Repertoires of Timekeeping in Anthropology¹

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Communities the world over record the timing of objects and events in wavs that adhere to notions of both objective measurable time and what may be called the apprehension of time, or time-consciousness. Situating objects and events in time circumscribes the relative certainty of their existence. Speakers of the South American Indian language Aymara, for example, locate objects and events in either present-past time, which is considered visible and knowable, or future time, understood as located "behind" a person, because it has not been seen (Miracle and Moya 1981). Members of communities may have invariant or multiplex paradigms for conceptualizing and marking time. Some members of the scientific community, for example, entertain the idea that time is not absolute but rather runs faster or slower depending upon conditions of gravity and therefore has been difficult to measure (Browne 1998).

The intertwining of categorizations of time and certainty means that timekeeping also is a moral matter, implicating such notions as truth, virtue, authority, origins, memory, desire, progress, and anticipation. Ephemeral and durable recordings of the occurrence of objects and events thus warrant analysis that transcends simple timekeeping depictions of calendars, chronicles, and agendas.

This collection of essays probes the concept of record through an examination of culturally and professionally diverse modalities for temporally situating events. Modalities for recording include but are not limited to oral, written, material, somatic, and visual forms. Each of these modalities may in turn yield a range of recording genres. Spoken and written records, for example, may take the form of grammatical structure, myth, personal narrative, ritual, theatrical performance, history, a country's constitution, an official census, a birth, health, mar-

riage, or death certificate, a dictionary, a computer printout of data, and a poem, among others. Material forms of recording the timing of objects and events include landscapes, layers of sediment, tree rings, monuments, and museums, each of which is subject to ever-shifting temporal meanings. The body as well may be a timekeeping device, through heartbeat, life-course changes, diurnal and seasonal rhythms, cellular aging, DNA sequences, body morphology, and other forms of reckoning. Similarly, visual markers include the length of a shadow, stellar constellations, maps, drawings, photographs, genealogical charts, diagrams, and tables representing the temporal horizons of objects and events.

Timekeeping records extend beyond institutional documents to informal, local, and individual repositories of time such as family stories, local dialects, and ethnographers' field notes. Therefore the articles in this issue explore the concept of record beyond conventional definitions such as "an account of some fact or event preserved in writing or other permanent form" (Little, Fowler, and Coulson 1968:1675). Although any form of record allegedly is only a construction of the past, contributors consider how it simultaneously informs present and future realities. Schieffelin, for example, depicts how missionary renderings of time attempted to eradicate the indigenous past of the Kaluli of Papua New Guinea and to promote historical reckoning from the introduction of Christianity. Similarly, Pavelka indicates how charts representing primate evolution position contemporary representatives of the human species in a privileged light. Central to the interest of this collection is the notion that forms of recording are situated and vary within and across societies in time and space. Records therefore both are informed by and inform their sociohistorical contexts.

For our purposes, the concept of time is juxtaposed with that of temporality in such a way that "time" can be used in the sense of modern physics, as a processual quality of the material world (Hawking 1988), whereas "temporality" designates how beings experience such processual qualities in different sociocultural contexts, for example, through memory or anticipation (Aveni 1995, Bender and Wellbery 1991, Gell 1992, Gingrich 1994, Gould 1987, Hughes and Trautmann 1995, Husserl 1991). Under such premises the contributors attempt to move beyond the simplistic dichotomies of subjectivism and objectivism without attempting to create a unified epistemological stance (Bourdieu 1977, Ricouer 1988).

Rather than being a "state of the art" summation of an already well-researched anthropological topic, this collection is an attempt to bring into dialogue for the first time diverse anthropological perspectives on recording evolutionary, historical, life-span, and interactive time and temporality across the fields that constitute the discipline. The recording of time and temporality has been a pervasive but relatively invisible concern within anthropology; our intent is to bring the reckoning of time and temporality to the foreground. This cross-disciplinary effort is particularly important at a time when biological, archaeological, sociocultural, and

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linguistic anthropologists are experiencing increasing difficulty in finding intellectual venues for dialogue. Specific to the theme at hand, a central orientation of biological anthropologists is the evolutionary perspective, while archaeologists primarily attend to history, linguistic anthropologists to ongoing social interaction, and sociocultural anthropologists to the organization of mental and social lifeworlds. Across these articles, readers are invited to explore commonalties and divergences in recording and conceptualizing events, conditions, and processes in and across different scales of time. Common questions addressed in these essays include "What gets recorded?" "How?" "To what end?" "In what context?" "With what consequences?" For example, how are concepts such as "sequence," "gap," and "turning point" relevant to the reckoning of events across momentary and epic ranges of time? What is the role of place, space, territory, or landscape in remembering and anticipating events? How is the present used as an orientation for recording temporality?

An analytic focus across these articles is the coexistence of divergent modes for recording and conceptualizing temporalities. The existence of multiple repertoires of timekeeping holds for both professional groups and other communities studied by anthropologists (see Goodwin, Pavelka). Members of communities have repertoires of temporal markers (e.g., calendars, genealogies, chronologies, myths, and stories that are historically and institutionally rooted, with different symbolic and moral meanings [see Brettell, Lindenbaum, Ramble]). In addition, one and the same temporal marker (e.g., Stonehenge, Deerfield Village) may be interpreted in widely divergent and possibly conflicting ways within and across communities and groups (see Bender, Paynter). A recurrent theme is the power asymmetry among modes of reckoning dimensions of temporality. This becomes evident, for example, in missionizing processes in the highlands of Papua New Guinea (see Schieffelin), and in the interface between national, Buddhist, and various registers of local calendars in northern Nepal (see Ramble). In the context of biological anthropology, the Great Chain of Being privileges an end point or highest-order position for Homo sapiens, a position that has been challenged by primate evolutionary biologists (see Pavelka).

An additional focus of the essays in this issue is the deployment of spatial coordinates to situate events in time, as manifested through localities, celestial constellations, or landscapes. Across many languages and local groups, time is experienced and recorded as being rooted in space. For instance, it can be seen as being encapsulated in material objects within the landscape or as moving through it (see Paynter). Complementarily, landscapes and other spatialities such as maps are given

meaning by being connected to different temporal repertoires (see Bender).

In summary, the papers in this issue are concerned with how people use multiple, sometimes conflicting time-reckoning systems to regulate social life. This perspective leads the contributors to focus on the ways in which people use systems of time-reckoning to observe, experience, measure, and regulate social and natural events. In this sense, repertoires of timekeeping reflect, legitimate, and otherwise impact epistemic, moral, and social order. Historically situated timekeeping systems are sites wherein multiple official and unofficial, public and private clocks may be actively supported. The contributions to this issue demonstrate anthropology's sensitivity to pluralities of local and analytically framed times and temporalities.

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