Finding ourselves in time

Time intervals, self, language and culture

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EXTENDED EMBODIMENT

- The body is our general medium for having a world … Sometimes the meaning aimed at cannot be achieved by the body's natural means; it must then build itself an instrument, and it projects thereby around itself a cultural world.

  Merleau-Ponty 1962: 146.

SELF AND IDENTITY

* Self is usually thought of as more "basic" than identity, and as the pre-condition for identity and identification

* The *social self* is that which presents itself (Goffman) in the guise of *specific identities*

* Identities can be multiple, and self is thus contextually variable

* But self also *integrates* identities, over space and through time

* Memory (individual and collective) is clearly implicated in the continuity of self, but there is disagreement on how this occurs

CONTINUITY AND DISCONTINUITY

* The self is an example of *continuity in change* (Michael Chandler)
* Failures in continuity are pathological (multiple selves in time and space, fragmented selves, divided selves)
* Failure to adapt to change is also pathological (neurosis and repetition compulsion)
* Having, or being, a self is a condition for the attribution of human agency and accountability

THE NATURE OF SELF

- Is there an "essential" self?
- Descartes believed so: "Cogito ergo sum"
- Locke challenged this idea: the self is merely a repository of memories and associations. Neuroscience tends to support Locke.
- But then what gives this associative network coherence and continuity?
- Is there a "self that binds" (agentively), or some non-essentialist "constituting agency" that binds memories and constructs self?
- Is autobiographical memory such an agency?

AUTOBIOGRAPHICAL MEMORY AND SELF IN TIME

- **Autobiographical memory is clearly a form of episodic memory** … An important function of autobiographical memory is now seen as providing the sense of the continuity of the self across time from the past to the future (Katherine Nelson, 2003: 136)

- But in what sense is autobiographical memory *episodic*, inasmuch as episodes are "structured fragments", not extended narratives?

- Strawson (2004) contrasts "episodic" individuals (no strong "self narrative") with "diachronic" individuals, whose mode of self-experience is (in the paradigm case) narrative

NARRATIVE

- Narratives bind together events, causes, effects and reasons into organized intentional structures.

- "People do not deal with the world event by event or with text sentence by sentence. They frame events and sentences in larger structures". (Bruner 1990).

- Narratives are the glue for sticking together event sequences.

- Narratives often blend fact, fiction and interpretation: "faction".

- **Narratives are not only the glue binding events, but also the glue binding personal and group, or cultural, identity**

- **Narratives have a plot sequence which may be referenced to a public (collectively known) event line (other narratives, chronicles or a calendrically constituted timeline)**

THE NARRATIVE SELF

- The self is an agent and a protagonist
- The story is populated with other protagonists and antagonists
- The story may involve a goal, mission or quest
- Fulfilling the mission involves overcoming obstacles
- The resolution of the story exemplifies a message, moral or point.
- If not: so what? The "story" is just one damn thing after another.
- Self-narratives lend or inflect the story with meaning and purpose (intentionality) as well as coherence

DOES EVERYONE HAVE A NARRATIVE SELF?

* Strawson suggests not, and Nelson (pc) agrees
* But Nelson also suggests that some "non-narrativizers" lack detailed episodic memories (maybe they are "propositionalizers")
* Self- Narratives may, therefore, be schematic and proposition-based rather than richly textured and episode-binding
* Narrative memory may therefore "bleach" episodic autonoesis (re-experience of the past), as well as "factionalising" memory
* Personal narrative memory may be strongest in cultures lacking fully shared collective narratives (ideologies, worldviews), but which do narrativize ongoing personal experience

MEMORY AND THE TIMELINE

* **Episodic memory (events)**
  + **Can** (but need not) be timeline referenced
  + I graduated on a fine summer's day
  + [in 2008]
  + *Autonoesis*: re-experience of the past
* **Semantic memory (propositions, facts)**
  + **Not** timeline referenced, although the fact itself may involve timeline reference:
  + Jupiter is bigger than Mars
  + Lehman brothers went bankrupt [in 2008]
  + the **episode of acquiring the fact** may be timeline referenced:
  + I remember when Lehman brothers went bankrupt [in 2008] [just before the banking crisis broke]
  + *Noesis*: no necessary accompanying sense of past self-experience

NARRATIVE MEMORY AND THE TIMELINE

* **Narrative memory involves**
  + Structure
  + Participants
  + Setting
  + Moral or Point
  + Narrative (factual or fictive) timeline
  + But not necessarily rich autobiographic detail
* **Narrative memory is canonically timeline referenced**
* **What happens in cultures that lack a public timeline (if such exist)?**

TIME AND TIMELINES IN PHILOSOPHY: THE A-SERIES

* McTaggart (1908) and the philosophy of time: the A-series and the B-series

* The A-series: "That series of positions that runs from the far past through the near past to the present, and then from the present through the near future to the far future, or conversely".

* The A-series is an undated TIMELINE with Directionality, Anchored to the present, in which events are PAST, [PRESENT] or FUTURE (1-place predicate) with respect to a viewpoint (the "now")

TIME AND TIMELINES IN PHILOSOPHY: THE B-SERIES

- The B-series is "The series of positions which runs from earlier to later, or conversely"

- The B-series is a TIMELINE with Directionality, in which events are earlier than or later than, or before or after, other events(2-place predicates); or are "dated" (Gell) with respect to a metric dividing the line (eg clock or calendar).

- In the B-series, viewpoint is irrelevant.

A-SERIES, B-SERIES, TRUTH AND TENSE

- A –series expressions, whether or not they are grammatically tensed, are semantically tensed, eg "[Yesterday] it rain[ed]", "My ex-wife".

- A-series propositions have indexical truth values: "Mary is John's [ex-]wife"

- B-series expressions are not semantically tensed and their truth-values are context independent,
eg "Obama the victor of the 2012 election", "George W. Bush the President of the USA after Bill Clinton" (although in languages like English sentences are obligatorily tensed).

PHILOSOPHY AND THE A-SERIES

* A-theories
  * Presentism (and stream of consciousness). Only the now exists. In most versions a variety of subjectivism. Is it correct to bracket Bergson and the phenomenologists with this? Was Heraclitus a proto-A-theorist?
  * Growing block theory. "According to the "growing blocker", to become past is to cease to be on the "cutting edge" of a growing four dimensional manifold of events" (Zimmerman). Future events are non-existent, but past is real.

* More generally: Theories of **Passage**

PHILOSOPHY AND THE B-SERIES

* B-theorists predominate, at least in analytic philosophy (including Frege and Russell).

* For B-theorists , the B-series is real, the A-series is not.

* Everything (the Universe) exists in four-dimensional Space-Time (The Block Universe), and/or objects have temporal parts as well as spatial parts.

* "Passage" is a property or by-product of consciousness, not a property of time or events.

* The Theory of General Relativity was interpreted this way by Einstein, who maintained that Time is an illusion.

* General Relativity also throws into question the notion of Simultaneity

PASSAGE, MOTION AND METAPHOR

* "Absolute, true, and mathematical time, in and of itself and of its own nature, without reference to anything external, flows uniformly and by another name is called duration. Relative, apparent, and common time is any sensible and external measure (precise or imprecise) of duration by means of motion; such a measure - for example, an hour, a day, a month, a year - is commonly used instead of true time." - Isaac Newton, Principia

* "In the image of McTaggart the passage of time consists in the fact that terms ever further in the future pass into the present...or that the present advances toward terms ever farther in the future. If we assume the first point of view, we speak as if the B-series slides along a fixed A-series. If we assume the second point of view, we speak as if the A-series slides along a fixed B-series." (Wikipedia entry)

* But how can an A-series be "fixed" when positions are relative to "now"? Surely it is the "now-anchor" of the A-series that is either "fixed" or "moves" in relation to a moving or static B-series?

* The same reasoning and imagery can be applied to SINGLE EVENTS

MOVING TIME (A) AND MOVING EVENT (B) SERIES

Now → Now´ → FUTURE

Event

PAST ← Event´ ← Event ←

Now
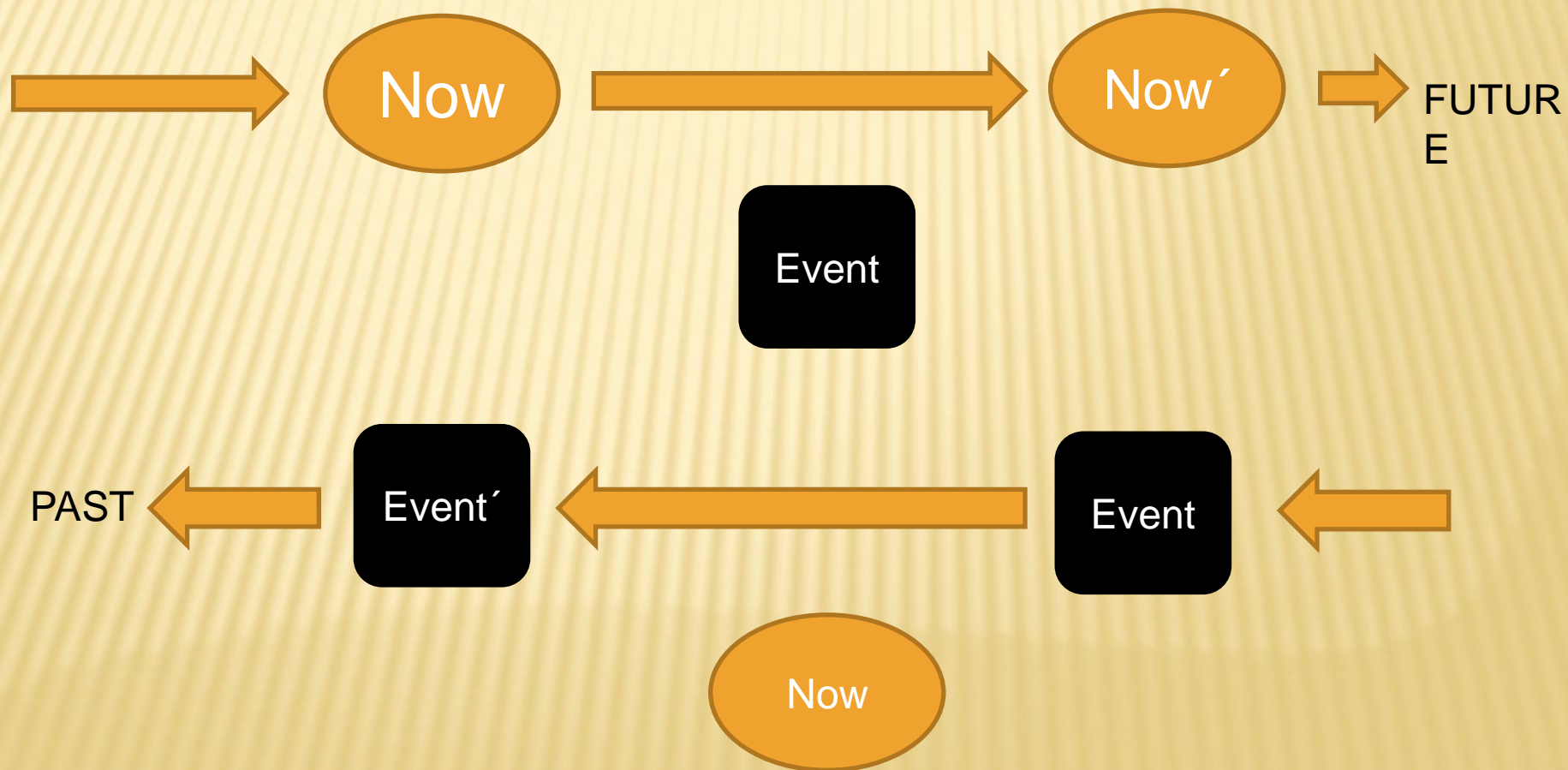
PSYCHOLOGY, LINGUISTICS AND TIMELINES

- Metaphoric space-time mapping constructions
- (We might call these "Passage Constructions".
- "My birthday is coming up"
  - Moving Time (or Moving Event)
- "I am coming up to my birthday"
  - Moving Ego (Clark, 1973, Lakoff and Johnson, etc)
- "My Birthday is before Christmas"
  - Positional Time (Sinha et al, 2011, others use

EVENTS AND TIME INTERVALS

- The McTaggart theory views Events as "Positions" that are effectively instantaneous, one-dimensional points in a series

- But events, of course, not only have relations with each other, they have temporal extension (2 dimensional, segments of the Timeline)

- Any such Timeline segment can be designated as a Time Interval. There are two kinds of time intervals, Event-Based and Time-Based.

EVENT BASED TIME INTERVALS

- Event-based time intervals are those whose boundaries are constituted by the event itself. In this sense, there is no cognitive differentiation between the time interval and the duration of the event or activity that defines it, and from which in general the lexicalisation of the time interval derives.

- The reference event is often natural (such as 'spring', e.g. "let's take a holiday in the spring"), but sometimes conventional (such as 'coffee break', e.g. "let's discuss this during coffee break")

- (Silva Sinha et al, 2012 in press)

TIME BASED TIME INTERVALS

- Time-based time intervals (such as "clock time" and "calendar time": Levine 1997; Postill 2002) are those whose boundaries are constituted by the segmentation of a conceptual domain of "Time" as an abstract and measurable entity: what we may call *Time as Such*.

- Examples of time-based time intervals are hours and weeks. Although time-based time intervals are based upon natural (astronomical) cycles of events, they are conventional, and their duration is determined by division and counting in a number system.

- (Silva Sinha et al, 2012 in press)

THE CALENDAR

- Calendric systems can be considered as instruments dividing the "substance" of Time-as-Such into quantitative units

- Calendric systems have a recursive structure in which different time interval units are embedded within each other

- Calendar systems are cyclic and depend upon numeric systems

COGNITIVE ARTEFACTS

- "An artificial device designed to maintain, display or operate upon information in order to serve a representational function and that affects human cognitive performance" (Norman 1991)

- But there exists "no consensus on how to bound the category … [prototype cases] are surrounded by gray areas consisting of mental and social artifacts, physical patterns that are not objects [landscape, skyscape] and opportunistic practices" [knot in the handkerchief] (Hutchins 1999)

SYMBOLIC COGNITIVE ARTEFACTS AND CULTURAL SCHEMAS

- Symbolic cognitive artefacts can be defined in the first instance as those artefacts which support conceptual and symbolic processes in specific meaning domains

- Examples: notational systems, dials, calendars, compasses

- Cultural and cognitive schemas organizing e.g. calendric time can be considered as *dependent on,* not just expressed by, cognitive artefacts

- Symbolic cognitive artefacts are **constitutive**, rather than regulative, of domains and practices (Searle)

TIME INTERVALS AS COGNITIVE ARTEFACTS

* Both event-based and time-based time intervals (and systems) can be regarded as cognitive artefacts

* Time-based time intervals (and systems), but not event based time intervals, are **symbolic** cognitive artefacts

* Symbolic cognitive practices and artefacts employing time-based time intervals constitute the cultural-cognitive domain of "Time as Such" (Reified Time)

* "Time as Such" is a socio-cultural and historical construction whose history is co-terminous with that

MEDELTIDSURET
DOMKYRKAN LUND

WHORF ON "TIME AS SUCH"

- The Hopi speaker "has no general notion or intuition of *time* as a smooth flowing continuum in which everything in the universe proceeds at an equal rate, out of a future, through a present, into a past; or, in which, to reverse the picture, the observer is being carried in the stream of duration continuously away from a past and into a future." (1950: 27)

- He seems to be talking the absence of Moving Time and Moving Event schemas

TIME INTERVALS IN AN AMAZONIAN CULTURE AND LANGUAGE

- Thanks to my collaborators:
  Wany Sampaio, Vera da Silva Sinha, Jörg Zinken

  - **Amondawa:** Indigenous Group of some 115 people living in the State of Rondonia (Greater Amazonia). Community was first contacted in 1986

  - **Language:** Tupi Kawahib language – sub-branch of Tupi. Language description and ethnography had been conducted for more than 10 years (Sampaio and Silva Sinha). Language status: Endangered

INDIGENOUS LANDS IN BRAZIL

AMONDAWA NUMBER SYSTEM

* One: pe´i
* Two: monkõi
* Three: monkõiape´i *or* ape´imonkõi
* Four: monkõiuturaipei *or* monkõimeme

TIME INTERVALS: SEASONS

✖ There are 2 seasons:

1- Kuaripe – *"in the sun":* the dry season, time of the sun

SUBDIVISIONS:

✚ **O´an Kuara** - the sun is jumping up (beginning of the time of the sun, also sunrise)

✚ **Itywyrahim Kuara** - very hot sun; strong sun.

✚ **Kuara Tuin** *or* **Akyririn Amana** - Small sun (ending of the time of the sun) / The time of falling rain is near

TIME INTERVALS: SEASONS

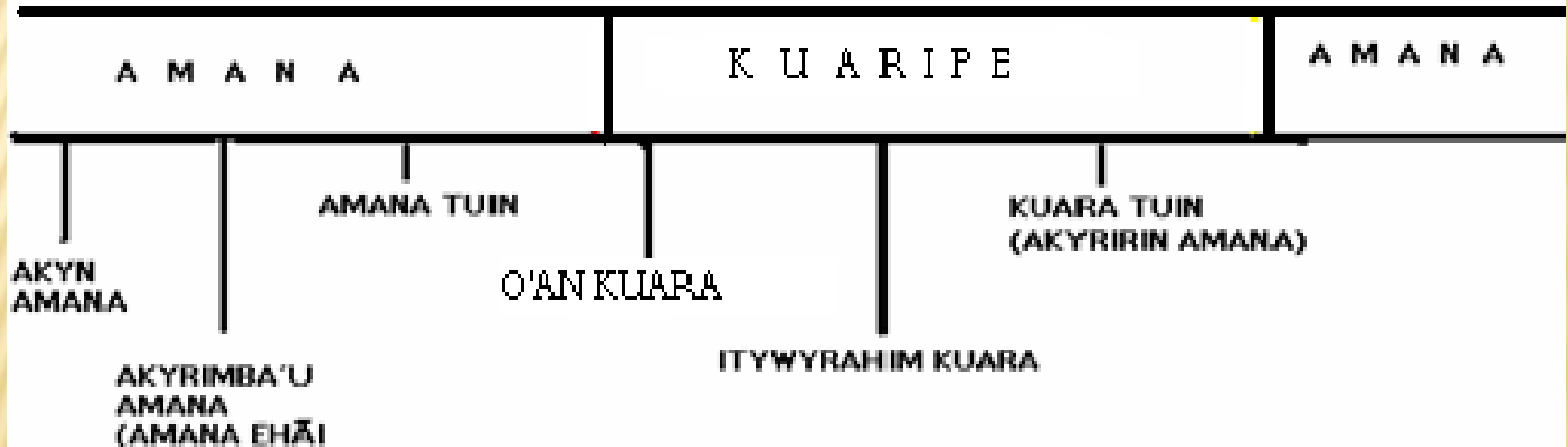**2- Amana** – *"Rain":* the wet season or rainy season

SUBDIVISION

- **Akyn Amana** - falling rain (Beginning of the time of rain)

- **Akyrimba´u Amana *or* Amana Ehãi** - very heavy rain *or* Great rain

- **Amana Tuin** - small rain (ending of the time of rain)

INVESTIGATING THE SEASONAL SCHEMA IN AMONDAWA

SEASONAL "SCHEMA"
OUR INVENTION OR THAT OF THE COMMUNITY?

Figure 2: The Amondawa Season schema

TIME INTERVALS: DAY
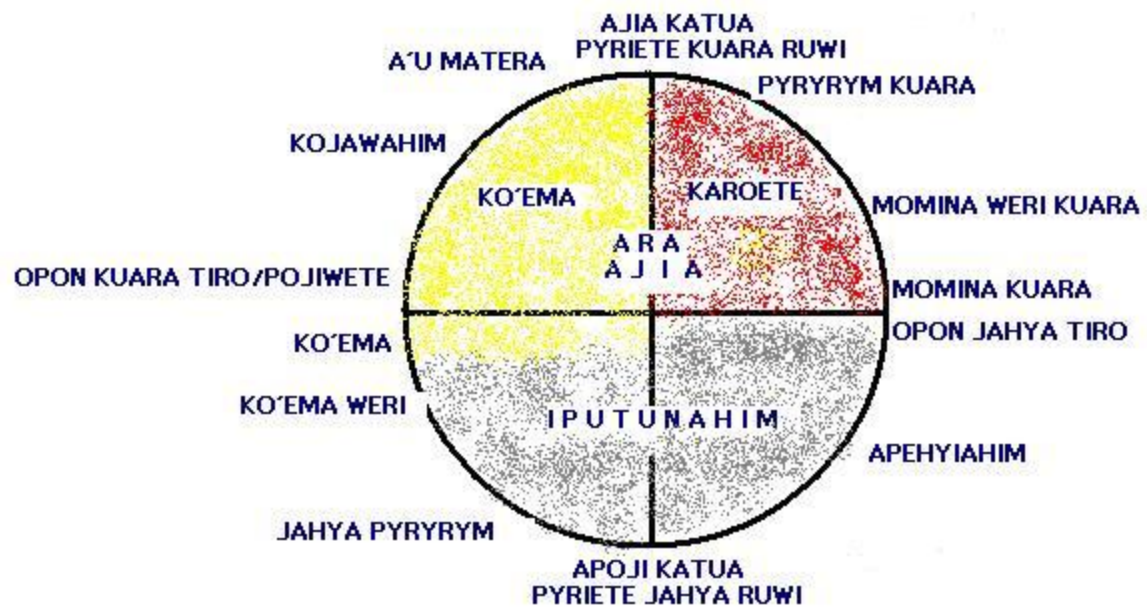
The day is divided into:

- *Ko´ema* (morning)
- *karoete* (afternoon)
- *iputunahim* (night).

The day is further divided by customary activities such as :

- time of waking
- working
- eating
- resting
- sleeping

Night is marked by the disappearance of the sun

DIVISÃO DO DIA E DA NOITE EM AMONDAWA

AMONDAWA NUMBER SYSTEM

- One: pe´i
- Two: monkõi
- Three: monkõiape´i *or* ape´imonkõi
- Four: monkõiuturaipei *or* monkõimeme

THE ABSENCE OF A CALENDAR

* The interval systems of Season and Day have sub-intervals

* There is no superordinate year

* There is no name for the week or lunar month

* There are four names for lunar phases

* There is one application of the 4-item numeral system to time intervals: enumerating moons (*probably* lunar phases)

* There is no **calendric system**

THE STRUCTURING OF TIME BY EVENTS AND ACTIVITIES

* Time intervals in our culture are structured by cognitive artefacts such as calendars and watches

* These artefacts impose a quasi-static cultural model on "Moving Time", constituting Time as Such

* In contrast, Amondawa time is structured by events in the natural environment (seasons) and the social habitus (Bourdieu) of activities, events, kinship and life stage status

* We can diagram Amondawa time, but there is a risk of distorting it by imposing "Western" cultural schemas of cyclicity and / or linearity

HOW TIME IS EXPRESSED LINGUISTICALLY

- Dependent adverbial morphemes or particles:
    + future *nehe, poti, poti … nehe*;
    + past: *ki…ko, ki…i´i, emo, ramo*.
    + these morphemes also express modal, aspectual and evidential notions (intention, desire, perfectivity, continuous action, event witnessed by speaker etc.)
    + We have not fully investigated these polysemous items
- In context:
    + Ki … ko [yesterday], *ko, koro [*today], *ko´emame [when it is morning]* tomorrow, *ko* now.

HOW TIME IS EXPRESSED 2

✖ Proximal Future

+ T-aho   koro ´i   ga   nehe
  Rel-*3s-go*   *now*   *intens.*   *he*   *FUT*

+ he will go out (from here) just now.

✖ Distal Future

+ kuaripe   taian   ´i   ga   nehe
  dry season   *arrive.intens*   *he*   *FUT*
  - He will arrive in the summer (dry season)
  [spoken during rainy season]

✖ Past

+ Da-o-ur-i   ki   ga   ko
  neg-3s-come-neg   *PAST*   *he*   *PAST*
  He did not come (some minutes ago/yesterday)

AMONDAWA LANGUAGE AND TIME: SUMMARY

* There is no word meaning "time"

* Past and future are not expressed in verbal morphology (no verbal tense system)

* There exists a nominal aspect (or Nominal TAM) system

* Amondawa speakers do not employ Moving Ego or Moving Time metaphorical constructions

* The Amondawa language does not have words meaning "before" and "after", so does not employ true Positional Time constructions

AMONDAWA TIME, A-SERIES AND "WORLDVIEW"

* The time adverbial system and the nominal aspect system are evidence of (thinking in) "A-series" time, that is of philosophical or conceptual tense, even in the absence of grammatical (verbal) tense.

* So Amondawa is not a "language or culture without time", and Amondawa people do not live in an Eternal Present, let alone an "eternal sunshine of the spotless mind" (they have memories, like everyone else).

AMONDAWA TIME, B-SERIES AND "WORLDVIEW"

- The seasonal schema and the day schema are evidence of (thinking in) "B-series time", that is ordered event and time interval series. However
  - There are no cardinal chronologies such as:
    + ages of individuals
  - There are no ordinal chronologies such as:
    + yearly or monthly calendars
- The B-series is (contra Gell), not "dated"
- How do individuals construct narrative memory?

IS NARRATIVE THE ONLY BINDING AGENT?

- The Amondawa have narratives of collective memory, and mythic narratives, but not "chronicles", and no dateline (no calendar, no "Time as Such")
- With no dateline, can individuals have a personal narrative self "unbound" to the timeline?
- Are there other ways of temporally binding self (self-identity) to community?

AMONDAWA – SOCIAL ORGANIZATION

✖   The social organization is based on exogamous marriage and division into two "clans" (moitiés): Mutum and Arara (kanidea). This kinship structure determines the *onomastic* (naming) practices of the group.

LIFE STAGES IN AMONDAWA: TIME IN THE ONOMASTIC SYSTEM

* Time and naming through the lifespan:
  * *The Amondawa people change their names several times during their life time. From these names we can infer the individual's:*
    * age
    * gender
    * social position
    * moiety which they belong to

TIME INTERVALS: LIFE STAGE

ARARA	MUTUM	MUTUM	ARARA	
M	F	M	F	**AGE**
AWIP	**Mbitete**	**Morãg**	**Tape**	**Newborn**
Tangãe	**Kuembu**	**Pote´i**	**Poté**	**Child**
Pure- Tebu	**Kuari**	**Mbore´i**	**Poti´i**	**Teenager**
Juvipa	**Tarup**	**Mboraop**	**Kunhãte**	**Young adult**
Purap Mboria Mboria	**Yvaka Moarimã Mboava**	**Mboropo Kunhãpó kunhãjiwu**	**Mandeí Adiwu Umby**	**Adult**
Jari	**Uyra**	**Mbore´a**	**Mytãg**	**Elder**

NAMING, SELF AND IDENTITY

* The onomastic system is a time interval system linked to lifespan development

* It "personalizes" the system of social identity based in kinship

* It names according to IDENTITY

* But does it bind these identities by continuity and coherence, or segment the lifespan into meta-episodes?

* Maybe persons can have IDENTITY without a narrative (or even autobiographical) self, such that Identity is spatio-temporally and socially bound or integrated

A FINAL POINT

* In memory studies, the socio-cultural and cognitive effects of artefacts are usually conceptualized in terms of the externalization of storage, and accumulation and transmission of change (eg Tomasello's "ratchet effect")

* But artefacts are not just repositories, they are also **agents** of change, constituting new symbolic domains and potentiating new practices.

THANK YOU