Time

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Time, from an anthropological perspective, is culturally specific and inseparable from our understanding of the world and our place in it. Anthropology charts how and to what extent time is culturally constituted, and how, increasingly, these cultural constructs coexist, come into conflict, and colonise each other. This entry introduces time as a field of anthropological inquiry, including its emergence in philosophy and evolutionary thought, and the dialogue between physics’ relativity theory and anthropology’s cultural relativist approach to time. The anthropology of time has asked whether it is a multiple cultural and social construct, and how its multiplicity may be explored ethnographically, be it within a given society, in contexts of socio-cultural contact, or in the context of globalisation. Being attuned to temporal multiplicities enables anthropologists to improve how social and cultural research is conducted and to ask under which circumstances temporal multiplicities can be productive for anthropological theory and practice. The entry concludes with laying out the importance of anthropology to understand time in the age of the Anthropocene.

Introduction

Time is a notoriously difficult concept to pin down. Ancient and contemporary philosophers have not come to a consensus as to whether time exists independent from the entities and activities within it (Bardon 2024). Physicists of the twentieth century, notably Albert Einstein, made waves by reaffirming that time was not independent of the world, but was in fact conditioned by matter and movement. Their ideas soon reached the humanities, notably philosophy (Bergson 1924; Cassirer 1922) and anthropology. For example, Russian anthropologist Vladimir Bogoraz took Einstein’s famous insight that time is not absolute but depends on the observer, to theorize indigenous accounts of time like those of the Chukchi people in the Russian Far East, whom Bogoraz had studied in the late 19th and early 20th century (1923, 57). He recounts the following story:

> *A shaman went to distant lands, half-legendary or even entirely fairylands. After a year or two he returns. He is at full strength, in the full bloom of his health, but his home village has completely changed. His dwelling collapsed. His wife and young son disappeared. On the road he meets an old man with a grey beard and asks him about his son. It turns out that this old man is his own son. The shaman came back younger than his son. The two years of traveling … have passed like a whole human life.* (1923,19)

In providing these and other stories, Bogoraz was in dialogue with physics’ relativity theory as well as with

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the work of US-based anthropologist Franz Boas. Boas had argued as early as 1887 that ‘civilisation is not something absolute, but… relative, and that our ideas and conceptions are true only so far as our civilisation goes’ (1974, 64). Such ‘cultural relativism’ and physics' relativity theory inspired emerging anthropological interest in how people around the world conceive of time. It also inspired comparative literary theory such as Mikhail Bakhtin’s (1975) who borrowed the concept of the space-time or ‘chronotope’ from Einstein to postulate that space and time are inseparable from our understandings of the world and our place in it.

What this scholarship adds to physics is that time depends not just on the position of the observer but also on the observer's categories of thought, and their society and culture. The view of time as largely socially constructed was formulated systematically by the early twentieth century French sociologist Emile Durkheim ([1912] 1995). He acknowledged that time—along with other ‘principal categories of thought’ such as space, cause, and group (‘species’)—was so fundamental to human lives that it seemed almost inseparable from the functioning of human intellect. Given that human societies were ultimately part of nature and nature has some ‘objective value’, so too do the principal categories of thought, such as time, that humans have developed. However, Durkheim insisted that time was still largely a product of collective thought, as the ways we understand time are strongly determined by our social and cultural methods of dividing, measuring, and expressing it. Our division of time into days, weeks, months, and years corresponds to the regular recurrence of rites and ceremonies, which are ultimately social. As Durkheim put it, ‘it is not my time that is organized in this way; it is time that is conceived of objectively by all men of the same civilization’ ([1912] 1995, 10). For Durkheim, time thus had a mostly social origin even if it was never completely arbitrary.

Durkheim’s argument—that time is a largely social category that, once constructed, exerts power over society—still holds for many anthropologists today. Together with insights from Einstein’s relativity theory and Boas’ ‘cultural relativism’, it allowed scholars to investigate how people around the world make sense of time and to illustrate that seemingly common-sense understandings of it have many viable alternatives. This entry shows that alternative views of time ‘co-evolve’ with Western concepts of it (Fabian 1983) such as the global scale of universal time that underpins world capitalist economies. For anthropology, time is not one but many. This entry charts how this temporal multiplicity has been understood in a changing landscape of anthropological approaches to time, including current work on two forms of relations within such temporal multiplicities: the first consists of relations of change in which one kind of time is taken to be true and assertions of change can be made against it. The second concerns relations of exchange, where temporal differences work as resources for each other. The entry concludes with laying out the importance of anthropology to understand time in the age of the Anthropocene.

Evolutionism, diffusionism, and fieldwork

Even before time became one of the key topics of anthropological research, it already defined the discipline as it was emerging in the nineteenth century. Anthropology aimed to shed light on human history, as explored in *Ancient Society* (Morgan 1878), that which predated the emergence of the state and industrialised modernity (see also Maine 1861 and Tyler 1871). Yet, unlike archaeology, anthropology was interested in cultures and societies that were contemporary to it and accessible through ethnographic study. These contemporaries, such as Australian Aborigines, were assumed to illustrate 'early' stages of social and cultural evolution. The Native American Haudenosaunee (Iroquois) were held to illuminate the 'Heroic age' of Ancient Greece (Morgan 1851, 120–40). Interested in the 'lines of human progress' (Morgan 1878), anthropologists conceived of themselves as located at its forefront, understood to be in Europe. From there, 'sailing to the ends of the earth', a scholar was deemed to be 'in fact travelling [back] in time; he is exploring the past; every step he makes is the passage of an age' (Degérando [1800] 1969, 63). Such a temporal ordering of other people's lives reflected Western intellectual culture, where evolutionary stages were based on oversimplified dichotomies of the 'primitive' versus 'civilised', 'backward' versus 'modern', and 'undeveloped' versus 'advanced'.

From the mid-twentieth century onwards, such temporal distinctions were increasingly contested on political grounds, since the subjugation and colonisation of others were frequently justified by postulating others' 'backwardness' (Asad 1973). But on conceptual grounds, this temporal classification had already been contested since the late nineteenth century. The Victorian polymath and originator of eugenics Francis Galton famously argued that evolutionism, which classified human groups along temporal stages with Western cultures as the final stage, overlooked how cultures and societies influenced each other. For example, the line of socio-cultural progress may not stem from 'simpler' origins in the remote past to greater complexity in more recent times, but rather from recently 'civilized' or colonised originals to equally recent 'duplicate copies of the same original' that were nonetheless more 'primitive' (Galton 1889).

This was not to say that all insights by evolutionist scholars were wrong. One of the central contributions of evolutionary anthropology's temporal classification was the discovery of matrilineal kinship and the political prominence of women in many societies. Far from being 'natural', patrilineal kinship and rule by men ('patriarchy') was shown to be a result of relatively recent accumulation of wealth and development of private property (Morgan 1878; Engels [1884] 1990). Galton's objection drew anthropological attention to how often this change from 'matriarchy' to 'patriarchy' was not a matter of evolution but that of influence by dominant neighbouring cultures (Rivers 1914, volume II: 90–149). Tracing these lines of influence—the geographical spread of cultures from assumed 'cradles of civilization' to their imitative peripheries—came to be called 'diffusionism'. Diffusionism reinforced the idea that space was enmeshed with time:

> *Since all historical events occur in space, we must be able to measure the time they needed to spread by the distances that were covered or a reading of time on the clock of the globe* (Ratzel 1904, 521, cited in Fabian 1983, 19).

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In the twentieth century, time remains a key research tool but in a different sense than in evolutionism or diffusionism. Anthropology develops a temporally distinct understanding of research as being based in 'fieldwork', holding that 'time in the field' (Dalsgaard and Nielsen 2016) should take 'a year or more' (Rivers 1913, 7). Initially, field research was often much longer—frequently due to political circumstances that were as a rule un- or under-stated in academic publications. Bronislaw Malinowski's famous ethnography *Argonauts of the Western Pacific* (1922)—a study of early twentieth century travel and exchange off the eastern coast of New Guinea—became a manifesto for the method of 'participant observation' requiring that researchers not simply interview the people they study but participate in their lives. In creating this method, it was not frequently acknowledged that Malinowski's fieldwork had only taken this long because he was not allowed to return to Europe during the First World War. As an Austrian citizen, Malinowski was considered an 'enemy subject' working on British colonial territory (Young 1984; Baker 1987). Bogoraz's ethnography mentioned above took place under similarly prolonged circumstances, as it was conducted while he was in political exile in 1889-1899 for socialist activism in imperial Russia (Ssorin-Chaikov 2008).

Temporal multiplicity

Ethnographic fieldwork for 'a year or more' made time a research question rather than an answer. Instead of disassembling cultures into multiple layers of human evolution with cultural 'survivals' reflecting stages that were 'once in existence' (Engels [1884] 1990, 37), or tracking cultural traits over geographical space to measure their diffusion, anthropologists began to explore societies and cultures as largely coherent and self-referential units. This was done by following their internal logic, including when it comes to time.

For instance, kinship had previously been conceived through the lens of either an evolutionary timeline from 'matriarchy' to 'patriarchy' (Morgan 1878) or lines of diffusion on 'the clock of the globe' (Ratzel 1904). Now that anthropologists studied groups of people ethnographically, kinship became key to understanding their culturally distinct forms of temporal organisation. A classic example of this is the study of the Nuer of Southern Sudan by British anthropologist Edward Evans-Pritchard (1940). Evans-Pritchard argued that the early twentieth century Nuer largely measured time in terms of socially relevant activities, determined by ecological change, such as where they reside during the dry and the rainy seasons of the year. However, the Nuer also conceived of time in a structural way, thinking of it as largely static. In this conception of time it formed an 'unalterable' distance 'between two points, the first and last persons in a line of agnatic [father-based] descent' (Evans-Pritchard 1940, 108) and an equally 'unalterable' distance between the mythical beginnings of the world and the present—so that the 'tree under which mankind came into being was still standing in Western Nuerland a few years ago' (1940, 108). Evans-Prichard's work shows that time is frequently multiple—differently understood and structured not just from culture to culture but also within cultures, e.g. ecological and structural time.

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Similar findings were made elsewhere. In the late 1950s, American anthropologist Clifford Geertz charted ideas of timelessness in Bali which, according to him, underpinned the Balinese calendar. Geertz examined a complex calendar which did not add up to a directional duration of years, as Western calendars would do. Instead, it featured timelessness comprising static cycles, important for religious rituals (Geertz [1966] 1973, 384). However, Geertz noted that Balinese timelessness did not prevent this predominantly Hinduist society from simultaneously noting chronological time such as exact dates, everyday occurrences, or recent historical events. Ritual timeliness coexisted with chronological or linear notions of time. Yet according to Geertz, this chronological time was of 'distinctly secondary importance' ([1966] 1973, 391, ft29) to the people he studied. It had emerged not 'from within' Balinese society but 'from without'; that is, from a developing national state 'whose centre of gravity lay in the cities of Java and Sumatra, where modern notions of time went hand in hand with ideas of a new nation and of youth culture' (409–10).

Ethnographic studies of time-reckoning in 1930s Sudan and 1950s Bali showcased the many ways in which groups of people can make sense of time. This led to a debate in anthropology on whether time, particularly in its practical, everyday dimensions, is universal or culturally specific (Bloch 1977; Leach 1961; Howe 1981; Gell 1992). As part of these debates, anthropologists' own temporal assumptions would eventually come under critique.

Temporal othering and global processes

By the 1980s, the relative autonomy of 'field sites' that many classical anthropological studies relied on came under question. Much anthropological work had constituted its subjects as 'the temporal Other' (Fabian 1983) to modernity. Ethnographies had explicitly or implicitly contrasted the lives of 'non-modern' peoples to that of the assumedly modern readers of anthropological work. Our lives responded to history books, calendars, and clocks, while 'their' lives were marked by timelessness and the falsely assumed absence of history (Wolf 1982). To remain 'objective'— true to the reality anthropology charted—scholarship had required distance as evidence that the subjects of study were 'independently constituted' (Marcus and Myers 1995, 2) from the people who studied them. Now, Anthropology had to rethink its own temporal assumptions. Anthropologist became acutely aware that history in fact included the impact of societies where they were coming from on societies that anthropologists explored. Emerging scholarship now had to account for existing relationships of power between anthropologists and the people they explored, which altered the social situations where anthropologists were present as participant observers. This evinced a 'critical ambivalence' of the discipline's desire for objectivity as anthropology faced itself as having been already a part of its own subjects of study' (Marcus and Myers 1995, 2).

Several concrete solutions were developed to minimise temporal biases in anthropological research. Firstly, 'fieldwork locations' (Gupta and Ferguson 1997) were no longer thought of as being unaffected by modernity, Western cultures, or capitalist economies. They were no longer deemed to be 'frozen in time' or

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profoundly temporally distinct from Western, modern time. Places where anthropologists conduct fieldwork now appeared not as relation-neutral dots on the map or locally-specific cultural settings but rather as themselves historically produced within broader relations such as capitalist demands for resources: from gold and fur to rubber and oil, from sugar and land to workers or slaves (Mintz 1985; Wolf 1982). Following this insight, ethnography became increasingly 'multi-sited' (Marcus 1995), stressing that anthropology in a globalised world is about always-already interconnected spaces between what takes place 'at home' (of anthropologists) and in 'the field', i.e. the home of their research subjects. This new stance came about through research such as anthropological histories of working-class diets in Britain, which explored how British diets were linked via the North Atlantic Triangle to the changing social organisation of labour in Caribbean plantations, where sugar was produced, and to West Africa, where slaves were traded in exchange for European weapons and other goods (Mintz 1985).

A second remedy to anthropology's temporal biases was the idea of 'multi-temporal ethnography' (Dalsgaard and Nielsen 2016), a research approach that considers the multiple temporalities of research on the one hand and the multiple temporalities of people that are being researched on the other. Ton Otto's (2016) ethnography on the Baluan Island in Papua New Guinea in the late 1980s gives a clear example of this. Otto was invited to a funeral, after which he decided to walk back to the cemetery to take photos of the grave. For him, time for the photos was part of the ethnographic chronicle of that day. For his hosts, however, returning to the grave so soon after the funeral was dangerous, as the spirits of the dead might return to the funeral site too. The shared time between the 'ethnographic present' (research temporalities, including fieldwork photography) overlaps with other forms of presence—such as Baluan temporalities of kinship renewal. Otto describes how his return made his research subjects suspicious of his ritual powers to deal with the haunting pasts of the spirits of the dead. This made Otto not just an observer but also a participant in the Baluan time that he observed.

Global processes affect the shared time between the anthropologists and the people they study. Fieldwork time was institutionalised as part of annual academic rhythms, with a year in the field becoming a norm within the PhD in anthropology. Current work pressures and neoliberal employment insecurity generate more fast-paced research, as well as 'patchwork ethnography' (Günel, Varma, and Watanabe 2020) where shorter fieldwork periods are spread over longer, 'punctuated' (Guyer 2007) academic time (Faubion and Marcus 2009; Marcus and Okely 2007). PhD fieldwork stops being a period of academic isolation between anthropology student and supervisor. Instead, it is broken up by continuous email exchanges, proposal writing, and joint 'improvising theory' (Cerwonka and Malkki 2007). At the same time, this happens amid 'profound temporal turbulences' in social and cultural settings that anthropologists explore—when (and because) anthropologists 'can no longer make assumptions about what is necessary for their method to produce rich ethnographic data—a temporally stable scene and subject of study' (Rees 2008, 7; Rabinow 2008). The anthropological field study also happens in the context of 'the unbearable slowness of being an

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anthropologist now' (Marcus 2003). One of Marcus' examples is the 1984 Bhopal gas tragedy caused by a chemical accident which attracted ethnographic research in the area from 1988, yet resulting in a book publication only in 2001 (Fortun 2001).

Globalised capitalism and temporal multiplicities within groups

As a part of global capitalism, the temporalities of people's bodies, social lives, and consumption are increasingly subsumed to the rhythms of the markets. The globalisation of sushi, for example, shows the market value of tuna depending on how quickly it can be flown to Japanese and global high-end consumers (Bestor 2008). Despite the appearance of sushi and sashimi as traditional Japanese cuisine, it is a mass capitalist invention made possible by international jumbo jets and, within Japan, trucks with highly efficient commercial refrigeration. This research into 'just in time production' (Harvey 1989) and more broadly the anthropology of globalisation confirms Karl Marx's insight that globalised capital and the market-driven industrial division of labour 'annihilates space by time' ([1857-1859] 1973, 535). Locations of production and consumption become increasingly closer to one another by sped-up travel.

Ethnographies such as Theodore Bestor's reveal homogenised timetabling on a global scale, which anthropologists and historians of science research as 'empires of time' (Aventi 1990; Galison 2004). In 1883, the adoption of Standard Railway Time for North America meant that the residents of Cornwall, Ontario, had to set their clocks back five minutes and forty-five seconds to achieve synchronicity with the rest of the rail network (Stein 2001). That same year, a convention of railroad executives in Chicago standardised five time zones for North America on the basis of British Greenwich Mean Time. This was a precursor to the International Meridian Conference in 1884 in Washington, DC, where the global scale of universal time was agreed upon to consist of 24 time zones, counted from the initial meridian for longitude passing through the Greenwich Royal Observatory, with a universal calendar based on a 24-hour day beginning at midnight in Greenwich (Stephens 1983; Ogle 2015; Kern 2003).

As such, a calendar is homogenised globally; it comes with the homogenisation of 'the money economy' which was demonstrated to come hand in hand with 'the universal diffusion of pocket watches' (Simmel [1903] 1950, 412), alongside the equally homogeneous and clear-cut boundaries between work and rest, busyness and idleness—including culturally new experiences of boredom, as in the case of Australian Aboriginal Walpiri after clock time was introduced to them (Musharbash 2007). Ethnographies have shown how quantitative time creates qualitative temporal relations. For instance, Karen Davies (1994) illustrates the tension between clock or linear time, which takes its cues from economic principles (wage labour, punctuality), and what she calls 'process time' or temporal relations oriented on respect, empathy, and affection for care-receivers in Swedish day nurseries. Michael Crawley explores Ethiopian long-distance runners who use digital self-tracking devices and identify themselves not as individuals competing in natural time but as parts of groups who expend energy synchronously and suffer together 'on the part of

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the self … [and] on behalf of others' as Ethiopian Orthodox Christians (2021, 662).

Standardised forms of reckoning time were imposed on different cultures and societies at different times (Aventi 1990; Stern 2012, 2021) and locations (Shresta 2015). Current research on this harkens back to the classical point made by sociologist Pitirim Sorokin that while temporal standards take the form of quantitative time, they coexist with 'full-blooded' sociocultural time within different social groups consisting of their own rhythms, pulsations, and conventions, including calendars. For example, the Harvard University calendar is quite different from the Boston working-class calendar 'in regard to holidays, beginning and the end of the "school" and factory year' (Sorokin 1943, 197).

Temporal hierarchies

The temporal multiplicities that we see playing out on a global scale filter down into people's daily lives as hierarchies. For example, in late August 1994, I was traveling in Central Siberia with Evenki hunters and reindeer herders to the Katonga village on a tributary of the Yenisei River that divides Western and Eastern Siberia. My co-travellers were to bring their children to boarding school by September 1 for the beginning of the school year (Ssorin-Chaikov 2017, 26). The trip lasted two days and began in the ecological time of hunting and herding, which was imprecise from the perspective of the school calendar. Travel itself, with the hunters, herders, and their children riding reindeer, depended on how difficult it was to cross rivers, and how far we were before it got dark. We ended up being several hours late for the start of school.

September 1 designates a 'day of knowledge' in the Russian national calendar. It marks the beginning of the school year that has quantitative dimensions marking hours and minutes for lessons, breaks between them, fixed times for meals—all that being very different from both the activities and daily schedule in reindeer herding and hunting camps. The 'day of knowledge' celebration involved a pupils' parade and calling out all new students by name, upon which they were to step forward from their line and loudly reply, 'Here!' When a pupil is absent, the head teacher would say, 'Ah, [he or she is still] in the forest', marking a hierarchical difference between the time of the state and that of people's ordinary lives. Hierarchy can be used to structure all aspects of temporal multiplicity, be it what goes after what ('sequencing'), exactly when things are done ('timing'), and through what visions of the past, present, and future activities should be interpreted (Munn 1992, 116).

Hierarchy can even govern more subtle temporal multiplicities. Anthropologist Nancy Munn, who studied the ritual trade of kula shells on the eastern coast of New Guinea during the second half of the twentieth century, showed that gift-giving generates its own time. As an 'action system', it produces temporal circles of cyclical obligations to give and reciprocate, and the line-like time of movement of canoes between islands. Munn argues that this inter-island movement and the circulation of shells among people 'was not in or through time and space, but that they form (structure) and constitute (create) the spacetime manifold in

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which they “go on”’ (1983, 280). Hierarchy plays a role here, as both obligations and canoe movements can be ‘relatively slow’ and difficult or, conversely, ‘speedy’ and easy. They depend on people’s navigational skills, correlating the social skills and power (‘fame’) of people who give and receive gifts.

In the Evenki case, moving from the forest to the village school was conceived during the Soviet era as symbolising ‘the great removal’ up another line-like process: the evolution from ‘primitive’ to ‘scientific’ communism (Bloch 2004; Ssorin-Chaikov 2003, 140–69). There are also two cyclical times at play here: that of the school calendar and that of the annual ecological movement in Siberian reindeer herding. Being punctual or not in quantitative time makes visible hierarchical arrangements of the disciplined and the undisciplined, village versus forest lifestyles, educated teachers versus ‘ignorant’ children—and ultimately the school teachers’ temporal distinctions of modern and non-modern.

When the movement is ‘relatively slow’ and difficult (we were late), school teachers were to wait for the children that were travelling with us. In this example, the teachers, i.e. people in power, were made to wait. Yet, according to recent ethnographies of waiting, waiting is usually something that people in more vulnerable structural positions must do, such as waiting in line for medical or social services or staying at a refugee camp as ‘a waiting zone’ outside of society (Auyero 2012; Janeja and Bandak 2018, 7; Jacobsen, Karlsen and Khosravi 2021). Ethnographies of time reveal waiting as a technology of governance where power is exercised through claims on other people’s time (Bourdieu 2000, 227–30). Under state socialism, making people queue became ubiquitous of not just chronic shortages of goods and ‘distributive power’ of sellers and the apparatchik (Verdery 1991), but of the ‘etatization of time' (Verdery 1996: 39-58), i.e. the increase of state control over it. However, in this Evenki case, power is exercised over people of authority such as teachers and state bureaucrats. Waiting for the Evenki to be on time is part of a longer waiting for them to move up developmental time—waiting for history to be made.

These examples highlight the hierarchical relations between different understandings of time. One kind of time, such as ecological time or waiting time, works to affirm or challenge or indeed frustrate other kinds of temporal organisation, such as calendar school time or the time of progress. Current anthropological work focuses on relations within temporal multiplicities, which are at least two: relations of change in which one kind of time is taken to be true and in doing so falsifying or replacing others, and relations of exchange, where temporal differences work as resources for each other.

Change and exchange

One notorious example for how one conception of time replaces another is the conflict between Christianity and Western science. Christian and Western scientific understandings of time are not completely opposed. The concept of singular, natural, linear time has one of its points of origin in Christianity, as a projection of Christ’s biography onto generational biblical time from Adam to Abraham (McCarthy 1997). Christian

teachings also underpin the term ‘temporality’ that refers to the condition of existing within a time that is itself temporary. ‘Temporality’ originally meant worldly or secular possessions or revenues of the church or clergy as opposed to God who is ‘eternal’, that is, timeless. The term ‘temporality’ became useful in anthropology to refer to the notions of time that themselves change historically and across cultures, highlighting time-related specificity (Guyer 2007; Dalsgaard and Nielsen 2016).

Today, natural time tends to claim truth over Christian time with regard to our understanding of when the world originated and of where time might lead. Natural time also states what is timeless, namely, the laws of nature. Changing from Christian to natural time is often conceived of as part of ‘progress’, as opposing these two conceptions of time is associated with broader intellectual and political questions of what constitutes scientific truth. The time of ‘predestination’ (Weber [1905] 1992) and of religiously sanctioned hierarchies (Kantorowicz 1997), differs from the Darwinist survival of the fittest. Conflicts between conceptions of time have been reflected in state ideologies and popular culture, including fiction (Beer 1980) and material artefacts. For example, the statue in picture 1 is a famous 1893 bronze cast made by German sculptor Hugo Rheinhold, entitled 'Ape with skull', about 30 centimetres high. On it, the biblical quote '*eritis sicut deus*' (‘you will be as gods’) warns us against eating from the Tree of Knowledge. It restates the temporality of the fall from Eden as that of ascent of Man. The inscription features in the open book of a pile of the works of Darwin, atop of which sits an ape contemplating a human skull and holding a drawing compass with one of its feet. The statue illustrates different conceptions of time in competition with one another.

Picture 1: Ape with skull, source: Wikipedia.

Moreover, it demonstrates how meanings of time are created by where such artefacts are placed. Copies of this bronze cast are on public display at institutions of biology and medicine such as the Boston Medical Library, the University of Edinburgh’s Institute of Evolutionary Biology, the Medical Library of Queen’s University, Canada, etc. Yet, the original holds pride of place in the Kremlin Museum's collection of Vladimir Lenin's belongings. The political leader of Soviet Russia had received it as a gift from a young American businessman, Armand Hammer, who visited him in 1921. As a gift, the figurine received an unintended yet well-fitting Marxist meaning: ‘You will be as gods’ was taken to refer to building a new and radically different society. The Museum catalogue highlights this gift as a sign of international ‘affection and respect… of the world’s *first* socialist state’ (emphasis added; Ssorin-Chaikov 2017, 2; 48)—a gift of gratitude following the gift of revolution.

Even secular conceptions of time are frequently opposed. Marxist perspectives of time have been challenged by capitalist understandings of it. Eastern European socialism lost out to capitalism, in part because it constituted a different temporal logic. Socialism placed frequent focus on longer, even historic

temporal scales, while capitalism placed a great premium on turnover times when producing goods, and remains obsessed with the constant compression of decision-making and other productive activities (Verdery 1996, 35). Socialism and capitalism also constituted different "chronotopes" i.e. unities of time and space specific to a particular narrative of who is ahead and who is history (Sosnina and Ssorin-Chaikov 2009). While capitalism always moves 'forward' in time towards neoliberalism, postsocialism can in some locations be seen to remain at least partially stuck in times of Soviet or imperial rule (Hann 2002; Müller 2019).

Thinking of time in terms of exchange highlights additional temporal aspects. Timing makes all the difference in exchange, not least when exchanging across different temporalities. Consider the following example where two kinds of time—those of the market and of gifts—work together. In 1921, the Volga River region and the Ural Mountains of Soviet Russia experienced a massive famine. Armand Hammer (mentioned above), an American graduate of Columbia Medical School, visited the country, bringing medical supplies for the relief of a typhus epidemic that accompanied the famine. In the Urals he was surprised to see stockpiles of various commodities such as fur and precious stones, which could be used to purchase grain internationally and alleviate hunger. Hammer was told that the time that it would take to trade these commodities would make the delivery of grain too late to save lives. He solved this by telegraphing the US to ask for credit to purchase grain and ship it to Russia. In addition to obtaining credit, Hammer conducted his trade at a time when the US market price for grain was at its lowest. Grain, a commodity for which he ultimately received payment from the Soviet authorities, immediately circulated as humanitarian aid. It became a gift given by the Soviet state with the help of US credit to alleviate starvation. In this example, time can be considered Hammer's main gift. He provided timely grain, obtained timely credit, and purchased grain at the best possible market time. As he arranged this gift of grain, the temporalities of markets and gifts complemented each other, and ultimately became intermeshed. Market and gift temporalities existed in parallel and were used as resources for one another. After Hammer arranged this, Lenin invited him for a visit, making him an offer to start American commercial operations in Soviet Russia, while Hammer gave him the above sculpture in return (Ssorin-Chaikov 2017, 39–42).

Exchange across temporalities also occurs in other contexts. Studying container ship navigation on the Hooghly river in India, Laura Bear (2014) charts how multiple temporalities of global capitalism and river ecology converge. Navigating container ships means dealing simultaneously with the ecological time of the highly unstable Hooghly river, with temporal demands of the international shipping trade, with the rhythms of bureaucratic decision making, and with the temporal affordances of predictive shipping technology. The mastery of ship navigation mediates between them, as river pilots attempt to reconcile ultimately incommensurable temporal rhythms through a slowly acquired art of navigation. Doing so is increasingly difficult in times of a cost-cutting public sector, which raises the risk of accidents. If a ship runs ashore, the accident may be understood in terms of the pilot's lack of experience, and result in individual punishment

and stigma. Yet, navigation is much more than an individual act. It is an attempt to balance the heterogenous times of capitalism (Bear 2016) with the temporalities of bureaucracy, infrastructure, and the natural world.

Other examples of the fruitful interplay of temporal multiplicities comes from studies of highly financialised environments where stockbrokers draw on global time differences between stock exchanges in, for example, Tokyo, Chicago, and London (Miyazaki 2003; Zaloom 2006). The same commodity—such as grain and its futures —may have its prices fluctuating differently in these different stock exchanges. Commodity futures can themselves be seen as different temporal states, the trade of which can drive markets up or lead to market crises (Stout 2016). Benjamin Franklin's dictum that 'time is money' (Weber [1905] 1992, 14-16) applies, as some ethnographies demonstrate, even to the temporal difference between offices within the same global company. When headquarters in the West go to work, regional offices in an Eastern time zone may face pressure, and hierarchical exchange relations between them may mean that work time in the East spills over to 'private' home time (Karasyeva and Momzikova 2019). Within many financialised companies, the speed of work becomes a commodity in and of itself, both in face-to-face exchange, in screen-based trade (Zaloom 2006), and in the work of management consultants, frequently hired to speed up corporate activity (Stein 2017; 2018). In these contexts, work speed drives upward mobility and constitutes the social capital of 'go-getters' in banks and other corporations (Chelcea 2015; Ho 2009).

Conclusion: Time and the Anthropocene

The anthropology of time has provided us with rich insight into the different ways in which humans make sense of time, into how temporal multiplicities coexist and compete with one another, and into how anthropological research must be aware of its own temporal assumptions. One of the futures of the anthropology of time is in addressing the ecological insecurities of the Anthropocene. For instance, Lukas Ley's recent ethnography charts rising ocean levels that affect the urban landscape in Semarang, central Java, where housing and urban infrastructure are being built on 'borrowed time' (Ley 2021). A similarly temporal sense of urgency to 'think like a climate' explores new motivations to use energy efficient housing which may shield its inhabitants from a climate-insecure future (Knox 2020). The Anthropocene compels us to think from the point of view of 'deep time' (Irvine 2020) that refers to long-term temporality of Earth as a planet. We need to compare conflicting temporal scales of geological time and the temporal dangers of capitalist extraction, production, and consumption (Chakrabarty 2018; Povinelli 2016). Capitalist time frequently works through the 'evacuation of the near future' (Guyer 2007) which includes creating incentives to consume now and to generate new forms of debt that one might repay later, but which one might also try to refinance and defer perpetually. The risks of human impact on the climate signal that this 'evacuation of the near future' may itself be evacuated. The Anthropocene invites 'critical thinking …

across some of the divisions that existed before' (Haraway at al. 2016, 541; Moore 2016; Mathews 2020; Chakrabarty 2018). However, it also foregrounds its own secular and singular and true meaning of time over other temporal multiplicities if they are used to deny the risks of ongoing climate change. The possibility of human decline challenges us to consider not just the time of our lifespans but also the greater finality of human life and human time, no matter how it is culturally conceived.

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