

CHAPTER 1

Time and Consciousness

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“Fine” watches are wonderful distillations of the complicated, interwoven dimensions of the relationships of culture and time. What makes a watch “fine” are accuracy in time-keeping to a tiny fraction of a second and an analog, rather than digital, display in which accuracy is obscured because time is judged by the relative position of the hands. The combination of physics, technology, conspicuous consumption, and function manifested by such watches attests to time being more than human awareness of the relationship of duration, sequence, and cycles.

Time engages culture, nature, and experience, making the study of time a fruitful domain for exploring the relationship of natural and cultural cycles and sequences mediated through individual and collective experiences. Because cultural concepts of time link human ideas and activities to astronomical and biological cycles, time generates a problem for anthropologists; as Greenhouse observed: “Anthropologists know that people conceptualize time differently around the world, but they have tended to treat social time as a paradox, seeming to be both culturally relative and universal” (1996: 1).

This paradox is a manifestation of the deeper anthropological quandary of psychic unity versus cultural diversity, but it goes beyond debates about universals in human psychology and includes extra-human phenomena such as seasons, lunar cycles, and solar cycles. To complicate matters further, some of these cycles are not the same at every location on the globe: the difference between the equal amounts of daylight throughout the year at the equator versus the long nights and days at extreme northern and southern latitudes is one example, and the difference between those parts of the world where the seasons are “rainy” and “dry” versus those parts of the world where there are weather patterns identified with winter, spring, summer, and fall is another example. Consequently, building a claim that all humans share a common idea of time through their noticing “natural” phenomena elides local differences in such “natural” phenomena.

As Shore (1996) argues with regard to the paradox of psychic unity and cultural relativism, the resolution of this quandary requires relating culture to mind.

The implication for the study of time is that there is a need to relate time to culture, cognition, perception, and biology. In considering the latter two issues, perception and biology, one must keep in mind that culture influences our choices of what in our surroundings we notice, and cultural knowledge recognizes and even has some power to influence biological cycles.

While time draws together many issues associated with both nature and culture, part of the challenge of studying time is that time is connected to ideas of space. Most of the connections made between time and space are cosmological and ontological. The endeavor to understand what time *is* should not be confused with the attempt to understand cultural constructions of time or the human experience of time. The former can easily be related to theoretical physics, such as Einstein's time-space continuum or Steven Hawking's discussions of the origin of the universe. Furthermore, the connection between space and time in such theories should not lead to the assumption that the cultural constitution of the relationship between space and time is the same across cultures. Instead, one must leave open the possibility that, in human experience, the relationship of time to space is culturally constructed and culturally, even contextually, variable.

Looking at the concept of time in the context of globalization powerfully demonstrates both the multiple connections of time to culture, perception, and biology and the constructed connections of time to space. Those who study globalization often assume that time and space can be compressed through technology that allows interactions to transcend space almost instantaneously (Featherstone 1995; Harvey 1990; Ohmae 1996), or that such space-transcending technologies even create a sense of "timelessness" (Castells 1996). Such perspectives neglect the features of living on a rotating "globe" that revolves around the sun. In processes of globalization, space and time do not have a consistent or clear relationship – their relation is consistently mediated by the speed of communication or travel. Communications and travel must take into account connecting points on a globe – a fact that results in different times relative to the rotation of the earth and biological cycles in different places at the same instant. Contact via the Internet or by telephone is experientially different from physical, face-to-face interaction. Indeed, this is one of the weaknesses of claiming timelessness or time-space compression as a result of current telecommunications and information technology.

Castells rightly emphasizes the significance of "the annihilation and manipulation of time by electronically managed global capital markets" (1996: 467), but while capital and information may move instantaneously and be immune to the differences in daylight versus darkness, the experience of our bodies is quite different. Compared to information and capital, people do not move very fast; when they do move long distances along an east-west axis as quickly as they can, they experience jet lag – a well-documented experience of how the transfer of people is phenomenologically different from the transfer of information; and when they are awakened while deeply sleeping by a telephone call from another time zone, they are generally not appreciative of the instantaneous electronic movement of information across large distances (particularly if it is a wrong number).

Moreover, as Sassen (1998, 2000) argues, globalization is not a homogeneous process, but one that generates conflicts and in which a small number of global cities play particularly important roles. With global telecommunications, it is the times of

these cities, and consequently the circadian cycles as defined by their time zones, that are beginning to play a significant role in how time is globally experienced and conceptualized. The opening of the stock market in New York is temporally significant for many people far from the Eastern time zone of the United States in ways that are not true for many events in other time zones.

The human experience of the relationship of consciousness of time to globalization is largely unexamined. This relationship is historically contingent and culturally determined. With regard to transnationalism, the immediate contact many communities maintain through telephones or computers is a different experience from the travel time and jet lag that often accompanies moving from one location to another. Media decisions about broadcasting "live" events when they occur or during "prime time," such as the major controversy about NBC's broadcast of the 2000 Summer Olympics in the United States, highlight the temporal dimensions of living on a rotating globe. The ability to broadcast an event in one location globally raises the problem that an event in, say, Sydney occurs at the same time as the viewing audience in, say, eastern North America is sleeping. For that matter, in the United States, the exit polling conducted by the media during presidential elections is increasingly viewed as skewing results in the western part of the nation (e.g., voters in California often know how the east coast has voted before they cast their own votes). Consequently, contrary to claims of how technology has created a sense of timelessness, globalization has highlighted the issue of timeliness and has created dilemmas about time and timing that did not exist in the past. It also highlights the negotiated relationship of media to time and events. Whereas there was debate over when to broadcast the Olympics, and whereas there is continuing debate over the broadcasting of election projections, when hijacked aircraft struck the World Trade Center there was no question but that the broadcast be immediate. In the wake of that tragedy many say that they will remember the exact time and place they heard the news.

The instantaneous quality of the media thereby creates memories embedded in particular times and places. Consequently, any discussion of cultural ideas of time in relationship to consciousness at the beginning of the twenty-first century must synthesize the traditional anthropological and historical discussions of conceptions of time with phenomenological discussions of the interaction of globalization and time. This is a daunting task and a necessarily incomplete one – the distribution of media and travel technology is uneven and reflects political economic differences of class, ethnicity, gender, legal status, and age in highly localized fashions. The interaction of multiple physiological manifestations of biological cycles, multiple experiences of time, multiple conceptions of time, multiple technologies of representing time, and the effect of movement and telecommunications on all of these multiplicities is difficult to theorize. Here, I'm going to be more modest and primarily explore circadian cycles and daily experiences of time, rather than larger slices of time.

ANTHROPOLOGICAL APPROACHES TO TIME

In the last decade there have been several excellent reviews of the anthropology of time (Gell 1992; Greenhouse 1996; Munn 1992), so there is no need to cover that ground here. Instead, through my discussion of time, I shall continue to wrestle

with the issue of psychic unity in terms of cognition and biological circadian cycles. Underlying both issues is the question of what, for humans, are “natural” and “unnatural” ways of experiencing and thinking about time.

The classic ethnographic treatments of time, such as Mauss’s *Seasonal Variations of the Eskimo* (1979), Evans-Pritchard’s *The Nuer* (1940), or Hallowell’s “Temporal Orientation in Western Civilization and in a Pre-Literate Society” (1955), establish a set of tacit assumptions that include (1) among non-industrialized peoples, time-keeping is closely related to cultural knowledge about the environment, and (2) this cultural knowledge is then tied to the cycle of social activities. The most frequently cited example of this is Evans-Pritchard’s description of “oecological time” and “structural time” among the Nuer. In his description, the daily cycle of activity, the annual cycle of movement, and the relationship of space to time allowed him to trace connections between interactions with the environment and his idea of Nuer social structure – a naturalizing of time. In contrast, Mumford’s roughly contemporary book, *Technics and Civilization* (1934), emphasized the unnaturalness of clock time. The contrasts between primitive and industrialized, and natural and humanly created, became intertwined and suggested incommensurable ways of thinking about time and experiencing it. The incommensurability remained a theme in works such as Geertz’s “Person, Time and Conduct in Bali” (1973) or E. T. Hall’s *The Dance of Life* (1983). It was also implicit in E. P. Thompson’s article “Time, Work-Discipline, and Industrial Capitalism” (1967), which argued that the shift from agrarian to industrial time was one of the fundamental cognitive changes of the industrial revolution.

The tendency of early anthropological approaches to time to emphasize alterity has been rightly criticized as unduly exoticizing and naturalizing “the Other” (Greenhouse 1996). Several important studies develop this point and focus on de-essentializing Western versus Eastern times (Gupta 1994), or establishing that there are certain ideas about time in daily living that are shared pan-culturally (Bloch 1977), or criticizing either the idea of the ethnographic present or any ethnographic representation that portrays ethnographic subjects as existing in times separate from history or from the “West” (Fabian 1983). These perspectives lay the groundwork for claiming pan-cultural and global elements of time consciousness.

Yet such studies do not develop a critique of studies of clock time that parallels the critique of studies of ritual or ecological times (i.e., there has been no close scrutiny of the assumption that time in “industrial” societies is at odds with nature). This position continues to be manifest in social scientific treatments of clock time, as is the case with Adam’s research on reproduction (1995). Adam assumes the clock is antagonistic to the body, and therefore to nature. Is this claim tenable, however? There is abundant evidence that the clock entrains biological processes. For that matter, if one examines the literature on humans’ supposed “natural” free-running circadian cycles studied in conditions where all social and temporal cues were controlled (see Wever 1979), one realizes that so-called “natural” human circadian cycles bear no resemblance to the cycles of any human society, and that they are highly sensitive to light duration, light intensity, intensity of physical activity, and especially social contact. Consequently, not only must the association of “traditional societies” with “natural time” be discarded, but the association between “modern societies” and “unnatural time” must also be undone. To view times of modernity as being culturally constructed and unnatural is just as misleading as viewing the times

of premodernity as being constructed out of a pragmatic closeness to nature. Biological cycles are not immutable, but are, instead, very sensitive to the environment, whether it be a factory or a pastoral setting. This is true for humans and the animals that they domesticate. Because of the biological flexibility in organisms, the relationship between clock time and biology is complex.

Discarding this assumption about natural time blurs the conceptual barriers between industrial time and non-industrial time by returning to the initial anthropological formulation of viewing time as emerging out of cultural ways of thinking about all environments and cycles. Instead of using the clock as the conception of time against which all others are compared, thereby exoticizing non-horological cultural constructions of time, this shift views clock time as serving the same purposes as the cultural models of time described by Mauss, Evans-Pritchard, and Hallowell. Furthermore, precisely because of the multiplicity and flexibility of social and biological rhythms, it is difficult to separate the “natural” from the “culturally constructed.” Time consciousness involves the recognition and definition of all sorts of sequences and cycles. Time serves to orient people cognitively and biologically to one another and their environment.

TEMPORAL ORIENTATION

Hallowell's (1955) concept of behavioral environment blurs the boundary between nature and culture in ways useful for thinking about time. The behavioral environment emphasizes the environment as experienced. Hallowell (1955: 93) claims that one of the major functions of the relationship between the self and its behavioral environment is the orienting of the self in time. This can also be said of institutions, collectives, and societies. In a sense, all seek to orient their participants through recognizing or creating cycles and sequences. As Foucault emphasizes in *Discipline and Punish* (1979), a significant technique for the imposition of power is implementing definitions and organizations of time. In his treatment of discipline what he neglects is the establishment of a dominant concept of time by which discipline is structured. While he traces the origin of temporal discipline to the Benedictine monks, he does not acknowledge other conceptions of time or the conflicts that emerged about how time is defined, as opposed to how time is applied. As E. P. Thompson (1967) points out, the victory of clock time over other conceptions of time was apparent at the point that the workers negotiated with their managers over work hours, as opposed to the original confrontations over the imposition of the clock.

Thus, Foucault emphasizes conformity without exploring the orientational function of time and the possibility of multiple times providing different, and even conflicting, temporal orientations. This is despite the orientational function of time being central to his argument about how power works. It is temporal orientation that allows the definition of conformity and non-conformity; for example, a clock-defined hour that defines when work begins is a necessary condition for the definition of tardiness, and a conception of how much work can be performed in an hour is a necessary orientational condition for the definition of laziness. In the slave system of the United States, the efforts of those enslaved to challenge authority were based on cycles, sequences, and durational measurements of activity shared by those enslaved and their supervisors (Smith 1997).

It seems that temporal orientations are necessary for economic systems to function. The market days crucial to commerce are an example of people culturally creating temporal systems to mark, measure, and coordinate their economic activity. What makes assertions of time-space compression or timelessness in the global, networked society fascinating is the claim that temporal orientations have come to be defined by immediateness detached from local times. This may be true in the sense that financial activities are no longer bound by local times, but the concepts of sequence and cycles are still profoundly important. The hourly cycle imposed to define and measure labor in the industrial revolution may be finding itself superseded in global financial networks, but quarterly and annual cycles continue to be marked by earnings reports that have immense influence over the flow of capital. The use of “timelessness” or “time-space compression” falsely indicates that time is irrelevant, when what seems to be happening is that the temporal, clock-bound, culturally constructed orientation that was essential to the industrial revolution is decreasing in importance relative to other temporal orientations.

The insight that time orients also must be viewed in light of the fact that humans are not reliable timekeepers. When placed in isolation from temporal cues, humans tend to develop rest–activity cycles of around 25 hours. Changes in activity cycles due to jet lag or shift work result in de-synchronization of the cycles of body temperature and of different hormones. While there are several biological cycles that are viewed as timekeepers in humans, the fact that these cycles are identifiable through isolating people from social and temporal cues suggests the extent to which human temporal orientation is a product of the interaction of internal, biological cycles and external social and environmental cycles.

Temporal orientation is, then, not produced independent of the environment. It is also not simply a matter of passively observing the environment. Nature provides a cacophony of cycles from which humans select, and human ingenuity has added a number of potential time cues, whether it be the vibration of a cesium 133 atom in one of the atomic clocks used by the United States Naval Observatory or the duration of sports’ seasons, shopping seasons, academic semesters, or budget cycles. People thinking about cues in their socially structured, culturally determined environment produce time. These environmental cues are an excellent example of what Vygotsky meant when discussing cognitive tools and the extension of cognition outside of our bodies (Steel 2000). It is of great importance that the orientations in time occur through the relationship of the embodied mind/mindful body to the environment. Time is profoundly material and profoundly cognitive at the same time.

Consciousness of temporal orientation is consequently both inward- and outward-looking. It is a matter of individual cognition, as a multitude of psychological studies have shown, but it is also a matter of modes of production, class distinctions, social relationships, and power, as the large literature on political economy and time has demonstrated.

TIME IS WHAT YOU MAKE IT

Whether it is with regard to the Nuer, the Eskimo, the Balinese, eighteenth-century English workers, or Trinidadians, when social scientists discuss time they are not

discussing an essentialized definition of time but cultural models of time. Discussing time as a circle versus time as a line or an arrow is not discussing what time is, but how time is thought – the metaphorical underpinning of this discourse gives this away. Cultural models of time are tools with which people think about and structure their world.

The culturally constructed nature of time is most easily seen in the history of calendars. For instance, in 1752 the government of Great Britain decreed that the day after September 2 would be September 14. This seemingly odd change of dates was to bring the calendar being used in Britain in line with the other calendars of Western Europe (Steel 2000). Indeed, in 1752, September 1 in Great Britain was September 13 across the English Channel in France. This created a bit of a problem, particularly as the pace and extent of international commerce increased.

This is not, by any means, the first or last such time adjustment of a calendar. In 1993, Kwajalein, part of the Marshall Islands, skipped Saturday, August 23. This island is near the International Date Line, and for many years its people had set their clocks as if they were on the same side of the date line as the United States. After the Marshall Islands gained independence, Kwajalein was the only island in the nation that acted as if it were on the United States' side of the date line – so its residents decided to change their time and calendar in order to be consistent with the rest of the Marshall Islands. This meant losing a day.

Actually, we make such changes regularly, and call those occasions leap years. These adjustments call into question the naturalness of calendars, however. Something to contemplate is that, even for those places that had adopted the Julian calendar, the beginning of the millennium on January 1, 1001 AD took place on different days in different places, because different principalities dealt with the inaccuracies of the calendar differently. As January 1, 2000 media promotion of the new millennium showed, now the beginning of a new calendar year is a global event displayed and coordinated by a global network of technology and media.

Not only have we adjusted our calendar, but we have adjusted our watches, as well. These calculations – our seconds, minutes, and hours – themselves have only a tangential relationship to their origins in reckoning time by the sun. All the watches we wear and employ are set to standard mean time. This is based on the average length of a day during the year. In fact, the length of solar days varies during the year. The idea of standard *mean* time – the average length of the day – emerged during the early industrial revolution both as a means of standardizing labor hours throughout the year and as an important step in simplifying mechanisms for clocks, so that they could be made smaller and mass produced.

In effect, our calendars and watches are important cognitive tools, but they are not extensions of cognition designed to measure actual time. Historically, the way in which calendars and watches have evolved makes it clear that these timekeeping tools are devices for coordinating ourselves vis-à-vis others and activities. The ideology that they measure some ontologically existing time importantly obscures the social origins of our time reckoning, and gives it an air of naturalness that places time beyond challenge. This ironic combination of factors, namely, naturalized culturally constructed time that is beyond challenge, is what makes the study of time such a fascinating window into the relationship of cognition/emotion, activity, and social relationships.

All of this challenges the naturalness of clock time and calendars derived from the Gregorian calendar. The processes by which natural phenomena are selected to mark, measure, and reckon time takes on an existence more closely linked to human activity than to the originally selected natural phenomena. This is probably a pan-cultural practice. The socio-ecological cycles of the Nuer (Evans-Pritchard 1940) and the Eskimo (Mauss 1979) are very different, but the end result of ecological cycles only becoming important because of their relevance to human activity is the same. Indeed, Evans-Pritchard hints that although Nuer “time” is based on ecology, it tends to privilege social cycles above environmental change: “Ultimately most, perhaps all, concepts of time and space are determined by the physical ambient, but the values they embody are only one of many possible responses to it and depend also on structural principles” (Evans-Pritchard 1940: 94). Thus, for all the “naturalness” of Nuer time, it shares with clock time and the Gregorian calendar a derived, socially influenced relationship to the environment, rather than a direct one.

TRAINING IN TIME

The body is not immune to culturally created tools of keeping time. Not only do social relationships structure human circadian cycles, but humans also tend to challenge their bodies in unusual ways. Carnival, all-night rituals, shift work, and jet lag are examples of human attempts to overcome typical biological circadian patterns. Because shift work and jet lag are products of societies which also relentlessly pursue biological research to improve “productivity,” the biological implications of these two have received the vast majority of scientific and governmental attention (see US Congress, Office of Technology Assessment 1991). Some of what has been learned can be conservatively applied to activities such as carnival or ritual. First, the body’s multiple circadian rhythms do not all respond in the same fashion or at the same rate to a radical change in circadian activity. For instance, in shift work there is a phase shift in prolactin and growth hormone so that nighttime workers have levels similar to those in daytime workers, but there is not a similar shift in cortisol or thyrotropin cycles (Weibel and Brandenberger 1998). Second, from jet lag studies, people find shifts in activity that result in staying awake longer – traveling in an eastward direction – easier to accommodate than shifts that require getting up earlier – traveling in a westward direction. Third, physical exertion affects hormone levels and helps people to stay awake at night. Fourth, there is a great deal of variation from individual to individual.

The body’s sensitivity to temporal structures is culturally recognized separate from the biological research. Due to the persistence and ubiquity of clocks and watches in some societies, people in those societies are born into a world of timekeeping. Anyone who has recently had children has been beset upon by lactation consultants providing moral directives about feeding schedules. Some pediatricians will hold forth on the importance of feeding schedules, whereas others will argue for feeding on demand. In the United States, the classic guides for raising children address this issue. Dr. Spock writes: “The baby can be greatly influenced by the parents’ *management*. Suppose a mother wakes her baby boy whenever he’s still asleep 4 hours after the last feeding; she is helping him to establish a 4-hour hunger habit”

(Spock and Rothenberg 1985: 95; emphasis added). The child's earliest experiences are consequently structured by a horological obsession. *What to Expect the First Year* extols: "For all babies, the absence of structure in their lives early on can interfere with their developing, and then exercising self-discipline later in life. Getting to school on time, completing homework, and getting papers in on schedule can be inordinately difficult for children who have never been exposed to any kind of structure previously" (Eisenberg et al. 1989: 175). I suggest these practices are part of a very early process of synchronizing biological rhythms to social and cultural rhythms. These practices associated with activity, sleep, and feeding patterns have all been demonstrated to influence and structure circadian rhythms at the level of biological processes (Moore-Ede et al. 1982). This means that the cultural environment of children begins to influence biological rhythms by bringing them in line with externally generated, culturally constructed conceptions of time. The embodiment of discipline through scheduling that Foucault stresses in *Discipline and Punish* is not limited to coordinating social groups or embodiment in a symbolic sense, but includes embodiment in the sense of affecting basic body functions at the level of the nervous system that is normally not associated with cognition, much less with discourse.

TIME AND COGNITION

Time as a tool is not isolated from other issues. Methodologically, it does not generally work well to accost an informant and ask, "What is your cultural model of time?" or even, "What is time?" Cultural models of time are not models that act autonomously, but instead are models that are connected to other models. In fact, models of time are usually constituted by metaphors – itself a fact that emphasizes connections. From the perspective of understanding cognition, then, it is not useful to view cultural models of time as self-contained schemas or as elements of sequential logical thinking. Instead, cultural models of time are more consonant with connectionist models of cognition.

Examples of this are parapraxes that are commonly heard in university environments: saying "yesterday" when one means the previous class, even if the class met two or more days before, or saying "tomorrow" when one means the next class, even if it meets two or more days in the future. This is an example where two parallel models of time, one having to do with the sequence of classes and the other having to do with the sequence of days, interact to affect what is said and to cause a slip of the tongue.

It is also an example of the interaction of the behavioral environment and temporal consciousness and orientation. Classes are part of the university environment. Often they constitute a means of organizing the world. Models for organizing the world but not the self always utilize a chronological organization of time. The chronology may not always be a clock or a calendar; any marker in the world by which one can measure and mark change can serve as a temporal marker. Meetings and class periods temporally organize the university. Therefore, class periods are temporal markers during the academic year. Class periods are used to organize the week, but generally not for periods longer than a week. As a result, "last class" and "next class" are the main expressions utilizing class periods as temporal markers.

There are other interesting features of these parapraxes that demonstrate the extent to which metaphors penetrate and structure temporal consciousness. Implicit in the temporal structuring of university classes is, seemingly, the travel metaphor of time. This metaphor involves expressions such as the “preceding class” and the “up-coming class” as synonymous with the “last class” and the “next class.” This travel metaphor of the past and future is closely associated with linear time and ideas of chronology, rather than with other metaphors.

“Yesterday” and “tomorrow” are words that are used to orient oneself in time vis-à-vis the world through a model of time based on chronology and sequence. “Next class” and “last class” also orient one in time vis-à-vis a specific educational context, and they also imply a sequential, chronological model of time. Such parallelism suggests both models of time are connected to the same underlying temporal model. Or, put in more connectionist terms, the network into which “yesterday” and “tomorrow” integrate is the same network into which “last class” and “next class” integrate. This does not mean the “last class” is synonymous with “yesterday” and “next class” is synonymous with “tomorrow,” but that their orientational function utilizes the same logic. Obviously, if the last class was three days ago, then it was not “yesterday.” Yet, since “yesterday/tomorrow” are based on the same sequential temporal logic as “last class/next class,” it is quite easy, although incorrect, to segue from the one to the other, thereby creating a slip of the tongue. Thus, in cognition, cultural models of time relate different ideas. They are used to coordinate actions with one another, but they are also employed in the ideological work of linking unrelated ideas in order to naturalize cultural constructions of the world.

TIME IS MONEY IN TRINIDAD

The metaphorical system “time is money” has been explored by Lakoff and his colleagues in several books (Lakoff and Johnson 1980; Lakoff and Turner 1989; Lakoff and Johnson 1999), and would seem to qualify as a cognitive/cultural model of time that indicates the effect of industrial capitalism on cognition. If industrial capitalism has the sort of ideological and cognitive influences implied by the essentialist contrasts between industrial time and agrarian time, then one would expect a close correspondence between the metaphorical system described by Lakoff and Johnson and industrialism – basically, where one is found, one would find the other. But reality is far too messy for such essentialisms.

Rural Trinidad is the place in which this fact came to the fore for me. In studying cultural conceptions of time, I went through the classic metaphors associated with the “time is money” metaphorical system:

Time is money
Spend time
Waste time
Save time
Budget time
Invest time
Manage time/time management

The context in which I did this was a rural community in which most residents had attended school, and in which many of the men had worked in factories. Everyone I interviewed on this topic (16 people) reported that they had heard the phrases “spend time,” “waste time,” and “save time.” They could all produce examples of how these phrases are used that correspond with Lakoff and Johnson’s discussion and with the usage of the phrases that I was accustomed to in the United States. No individual I interviewed reported that they had heard the phrases “invest your time,” “manage your time,” or “time management.” One individual reported hearing the phrase “budgeting time,” and then said, “Budgeting time is the time of year when the government makes its budget.” Two individuals reported hearing “time is money,” and they were both tailors. While my sample is admittedly small, the results are extremely clear: the metaphorical system “time is money” has been adopted only partially in the region of Trinidad in which I worked. The distribution of the phrases that have been adopted is interesting, in that it was not the individuals who had worked in factories that reported awareness of the metaphor “time is money,” but individuals who worked as tailors – individual artisans, so to speak – who used this metaphor.

This suggests that temporal ideologies do not adhere to well-defined modes of production or economic formations; instead, these temporal ideas are unevenly distributed in their cognitive manifestations. Such manifestations are distributed according to social relations. This distribution allows for strategic action based on self-presentations of knowledge or naïveté. With transport and communication spanning multiple time zones, the possibilities for sometimes disrupting others’ lives purposefully and with impunity are great. An example of a tailor’s visiting the United States, who had manifested much of the “time is money” system in Trinidad, is instructive in exploring how cultural models of time, ideologies, and the use of time are combined strategically.

Ted had arrived from Trinidad and was waiting for his friend, Mark, who lived in California, to make arrangements for Ted to visit. Mark had promised a good time and work for Ted while Ted was in the United States, and Ted, who had arrived with a green card but very little cash, was anxious to get a paying job. For several weeks, he had visited family and friends in New York City, and he was staying with my family and me for part of this time. After the first week, he became increasingly forward with Mark, who had not yet purchased plane tickets for Ted. One morning, around 8:00 EST, Ted picked up the telephone and announced, “I’m calling Mark.” My wife, in a moment of sympathy for Mark, said, “Don’t you know it is five in the morning there?” Ted beamed, replying, “Is it? Really?” and as he chuckled, he dialed the number.

Ted, who had been calculating time zone differences for a long time, was still able to play the naïve, just-off-the-airplane Trinidadian. In a fascinating use of time through a performance of a lack of knowledge about time, Ted was able to disrupt Mark’s day and get away with it – even though calling Mark at 8:00 a.m. would have been calling too early for him, much less at 5:00 a.m. Ted the tailor demonstrates that, in representing individual knowledge of models of time, and agency in negotiating time and subjectivities of time, neither the traditional anthropological approach of associating a cultural model of time with a society, nor more recent approaches to globalization that assert timelessness in constructing global homogeneity, suffice.

CONCLUSION

The anthropological study of time has been enmeshed in implicit assumptions that essentialize biology and exoticize cognition. It has also tended to view clock time as something completely different from other forms of conceptualizing and reckoning time, and has avoided exploring the influences of culture on biological cycles. To overcome these conceptual obstacles, it is necessary to discard discourse about natural versus unnatural ways of reckoning time. Instead, time must be viewed as a culturally created cognitive tool for thinking about our body's cycles, our world, our activities, and our relationships. Consequently, cultural models of time integrate these different dimensions of experience, and allow for manipulating each dimension, including our biological rhythms. Our bodies have multiple cycles, some of which are culturally sensitive and others that are slow to change, and many of which are consciously and culturally noted.

This integration of the biological, social, and cultural experience of the world found in cultural models of time has implications for understanding globalization. A consequence of globalization is that people can be bombarded by temporal rhythms emanating from all over the world in ways that directly conflict not only with local times, but also with the body's biological cycles. A further consequence of the form that globalization processes take is that, because of the dominance of certain global cities, there are relatively few time zones that have global significance. A feature of this situation is that there are growing numbers of people who orient themselves to what a clock reads in a distant time zone, such as that containing New York, London, or Tokyo time. Because of the multiple ways of defining time and, consequently, of temporally orienting oneself, there are significant conflicts of time and contradictions generated by such conflict, and because of the integrative possibilities of cultural models of time, these conflicts and contradictions can be manifested from the level of society down to the level of individual biological processes.

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