

Introduction: Timely Matters

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ABSTRACT

In this introduction to our special collection, we discuss the theoretical forebears that inform our guiding concept of “material temporalities” with an eye to the collection’s impact on contemporary debates in anthropology and beyond. To begin, we situate “material temporalities” in relation to the temporal and material turns that have reoriented anthropology in recent years. In particular, we emphasize the dual property of material temporalities in offering affordances to and constituting forms of recalcitrance for human actors. Following this, we discuss the two orders of time, human and nonhuman, that intersect in the assemblages of material temporalities, as well as a number of key inspirations for our theorization of material temporalities—Walter Benjamin’s notion of messianic time and Michel Foucault’s concept of heterochrony, specifically. This discussion of human and nonhuman times supports our critique of “clock time” and its errant aspiration to an objective material basis for temporality. Following this, we offer an overview of both recent and longstanding anthropological engagements with temporality and historicity, as well as a summary of recent media studies perspectives on time and materiality, which mount a more radical intervention and critique than most anthropological arguments. We then review anthropological debates over affect and materiality in order to argue for the centrality of temporality and historicity to affective matters. Finally, we summarize the collection’s three major thematic

clusters—virtuality and latency, material extensions of phenomenological time, and material futures—with reference to the specific contributions. [Keywords: temporality, materiality, affordance, recalcitrance, affect, heterochrony, latency, historicity, futurity]

Introduction

Time is an infamously difficult concept to pin down. It can stop, fly, run short, drag on. Its material manifestations are as various as its metaphorical movements. The human desire for temporality to be expressed materially is ubiquitous, if not universal. Yet, like other persistent concerns of anthropological scrutiny, this ubiquity necessarily takes shape through multiplicity—just as there is no Culture or Language as such, only specific cultures and languages, Time per force exists as a plurality of specific sociocultural times. Sociocultural times, in turn, are mediated by materials in their myriad forms.

Since the turn of the millennium, both a “temporal turn” and a “material turn” have productively upended anthropology. The temporal turn has illuminated the multiple “regimes of historicity” (Hartog 2016, Palmié and Stewart 2016, Walton 2019) that undergird distinct sociocultural contexts and anthropological engagements with them, while also emphasizing the temporal bases and entailments of labor within capitalism (Bear 2016). In tandem with the ascendancy of STS (Science and Technology Studies) in a Latourian vein (Latour 2006), the material turn has foregrounded the agency of objects (Miller 2005, Henare et. al. 2007) and the “vibrancy” of matter and material potentialities (Bennett 2010), especially as crucibles for affect and affective politics (Massumi 2002, Thrift 2008, Mazzarella 2009). However, despite the parallel trajectories of these two paradigm-shifting turns, recent anthropological research that integrates temporal and material analyses remains rare, outside of several inspiring exceptions (e.g., Navaro-Yashin 2009, 2012; Dawdy 2016).

Our overarching aim in this special issue, “Material Temporalities,” is to rectify this lacuna by explicitly synthesizing time and materiality in a unified conceptual and ethnographic approach. We introduce the concept of “material temporalities” as the lodestar for a capacious anthropological vantage on sociocultural mediations of time and matter. By melding

materiality and temporality in a single analytical lens, we consider efforts to give the abstraction of time material weight and stability, to objectify it, to render it persuasive and to make ephemeral temporal experiences endure beyond the immediacy of phenomenological being. These are moments in which materials are called upon for sociocultural purposes to reign in time and to give it substance. However, just as often, at the intersection of the material and temporal, it is materiality that intervenes and shakes up the ordered temporal schemas that cultural regimes attempt to produce and reinforce.

Panoramicly, our collection takes shape against the backdrop of regnant posthumanism in anthropology and its sibling disciplines (Descola 2013, Kipnis 2015), and seeks productive interventions in relation to principal posthumanist debates. Unlike more radical streams of anthropological monism, the concept of “material temporalities”—as its formulation suggests—retains an appreciation for the heuristic advantages of distinction. In particular, the distinction between human and nonhuman times animates and sets the tenor for our collection. On the other hand, the methodological advantageousness of distinctions does not entail an ontological or epistemological commitment to dualism. In the spirit of posthumanism, our contributions investigate and illuminate deeply contextual assemblages of human and nonhuman times and materiality, which ineluctably mediate one another. More specifically, our approach to materiality insists on bypassing the familiar dualities that corral the material within a circumscribed domain concomitantly attempt to “purify” (Latour 1993, Keane 2007) a residual realm of the human. Materiality spans human subjects and nonhuman objects, and configures both human and nonhuman times. In this sense, our analyses are material “all the way down.”

In pursuit of the thoroughgoing materiality of temporality, we rely on a Janus-faced concept of affordances and recalcitrance. As our contributions illustrate, material objects and assemblages afford humans the possibility to shape pasts and futures differently. In this, we are influenced by research on affordances, first formulated in psychology as the combination of objective features of an environment and a living being’s particular perspective on the world (Gibson 1979), and later taken up in anthropology, reformulated as relating to social interactions and situations rather than nonhuman material environments (e.g., Keane 2014). Material temporalities come about by virtue of actors’ mobilizing and navigating the affordances of material things, processes, and assemblages (Robb 2020).

Conversely, materiality necessarily circumscribes the horizons of human action through a plethora of obstacles and limitations, what we gloss as recalcitrance. Material things interrupt or bog down cosmological projections of collective temporality and spin actors off on divergent temporal perceptions. Affordances and recalcitrance, thus, constitute the dialectical faces of the coin of material temporalities—they mediate and reinforce each other.

The material temporalities that we theorize and elucidate in this collection bear dramatic witness to this constitutive tension between affordance and recalcitrance. In what follows, we examine how a variety of things—photographs of Kurdish martyrs, household clutter in the United States, mediated representations of a Shi'i historical tragedy in Mumbai, imagined Armenian treasure in Turkey, and speculative museums of urban futures in China—bend, hold back, extend, and distend time, often in ways that are beyond the full control and cognizance of human actors. A closer examination of the multiple conceptual genealogies of “material temporalities,” leading up to the recent material and temporal turns, will help to clear the ground for these ethnographic interventions.

On the Two Orders of Time and their Mediations

Anthropological engagements with time and materiality have achieved articulation against the backdrop of longstanding philosophical debates over the complex, multivalent entanglements between the temporal and the material. Most fundamentally, authors advocating a “new materialism” have argued for the irreducible materiality of the myriad forces of multiplicity and change that undergird actual phenomena of any kind. Gilbert Simondon’s writings on transduction as the emergence of entities out of an inchoate “pre-individual” milieu, such as the growth of a crystal out of a liquid, in which energetic interaction results in the “individuation” of new entities, are an early example of this line of argument (Simondon 1992[1964]). More recently, Jane Bennett’s notion of “vibrant matter” (2010) has become a familiar placeholder for what, following Deleuze (1994[1968]), contemporary monist metaphysical philosophy conceptualizes as the virtual: the interconnected forces behind the emergence of the actual, both of which are equally real (Deleuze 1994[1968]). In philosophies of time, such virtual matter in motion closely aligns with the

non-chronous, purely qualitative multiplicity that Bergson called *la durée* (Bergson 1990[1896]).

Following other anthropologists (for example, Hodges 2008), we take the virtuality of *la durée* as the ground from which actual, qualified modes of time emerge.¹ While both are material, the latter are more immediately connected to our ethnographic analyses. We comprehend these qualified times as constellations of human and nonhuman times: human temporalities that articulate relations of past, present, and future, and nonhuman temporalities based on causalities that produce relationships of before and after independent from human times.

This distinction between human and nonhuman times closely aligns with the established difference in the philosophy of time, introduced by J. M. E. McTaggart, between “A-series” time, or human experiences of time as co-constituting past, present, and future, and nonhuman “B-series” time, usually involving relationships of before and after based on sheer causality (McTaggart 1908). The distinction is important because it highlights the indifference of nonhuman times, such as that of Cretaceous sediments deposited on top of Jurassic sediments, to human subjectivity or even the existence of humans as such. Nonhuman time includes the relentless exposure to the elements that turns boulders into sand, or the earth traveling around the sun, but also a billiard ball that once set in motion ricochets off another and slips into the corner pocket. The ball enters the pocket *after* the ricochet regardless of whether its motion was perceived and qualified temporally by human perception. However, the shooter projects *human time* onto the future of the ball when they aim their cue to produce this successful ricochet.

While, generally speaking, both of these kinds of actual temporal relationships partake in the materiality of their virtual ground of emergence—the materiality of *la durée*—they are also material in more obvious and specific ways. Human time consciousness is embodied, and technical extensions are an integral part of it, while nonhuman times come about through the workings and causality of material forces. Our investigation of material temporalities at the intersection of human and nonhuman times should not be misunderstood as based on a dualist opposition between two kinds of actual time. Nor is it a result of the convergence between a putatively immaterial human time-consciousness and nonhuman material things, forces, and processes. Like its ultimate ground in the virtuality of *la durée*, time in both of these actual modalities is irreducibly material. The

close intertwining of these two kinds of actual time is crucial. Located at their intersection, material temporalities not only draw attention to how human actors navigate and manipulate nonhuman times and processes to particular human ends. They also point to instances where the nonhuman enters, shapes, and reconfigures human temporalities, illuminating their practical inseparability.

Accordingly, the major task of the anthropology of material temporalities is to interrogate the variety of collisions and syntheses between the human and nonhuman orders of time. Several major theorists of temporality inspire this interrogation. Walter Benjamin's notion of revolutionary, "messianic time" (1968:261)—the *kairos* or *Jetztzeit* that upends the decimated, homogeneous time of both positivist historicism and nationalism—animates a mode of historiography that attends to the affordances and recalcitrance of the present in its material plenitude. It is no coincidence that Benjamin dubbed this revolutionary approach "materialistic historiography" (Benjamin 1968:262). Nor must one subscribe fully to the Marxian gospel to appreciate the dialectic of human and nonhuman times that infuses *Jetztzeit*. Taking inspiration from Benjamin, we propose that material temporalities inculcate "moments of danger" (1968:255) that reorient relationships among multiple pasts and futures in the present. The concept of *kairos* indicates the qualitative differentiation of time—an *appropriate* time—as opposed to a measurable moment fixed on a calendar. As Newell suggests in this collection, it implies its opposite: *anti-kairos*, or the inappropriate moment. It is precisely in a reading of the material signs in one's environment that actors interpret whether the right moment has arrived, and it is often things themselves that announce such a temporal readiness or recalcitrance. That said, we do not limit our consideration of material temporalities to such moments of "messianic" fullness or in/appropriateness.² The temporalities of materials must also include archival materialities—forms of material duration and duress (Stoler 2016)—and technological materialities—forms of material prefiguration.

Benjamin's work on material spaces and objects, often referred to as the "dialectical image," is another inspiration for our approach to material temporality: "It's not that what is past casts its light on what is present, or what is present its light on what is past; rather, image is that wherein what has been comes together in a flash with the now to form a constellation" (Benjamin 1999:462). Benjamin writes of the streets of Paris as so many temporal juxtapositions with the potential for revolutionary release, such

that an idle perambulation becomes a journey through history. He cites Ferdinand Lion:

The most heterogenous temporal elements thus coexist in the city. If we step from an eighteenth-century house into one from the sixteenth century, we tumble down the slope of time. Right next door stands a Gothic church, and we sink to the depths. A few steps farther, we are in a street from out of the early years of Bismarck's rule... and once again climbing the mountains of time. Whoever sets foot in a city feels caught up as in a web of dreams, where the most remote past is linked to the events of today. (Benjamin 1968:435)

Yet another key forebear of the concept of material temporalities is Michel Foucault's adumbration of "heterochronies," modeled on, and entangled with, the more familiar notion of heterotopia (Foucault 1984). Like Benjamin's messianic time, heterochronies—literally "other times"—unsettle and disrupt hegemonic social time. Just as heterotopias exist in subversive tension with abstract social space, heterochronies contrast to dominant social time. Furthermore, because heterotopias and heterochronies are "linked" to each other (Foucault 1984:6; see also Walton 2022), the concept of heterochrony foregrounds both the spatial-material mediation of time and the temporal mediation of space and materiality. Heterochronies constitute remarkable syntheses and dissonances between human and nonhuman times.

To study material temporalities is to examine the ways specific material things are ensconced in temporality, often providing social actors passage into alternative temporalities where the past lives again, where the future can be touched, where the distinctions between before and after become blurred. Alternatively, an object's unrelenting presence can often jut its temporal duration into the present, its elongated past and future all too visible to those in its affective field, providing the material fodder with which to question the dominant temporal frame, as in the haunting ruins and collected possessions in Turkish Cyprus that Yael Navaro-Yashin considers, which continually recall a past when an ethnically cleansed social space was inhabited by others (Navaro-Yashin 2012).

Troubles with Clock Time

Messianic time, heterochrony, and the sibling concepts that animate material temporalities are not neutral in relation to competing visions of time. On the contrary, material temporalities unsettle a deeply entrenched image of time, closely linked to capitalist modernity and its constitutive forms of production, that has achieved hegemony and collective coordination across the globe. For shorthand, we call this “clock time.” Certainly, not all human actors grant the same degree of importance to the elaborate conventions of “clock time” and its insistent, definitive conceit that temporality is simply, objectively material, and “scientific.” Nevertheless, as a dominant temporal ideology and ensemble of temporal practices, “clock time” colonizes, saturates, and reorients disparate material temporalities.³ As Bergson pointed out early on (1990[1912]), the phenomenological experience of time does not resemble linear temporality at all. Ironically, it is precisely through the coordinated construction of material artifacts that render artificially “homogenous, empty time” visible that a conventional understanding of time is powerfully shaped as cognitive practice.

Although “clock time” is ostensibly based upon natural, astronomical rhythms and therefore seems to presuppose an “objective” material basis, this objective grounding is an illusion. Because astronomical cycles are not in fact, regular (the earth’s rate of rotation, for example, is decelerating at an unpredictable rate), diurnal rhythms and the orbit of the earth around the sun do not allow for accurate scientific measurement. Therefore, scientific time has been reckoned on the basis of atomic clocks since the 13th General Conference on Weights and Measures in 1967 (Birth 2012:38). Nor is Western linear time seamlessly rational: the Working Party 7A of the International Telecommunication Union’s Radiocommunication Sector (ITU-R) is tasked with adding leap seconds every so often in order to prevent clock time from becoming unmoored from its astronomical origins (Birth 2012:156-158). For over 20 years, an internal debate has gripped the ITU-R over the continuation of the practice of leap seconds, which disrupts the continuity of telecommunications and navigation. Despite continued opposition from astronomers and legal professionals (legal codes often reference the movement of heavenly bodies), as of November 2022 the International Bureau of Weights and Measures has declared the end of leap seconds in 2035, condemning humanity to a future without its material referent.⁴ Thus, “the common cultural attribution of what clocks indicate – the pragmatic meaning assigned to them, or the interpretant in

Peirce's terms—refers to an idea that the clock is tied to the position of the sun in the sky. From a semiotic perspective, the dominant cultural interpretation of clocks fosters a delusion" (Birth 2012:38).

This awkward solution to the dilemmas of clock time serves as an analogy for material temporality in general. Our sense of time continuously seeks material measurement and objectification, yet materiality stubbornly refuses to adapt itself to human temporal concepts. Time is too abstract to do without material anchors, yet material temporal processes are heterogeneous, unpredictable, and affectively forceful.

Anthropology and its Times

While matters of time have seized anthropology and its annexes in recent years (Bear 2016, Palmié and Stewart 2016, Ringel 2016, Bryant and Knight 2019), temporality has long featured in anthropological arguments, and generations of anthropologists have illuminated temporal practices that multiply, interrupt, and disrupt the imposed uniformities of 'clock time' (e.g., Evans-Pritchard 1940, Fortes 1970, Leach 1971, Hubert 1999). In the past, however, time most often served as the "handmaiden to other anthropological frames...[as] the topic of time frequently fragments into all the other dimensions and topics anthropologists deal with in the social world" (Munn 1992:93). Anthropologists were primarily interested in the alterity of conceptions of time in the societies they studied relative to those dominant in North Atlantic modernity, and the colonial impositions of the latter upon "the Rest" (Sahlins 1976, Wolf 1982, Trouillot 1995, Fabian 2014). This resulted in an awareness of the internal heterochronies of societies anthropologists studied—Evans-Pritchard's (1940) investigations of Nuer time as the interplay between ecological-cyclical times and specific tasks, as well as time reckoned through kinship and age sets, is an important early example. The primary anthropological focus was on conceptions of time that significantly depart from the linear, "empty homogeneous" time, theorized first by Benjamin (1968) and most thoroughly by Benedict Anderson (1983), which became so central to modern capitalism and nationhood. This interest was shared by approaches as different as the ethnolinguistic investigation into Hopi notions of time by Benjamin Lee Whorf (1956), which examined the subtle pressure that grammatical categories exert on habitual Hopi speculations on time, and the interpretive anthropology of Clifford Geertz (1973), which argued that the Balinese

calendar and the frequent use of teknonyms in address was evidence for a Balinese tendency towards “de-temporalization,” or the downplaying of linear time. Leach (1971) even took on the heterochronies of “modern” societies by demonstrating that a ritual form of cyclical time continued to overlap with calendrical time, structuring our festival times in ritual phases à la van Gennep.

The predominant focus on time as ideation began to be seriously challenged by the rise of practice theory in the 1970s. Pierre Bourdieu’s studies (1977) of Kabyle peasants’ strategies of gift exchange and other forms of social action that bring materiality into play became a classic example of how objects and nonhuman processes can be manipulated and skillfully integrated into temporal strategies for action. Building on the insights of practice theory, Nancy Munn (1992:116) called on anthropologists to study time comparatively as “temporalization,” the social product of interaction and exchange in contested social fields.⁵

This practice-oriented approach to “temporalizing” formulated by Munn has more recently been expanded by Laura Bear (2014) to focus on the relationship between time and labor within capitalism, allowing her to build a complex, open-ended concept of “modern time,” whose dominant tropes inflect most anthropological research into temporality. Despite these productive inroads, Bear explicitly privileges human agency in relationship to time to the exclusion of material agency, arguing for a concept of “labor in/of time” in modern capitalist worlds defined as “forms of skillful making enacted within timescapes, which bring social worlds into being and link them to nonhuman processes” (2016:489-490). We share this interest in the agentive struggle and making that is central to human engagement with the affordances of nonhuman times and processes. Nevertheless, in this collection, we interrogate the limits of the notion of “time-tricking” (Bear 2016:496, Ringel 2016) that serves as a shorthand for such skillful integration of a diversity of nonhuman times into human time with its mutually constitutive pasts, presents, and futures. In other words, our approach places greater stress on the obstinacy, recalcitrance, and temporal agency of material objects and apparatuses that cannot be fully exhausted by discourse, poesis, or other meaningful human practices. We take seriously the power of nonhuman material times that often resist such skillful making, thus, making a mockery of agentive time-tricking because of their recalcitrance and sheer ability to invade and reconfigure human experiences of time.

Mediating Temporalities

Perhaps unsurprisingly, the most radical interventions in the study of material temporalities have not come out of anthropology, which remains deeply grounded in the exploration of the great variety of sociocultural renderings of time, with an overwhelming focus on human actors. Instead, a provocative challenge has emerged from recent work in media studies and media philosophy on 21st century digital media. As several of our contributions testify, media techniques such as writing,⁶ as well as 19th and 20th century media centered on the reproduction of sounds and images, function as technical extensions of memory or “tertiary retentions” (Stiegler 1998), in distinction from Husserl’s “primary retention,” which is an integral part of the act of perception (e.g., the notes I have just heard while listening to a melody, trying to grasp its phrasing), and “secondary retention” (that which is remembered through imagination, e.g., remembering a melody played yesterday) (Husserl 1964). It is tempting to transpose this insight about the technical co-constitution of time consciousness onto what humans take to be the future. Scholars such as Yuk Hui, Mark B.N. Hansen and Erich Hörl have argued that 21st century digital media generate “tertiary protentions” (Hui 2021), or automated processes of “feed-forward” (Hansen 2015) steered by nonhuman actors that produce protentions, often in the form of nudges and recommendations, without having to pass through human subjects, operating at speeds and intervals radically below the threshold of non-enhanced human perception. Driven by profiles generated from vast amounts of constantly actualized data, such algorithmic suggestion produces a technical preemption and colonization of what used to be known as the future, as the operational speeds at which such nonhuman actors operate enable them to modulate perception at a prior, affective, or virtual level before sensorial awareness has actualized and become available to human consciousness (Hansen 2015). The implication is that digitally enabled automated processes evacuate the future as a previously human preserve of individual or collective anticipation and imagination, and therefore call into question any human-centered anthropology of the future (for example, Bryant and Knight 2019).

Our contributions do not directly address the challenge formulated by these authors, who seek to demonstrate that networked digital 21st century media and their “hardwired temporalities” (Volmar and Stine 2021) not only massively intervene in human temporalities but are even able to

subvert and preempt aspects of it, notably those related to the future. Yet, all of the studies collected in this special section are based on ethnographic contexts where such 21st century digital media are omnipresent. They strongly suggest that entanglement with networked digital media in which nonhuman actors play such crucial roles does not necessarily displace or even weaken social imaginaries, fears, and hopes of collectively imagined futures. Those of our studies that address 19th and 20th century media, such as photography or video, even demonstrate the far-reaching domestication of these media into, for example, a centuries-old religio-political paradigm of martyrdom centrally concerned with socially remembered pasts and anticipated futures. Our contributions show that 21st century digital media and the technically modulated times they produce in and for humans exist parallel to a great variety of socio-culturally produced human times.

The capabilities of networked digital media evolve continuously. In their distribution and ubiquity such media networks have become progressively “environmental,” producing an “environmental time” that shapes and captures the sensory continuum of humans (Hörl 2021). This enables them not only to constantly generate automated protentions and projections, but even to effect anticipatory adjustments of particular environments, such as homes and workplaces. Whether this will eventually result in the dominance of certain kinds of technical preemption of human temporalities, eliminating varieties of the future as claimed in particular strands of media theory, remains an open question. Nor is just the future at stake; the capacity for ordinary individuals to document their pasts and the uploading of those pasts into massive cloud archives raises crucial questions about new mediations of memory.

Time for Affect

From a markedly different vantage than that of recent media studies and its neo-phenomenological approach, the recent anthropological shibboleth of affect offers a powerful model of the relationship between sociocultural mediation and human sensorial experience and embodiment. It is no coincidence that the “affective turn” has paralleled the material turn in anthropology. Like materiality, affect provides a grammar for comprehending movements between virtual collectivity and actual sociality that destabilizes a host of liberal-humanist motifs—reason, autonomy, and freedom.

In William Mazzarella's apt phrasing, "thinking affect points us toward a terrain that is presubjective without being presocial" (2009:291). Indeed, one of the alluring aspects of affect for our understanding of materiality is that, in Brian Massumi's framing (2002), affect constitutes the corporeal mind, the body's response to its environment *avant la lettre* of conscious symbolic self-representation. In this way, non-conscious bodily reflection becomes part of collective processes, and thus part of how time is felt and sensed before (and after) it is constructed in representation.

In contrast to media studies' emphasis on protentions and retentions, affect theory has largely remained indifferent to questions of temporality. To some degree, this indifference reflects the origins of the affective turn in a Deleuzian anthropology of radical immanence, pioneered by Massumi (*ibid.*), which jettisons questions of both temporality and mediation.⁷ Recent efforts to situate affect in a broader field of semiotic, sociocultural, and political mediation (Mazzarella 2017, Newell 2018) hold out the promise of egress from the navel-gazing cul-de-sac of immanentist anthropological vitalism. More concretely, Yael-Navaro Yashin (2009, 2012) and Shannon Dawdy (2016) have evocatively explored how ruins, dilapidated buildings, the "patinas" that accrue on antique objects, and other aspects of the built environment and material culture constitute affective relationships to the past in the present (see also Walton 2019). The contributions to a sibling volume to our collection, titled "Material Afterlives" (Walton and İlengiz 2022), extend this perspective on affective relationships to the past to encompass an array of heterochronic contexts, from memorial graveyards and eccentric monuments to sepia-colored post-imperial photograph albums and the posthumous domestic objects that remain in homes following their residents' deaths.⁸

These anthropological explorations resonate strongly with a major strand of memory studies, inspired by Pierre Nora's concept of *lieux de mémoire* (1989), which foregrounds how specific spaces and places coordinate collective memories. Similarly, in this collection objects often create affective responses that transport people into heterochronic spaces, such as the mediated representations of Karbala through which viewers can relive and witness the trauma and piety of their people's historical suffering (Eisenlohr, this issue). As Massumi argues (2002), the sensorial materiality of things serves as a sounding board from which corporeal reaction precedes conscious reasoning and cultural qualification. That is, by the time one has made sense of something consciously, it has already

been processed unconsciously and affectively. To extend such feeling to temporality is to suggest that material things often generate heterodox temporal awareness, connecting social actors to a sense of time with unconventional cultural potential. Mazzarella describes something similar in his concept of the mimetic archive: “that layering—in our senses, in the objects and images we live with—of another history, a history, mimetically available to us, that can flash up a moment of resonant encounter” (2017:125).

As a complement and supplement to affect theory, material temporalities accord with the imperative to historicize specific formations of affect. Even more strongly, material temporalities invite an approach to affect as a temporal formation and mediation, replete with the affordances and modes of recalcitrance that such mediation entails. While the distinctions between affect and material temporalities should not be collapsed—the former primarily reorients questions of subjectivity, embodiment, and semiotic mediation, while the latter, as we have emphasized, is a matter of the mediation of distinct orders of time—the elective affinities between the two concepts are welcome provocations to further research.

On Materials Ahead

All of the studies brought together in this special collection address the multiple ways in which human actors draw on the affordances and navigate the recalcitrance of material things, processes, and assemblages. These objects of affordance and recalcitrance include gold and other buried treasure, household objects, media artifacts and apparatuses, and three-dimensional city models. In doing so, the essays contend with the possibilities and constraints of material temporalities for the social projects they are engaged in. Our studies cluster around three key themes:

Virtuality and latency:

All material temporalities involve movements and mediations between the virtual and the actual. A host of specific material temporalities attest to the vibrancy of such movements and mediations. Sasha Newell explores how the duration (Bergson 1990[1896]) of clutter mounding in public spaces of the home comprises an accumulation of virtuality that is inhabited by the latent potential for actualization in multiple social, affective, and material forms. In distinct but parallel ways, Patrick Eisenlohr and Marlene

Schäfers delineate how, on the basis of the temporal figure of latency, material media—video recordings of collective Shi’a mourning and photographs of Kurdish martyrs—afford actualizations of virtual collective pasts and potential futures. Finally, Anoush Suni demonstrates how treasure buried in a post-genocidal landscape constitutes the material afterlife (Walton and İlengiz 2022) of collective violence that becomes startlingly actualized when unearthed.

Material extensions of phenomenological time:

Drawing on phenomenological accounts of temporality (Husserl 1964, Ricoeur 2004), our collection takes the play of retentions and protentions to be the warp and woof of human experience of time. While this “primary” human temporality is materially-mediated (because embodied), materiality also affords “secondary” and “tertiary” extensions of phenomenological time. The chief mechanisms of such temporal extension are objects and media technologies. Our essays bear witness to the many ways in which the nonhuman times of objects and material assemblages are “enfolded” into human temporalities of past, present, and future. Here, objects serve as portals towards other times—sometimes evoking memories but sometimes serving as material witnesses to a past one never experienced oneself. A historical photo directly indexes a reality for which the viewer was not yet present (in nonhuman temporal terms, they came *after*), but it provides virtual access to a moment that would otherwise be gone, giving it an out-of-time endurance. A soldier’s life and the value of their death carry on in their photographs as a call to future action. A video representation of Karbala makes the ritual recreation of the past present in its immediacy to the viewer. Other objects serve to maintain the possibility of a future, whether by persuading government officials such a future is possible through a scale model of a city yet to be, or by helping a homeowner to believe that they will indeed return to that craft project they left aside years ago in the attic, or by lying in wait underneath the dirt, as in the Armenian treasure that at once inspires hopes of future riches while also serving as a unique reminder of a pluralistic past in which Armenians shared a now-eviscerated social space. All become folded into the operations of protention and retention that characterize first-order human temporality.

Material futures:

In contrast to more familiar anthropological tussles with history and the past, our collection takes the call for an “anthropology of the future” (Bryant and Knight 2019) seriously. Explicit concern for the material preconditions for future sociocultural and political transformations dates back to Marx and Engels—minimally—yet theorizations of material futurities remain vanishingly rare. Our contributors’ shared emphasis on the affordances of material temporalities tills this neglected theoretical ground. Leksa Lee’s account of city “museums” in contemporary China, speculative city models which materialize virtual urban futures that will likely never come about in hopes of securing investment in the present, deserves special mention in this context. More generally, each of the essays broach the themes of virtuality, materiality, and futurity. Material objects often exceed collective temporal regimes and simultaneously invite collisions of past and future reflections, allowing for the emergence of new spatiotemporal configurations. Clutter, treasure troves, photographs and other media objects all vibrate with latent potentials for future transformations, whether redemptive, revolutionary, or retributive.

* * *

Time can also be up—as it is now. The materials of our ethnographic intervention await appraisal. They afford visions of unacknowledged pasts and possible futures. So, too, will they remain recalcitrant—such is the fate of any mediation. Time, they say, will tell. ■

Endnotes:

¹Gilles Deleuze provided a classic account of how human temporalities of past, present, and future arise from virtuality through what he called the three syntheses of time (Deleuze 1994 [1968]).

²See Eisenlohr (2006:238-265, 2015) for another anthropological uptake of Benjamin’s messianic time, examining resonances of messianic time with the co-presence of ancestors from a “homeland” generated through ritual and linguistic performance in a context of diasporization.

³The concept of material temporalities invites an inquiry into the relationship between “clock time,” understood as the signature temporality of capitalist modernity, and “presentism,” which François Hartog (2015) interrogates as the dominant mode of historicity—relating to the past—today.

⁴It is worth noting that in the heady days of the French Revolution there was an earlier effort to separate time from materiality entirely, as both the hours of the day and the annual calendar were to be converted to

the decimal system, divided into rational units of ten subdivided infinitely by further units of ten. Although new clocks were built to match this new temporal regime, it was quickly abandoned after only two years, attesting to the difficulty of wresting human time from the material processes upon which it is modeled (Birth 2012).

⁵In her ethnography of Gawa (1986), Munn examines how various practices are oriented around value production, value being tightly linked to the expansion of intersubjective spacetime. The kula was thus the epitome of valuable activity, because it worked to carry the names of social actors far beyond their own spatial or temporal contexts, circulating around the islands to places Gawans would never reach and being repeated in the histories of famous kula objects long after their death. Indeed valuables were condensed spacetime, containing within them the arc of their former and future circulations as well as the names of multitudes of people who had exchanged them. Kula becomes a heterochronopia, a virtual spacetime outside of normal spatial and temporal modalities.

⁶Brinkley Messick's groundbreaking study (1993) of writing as a technology that introduces new forms of collectivity, discipline, and historicity in 19th century Yemen is an important exception to anthropological disregard for material-technological temporalities, though see also Jack Goody and Ian Watt's important earlier work (1963) on writing and historicity.

⁷The literature on affect inspired by Massumi does address time to a certain extent, though in a frame rather different than our own. Massumi's argument about affect hinges on the "half-second delay" (2002:195) that sociocultural mediation and qualification is subject to and that enables affect to do its work. The notion of affect is hard to separate from the idea of microtemporal intervention and preemption. Massumi (2002:195) also makes reference to Bergson on time, and in some respects the literature on new materialities earlier mentioned in our introduction and the literature on affect are coextensive. See also the volume *Timing of Affect: Epistemologies of Affection* (Angerer, Bösel, and Ott 2014), including a chapter by Massumi.

⁸A brief genealogy of this collection and its origins is apposite in this context. Our conversations began on the basis of a double panel at the 2018 American Anthropological Association meetings titled "Material Temporalities." Many of the contributors to this panel reconvened in Göttingen, Germany, together with several new interlocutors, to expand and refine our inquiries in January 2020. Ultimately, most of the presentations from this second workshop were channeled into two special issues: "Material Afterlives," published by the *Journal of Material Culture* in late 2022 (Volume 27, Issue 4), and this collection.

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Foreign Language Translations:

Timely Matters

[**Keynotes:** temporality, materiality, affordance, recalcitrance, affect, heterochrony, latency, historicity, futurity]

A Oportunidade Importa

[**Palavras-chave:** temporalidade, materialidade, acessibilidade, recalcitrância, efeito, heterocronia, latência, historicidade, futuramente]

Актуальные вопросы

[**Ключевые слова:** временность, материальность, аффорданс, упорство, аффект, гетерохрония, латентность, историчность]

及时的事项

[**关键词:** 时间性, 物质性, 可供性, 抗拒, 情感, 异时性, 延迟, 历史性, 未来感]

الوقت المناسب

كلمات البحث: الزمنية، المادية، التحمل، العناد، التأثر، غيرالتجانسية، الكمون، التاريخية، المستقبلي