize that time has been studied and examined in philosophy or literature with the aspiration for better understanding of *time for man*.

On the country, however, what we find in their studies to date is not sufficiently flawless. Firstly, their concept of time has been too ideological and abstract. Secondly, they have failed to review what on earth has indeed caused time to be 'what time should be'. They have failed to understand why and how time, which

those researchers themselves undergo and experience, could be *time* as it is.

2. Edmund Husserl is one of those who have studied the subject of 'internal-time-consciousness' in the most profound manner for the purpose of better understanding of 'time for man'. He, with enough care and prudence, criticized the conventional methods to deal with time in Western philosophy which had been applied for centuries since Aristotle. Through that effort, he advanced his theory about the cognition of time to such an extent that it was quite close to the way of thinking in cognitive science in the modern times. No one could overlook his achievements in the history of philosophy, whenever attempting to deal with *time*.

Having said so, however, we also need to confess that we find it extremely difficult to read his book, *The Phenomenology of Internal Time-Consciousness* (1964 Bloomington: Indiana University Press). In fact, some say that there is no other book which could be as difficult to understand as this particular one written by Husserl. Nevertheless, others might allege that all books on philosophy are to be difficult as inherent nature. This claim would perhaps end all the debate, because 'that would be it'. There is nothing to complain about any more.

Bearing that in mind, however, if we talk only about *The Phenomenology of Internal Time Consciousness*, we would discover that a primary reason for this work being so difficult to understand is that it is extremely ideological and abstract. At the same time, his way of reasoning gives such impression to readers as if the author had tried to ignore the voice of warning articulated by Zeno of Elea long time before.

The problem is that, although the 'internal-time-consciousness' could never make an object of human perception, Husserl dared to perceive and analyze it as an object from a point of view of epistemology. Indeed, I believe that, on this very point, his reasoning has come short. The major shortcoming in his logic is that, by trying to cognize the 'internal-time-consciousness', one would be alienated from 'internal-time'. One would be carried away too distant from the phenomenon which the one attempts to understand, namely, the 'internal-time' itself.

It is said that Martin Heidegger continued and further advanced what had been propounded by Husserl. In his book, *Sein und Zeit*, Heidegger enhanced the quality of the reasoning which had been presented by Husserl as cognitive science.

According to him, human beings are beings who always aspire to be *ek-sistence* from themselves. From the perspective of *time*, they are *Da-sein* who exist at each moment of *time*. This *Dasein* always continues to be driven forward toward the future. However, since the future is always an unknown domain for the 'present', the beings of mankind are to be encapsulated in ceaseless anxiety. As a result, whereas the *Dasein* keeps trying to stride ahead toward the future all the time, it cannot be totally emancipated from the harness of the current 'presence'. Because of this, the *Dasein* cannot but undergo a reversal to the past all the time.

Superficially, this process of the *Dasein* going through the *ek-sistence*, 'presence at the present' and then the 'reversal to the past' could sound persuasive

enough. Especially when we try to consider *now*, which I will touch upon later, the reasoning looks quite sensible.

All in all, however, there were essential premises for his theory. It is that, ultimately speaking, human beings do not have an exit from this world other than death, that they possess 'freedom to death' and also that the Dasein is the 'being-to-death'. As long as these concepts are accepted, *time* would be defined as an enormous locomotive which vigorously keeps striding toward death, which is the ultimate goal. The dread and agony of the Dasein are triggered by this very fact.

On the other hand, there are certain questions which arise in relation to Heidegger's ideas. The questions are: Why does the Dasein reach the end? Why is death the 'exit' and the 'goal' which the Dasein should reach? Why is the Dasein a 'freedom to death'. In fact, all the criteria (or premises) which are incorporated in *Sein und Zeit* are the ones of Christianity in the pre-modern age, and therefore, carry highly social orientation. It should be noted that Heidegger, one of the greatest philosophers whom the world has ever produced, took these premises as self-explanatory. This intellectual, one of the most prominent academicians in Western philosophy to date never shed any skepticism on the well established criteria in society.

3. Here I would like to touch upon Georges Poulet, whose theory from the angle of comparative literature did not totally deny nor assimilate what Husserl or Heidegger had proposed, but rather enhanced it a step forward, inducing further enlightenment to the human perception of time. His book, *Études sur le temps humain* (1950 Paris: Plon; Japanese translation by K. Inoue et al., 1969 Tokyo: Chikuma) is an excellent culmination of his efforts to explore an innovative method in the undertaking. In this book, the author examined in depth different approaches to the perception of time taken by leaders in French literature from Montaigne to contemporary authors. Poulet analyzed their linguistic expressions in detail, thereby identifying how those authors conceived time.

What he discovered was the dissociation between what is individual and what is entire, and the alienation of individual time from universal time, which had taken place since the Renaissance. On the other hand, he did not find such dissociation nor alienation in the cognizance of time by Europeans during the Middle Ages. In people's perception during that age did he find a Western prototype of temporal cognition and some sort of salvation from the problems in the modern world. His thought is elucidated very well in the following:

According to Poulet, in the mind of followers of Christianity during the Middle Ages, the feeling that one does exist in the current world never preceded the feeling to recognize the inherent continuity of oneself. In other words, from their perspective, it was not that one discovered oneself within the present moment before one did in fact perceive the existence of the self within *time*. Instead, to feel that one did exist in the world was identical to the recognition of the 'being' or 'existence' of oneself. To feel that one did exist in the world was not that one was

changed, generated or subjected to the process of succession, but that one would continue to be 'being' in the world. There was no real distinction between 'being' and continuity. There was no essential difference between various temporal moments at which the continuity of individuals was generated. The 'being' of human beings had to continue to exist as long as they were 'beings', and existed in the world.

It is indeed true that there are certain limitations in Poulet's view. Since it was constructed inside the limited framework of French literature, it was inevitable that the analysis carried some narrowness as well as the virtue of in-depth understanding. At the same time, however, no one would disagree that Poulet had introduced an innovative approach of comparison in the area of literature, exercised carefully organized criticism of writings in the past, thereby verifying that there were other means for perception in human mind. He made a great contribution to modern philosophy in the West in that his arguments provided it with the means to set free from the sense of 'nothingness' or 'nihilism', to which the modern philosophy was often quite vulnerable.

Furthermore, Poulet attempted to analyze the approaches to temporal perception and history by combining two pillars of ideas. One is the everlasting continuity of substantive phases, and the other is successive continuity of changes. In his reasoning, in stark contrast to the definition of time which was always driven toward the reversal to eternity, the autonomy of individuals and the alienation from entirety were triggered, as soon as Christianity advocated the genesis of the world, eschatology and the Last Judgment. As a result, time came to be relativized and disunified. This whole development provided mankind with the foundation for the concept of 'history' for the first time since the advent of this species on the planet.

If it is the case, it is only natural for us to conjecture that the dissociation and alienation would have been equally imposed to the followers of Christianity in the Middle Ages as well. However, Poulet denies this presumption. As far as the above-mentioned pillars of concepts were concerned, they were there in an utterly different way from those in the pre-modern and modern times since Montaigne. That is to say, 'individual' *time* and *history* were not two different things in the Middle Ages.

His ideas are quite stimulating to us. We sometimes draw a distinction between Christian, Indian and Hebrew perceptions of time by focusing on their distinctive features. It is true that each of them can be characterized by characteristics such as 'linear', 'cyclic' or 'iterative' attributes. The features are readily discernible, thus making the characterization look as if it actually represented fundamental difference in the cognition of time. Nevertheless, in many cases, these distinctions are only a simple classification of characteristics of temporal perception. If we make a mistake of being bothered too much by the superficial classification, the in-depth understanding of the real substance would be seriously hampered. It is, therefore, extremely important that, whichever temporal perception we focus on, we should always incorporate into the review of time the

angle of thoughts which was propounded by Poulet.

4. Now let us look into other approaches to *time*. There have been many remarkable achievements in anthropology in relation to the study of time as well. They are represented by the works of Emile Durkheim, E.E. Evans-Pritchard, E.R. Leach, Claude Lévi-Strauss, Harold C. Conklin and so forth. We should pay tribute to these anthropologists who have upheld a very fundamental principle in their undertaking that they tried to understand idiosyncrasies of perceptions of time among different ethnic groups by applying local and traditional logic in each ethnic group, instead of imposing Western logic to which those anthropologists were accustomed.

The problem is that most of their works focused on the elucidation of the 'relationships' between the temporal perception and the aspects of cultures such as rituals, concept of the cosmos, calendars and so forth. Except for Alfred Gell's book, *The Anthropology of Time* (1992 London: Berg), there is hardly any work in anthropology which has taken a far-reaching step to enter the areas of analysis of temporal perception itself or concept of 'history' in various ethnic groups.

In linguistics, since the days of Wilhelm von Humboldt, *time* has presented a major challenge to researchers. When linguists attempted to describe the grammar of languages which did not fall in the Indo-European language group, they found themselves in a situation where the grammatical categories which had already been established in the Indo-European studies were virtually useless. This very fact inspired von Humboldt to try to explore patterns and universality which might exist among different languages.

This ambitious undertaking, however, was ended without reaching a conclusion because of the heavy storms of structuralism which struck various academic disciplines in later years. Thus, it was only in recent years when von Humboldt's aspirations were restored and reevaluated in the debate concerning the relationship language and cognition. We must admit that it is not yet clear how much has been disclosed and appreciated by applying the methods of generative grammar, which was developed from the criticism of structuralism, to the issues in question, that is to say, what is it that ultimately lies in the core of linguistic phenomena. Nevertheless, at least it is true that the concept of universality, which inspired renewed interest among linguists, has certainly opened a new pavement for the effort to seek an interface between linguistics and other sciences which lie in the vicinity of the former.

Through these developments, there emerged new angles of thought to be applied to the study of time, too. Today, linguists in the world are not only interested in discovering 'tense' or 'aspect' in languages, but also in elucidating how time is correlated with grammar, how it is possible in grammatical spheres to induce a time-oriented transformation from 'tense' to 'aspect' or vice versa, what sort of mechanism is involved in the switching 'on' and 'off' of time in people's discourse, and others.

These studies are still under way, and therefore, it is not yet assured that they will make an independent discipline. On the other hand, the construction of grammatical theories, which often include concrete processes of verification, has advanced to such an extent that researchers can feel comfortable enough when being involved with highly abstract discussions in this area. I strongly believe that it is highly probable that, through sincere efforts to avoid dogmatic debates, and to compare verified observations among different subjects and categories, we will be able to pursue better understanding of what is the very basis of *time* and *times* to which linguists are exposed in their own environment. In this context, the major points of focus would be the universal truth in human perception of time and historic processes in the world.

5. So far I have been discussing my review of conventional studies on *time*. The next question is what sort of attitude would be required when we face time. What I suggest here would be far from a systematic approach based on a broad perspective. Nevertheless, I dare to propose to innovate our attitude to question 'what *now* is', which, I hope, might bear some potential to enhance our appreciation of time.

For all human beings, *now* is an issue of utmost importance which is deeply intermingled with the very sense of us living in the world. 'Existence' or 'being' itself signifies *now*, which was corroborated by a remark of Dōgen, a Japanese monk and the founder of the Sōtō sect of Zen Buddhism in Japan (1200–1253). In his book, *Shōbō Genzō*, Dōgen said, "Time is already in place when things exist. *Beings* are all *time*."

Munesuke Mita wrote a book called *Comparative Sociology of Time* (in Japanese; 1981 Tokyo: Iwanami), in which he proposed new concepts such as 'the past which exercises the present' or 'the present which exercises the past'.

As are implied by these authors, whether it is the future or the past which is referred to by linguistic expressions, couldn't it be possible that whatever is identified, imagined or experienced in the scope of human perception be always *now*? In addition, although in a slightly different framework of concepts, Shōzō Ōmori, in his book called *Time and Being* (in Japanese; 1994 Tokyo: Seidosha), also emphasized the importance of concepts such as 'now present' and 'now midst'. By using these technical terms, the author tried to draw attention to the potential risk which is entailed in the concept of 'point time' or 'moment time'. I trust that his discussion is also closely related to what I have proposed on *now*.

As a matter of fact, we can practically benefit from thinking about *now*, when trying to understand the issue of 'aspect' in linguistics. According to Matisoff, aspect is defined as 'the grammatical category that refers to the internal dynamics of verbal event'. In many cases, the aspect distinguishes whether an action has been completed or not. It is normally 'perfect' and 'imperfect' which is discerned by the aspect.

I have been involved in the study of Tibeto-Burman languages. Among them



is there one linguistic group in which suffixes for manifesting the directionality of actions have been developed substantially. When I examined these suffixes carefully, it was revealed that they designate not only the directions in which specific actions are oriented, but also specify aspect as well. Normally, it is completed actions for which the specification of the orientation of action appears coupled with affixes in syntax. For instance, in one of the dialects of the Qiang language, which is spoken in Sichuan Province, China, 'directional affixes' are introduced only for the actions which have already been completed or which are currently in progress (Sun Hongkai = 孫宏開 1981 羌語動詞的趨向范疇 『民族語文』 1: 34-42).

This particular phenomenon is usually explained that 'directional affixes' have the function of a marker to represent the 'perfect aspect'. There is a problem in this explanation, however, because, in a progressive form, the action in question has not been completed yet, thus rejecting a good justification for the emergence of the 'directional affix' in context.

Interestingly enough, however, the scope in which these 'directional affixes' do appear perfectly corresponds to the scope of *now* of time which I have previously mentioned. The reference to the direction of a specific action is a very pragmatic statement, and therefore, it requires to be the one which could be perceived in mind by those who mention it. I trust that it is not accidental at all that these two scopes of function, one with *now* and the other with 'directional affix', coincide with each other, but that it indeed evidences the essential nature of the linguistic phenomenon of aspect. I suspect that *now* is 'what is real', which is to be manifested as 'perfect', and therefore that all *other times* outside *now* are to be dealt with as imperfect. It should be noted that I do not believe that all the aspects in language could be elucidated by this explanation without causing any contradiction. At the same time, however, I do carry a fairly firm belief that what I have discovered in this language group presents us with an very archaic type of aspect, which used to exist in the distant past of human language.

In this paper, I have discussed how time could be observed through linguistic phenomena. To tell the truth, it is quite reassuring that, in this symposium where very stimulating presentations of excellence were proposed, there happened to be some papers which urged us to question and review the issue 'what *now* is'. I also share the same idea, and believe that this very issue is presented to us as the most brief and serious challenge when the social sciences attempt to tackle various issues regarding *time*.