

Language & Time

*Jens Allwood
Göteborg University*

Introduction

Language and time are related in many ways. This paper presents some reflections on two of the most important ways in which language and time are related. In the first case, the point is that language is a phenomenon which itself is found in time and is used and developed in time. Below I will briefly point to four aspects of the time relatedness of language. In the second case, language is a means for structuring, representing, and conceptualizing time. Language is one of our chief instruments (probably the most important one) for understanding time. The second part of the paper, thus, discusses a kind of methodological prerequisite of the first part, making use of language in a kind of "metalinguistic" manner to relate to the first part.

1. Language in time – use and evolution

Human languages are not constant phenomena but are continually undergoing dynamic processes of use and evolution. Let me briefly introduce four types of dynamics associated with human language. With terms derived from Latin, the four types can be designated *phylogeny*, *macrogeny*, *ontogeny*, and *microgeny*.

Phylogeny

Phylogenetic dynamics concern those millennia of development which can be associated with the origin of human speech. Some researchers see a connection between the origin of humans as a species (*Homo sapiens sapiens*) and the origin of human language. Human spoken language was a factor which probably had survival value for the human species. Through the development of language humans gained access to a gradually improved capacity for collective information processing. The surrounding world could be observed, categorized, and discussed collectively. Collective plans and undertakings became possible. The possibilities for complex cooperation improved radically. Through language in effect a collective memory was created. The improved possibilities for cooperation provided by language, thus, gave humans access to an important survival factor. The importance of cooperation for survival can perhaps be seen even more clearly in other species, for example, in ants, who despite being a relatively simple organism, with a simpler means of cooperation than that of humans, have survived on earth very effectively for a long time.

In a similar way, through language humans gained the ability to survive by means of cooperation. Cooperation through spoken communication is also connected with the development of another fundamental trait of humans, namely their social nature. Humans do not evolve in isolation, but in interaction with others, and this interaction is most often spoken.

Macrogeny

By macrogeny, I mean the evolution of the language of a particular group. This is a process which, at least for groups which are not too small in number, usually takes centuries. We can, for example, compare the English of 800 years ago with the English of today. The process of group change is for the most part greatly dependent on different types of influence from the surrounding world, which most often carry with them linguistic influence as well. It is also dependent on the economic, technological, and political dynamics within a group. The development of written language has played an especially important role, primarily in that it makes the macrogenetic changes slower. The usage of earlier generations can be preserved through writing and can exert an influence on later generations. This influence has probably been strengthened by printing and by the advent of generally accessible dictionaries and grammars. Secondarily, writing, especially after the rise of the mass media, has also made the more rapid spread of linguistic innovations possible. However, these innovations are also preserved by writing, instead of disappearing, as they might have done in a spoken language culture without writing.

Macrogenetic linguistic evolution can pertain to groups other than national groups. It can apply to the "dialects" of regional groups or the language within social institutions such as government entities and corporations (the language within public health services or at a car company). It can also pertain to language within a certain activity or genre such as, for example, the development and change of the language of instruction or the language in a cookbook.

Ontogeny

A third type of dynamics concerns an individual's development of his linguistic abilities from infancy to old age.

We develop our language throughout life. There is always something to learn. We learn the most, the easiest, and the quickest during the very early ages (0–5 years). The high pace persists up into one's teens, after which, for most people, it decreases somewhat but, provided one is not stricken with illness, the ability to learn and develop language never wholly disappears.

Microgeny

A considerably swifter linguistic dynamic than the three we have discussed up to now is found in ordinary conversation. How do we develop internal impulses into externally accessible messages through gestures, speech, or writing? The course of events is so fast that most often we do not have a clear picture of whether thoughts precede words or if rather thoughts and speech are articulated simultaneously and in unison. The dynamic also comprises how others consciously and unconsciously are influenced by and react to what we say, and how we work jointly and structure both the relations between us and the content about which we communicate.

2. Language as a means for structuring, representing, and conceptualizing time

After having, thus, contemplated the fact that language is a temporal phenomenon with processes that extend over millennia (phylogeny), centuries (macrogeny), decades and

years (ontogeny) and microseconds (microgeny), we will now move on to the question of how we with the aid of language structure, represent and conceptualize time. This question can be formulated more precisely in terms of two main questions: (i) which categories of linguistic expression (linguistic means) are used to structure time in different languages, and (ii) which categories of temporal content are found in different languages?

Linguistic means of expression

Some of the relevant linguistic means are the following:

- (i) Affix: for example, tense endings as in *I talk* (now–present) and *I talked* (past time – preterite)
- (ii) Vowel change: for example, *sit, sat*
- (iii) Reduplication: for example, *he ran and ran and ran* to indicate that a process is extended over time.
- (iv) Simple and compound words: for example, (adverbs like *now, then, tomorrow, yesterday, yesteryear*, nouns like *second, minute, hour, week, month, year, afternoon, fortnight*, adjectives like *long, short-lived, etc.*
- (v) Intonation: for example, vowel lengthening to show a long time duration.
- (vi) Body movement: for example, quick movements to show that something happens quickly.
- (vii) Implied correspondence between that which is expressed and the actual course of time. Consider for example the sentences *Olle ate a sandwich and went to bed* and *The man jumped up, ran, and stopped*. In both these types of examples we assume that the described series of events are also in time sequence. That which is mentioned first happened first.
- (viii) Information that is not expressed linguistically at all but that can be inferred from the speech situation, for example, the point in time when something is said.

Of all linguistic expressions for time, perhaps one can say that tense markers have been discussed the most. Tense markers are found on verbs and indicate how the process the verb stands for should be temporally anchored. Adverbs of time probably come in second place. These can be more freely combined than tense with all parts of speech, for example, *food yesterday, drink today*.

From the examples we see that in English, one can express time relations in many different ways. This also pertains to other languages. There are often many ways to express and formulate time in a given language. There is also variation regarding the ways which are used most in a certain language. Sometimes a certain way to express time is lacking. In Chinese, for example, time is not expressed as in English and many other languages, by linguistically changing the forms of verbs, so that the process that is being described can be anchored in time in various ways. Instead, adverbial expressions such as *now, then, tomorrow, etc.*, are used to a higher degree than in English, together with letting situationally given time information be implied by what is said, for example through agreement between linguistic description and the sequence of events (as in the English examples above) or through the situation necessitating a certain temporal anchoring.

One might wonder, then, whether the difference in modes of expression reflects something more than a random variation. Many linguists have maintained that this is the case. The above-described list (i)–(viii) is believed to reflect degrees of integration in a linguistic system. Whatever is expressed through grammatical means (for

example, inflectional and derivational morphemes, or prosodic or syntactic patterns) is more integrated in a language than what is found in the vocabulary, which in turn is more integrated than what is implied contextually or situationally. If one limits one's perspective to inflectional and derivational morphemes (and disregards syntax and prosody), this implies for the examples discussed above that Chinese has a less integrated need for temporal anchoring in its linguistic system than English.

Linguistic structure of temporal content

A good starting point in discussing linguistically structured temporal content is the relationship between time and change.

Without change, it is uncertain whether we would have any concept of time, and perhaps one can say that if time did not exist, no change could occur. Time and change appear to be analytically conceptually bound together. Changes show themselves most distinctly in processes, occurrences, and courses of events. It is therefore natural that verbs (those words in the language which indicate processes and courses of events) have an especially close relationship to temporal anchoring and temporal duration.

Let us now consider two fundamental ways by which a speaker (or experiencing subject) can perceive change.

- (i) I (the experiencing and possibly speaking subject) change in relation to the environment.
- (ii) Space changes in relation to me.

The first way is associated with the constant stream of new contents in attention and consciousness, while the other is associated with changes which are independent of human beings, such as the continuous change of night to day and the change of the seasons. These are phenomena which, independent of our own activity, force an experience of change on us.

These two points of departure for the experience of change are connected to three different methods used in human languages for temporal anchoring, where the third method consists in a combination of the first two.

- (i) The point of departure is the "now of the ego" in the speech situation – a perpetually ongoing "flow of experience/attention" or "now-flow". This leads to so called deictic (pointing or indicating) temporal anchoring.
- (ii) The point of departure is an external way to measure time – the sun, a clock, etc. This leads to so called calendric temporal anchoring.
- (iii) The point of departure consists in a combination of the "now of the ego" and an external way to measure time.

The first point of departure is the one we find behind all so-called "deictic" time expressions, for example, tense affixes and adverbs of time. The point of departure is the speaker's (or experiencer's) "now" and all of the deictic words which receive their anchoring relative to this "now". The preterite *I went yesterday* indicates a point in time before "now", and the pluperfect *I had already gone yesterday* indicates a point in time which lies before this prior point in time. The present *I go* indicates that the event spoken about includes the "now" and the future *I will go* indicates a point in time that lies after the "now".

With this system, time is structured as a sort of line where the point of departure, the "now" moves from "prior or earlier" to "after or later." Consequently, each time

indication becomes relative to the speaking subject. Two classic accounts of the system, from two different perspectives, are Bühler (1934) and Reichenbach (1947).

The other way to temporally anchor ourselves is to use some external way to measure time for the anchoring; let us call it "calendric anchoring". Instead of saying *now* or *again*, we say the fourteenth of October 2001, or the thirteenth of October 2001. The point of departure here, historically, is likely to be astronomical –diurnal rhythms and annual rhythms, which were later strengthened by the invention of different artifactual ways to measure time. From this perspective, differences arise concerning the expression of time in different languages, because people in different cultures have had different ways to measure time and have had different ideas about which holidays they wished to observe. Before modern clocks were constructed, there was not much reason to have words for seconds or even minutes and hours. For similar reasons, there has not been any great reason for non-Christian cultures to have words for Christmas Eve or Good Friday. Since even the seasons are experienced with different degrees of distinctness in different parts of the world, there are not always words for *summer*, *fall*, *winter*, and *spring* but rather, for example, for *rainy season*, *dry season*, or *monsoon season*.

The third way to bring about temporal anchoring occurs through combining the calendric way of anchoring with the deictic, which can be observed in expressions such as:

| | | | | |
|-----------------------------|------------------------------|-----------|-----------|---------------------------|
| the day before yesterday | yesterday | today | tomorrow | the day after tomorrow |
| | last week | this week | next week | |
| | last year (previous year) | this year | next year | |

The point of departure is a time interval including "the now-flow", and then one uses external temporal anchoring is used in addition –diurnal change, the ability to count (a week), or seasonal change to secondarily anchor the event being referred to.

Conceptual categories related to subjective temporal anchoring

Through deictic temporal anchoring, the point of departure for temporal anchoring becomes a the "now-experience" or "flow of attention" of a self. These make it possible and natural to combine time with other elements in the "now-experience". Such elements are provided, for example, by the experiences of certainty, uncertainty, intention, will, and feelings of obligation, which can be associated with "now-flow". The link is so natural that it has influenced our ways of linguistically structuring time. Time expressions (e.g., tense expressions) are therefore in many languages difficult to distinguish, for example, from what often is called "aspect" and "modality."

By "aspect" (sometimes the term *aktionsart* is used) we mean factors which have to do with the temporal structure of a course of events. Do we regard an event as a process or as the end state which the event has resulted in? Do we see an event from the outside as some completed whole, or do we see the event from the inside as something on-going? Are we speaking of an isolated event or of repeated, routine events and actions? With some reflection, one can perhaps see why tense (time) and aspect often fit together. An event that is completed is often an event in the past, while an event that is uncompleted often points to a future event. One can therefore use linguistic endings for tense and aspect (or choice of verb type –*aktionsart*) in order to, depending on the circumstances, express something about the inner structure of a process in relation to time. From a linguistic semantic point of view,

concepts like the ones below have been used in order to capture how different linguistic forms relate to processes. (See further, Dahl 1985; Comrie 1976; Lyons 1977.)

- 1) change (dynamics)– state (statics), e.g., the difference between. *Peter is running* and *Peter is happy*.
- 2) duration, e.g., *Peter runs for an hour*.
- 3) beginning, e.g., *Peter begins to run*.
- 4) continuation, e.g., *Peter is running now*.
- 5) completion, e.g., *Peter has finished running*.
- 6) punctuality, iterativity, e.g., *Peter gave a start* – *Peter runs often*.

Temporal anchoring is also closely bound up with what is usually called "modality." By "modality," we mean phenomena that have to do with that which is necessary or possible, certain or uncertain, obligatory or permitted, desired or undesired, intentional or unintentional.

Once more there is a connection between phenomena of this type and temporal anchoring. If I want to go to the movies, then with a certain likelihood I am going to (will) do so. To say something about "what one wants to do" can in this way be a way to say something about "what one is going to do." In English, this process has gone so far that *I will* most often has nothing at all to do with desire, even though it originally did. In the same way, something that is an obligation, *I shall*, can also cross over to express that something will occur in the future.

Further, there is a relationship between epistemic modality (certainty-uncertainty) and time. That which happens now tends to be what one is most certain of, while that which has happened or will happen has a less certain status. In certain North American Indian languages, there is precisely this coupling of epistemic status and temporal anchoring. In Swedish and English there is also a coupling of this kind, though it moves rather in the opposite direction, going from temporal anchoring to the state of knowledge. If someone says *Olle kommer att vara hemma nu* (*Olle is going to be at home now*), *kommer att* (going to) expresses the future, but since the word *nu* (*now*) also is found in the utterance, we reinterpret *kommer att* to mean approximately "if we check," which gives the entire utterance a hypothetical epistemic status. In a similar way, in Swedish one can say *om jag var dum skulle jag gå* (*if I was (were) stupid, I would go*) and use the preterite of the verb *vara* not to express the past time but rather to express counterfactuality in the present. The past's non-presence, in combination with the word *om* (*if*), causes the utterance to be interpreted as a possibility. English is different here since it has the subjunctive *were*.

As has been suggested above, then, there are interesting connections in many languages (including English and Swedish) between how one expresses the categories of content underlying what linguists call tense, modality, and aspect. The future has a connection with the uncertain, with what one intends, wants, or ought (must, obligation) to do, as well as with that which is on-going and not completed. The now or the present has a connection with the certain and the on-going. The past has a connection with the uncertain and the completed but can also be used to express that which is unreal or only a supposition in the present.

Other ways to express time linguistically

Time is expressed linguistically not merely through different ways to temporally anchor a course of events, but also through those qualities, processes, and relations which we tend habitually, in the language, to ascribe to time.

The following are some qualities that are relatively often ascribed to time in English.

scarce, short time
good, long, eternal time
strange, difficult, changing times

In all cases, these qualities seem to have to do with some course of events the speaker is engaged in. This course of events has a duration, and words such as *short* and *long* specify its extent in relation to some actor in the course of events, e.g., the speaker her/himself. Words such as *strange*, *difficult*, or *changing* specify instead a set of evaluations which the speaker makes about different events or states in a certain period of time. If we look at processes where time is attended to, one says for example that

time flies, passes, lasts
time runs out, is up
the time is at hand, is approaching

Only in the first type of example does the process seem to be an attempt to speak about time-in-itself and its relationship to the deictic "now-experience". In the latter two examples, on the other hand, the most natural interpretation is that it has to do with an actor's perspective on a certain course of events with a finite extension of time. A less probable interpretation of the second type of example of processes would be that time as a conceptual or physical quantity will no longer exist.

Finally, if we look at the linguistic structuring of relationships to time, this happens to a large extent with the help of prepositions, for example:

| | |
|------------------------|----------------------|
| for, in, during, after | an hour |
| on | the stroke of twelve |
| at | about twelve |
| through | the centuries |

These prepositions have been claimed by many authors (see, e.g. Lyons 1977) to be primarily spatial. They have then, through some sort of metaphorical process, been extended to time, where the differences that are found between their meanings in a spatial context receive a partly different interpretation. In relation to time, the differences become roughly "aspectual" (see above), i.e., they deal with whether an action is, for example, completed (in), on-going (for) or quite simply localized within a certain period of time (during).

He wrote the letter in an hour. (the action concluded after an hour)

He wrote for an hour. (on-going, continuous action)

He wrote only a line during one hour. (relevant period for the action is one hour)

The linguistic structuring of relationships to time is often also the point of departure for speculations about whether time is essentially discontinuous (a series of points) or continuous, structured in a flow of intervals. The discontinuous perspective is supported by a calendaric temporal anchoring and can linguistically be expressed through a "bare time expression" such as, for example, *12 o'clock* or *the year 1200*, possibly with the addition of adverbs such as *precisely*, *exactly*, or *just*. In much the same way, the continuous perspective is supported naturally by a deictic anchoring (in an ongoing "now-flow"), for example, *He ran to the city for an hour/in an hour*, and by

the relationships most of the prepositions contribute to the structure of time, such as whether it consists of intervals with duration rather than of points without duration.

References

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