RHYTHM AND SIGNIFICATION: TEMPORALITIES OF MUSICAL AND SOCIAL MEANING

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rhythms

Rhythms are present in our lives from the very beginning (Partanen et al.), as perceptions, practices, and experiences. They "enskill"[1] us, in the sense that they provide us with temporal frames[2] for our physical and social interactions, with games, poetry, music and dance as key media for this enskilment. But what are these "temporal frames," and how do they enable and engender physical and social practice, including musicking?[3] What is the operation of rhythms that bring us into conjunction with time in meaningful ways? Here we explore theories of the sign, taking music as our foundational practice, in order to ask how thinking about signs and semiotics may provide some strategies for exploring these questions.

In recent years, across diverse fields in the arts, humanities, and social sciences, "rhythm" has come to serve as the conceptual marker for a wide range of new approaches to understanding relations and relationality. Following the lead of Gaston Bachelard and Henri Lefebvre, with their notion of *rhythmanalysis* (Bachelard, *Dialectique*; Lefebvre, *Élements*), rhythm is now regarded as a key methodology and conceptual tool for empirical research (Lyon), while remaining a puzzling topic of enquiry in disciplines ranging from cognitive neuroscience (Keller et al.), through social geography (Vannini) and cultural theory (Henriques et al.), to philosophy (Cheyne et al.). In particular, within a set of discourses that have sought to tease apart and question an anthropocentric bias that has located sense, self, and vitality in the human alone, the notion of relationality has taken on a profoundly subversive and renovative role in reorienting and repartitioning the assemblages we consider or take as given (Latour, *Reassembling*). However, within such a notion of relationality, rhythm implies the presence of a particular relational *regime*. What are the values and transactions of this regime, and what relations or types of relations does rhythm establish and account for?

This question is posed in this way, and as a central point of discussion here, because its answer does not appear clearly in much of the writing that invokes rhythm as a concept. Here we intend to map out the domain of an answer, framing, in a necessarily partial way, some key touchpoints and distinctions for a new perspective on rhythm. In order to approach this question, then, we should first take account of some of the normative implications that appear when rhythm is adduced in support of a particular line of argument or analysis, so as to see what sorts of relations they describe. Those implications are by no means agreed upon. Thus, Katie Overy and Robert Turner, in the Editorial introducing their 2009 Special Issue of *Cortex,* entitled *The Rhythmic Brain,* remark, "the word *rhythm* can mean different things to different people, while terms such as *beat, metrical/non-metrical, simple/complex rhythm, conventional/un-conventional rhythm* and so forth, can be the topic of heated debate" (1).

Nevertheless, they are agreed that rhythm is a "temporal framework" or "temporal organisation" (1) and their project is to survey current investigations of the ways in which human and non-human selves manage to effect temporal coordination. This coordination centres on the notion of *entrainment* (see for example Merker et al.), and it puts relation and action at the centre of the understanding of rhythm while also framing time as a succession of measured durations, reducing the *experience* of time to the making of a set of judgements, supported by nested frameworks within the mechanisms of the human brain. Those mechanisms situate such temporal judgements within specific constraints, as outlined in detail by Pöppel, and they allow the perception of temporal intervals, as described in Meissner and Wittman. Yet, temporal experience is more than judgement; synchrony a nuanced concept. The notions of *pulse* and *metre* that underpin entrainment should include both *time perception* and *lived/experienced temporalities*. We propose the human experience of time as a complex of modalities that, while fundamentally relational, in an ecological sense (see Guattari, *Three*), draw on specific conceptual and signifying practices that we wish to investigate further.

The distinction drawn here, between time as perception and time as experience, has its foundation in the disagreement between Albert Einstein and Henri Bergson,[4] a disagreement with resonances in the work of both Martin Heidegger and Gaston Bachelard. It goes to the heart of the question of rhythm since it hinges on the distinction between *instant* and *duration*. The instant will set up the connections required for relationality since, as Einstein reminds us, "all judgements in which time plays a part are always judgements of *simultaneous events*."[5] But for Einstein, these (relative) judgements depend on a notion of measure – a "clock" – whose present "ticks" divide past and future, a clock which, in Heidegger's critique, cannot be set apart as an abstract technology, even if the "clock" is inside our brain (see Meissner and Wittman). In the terms outlined by Overy and Turner, the *beat* or *pulse* is a type of clock, subject to the same critique as that applied by Heidegger when he considers the instant of Einstein's measure, and Bergson's experience of duration, as both parts of lived existence. As David Scott puts it, for Heidegger "the clock is a *concept*, in that it is unthinkable if disconnected from the question of being" (195). We will explore further the relation between instant and duration, through the work of Bachelard: for now, it is enough to note that what brings us into the frame of time, under the name of rhythm, cannot simply be a measure or a judgement, but must somehow signify within a process of lived existence.

Henri Lefebvre situates the notion of rhythm within a social, rather than a scientific or a metaphysical regime when he writes, at the start of his late work *Rhythmanalysis*, "Everywhere where there is interaction between a place, a time, and an expenditure of energy, there is rhythm" (*Rhythmanalysis* 15) This statement also presents *relation* and *action* as the central facets of rhythm, but it places time, which might be considered a more fundamental concern, as only one factor among several. Time here, as "a time," points to the notion of the *instant*, rather than to duration, in a sense that will be made more clear through our discussion of the ideas of Bachelard. The notion of place confirms an ecological concern that situates the rhythmic relation, and the "expenditure of energy" points not just to action in the sense of "action and perception" encountered above, but action as counter to any notion of passive experience. In this sense, "[t]he time in which objectively present things move or are at rest is *neither objective nor* can it be said to be *subjective*" (Scott 201). The expenditure of energy is envisaged as a productive force, in the sense intended by Heidegger when he asserts that "[t]imeliness extemporizes, it extemporizes possible modes of itself" (quoted at 197). This

provides the means by which we can assert our central proposition, that time can signify. It is central, since we take it that rhythm is a signifying system, of a certain sort, whose making provides specific experiences of continuity.

Andy Hamilton emphasises the dynamic quality of any rhythmic interaction or relation, while warning against "abstract and static" accounts of rhythm as merely "order in time" (26). This dynamism is represented as an undifferentiated *flow*, and that characteristic of flow seems important since it is also characteristic of some views of time.[6] Gaston Bachelard, whose ideas are key to our discussion (*Dialectique*; idem, *L'Intuition*), presents flow as simply one pole in a dialectic, but nevertheless the idea of flow is crucial since it supports lived reality against what Hamilton characterises as "static pattern" (36). Hamilton attributes dynamism, very specifically, to a *humanistic* conception of rhythm located in bodily movement, but, consequent on the implications of the broader conception of relationality and assemblage introduced above, we do not consider that dynamism need be an attribute of the human per se, while agreeing that it is a critical property of rhythmic relations. For rhythm to have the relational openness of Lefebvre's "everywhere," we think of the human as only one possible pole of relation, whose subjectivity in any case might need to be accounted for rhythmically.

We are not committed to a specific view on the flow of time. Whether time itself passes, or only appears to pass,[7] is not critical to our commitment to an investigation of instant and duration, relation and sign. Hamilton's conception of rhythm as embodied fits with contemporary theories of cognition, and also with the pragmatist tradition that underpins Charles Sanders Peirce's semiotics, which will inform our own view of time as a domain of signs. Our exploration of the possibility of a semiotics of time intends to complement the investigation of rhythmic phenomena in terms of synchrony and entrainment,[8] if also to critique those terms. While these phenomena undoubtedly contribute to practices of relation, they do not yet account for rhythm as the meaningful experience of time. Time consciousness and experience, for the individual self, would seem to integrate past and future within the present. This formulation is again agnostic in respect of the metaphysics of time. Thus, Andy Clark proposes the brain (human or otherwise) as a prediction engine that constantly compares current sensory input against predictions drawn from previous inputs. Varela, Thompson, and Rosch, from a similar standpoint, assert the pragmatist position that:

> The overall concern ... is ... to determine the common principles or lawful linkages between sensory and motor systems that explain how action can be perceptually guided in a perceiver-dependent world. (Varela et al. 173)

These accounts connect action and perception, even if they do not yet incorporate experience, in particular the experience of time. Varela is clear that it is Husserl who provides the insights that allow the connection of an account of time consciousness in terms of the integration of past and future (as *retention* and *protention*) with temporal experience (111-12), and with the self-consciousness that allows time to be a sign. As Dan Zahavi puts it:

> Husserl's analysis of the structure of inner time-consciousness serves a double purpose. It is meant to explain not only how we can be aware of objects with temporal extension, but also how we can be aware of our own fluctuating stream of experiences. In short, it is not sufficient to understand how we are able to be conscious of temporal objects; we also need to understand how we are able to be aware of the very experiences that intend these temporal objects. (58)

Of course, we will maintain that "temporal objects" are what the framing of rhythm allows us

to encounter, and we will try to show that this temporal experience can be structured in ways that accord with our general notion of rhythm.

Rhythm is clearly a central concept within the practices of music, yet even within writing about music the implications of rhythm are by no means clear. Thus, prefiguring Overy and Turner, Curt Sachs, in his ground-breaking book of the early 1950s, *Rhythm and Tempo: A Study in Music History,* introduces rhythm as, "a word without a generally accepted meaning. Everybody believes himself entitled to usurp it for an arbitrary definition of his own. The confusion is terrifying indeed" (12). As rhythm became a more central concern in musicology through the 20th century, Kofi Agawu, in his paper "The Invention of African Rhythm," challenges musicology's prevailing colonialist and Eurocentric perspective in order to "develop a view of African rhythm in which its mechanical aspects (grouping, accents, periodicity) are shown to reside in broader patterns of temporal signification (movement, language and gesture)" (395). Here, like Hamilton above, Agawu introduces the living and lived body, situated within cultural and historical contexts, into a discussion otherwise dominated by issues of logic, perception and cognition. However, Agawu also poses the crucial question of "temporal signification": how does time signify for us? In thinking about "signifying time" we want to distinguish between different senses of time, in order to articulate our claims about the ways in which rhythm frames our experience and makes it meaningful. Psychological and cognitive accounts of temporal experience encompass the notions of past, present, and future in a different sense to that intended by, for example, Barbara Adam, when she writes of judgements of time that "determine festival periods, auspicious and unlucky days as well as right and wrong times for specific activities" ("Time" 122). This explicitly includes cultural and personal meanings, alongside judgements of mere order or simultaneity, focusing on "the significance of time in people's lives" and the "processes by which identities are forged, sustained, discarded and reworked" (Adam, "Timescapes" 7). If rhythm is to account for relations, within some relational regime, those relations ought to be meaningful, as well as perceptible. And if time is a critical component of the relations implied by the notion of rhythm, how is time implicated in those relations, and what shifts or thresholds make a difference within the regimes we envisage?[9]

In order to get a sense of how these questions might unfold, it is necessary to unpack some of the history and structure contained in the word, *rhythm*, aside from what we have taken, above, to be some of its "normative implications." In a paper entitled "The Notion of 'Rhythm' in its Linguistic Expression," included at the end of his book, *Problems in General Linguistics*, Emile Benveniste tackles the etymology of the word "rhythm" from its Greek origins, usually taken to be the word ῥυθμός (rythmós). Benveniste's analysis is detailed and revealing. First, he establishes that "ῥυθμός never meant 'rhythm' from the earliest use down to the Attic period," but rather that "its constant meaning is 'distinctive form, proportioned figure, arrangement, disposition'" (285). This idea of form, however, is specifically dynamic:

> the form in the instant that it is assumed by what is moving, mobile and fluid, the form of that which does not have organic consistency; it fits the pattern of a fluid element, of a letter arbitrarily shaped, of a robe which one arranges at one's will, of a particular state of character or mood. It is the form as improvised, momentary, changeable. (286)

In this we might hear a prelude to a dialectic between instant and duration. Within a philosophy of becoming, characteristic of Ionian philosophy since Heraclitus, Benveniste argues that

ῥυθμός, meaning literally "the particular manner of flowing," could have been the most proper term for describing "dispositions" or "configurations" without fixity or natural necessity and arising from an arrangement which is always subject to change. (286)

Thus, when Plato has Socrates speak of rhythm as τῆς κινήσεως τάξει (order in the movement) he is referring not to a mere temporal succession, but rather to the successive *form*s of a dynamic substance. What Plato introduces is the *rule* against which flow and form can be measured, and at this moment it seems that measure takes primacy. These two components, flow and measure, connect with our argument above in a number of important ways. First, they suggest that rhythm has the *means to signify*, through "'dispositions' or 'configurations'," the possession of a "particular manner" at a moment of perception or measurement. Secondly, they propose rhythm as emerging from a dynamic flow "without fixity," as also implied both by Hamilton, and by Agawu's reference to "movement, language and gesture." In giving as examples the draping of cloth or the mood of a person, we take Benveniste to imply that, since these flow with time, it is in a sense time itself that flows and has dispositions: "Here is the new sense of ῥυθμός : in Plato, 'arrangement' (the original sense of the word) is constituted by an ordered sequence of slow and rapid movements" (287). This suggests that rhythm concerns not just events related in time, but the "disposition" of time itself. Gilles Deleuze and Félix Guattari, in their discussion of Benveniste (554 n.25), take issue with his reading of Democritus and atomism, but this account of dynamic form does seem to fit with their account of a rhythm "without measure, which relates to the upswell of a flow, in other words, to the *manner* in which a fluid occupies a smooth space" (364, our italics). Their difficulty arises from the introduction of the *measure*:

> The decisive circumstance is there, in the notion of a corporal ῥυθμός associated with μέτρον and bound by the law of numbers: that "form" is from then on determined by a "measure" and numerically regulated. … We may then speak of the "rhythm" of a dance, of a step, of a song, of a speech, of work, of everything which presupposes a continuous activity broken by meter into alternating intervals. The notion of rhythm is established. (Benveniste 287)

We want to consider the idea of the measure, not as bound to a numerical standard but as a principle of relation or interaction between flows, that allows moments of "difference that make a difference." In this sense, signification is encountered not as "aboutness" or knowledge, inevitably tied to linguistic units, but as critical distinctions and constructions of relation marked by affect and a specifically temporal charge.

This, in the first instance, aligns us with Deleuze and Guattari, and, moreover, with a key source for their philosophy of time, Bergson. Through Bergson Deleuze will resist any phenomenological reduction of past and future into the psychological lived present, and instead insists on a deeper, nigh ontological account of memory, a memory that can, in principle, encompass the past as a whole (*Bergsonism*; Bergson, *Matter*).[10] The emphasis, for Deleuze and Bergson, is not on a linear passage of time through an individual consciousness, but on the coexistence of heterogeneous durations (Deleuze and Guattari 238; Al-Saji). Where we depart, or are at least hesitant, is with the at times polemical reversal of the Platonic hierarchy of measure and flow these thinkers enact, as in Bergson's famous distinction between qualitative and quantitative multiplicities and his critique of the quantification of time (*Time and Free Will*). What is at risk here, as we will see via Bachelard, is a failure to adequately account for the instant, as well as related notions such as discontinuity, in the positing of a metaphysically fundamental notion of duration.

As the Introduction to his recent book, *Delayed Response: The Art of Waiting from the Ancient to the Instant World*, media theorist Jason Farman tells the following story:

> Five years ago, as I sat in the audience at a conference in Boston, an anthropologist of Japanese popular culture described an emerging practice among teens in Japan. A teen would send a blank text message to his or her romantic partner, and the partner's job was to respond with a blank message with as little time elapsed as possible. These blanks texts would be sent throughout the day and establish a rhythm for the relationship, as partners would respond quickly to each other, always being in contact without saying a word. … The meaning of these messages was entirely dependent on how quickly someone responded, and that speed - or delay, if someone's partner wasn't paying adequate attention - had significance for their relationship. The content of these messages was *time*. (1)[11]

This scenario, a curious dialectic of instant and duration in social relations at a distance, seems a perfect instantiation of Lefebvre's "interaction between a place, a time, and an expenditure of energy" (*Rhythmanalysis* 15). Furthermore, it suggests that time itself has meaning, and in this sense can act as a sign within a semiotic practice: to paraphrase the chapter "The Work of Time" in Pierre Bourdieu's *The Logic of Practice*, it matters *when* things happen: "The same act … can have completely different meanings at different times, coming as it may at the right or wrong moment, opportunely or inopportunely" (105). We also want to suggest that, in order for this signifying to take place, there have to be signs that are temporal, and that suggestion presupposes a certain approach to time. In Bourdieu's title, time is capable of effecting work, and this echoes both Lefebvre's "expenditure of energy" and the remark of Gaston Bachelard, in direct opposition to Bergson, that "… la durée est, non pas une donée, mais une oeuvre": "duration is not a given, but a work"[12] (*Dialectique* 91). Indeed, considering time as some sort of signifying material, the Japanese teens could be seen as *making* from this material small tokens of their affection: little "time-things," which are shaped in their flow of affect, measured in their specific inductions of charge, and which have meaning for them. The relational process within which this play of affects unfolds is referred to as "a rhythm for the relationship," and since rhythm and time are here connected, our final move is to suggest that rhythm involves time in a certain *type* of semiotic behaviour. If all acts or perceptions figure as "time-things" (cf. Morris) not all temporal relations are rhythmic. As Heidegger points out:

> Every sign, or better, "indication," is an ontic reference, but not every reference is a sign. This at the same time implies that every sign is a relation, but not every relation is a sign. Moreover, every sign *means*, which here signifies that it has the mode of being of meaningfulness. (204)

In order to think about signs and time in this way, we need to raise the question of time as a signifying and affective force. Heidegger is clear that time's flow is affective:

> care means being out for something ... As being out for something, it is out for *what it still is not*. As care, Dasein is essentially *underway towards something*; in caring it is toward itself as that which it still is not. (308)

The notion of "care," which is central to Heidegger's account of being in the world, *Dasein*, is expressed here as dynamic, and as not just ontologically grounded in temporality but showing temporality to be productive of meaning.

Varela, in his enactivist account of time-consciousness, is also explicit about time's "emotional tone" (133). This is harder to envisage in Andy Clark's account, mentioned above (see Schaefer et al.), but Clark does allow for "internal models" that the enactivist position

relinquishes, and these allow for the conceptualisation of time as sign, with consequent implications of affect. He also allows for two critical extensions out of the isolation of individual consciousness, to include "predicting with others" (285 et seq) and a notion of *mind* which, like that of Gregory Bateson, extends beyond the confines of individual bodies to include the *habitus* of the organism (260 et seq). Both of these extensions allow us to move the discussion of time away from its consideration as a metaphysical, cognitive or psychological phenomenon, and introduce a more pragmatic, relational and material approach. As Bruno Latour has warned us against excessive "purification," (*We* 10-11) thinking about time in material terms might help us to identify and get to grips with the larger networks in which time participates; getting to know about time through the contingencies of its physiological, subjective, material, social, and historical interactions. This focus on interactions is a focus on signs, as they arise and signify in some way for some self, and it continues our already stated concern for rhythm as an approach to understanding relations and relationality. But it also includes the contention that time itself forms signs, within a regime of signification. If the moment at which something happens is to have meaning for us, we must be able to know something about that moment, both of itself and in relation to other moments and durations. How, and where, do these signs emerge, and what constitutes their signifying regime? What do these signs emerge out of, and what is the more general effect of a milieu whose signifying potential remains largely unrealised by any specific agent?

Forman's story about the Japanese teenagers marks the social aspect of time and temporal production; time appears out of a social practice, texting on a smartphone. In Bachelard's formulation, the durations that mark the succession of text messages constitute "a work": they are made by the participants in this scenario, including the smartphone device itself and the networks, physical, institutional, and operational, that connect it with its users and with other devices, and which each produce their own temporal effects. As Latour points out "... 'time' is not something that is in the 'mind' or that is 'thought' by a mind, but something rooted in a long material and technical practice of record keeping, itself merged into institutions and local histories" ("Trains" 174-75) and, we would add, practices of meaningful social action and interaction. Thus, Bourdieu recounts the succession of "little gifts that bind friendship" (99), and presents them as the consequence of a fundamental social energy:

> The motor of the whole dialectic of challenge and riposte, gift and counter-gift, is not an abstract axiomatics but the sense of honour, a disposition inculcated by all early education and constantly demanded and reinforced by the group, and inscribed in the postures and gestures of the body (in a way of using the body or the gaze, a way of talking, eating, or walking) as in the automatisms of language and thought … (103)

Here a social practice engages with material signs – "… a little wheat, a little semolina (never barley, a female plant and a symbol of frailty …)" (99) – to create meaningful time. This begins to suggest the ways in which time comes as "shaped"; as sign; and as a flow that is not a simple continuum. Thus, Michelle Bastian demonstrates the multiple disconnects between our understanding of time as a continuous flow, and the actual mechanisms, agreements, institutions, and political negotiations that go into producing a socially understood temporality even like "clock-time": in this sense, clock-time is every bit as much a human-manufactured piece of "stuff" as anything else in the category of material gifts and objects. One could add to this category the social constructions of temporal objects, or "time-things" such as: waiting times – as in the provision of health services; break-times – as in Amazon warehouses; and a

host of other time objects that signify affects and power structures within the situations of particular people in very particular ways. As Sarah Sharma puts it, "time is a central problematic understood as a parameter of communicative possibility" (*Meantime* 312).

signs

If what we are suggesting is a kind of semiotic inquiry, then it is necessary to further specify how we understand signs. This is of immediate concern because how signs are conceived does much to determine the form that semiotic inquiry can take, and semiotic inquiry, as it has been practiced, has not always been amenable to the kinds of temporal and aesthetic relations that concern us here. Moreover, as Umberto Eco remarked in his *A Theory of Semiotics*, in taking its project to be one of "study[ing] the whole of culture" (6), semiotics may appear to take an imperialistic approach to scholarly inquiry, forever extending the reach of what it takes to be its proper domain. Through fields like biosemiotics, an important resource for expanded sign theories, this reach is extended further still, with sign behaviours taken to be present in even the most basic of living and other kinds of systems. This is highlighted in Terrence Deacon's alignment of Bateson's understanding of information as the "difference that makes a difference" with sign behaviours, with Deacon showing the fruitfulness of thinking of even catalytic processes semiotically.

Eco's defence of semiotics, which we will follow, is that its concern is not with any metaphysically loaded concept of "signs" but rather with "everything that can be *taken* as a sign" (7). It is not a matter of asserting that all interactions should rightly be characterised as semiotic interactions, but of asking how understanding relational behaviours as semiotic can help us understand what is taking place when we see these behaviours. How signs themselves are conceived is thus important in distinguishing between semiotic inquiry that risks an all-encompassing "imperialism" and semiotic inquiry that is constitutively perspectival and can point to other modes of inquiry.

By common, long-standing definition, signs are things that help us to make sense of and engage with the world; that help us to produce and communicate meaning. They are things that in some way point beyond the immediate; that mediate between something present and something not.[13] However, one common effect of this long-standing conception of signs is a tendency towards a primary, verging on exclusive, concern with thinking of signs in terms of the signs of language. This troubles our attempt to account for the seemingly non-linguistic "time-things" that interest us. The legacy of structuralism in France is an illuminating example here, as in this legacy the foregrounding of language is felt with particular strength.

The structuralist inquiry of the mid-twentieth century widely picked up on and applied Ferdinand de Saussure's conception of the linguistic sign, where the sign does not unite a word and a thing but rather a sound-image and a concept, or, as he would go on to term these elements of the sign, signifier and signified (66).[14] This sidelines any notion of an ultimate reference point in the world, and from the perspective of analysis the relation between signifier and signified is not only conventional, as it had long been conceived to be in the case of words, but, more than this, *arbitrary*. Signifier and signified are bound together, but any substantial relation

between them is absent. At the same time, this renders the moment of signification productive, albeit perhaps, for now, implicitly: for Saussure, the network of words and their relations creates the set of signifieds, and this network in turn allows for the production of meaningful statements. One important effect of this is that value and meaning become relative and differential: value can only be determined in terms of a sign's place within the entire system of language, and it is this positioning within the closed system that permits the signifier and the signified to hold together despite the arbitrariness of their (non-)relation. In the uptake of this notion in the growth of structuralism in the social sciences, this meant that structures were the ground of analysis, and that analysis was thus synchronic: it took its concern as being how structures hold together and operate, with temporal phenomena generally being reduced to effects of the structure.[15]

This issue with temporality was one of the key features of the widespread break with structuralism in the second half of the 1960s, where time is seen to disrupt the consistency and stability of structure. For example, while Roland Barthes's 1964 text *Elements of Semiology* is for the most part a guide to structuralist accounts of the sign, Jacques Derrida would pick up on how Barthes seemed to understand signification as a productive process, it being "the act which binds the signifier and signified, an act whose product is the sign" (Barthes 48). For Derrida, Barthes here implies a diminishment of the primacy of the language system (Derrida 51-52), with this account of the genesis of signs undermining the possibility of Saussure's unmotivated and arbitrary relation between signifier and signified, and the now potentially shifting relation between them being what Derrida calls the trace. Likewise, Gilles Deleuze's departure from structuralism takes place when Félix Guattari introduces him to Guattari's notion of the "machine," a figure that Guattari argues must accompany the synchronic form of structure and which "[t]emporalization penetrates … on all sides" (Guattari, "Machine" 319). Here, production again becomes the key issue.

If this was the end of the story then things would be simple enough, but, on the contrary, some philosophers have recently made clear the continuing significance of structuralist thought in contemporary theory (Balibar; Maniglier; Mercier). Their work reveals not only that the many critiques of structuralism that emerged at the end of the 1960s were not the final word on structuralism, but also that the issues raised by poststructuralist thinkers may persist in today's theoretical approaches, including, of particular importance to us, in contemporary "more-than-human" thought. For example, the Actor-Network Theory (ANT) popularised by Bruno Latour draws heavily on the structural semantics of A.J. Greimas,[16] while, more explicitly still, a revisiting of structuralism has served as a motivating force in some areas of the ontological turn in the social sciences, as in the influential work of the anthropologists Philippe Descola and Eduardo Viveiros de Castro (see Skafish). And critique follows, as in the widespread recognition that ANT has significant limits in terms of temporal analysis (see Born and Barry), but also in persisting debates around the "textualism" of cultural theory. Signs, and structuralist conceptions of signs, continue to be at work, more or less explicitly, in contemporary accounts of the workings of social practices.

In the case of the original critiques of structuralism, what was at issue was whether, in structuralist inquiry, linguistics was only what François Dosse calls a "pilot discipline" (xx),

with its experiments in structure paving the way for other disciplines to achieve their own immanent mode of structuralism,[17] or if it was rather a master discipline, as in the remarkable primacy that Barthes affords to language when he speaks of a "trans-linguistics," where linguistics is not part of a more general semiology, but semiology, at least temporarily, a part of linguistics (11). We feel the need to resist this latter stance, which is one that Deleuze and Guattari have in mind when they speak of "the imperialism of language, the pretensions to a general semiology" (143). But we likewise feel the need to resist its polemical counterpoint, as in the relegation of language, in favour of ontological terms such as "affect" and "the real," that are found in nonrepresentational theory[18] and in the desire to go "beyond representation and signification" (see Cox; Kane). It seems to us that these approaches do not account for the intimate and ambiguous relation between structuralism and poststructuralism and do not resolve the issue of a foreclosure of routes of inquiry.

To navigate this fraught field, we turn to a figure whose significance to the early critique of structuralism has often been overlooked, and who furnishes us with a distinct understanding of semiotics from which to proceed, namely Charles Sanders Peirce. Among other examples (see Girel), in *Of Grammatology* Derrida makes the claim that Peirce "goes very far" in the direction of deconstruction and unlike Saussure recognises that "the symbolic … is rooted in the nonsymbolic" (48), while in his notes for his and Deleuze's *Anti-Oedipus* Guattari remarks that the key to departing from structuralism lies in "Hjelmslev, maybe Peirce" (*Anti-Oedipus Papers* 38),[19] with Peirce's notion of the diagram proving increasingly significant to Deleuze and Guattari's thought across the 1970s. And while hardly an obscure figure in the field of semiotics, effectively founding it himself through his extensive writings on signs over the late nineteenth and early twentieth centuries, he nevertheless still represents a somewhat heterodox strand.

Unlike the binary formulations of structuralism, Peirce's semiotics is suffused with tripartite distinctions and relations, most famously his division of signs into icons, indices, and symbols ("What Is a Sign?" 5), and his ontological categories of firstness, secondness, and thirdness. Of most immediate relevance to us is his minimal account of the sign as "something which stands to somebody for something in some respect or capacity" (*Collected* 2.228) – and we might follow the lead of biosemiotics and substitute "some system" for "somebody" – and semiosis, "the action of practicing on any sort of sign" ("Pragmatism" 411), as "an action, an influence, which is, or involves, a cooperation of *three* subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs." (*Collected* 5.484) These definitions imply an open-endedness quite distinct from the closure that structuralism requires, with the third variable of the sign, the "in some respect or capacity," complicating any *a priori* delimitation of the work of signs and suggesting the complexity in how meaning is produced in sign processes.

While Peirce's symbol maintains many of the characteristics of the linguistic sign as commonly conceived, such as its conventionality, it cannot readily be separated from signs of the icon or index type, and it is perhaps better to say that these three categories are *aspects* of the sign. Any account of a given sign would not be complete without an account of all three aspects, and the sign, then, has characteristics not only of conventional signification but also

of direct resemblance and physical association. Semiosis, then, would often, perhaps most often, refer to communication, and often to verbal communication, but it need not be limited to these kinds of communication and can be pared down to the smallest and most transient kinds of influence.

For this reason, Peirce can conceive of the symbol as always being at work; of a distinct life of signs. He picks up on the origin of symbol, *sumbalon*, "to throw together" ("What Is a Sign?" 9), to emphasise that it is not only constructed, as is vaguely implied by its status as "conventional," but is furthermore *always under construction*. And moreover, such a "thorough-going evolutionism" (*Collected* 6.14) underlies all of Peirce's work: his semiotics must be seen as dealing with, as the musicologist Ben Curry puts it, "the world in practice" (406), which requires, as the philosophers Guillaume Collett and Chryssa Sdrolia highlight, a singularity of method in the engagement with problems. In their words, "the method itself will have to be experimented with while the problems are being constructed – while thought experiences itself as contingent to the worlds it taps into and whose vital relations make it mutable, plural, and potentially fallible" (49). What Peirce offers is a semiotics not of closed structures and fixed determinations, but of a practical experimentalism.

Within the scholarship on Peirce there is debate concerning the validity of such adoptions of biosemiotic and poststructural adoptions of his thought (see Short xiii-xiv). It is certainly the case that Peirce's most direct concerns are with human knowledge and scientific inquiry, and that he develops his theory of signs in this context. Both cultural and biological perspectives may then be perceived as an overextension of a Peircean framework. But, without stepping into Peirce scholarship, we can nevertheless follow how the fine-grained character of Peirce's semiotic studies and the practical experimentalism he develops has allowed for his work to be an important resource for theorists including Derrida, Deleuze and Guattari, and, more recently, the anthropologist Eduardo Kohn, the musicologist Gary Tomlinson, and many others in many fields. A shared concern among these thinkers is of conceptualising the work of signs while resisting the positivistic tendency to "silence the plurivocality of the world by neutralizing it into conceptual structures that aspire to be given once and for all" (Collet and Sdrolia 49), and with this they aim to recover what we might call a semiotic polyvocality beneath the dominant univocal structure of language.

What we want to suggest, then, is that through his experimental production of diverse distinctions in the realm of signs, Peirce offers the starting point for a framework that can account for the plurality of sign processes at work in a given context. As such we are not taking a doctrinal position with regards to a theory of signs, but rather using diverse theories of signs as resources to deal with the problems we face. By working from the minimal definition of the sign that Peirce offers, and following the complexities it opens out onto, and its adoption in diverse fields, what we can say about signs is that, contrary to a binary signification, where signifier and signified are locked in a self-referential circuit, in our conception signs necessarily become other than themselves; they are intrinsically dynamic, and, we might say more tentatively and provisionally, intensive and material. With this conception of signs, we hope to begin to account for both the singularity of rhythmic experience, and its organisation and shared character.

time-things

In his book *The Dialectic of Duration*, Gaston Bachelard sets up the social, relational, connective perspective that has allowed us the notion of the "time-thing," and amplifies – and prefigures – Bourdieu's insistence that the "when" of an event matters. Bachelard writes :

> … l'égalisation horaire est déjà une grande tâche de l'interpsychologie. Quand on a réalisé ce synchronisme, c'est-à-dire quand on a mis en correspondance deux superpositions de deux psychismes différents, on s'aperçoit que l'on tient presque tous les substituts de l'adhésion substantielle. Le temps de penser marque profondément la pensée. On ne pense peut-être pas la même chose, mais on pense en même temps à quelque chose. Quelle union! (*Dialectique* 105-06)

> … the equalisation of timing is already one of the great tasks of relational psychology. When one has effected this synchronisation, that is to say, when one has put precisely together two superpositions of two different psyches, one sees that one has almost all the attributes of physical adhesive bonding. The time of thought marks thought profoundly. Perhaps one is not thinking the same thing, but one thinks something at the same time. What a union!

Thus the Japanese teens, encountered previously, sending their empty messages, can think of each other "at the same time," even across distances, and the instant of the perceiving of the message – even if it is noticed much later than the instant of its arrival – gives a point at which the meaning and affect of the time interval since the last connection have immediate force. This is constituted within a network of interrelations that figures time as more than simple flow or continuum.

The notion of the *instant* is critical in metaphysical discussions of time, but our commitment to temporal flow, to the sense of being "underway" (Heidegger 308), also commits us to distinguish between the instant as temporal judgement and the instant as relational connection. This distinguishes rhythm from time, as A. N. Whitehead explains:

> We can diminish the time-parts, and, if the rhythms be unbroken, still discover the same object of life in the curtailed event, but if the diminution of the duration be carried to the extent of breaking the rhythm, the life-bearing object is no longer to be found ... Thus there is no such thing as life "at one instant" (*Principles* 64.4)

Bachelard's account of time in *The Dialectic of Duration* attempts to show that the perception of duration is subject to a duality. He argues for time as a sort of psychological oscillation between fullness and emptiness, where the moments of fullness have special meaning for us, because we have to work to fill them. This work is the moment of relationality, that gets us out of the hermetic notion of time as an uninterrupted continuum. It also proposes a time that has different "energy levels," like the electron shells of an atom, where each level has its own ways to access relations and connections. He writes :

> *Les temps idéalisés ont alors des constances sans cependant avoir une continuité.* C'est là une des thèses principales de la philosophie temporelle que nous proposons. Sans doute, il paraîtrait plus simple de postuler comme fondamentale la continuité de l'attitude primaire et de considérer les évasions comme des fusées indépendantes qui surgissent de temps en temps le long du développement naturel. Mais cette solution, qui est la plus simple, n'est

pas la nôtre. Elle ne tient pas compte du fait que certains esprits peuvent se maintenir dans une pensée exponentielle, dans la pensée de pensée par exemple et même dans la (pensée)3. Il nous semble alors que le temps de deuxième ou de troisième superposition a ses propres motifs d'enchaînement. (*Dialectique* 110-11)

Idealised times thus have a consistency without however having continuity. This is one of the principal propositions of the philosophy of time that we propose. Doubtless, it would seem simpler to postulate the continuity of the primary level of thought as fundamental, and to consider deviations from that as independent shoots that spring up from time to time during the course of its natural development. But this solution, which is the simplest, is not ours. It does not take account of the fact that certain consciousnesses can support themselves in a raised way of thinking, for example as thinking about thinking and even as (thinking). It thus seems to us that the times of second or third superposition have their own ways and means of connecting.

This presentation of time as possessing different "surfaces" could be seen as a necessary precondition for the production of rhythm. The "idealisation" theorised by Bachelard presents time as constructed out of a multiplicity, echoing a remark by the Romanian conductor Sergiu Celibidache, for whom "*tempo* is a condition by which the multitude of information contained in sound can be reduced to a unity."[20] The notion of surface implies a contiguous encounter at some boundary, and rhythm must have boundaries if it is to be distinguished from smooth duration. This "idealised time" also counters behaviourist or cognitive approaches to the experience of time by providing a conceptual basis for the exploration of temporal relations, instantiated within physical relations. The ghost of *rhythmanalysis*, attributed to the lost book of Lúcio Alberto Pinheiro dos Santos, appears first in Bachelard, and he is the first to attempt to use it. In the story of the Japanese texters, a Bachelardian rhythmanalytical perspective would account for the, at least, doubled nature of their interactions, where the separate time experience of each participant is synchronised by moments of shared time, each of which have, all the same, separate affects for each participant, within their own experience. This could also describe the temporal experience of ensemble playing between performing musicians, for whom "integrative attention, and adaptive timing" (Keller) must unify, in action, a multitude of apprehensions: physical, auditory, affective etc. Theorising time as having a surface, or surfaces, shows us where the "work of time" is effected. All surfaces, according to James J. Gibson's account in *The Ecological Approach to Visual Perception*, have certain properties. These include a particular, relatively persistent layout, a degree of resistance to deformation and disintegration, a distinctive shape, and a characteristically non-homogeneous texture. Surfaces are where radiant energy is reflected or absorbed, where vibrations are passed to the medium, where vaporisation or diffusion into the medium occur, and what our bodies come up against in touch. So far as perception is concerned, surfaces are therefore "where most of the action is" (23).

rhythm revisited

What we have outlined here is a way of conceiving of time, not as a single metaphysical entity or psychological reality, but as many times, and many "time-things," produced by diverse mechanisms, which yet come to relate to one another. This relation arises through the convergence of heterogeneous series, but not in the structuralist sense of this, where the two

series of signifier and signified seem locked together in one static whole. It is rather a case of how, in the words of Deleuze and Guattari, "[one] series explodes into the other, forms a circuit with it" (156), bringing to this convergence an inherently temporal and transformative character. Work takes place not between conjoined points, but on a temporal surface. In considering the convergence of *temporally* heterogeneous signs we thus find it necessary to account for a plurality of times and their relations. Signs, conceived temporally, can help us develop this account. This is why we have turned to the evolutionary and pluralistic account of signs and sign behaviours that Peirce offers us. When we encounter the world of signs, we do not only encounter a world of language or the symbolic, a world in which seemingly diverse experiences can be univocally structured, systematised, and unified. We rather face the task of navigating through and with a multiplicity of heterogeneous signs which, moreover, can only be understood temporally, as they enfold past, present, and future, and as they mutate even as we encounter them. Here we find the germ of a conception of rhythm. We may say, provisionally at least, that rhythm is simply these temporal sign behaviours; the work of signs, when signs are conceived of as intrinsically temporal. This definition, however, requires further nuance.

Such a conception of rhythm suggests a means into understanding the complex interactions that give distinct temporal characters to given encounters or situations. From a subjective perspective, there may seem to be two poles to consider. On the one side there are situations where we feel ourselves able to work on signs, to exert a certain command and control over them, as we may feel we do with the signs of language. But there are also times when signs seem to only work on us, make us passive receivers, or even subordinate us to them. We find this in some conceptions of metrical rhythm, as when Theodor Adorno speaks of the "tendency to blind obeisance" (122) produced by jazz rhythms, with clock time, or with the airtight strictures of the Amazon warehouse timetable. This pole shows that while each worker will interpret the signs they encounter differently, this is nevertheless not only subjective, as we see in the prevalence of workers feeling their minds and bodies to be contained and constrained by an alien temporal order (Sainato).

This latter conception brings to mind the factory procedures acutely described by Marx in his writings on the working day (*Capital* 340). Marx, in passing, referred to this procedure as a spatialisation of time,[21] which Georg Lukács developed in vivid terms:

> time sheds its qualitative, variable, flowing nature; it freezes into an exactly delimited, quantifiable continuum filled with quantifiable "things" (the reified, mechanically objectified "performance" of the worker, wholly separated from his total human personality): in short, it becomes space. (90)

There is a wide literature on such a spatialisation or quantification of time being brought on by industrialisation, often linked directly to the passage from lived times and sacred times to the time of clocks, as in the accounts of E.P. Thompson and Jacques Le Goff. So too in the work of the anthropologist Edward T. Hall, who contrasts an imposed, "monochronic" western temporality with a malleable and social "polychronic" temporality (*Dance*; idem, *Silent*). On these accounts, industrialisation undoes a lived, intersubjective time and enforces an "objective" time. Is this polychronic temporality the pluralistic conception of time we are

putting forward? Perhaps not quite.

There is a tendency to conceive of polychronic time as somehow more "natural" than monochronic time, as when Hall stresses that monochronic time is "*not* inherent in man's biological rhythms or his creative drives, nor is it existential in nature" (*Dance* 49). A distinct split between a qualitative time and a quantitative space, with monochronic time naming a spatialisation of time, risks conceiving of polychronic time as offering the means of a romantic "return" to a natural, lived time somehow more "real" than what we experience now. In turn, distinguishing monochronic and polychronic time with too much haste also risks underestimating the complex and plural cultural temporality that, as Michelle Bastian has highlighted, inheres even in clock time. Theories of historical time will demarcate their terms of inquiry through the priorities and relations they determine between monochronic and polychronic times and through how polychronic times come to be rendered monochronic, and how these relations come to be and play out is a key topic of concern.

As such, holding in mind the accounts of temporal domination and control developed in Marxist and other critical traditions, what we take from Peirce is that strongly affirming the distinction between two poles of temporality can obscure their intermingling: that our apparent command of the inert signs of language is in some sense illusory, and that the domination of the workplace timetable is contingent (the signs can be interpreted as a call to solidarity and strike), that underlying the manipulation of symbols and the imposition of seemingly fixed structures is a temporal stream of mobile icons and indices. With this we suggest not so much qualitative time and quantitative space, or monochronic time and polychronic time, but a variegated account of temporalities, of relations between different relations of time, in line with what Sarah Sharma calls "critical time" ("Critical"; idem, *Meantime*)

In actuality, our interactions with signs are never easily separable into a distinction of control and being controlled. There is always an interpretation, always taking a perspective, enacting a relation, even when, in the workplace, we are *forced* to interpret the time-signs of the working day, but also when we seem to work *with* signs in a more positive manner, where we could be said to improvise with signs, as with the instrumentalist confident in their abilities but open to the unexpected. This latter instance could be described as what the Deleuze calls an "apprenticeship in signs" (*Proust* 3), where the sign marks a site of encounter with the unknown, the Other, the outside. Here the exploration of the world of signs is named as a "learning" that constitutes a challenge to our common sense ways of understanding the world, to our own times and rhythms (18).

This suggests an important aspect of how we are conceiving of "our" encounter with the world of signs, because, among other unities against which we pose the heterogeneity of sign behaviours, is precisely the unity of the "I"; the self. It is necessary to accommodate the biological, psychological, and social sign complexes that make up "us" as embodied actors, and that constitute, but also complicate, "our" relation to the world. Whitehead elegantly captures the complexity that underlies what appears as unity when he refers to how "apparent life in any situation has, as its counterpart to that situation, more complex, subtler rhythms than those whose aggregate is essential for the physical object" (*Enquiry* 197). This would mean for us an account of signs that sees them operate across commonly conceived oppositions or

dualisms – not only contributing to well-rehearsed challenges to subject-object or nature-culture, but also to musical distinctions such as embodied musicality versus culturally defined symbolic content, or compositional and performative control versus the contingencies of a performing situation.

A given situation can be understood as many time-things and temporal processes, many sign relations and behaviours, and if we examine how the sign relations that constitute "us" as embodied actors encounter these time things, we can develop a sense of how it is that time is meaningful. At this point we are able further to specify how we understand rhythm, and show how, while rhythm consists of temporal sign behaviours, and the temporal sign is required for rhythm to emerge, not all temporal sign behaviours can be said to be rhythmic. It will be informative here to return to Bachelard, and specifically to his notion of the instant, and its relation with his own conception of rhythm.[22]

Bachelard is clear in disconnecting the instant from any notion of continuity, stressing that we cannot assume universal time or, in a Leibnizian vein, a preestablished harmony or, again, in a Bergsonian vein, a fundamental metaphysical duration, that would allow for a direct and immediate connection between instants (Bachelard, *L'Intuition* 43; idem, *Intuition* 35).[23] On the contrary, the instant must concern a decision or an act, what Bachelard calls an act of attention (*Intuition* 11). For Bachelard, time is thus not only lived as flowing through us, but, as we have seen, can be said to be selected and created: "the only way we ourselves can feel time is by multiplying conscious instants … Consciousness of time is always, for us, an awareness of the utilization of *instants* – it is always active, never passive" (50).

Despite an often-humanistic tone in his writings on the instant and on rhythm, Bachelard's conception of the instant is far from limited to the human, although the procedures of selection become more marked at different levels. He will, for example, speak of how

> an atom radiates with frequency, and hence exists by using a great number, though never all, of its instants. A living cell is already more sparing in its efforts, using a mere fraction of the temporal possibilities furnished by the ensemble of atoms that constitute it. As for thought, it is by irregular flashes that it utilizes life. (27)

In this light Bachelard can affirm a complex relation between the material, physiological, psychological, and cultural that allows him to pose the seemingly counterintuitive formulation that "habit is the will to *begin* to *repeat* oneself" (44). What seems natural is denatured into a procedure of attention and selection, but at the same time the decisive autonomy of rational thought is brought down to nature. And moreover, if duration is produced, how time "flows" is itself produced – something made clear by the divergent kinds of movement of time we hear at work in any given musical situation.

What becomes clear here is that time is not only an internal experience, the experience of a subjective interiority. To repeat: "far from innermost duration being a property we own, it is a work we create and is always preceded by an action centred on an instant … We must attach our time to things for it to be effective and real" (Bachelard, *Dialectic* 44). Bachelard will speak of the diverse acts by which we can break with time as a flow merely lived through, of the "social framework of duration," the "phenomenal framework of duration," and the "vital

framework of duration" (*Intuition* 60). Conceiving of these as contingently constructed durations, rather than as anything essential, allows for a more precise making sense of the world, of our place in it, and of our means for acting in it, where we face a *timescape* of instants that demand a response.[24]

To describe how instants are brought together, Bachelard often turns to a vocabulary associated with sound and music, describing a habit as "a certain order of instants chosen from the basic ensemble of moments in time; it plays itself out at a specific pitch and with a distinct tone" (43), and Being as "a site of resonance by virtue of the rhythms of instants" (30). What are these rhythms Bachelard speaks of? He puts the work of rhythm in vivid terms:

> the most stable patterns owe their stability to rhythmic discord. They are statistical patterns of a temporal disorder, and nothing more than this. Our houses are built with an anarchy of vibrations. We walk on an anarchy of vibrations. We sit down on an anarchy of vibrations. The pyramids of Egypt, whose function is to contemplate the unchanging centuries, are endless cacophonies … the initial problem is not so much to ask how matter vibrates but to ask how vibration can take on material aspects. (*Dialectic* 124-25).

This returns us to some of the considerations laid out at the opening of this paper. Bachelard famously takes as a starting point for his reflections on rhythm Pinheiro dos Santos's theory of rhythmanalysis, which proposes a "phenomenology of rhythm" from distinct material, biological, and psychological points of view (123). In *The Dialectic of Duration* Bachelard will affirm that "the phenomena of duration are constructed by rhythms, rhythms that are by no means necessarily grounded on an entirely uniform and regular time" (xiv) and describes rhythms as "systems of instants" to which we must entrust ourselves, if we are to, in any case, have durations.

While at points Bachelard stresses a certain harmonisation and codification of such "systems of instants" (or perhaps rather a certain dialectic between repose and creation), what seems more important to us is that our work with rhythms is always just that, a *work*, of creation and recreation, not only doing but producing (133). Our involvement with a rhythm, then, cannot be supposed to be an immersion in the flows of time, but is a matter of risk, an "absolute and total risk, risk that has no aim and no reason ... [a] strange emotional game that leads us to destroy our security" (19).

How Bachelard conceives of the instant has much in common with how we are conceiving signs, and we can thus learn much from his understanding of rhythm. What we can now say is that a given situation can be understood as many time-things and temporal processes, many sign relations and behaviours, and if we examine how the "systems" of signs that constitute us as embodied actors deal with the encounter with these time-things, we can develop a sense of how it is that time is meaningful. In turning to Bachelard we have sought to show the movement between instant and duration as involving procedures of selection of, and learning from, the signs we encounter, contracted into given instants. We have also sought to bring into focus the specific "we" that is staged in this encounter, not a pre-given subjectivity but a process of stabilisation and modulation. And we have sought a perspective that is at once psychological, social, and historical, where the most intimate and fleeting affect is, in principle, in communication with matters and histories both present and distant.

We may feel that satisfaction or comfort derives from producing a rhythmic alignment with the sign-worlds around us, though Bachelard shows us how this seemingly stable state involves a great deal of selection and work at multiple scales. When we cannot succeed in this work we may feel exhaustion, as in the exhaustion of the worker who feels that their bodily or mental rhythms are being impeded by the "misaligned" rhythms of the working day. This is where the harmonisation and regulation that Bachelard emphasises comes into play: it is necessary that we be in a position to make our own rhythms before we can proceed with anything more ambitious (135-36). Or we may, alternatively, feel dread: the dread our teenagers may feel as they await the contentless signs of their partner's love, the comfort they feel when they finally encounter their desired "time-thing" that allows them again to construct their own rhythms for their own future.

But between these cases there are those that seem like complex interminglings of alignment and misalignment, where diverse signs are drawn together into diverse, coexisting rhythmic complexes that unfold and expand with autonomy and yet in resonant relation with each other. Moreover, we must assume that these complex interminglings are the norm: how else to explain the apparent consistency of the individual that spans my present, past and future as a living organism, as a human individual (with the characteristics and social relations that further identify me within the category of humanity), as a member of social groups and contributor to social relations of varying scales, as a subject habituated to certain modes of perception (as in Jonathan Sterne's account of what he calls "audile technique" (23)), as a node within the workings of global capital? These aspects are all in relation and not easy to isolate analytically, which is why Bachelard will speak of the instant as "likened to an eternity" (*Dialectic* 95), describing the instant not in terms of duration but rather "richness" and "density" (44). Through rhythm instants, temporal signs, all come to act as signs for the others, and sign complexes as signs for other sign complexes, constituted in a "thick temporality" held together not in essence or unity, but rhythmically.

Conceiving of signs and rhythm in this way offers a path to thinking of the meanings that time has for us as in some way shared or collective. Our bodies and minds can be seen to be made up of certain complexes of signs, and to sustain themselves and move into the future through processes of interpretation, both of themselves and of signs they encounter. Some of these signs of which we are made are also part of the complexes of signs that make up other bodies. This gives us the capacity to be receptive to other signs, albeit not necessarily in a neatly circumscribed way. We co-construct enough of a sign-world, enough rhythms, with our fellow participants in social or artistic situations to be able to "share" encounters, though not to confidently assign universal meaning to these encounters once and for all. This is perhaps what Bachelard is suggesting when he speaks of "not perhaps … thinking the same thing, but … think[ing] something *at the same time*" (103). As such these can be occasions when we not only control or are controlled by signs, but when we learn to work creatively with signs, when we anticipate, when we learn, when our relation to signs has the distinct charge we spoke of earlier, when we find joy, in the sense developed by the early modern philosopher Baruch Spinoza, joy in discovering in ourselves new capacities to affect and to be affected,[25] new ways to work with signs. These are the "edges" that time-signs have—their capacities to transform and to be transformed.

This provides a perspective towards some of the seemingly inexplicable events that occur in musical situations, situations where musical time is understood, to quote Gérard Grisey, as "a place of exchange and coincidence between an infinite number of different times" (274). Some of these times will be readily, commonsensically recognisable as both musical and temporal. Some will require more theoretical abstraction to exhibit their temporal characteristics and effects, as may be the case with social times – the fact that concerts take place at certain times of the day, or that extreme timespan events do not enter into an easy rhythmic relationship with the working week. Another level still is the time of objects – that, for example, instruments are imbued with a number of histories, from the global histories of instrument design, manufacture, and distribution (see Tresch and Dolan; Patteson), to the physical and social history of an individual instrument.

Again, these times are not readily separable – for instance, the temporal possibilities of a musical performance could be conditioned by the historical entity that is the drum kit, by the social constraints of the musical form the performance is situated within, and by wider social and institutional constraints (the concert hall versus the bedroom), albeit none of these acting as objective determinations, each being interpreted in turn. And this is before considering the reception of the situation itself, from aesthetic responses to the perspectives of performers working in relation to their embodied instrumental training. Wherever we are we have many times, many signs, and many rhythms.

conclusion

We have characterised rhythm as a sort of relational practice: it brings selves, objects, events, and so on into relation with each other through time, as it establishes "time-things" that "extemporise"[26] these relations. These relations are not static or abstract: they signify for the selves involved, and it is the processes of signification that have concerned us. Through identifying, untangling, and reconstructing these many temporal mediations[27] we can ask: what happens when a slight shift in beat changes the character of a situation drastically, how does this instance of "style" at work manifest itself? What has occurred when the atmosphere in a room passes an obscure threshold and shifts from satisfaction to joy? What happened at the near nineteen-hour long performance of Erik Satie's *Vexations* organised by John Cage that led Cage to say afterwards that "I had changed and the world had changed" (Kostelanetz 238)? *What happened?* (Deleuze and Guattari 192)

When Deleuze and Guattari pose this final question, it is with regards to the literary form of the novella, distinguished from the question associated with the tale, "What is going to happen?" The tale unfolds, while the novella enfolds (193-94). In Deleuze and Guattari's reading, the novella takes place where something has happened, something that cannot be expressed in itself or presented in a uniform and objective manner. What we find instead of an explication of the happening itself is that the characters take up "postures" in response to this happening. They respond to, in Deleuze's earlier terminology, an "event," the counterpart to the homogenous passage of time (*Logic* 22 and *passim*), that suffuses the moment. The question of "what happened?" is a call to identify and examine the "lines," we might say the passages of icons, indices, and symbols, that have become interwoven in a given moment, that converge in particular bodies in their response to the something that has happened. For us, this suggests

an approach to thinking through how the rhythmic configuration of a "system of instants" and a system of signs is at work throughout lived experience: in social as in musical situations.

With Bachelard, we might think of a harmonisation and stabilisation that takes place at the level of the instant, the achievement of kinds of synchrony that become rhythm – the satisfying, but perhaps not always inspiring, sense of being together (Nelson; Overy and Molnar-Szakacs). Such affective but nevertheless relatively stable experiences – discomfort, pleasure – still assume an equally, relatively stable subject position. But at the level of a "what happened," we can begin to think about what is happening rhythmically and semiotically with more significant "events" and ruptures.

With training, habituation, or "style" leading to a particular, non-comprehensive (that is, not composing an entire subject or actor) *system* of instants, an event may be responded to in an unexpected and perhaps illuminating manner, this in turn presenting a new sign for interpretation and integration into an "instant." But style itself, its deep habituations, may be subject to "desubjectivising" events, those that mark a change more substantial than a temporary affective shift. Extreme duration events seem especially apt to this, from Cage's *Vexations* experience to the dusk-till-dawn club night, each involving a kind of attention and interpretation, an integration of instants, that slowly works at habitual responses. But this would not be exclusive to such events, with risk, a concern with the unknown, and the contingent having their own roles to play across different durational domains.

What is at work here is an evaluative concern with signs, systems of signs, and the articulation of these systems as affective temporalities. It is a concern with the heterogenous magnitudes, scales, and surfaces that converge and diverge in the encounters that constitute lives, by which something happens and by which this something is interpreted and made meaningful as time. As Eduardo Kohn reminds us, "Selves don't exist firmly in the present; they are 'just coming into life in the flow of time'" (206, quoting Peirce, *Collected* 5.241). If rhythm is to be a concept with the power to illuminate, we should notice its call to consider the sense of time.

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[1] "Enskill" is a term used by Tim Ingold. For a comparison with enculturation, see Ingold 36-37.

[2] The notion of the "frame" is taken from Goffman and is thus supposed to be learned.

[3] Musicking is a term introduced by Small, to expand the culture-specific term "music" to include cross-cultural practices associated with making and using sound.

[4] For a detailed discussion, see Scott.

[5] <<Wir haben zu berücksichtigen, dass alle unsere Urteile, in welche die Zeit eine Rolle spielt, immer Urteile über *gleichzeitige Ereignisse* sind.>> Einstein 893.

[6] For a discussion of this, see Prosser chap. 6.

[7] Prosser chap. 6.

[8] There is a huge literature on these topics, but see, for example, Merker et al.

[9] Here we are speaking of *information*, in the sense Bateson defines as a "*difference which makes a difference*": see Bateson 459.

[10] In his first "synthesis" of time Deleuze accepts the primacy of a kind of Husserlian retention, albeit extended to accommodate pre-psychological levels of biological habituation, but for his second synthesis he sees the need to adopt a Bergsonian sense of memory. See Deleuze, *Difference* 80.

[11] Farman finds it hard to substantiate the truth of his story (4-5), but he, as we do, takes it as emblematic of familiar occurrences in the experience of waiting.

[12] The authors have sometimes used their own translations for further clarity.

[13] On the history of philosophical understandings of signs, see Cassin et al.

[14] Dosse maps the remarkable rise to scholarly hegemony of structuralist approaches in France.

[15] Though this is not to say that structuralist approaches cannot account for temporality, but rather only that any temporal behaviours are immanent to the structure under consideration. See Deleuze, "How Do We Recognize" 180.

[16] Latour notes in passing that ANT can be reasonably described as "half Garfinkel and half Greimas." Latour, *Reassembling* 54 n54.

[17] In Deleuze's words this is a case of finding the "language proper to a domain" ("How Do We Recognize" 171), with the use of the term "language" here suggesting the tension at hand.

[18] As in Derek McCormack's nevertheless rich and thought-provoking *Refrains*.

[19] Elsewhere, Guattari notes that Lacan "flattened everything by choosing to work with really bad linguistics," namely a form of linguistics derived from Saussure and Jakobson. *Anti-Oedipus Papers* 152.

[20] "le tempo est une condition pour que la multitude d'enseignements que le son nous donnes puisque réduite à l'unité." Transcribed from: https://www.youtube.com/watch?v=SthKs40ClCY [accessed 13/08/2021].

[21] As when he speaks of "the working day, regarded spatially – time itself regarded as space." Marx, *Grundrisse* 399.

[22] Kotowicz has been important for us in formulating these thoughts.

[23] Bergson scholars have disputed Bachelard's critique of Bergson, arguing that Bergson does in fact have an adequate account of discontinuity that relies on a richer sense of the heterogeneity of durations than Bachelard allows for. See Mullarkey 136. Rethinking the relation between these two thinkers could be a fruitful line of future enquiry into rhythm.

[24] By way of comparison see again Adam, "Timescapes".

[25] "Whatever so disposes the human body that it can be affected in a great many ways, or renders it capable of affecting external bodies in a great many ways, is useful to man[.]" Spinoza, *Ethics* IVp38. This account of affect is crucial for Deleuze and Guattari (261). Deleuze also highlights different kinds of sign at work in Spinoza's *Ethics* in *Spinoza* 105-07.

[26] Heidegger quoted in Scott 197.

[27] See Born on the importance of accounting for different levels of temporal mediation.