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On Time and Planning: Opening Futures by Cultivating a ‘Sense of Now’

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Abstract

Planning seeks to shape socio-spatial outcomes, but is also, by nature, future-oriented. Yet, planning theory and practice have paid relatively little attention to ongoing debates about changing social relations to time. Building on a wide range of disciplines, we review the multiple temporalities through which lives are lived, the modern imposition of clock time, postmodern acceleration phenomena in the Anthropocene, as well as their implications for planning's relationship to the past, present and future, and for planning theory. We discuss how thinking more and differently about time might challenge and improve planning by helping theory do better justice to the complexity of practice. We conclude by outlining eight propositions for rethinking planning's relationship to time.

Introduction: An idea whose time has come?

Urban planning theory and practice have a strong spatial orientation. Yet, space and time are intimately intertwined (May and Thrift 2003) and time is a key constitutive dimension of all planning activity. Planning is “a continuous process (...) of choosing strategically through time” (Friend and Hickling 1997, 1) and “by definition, a temporal field...concerned with transformation through time, or... the possibilities that time offers space” (Abram 2014, 129), with a particular orientation to the future that Myers and Kitsuse (2000, 221) describe as the discipline’s “raison d’être.” Planning practice thus seeks –from a present rooted in the past –to tame unpredictable, complex and wicked conditions and problems (Hoch 2009), to prepare and create the conditions for more desirable futures.

Aside from being intuitively obvious, the centrality of time and timing (i.e., the positioning of events in time) to planning becomes apparent when we consider descriptions of contemporary challenges: *rapid* urbanization, *urgent* imperatives of addressing climate change, *delays* stunting development, efforts to *accelerate* urban regeneration in *stagnating* neighborhoods or economies deemed to be *lagging* (e.g., Degen 2018; Raco et al. 2008). With terms like renewal, modernization or conservation, planners’ promissory vocabulary is richly temporal. Yet, planning thought has not paid much attention to time and rarely addresses the challenges posed by the dialectic interplay between time and space (though see Mandanipour 2017; Abram 2014; Beauregard 2015, ch.8)¹. We don’t fully understand (or research or teach) how time is constructed or interpreted, how its meanings are shaped, or how it is marked in space. Despite the discipline’s intrinsic interest in shaping future states, most approaches to planning research are time bounded (e.g. cross sectional studies), often failing to capture long-term impacts of planning episodes (Hall 2013; Matthews 2013).

There are historical reasons for the privileging of the spatial over the temporal dimensions of planning thought. The planning project emerged with a pragmatic physical design focus to address dysfunctional built forms. Time, by contrast, is a more intangible, abstract, even elusive phenomenon (Adam 1992; Luhmann 1976). Its influence can be felt but is often taken-for-granted as an inert measure of continuities and changes. Our understanding or mastery of time, and the possibilities that

¹ In contrast, human geography has focused on the temporal dimension of space since the 1980s (Soja 1980; Thrift 1983, Castree 2009; McCann 2003; Raco et al. 2008)

it offers are difficult to perceive in the world around us without a determined effort to cultivate particular ways of seeing.

The contemporary present is, however, a key moment in which to reconsider how we think about time and the possibilities it enables (and disables) for planning practice. In late capitalist societies, relationships to time and space are undergoing profound change (Harvey 1990; Castree 2009). The qualitative intensification of social acceleration and the technologically-driven disruption of many established social practices are seemingly undermining human capacity to contain risks or influence how the world is changing. The idea that we are living in a new geological era, the Anthropocene (Crutzen and Stoermer 2000), characterized by catastrophic human impacts on the planet, profoundly unsettles the timescales on which we think and act. We now live in parallel timeframes, or ‘shadowtimes’ where we experience everyday time while also being acutely conscious of our position and role in ongoing changes at “deeper”, i.e. geological, time scales (Beilin and Suryanarayanan 2016). The existential threats posed by impending ecological crises also generate a profound sense of urgency. Time seems to be running out but also reversing as innumerable threats stream back towards the present from futures we have already damaged and seem incapable of mending (Latour 2013; Braun 2015). We are locked-in to unsustainable patterns of development that generate potentially fatal path-dependencies (Urry 2016). At the same time, intensifying processes of space-time compression have accelerated the pace of life, outstripping human capacities to shape and guide change (Rosa 2009; Harvey 1990). If the present is a “switching point” where we seek to influence past trajectories as they extend into possible futures (Luhmann 1976), our contemporary future imaginary is marked by eschatological thought, projecting a “new catastrophism” pessimistic about our collective capacity to shape the future (Urry 2016).

The implications of such meta-narratives for planning theory and practice are significant. As Connell (2009) notes, urban planning is sometimes presented as a timeless activity, seamlessly linking contemporary practices to ancient city-building processes. However, ideas of planning are always shaped and enacted as part of historically variable regimes, influenced by social imaginaries that reflect and condition our understanding of the possibility of controlling time and space. Theoretical accounts regularly trace planning ideas to roots in enlightenment thought and the belief that rational thinking can be used to shape progressively better futures (Healey 1997; Friedmann 1987). Debates about the implications of post-modernity for planning thought, meanwhile, raise profound questions about what remains of planning when fundamental tenets of societies’ relationship to time, especially belief in progress, are undermined (Campbell 2005). Yet, debates about changing paradigms of planning thought can obscure how changing relations to time operate as an *ongoing* dimension of the

politics of possibility for re-shaping planning ideas and practices within diverse and changing spatio-temporal regimes. For example, recent problematizations of the time planning processes take, whether in bureaucratic-technical or participatory-democratic terms, raise profound challenges for both theory and practice (e.g., Abram 2014). In this context, the starting point for this paper is that planning theory's relative silence about the nature of time and its relations to planning and urban life is itself increasingly problematic.

Instead of simply contrasting utopian, progress-oriented planning with the condition of postmodernity, we join others who have recently begun to explore what developing concern for "critical temporalities" (Bastian 2014) might mean for planning theory and practice (Livingstone and Matthews 2015; Raco et al. 2018; Degen 2018). Planning is about choices, the possibilities of change, and normatively the "transition over time from current states to desired ones" (Abram and Weszkalnys 2011, 4). However, this temporal dimension is not sufficient to solidly anchor a discussion of planning and time². Planning practices necessarily draw upon, generate and seek to reshape various processes unfolding across a range of temporalities (Abram 2014). This involves the application of various techniques, methods and regulations to tame complexity, select, envision and implement a chosen future (or possible futures). In practice, such techniques are pragmatically blended with the necessity of muddling through, arguing, collaborating, negotiating, estimating and improvising in the face of wicked problems, uneven power relations and disagreement about how they should be tackled (Hoch 1984; Laws and Forester 2015).

To capture these multiple facets of planning's relations to time, we start from Friedmann's (1987) definition of planning as the application of knowledge to action. We conceive of planning broadly, as the act of applying a variety of knowledge types to actions that seek to shape the future course of events over changing timeframes, but always from the standpoint of a present informed by the past. This entails acting in and on a complex of interacting forces, tendencies and trajectories of possibility, requiring a sensitive grasp of the various temporalities at work in shaping change.

Reviewing the implications for planning of the pervasive sense that social relations to time have become a problem enables us to explore how these temporal dimensions of planning and urban change might be rethought, and what the implications might be for planning with a heightened sensitivity towards time. Following Walter Benjamin's critique of Hegelian historicism, teleologies of progress and homogenous time, we normatively seek to understand how possibilities for change

² Not least because *all* social existence, structures, practices and meanings are situated in time and space. Moreover, all social "practices are defined by the fact that their temporal structure, direction and rhythms are *constitutive of their meaning*" (Bourdieu 1977, 9, emphasis added).

might be opened up by thinking about the present as “Jetztzeit” (the time of now), a time when collective action has the potential to “explode” out of the continuum of history, generating new possibilities (Benjamin [1940], 1974 XVI).

The paper makes several key contributions to planning thought and practice. We highlight how changing conceptualizations of time underlie the shift from pre-modernity to modernity to postmodernity, and the very possibility –and difficulty- of planning. Drawing on insights from diverse disciplines, we also propose ways to rethink multiple temporalities as rich opportunities for planning intervention.

We start with an overview of understandings of social time, from the nature of ‘modern’ time to an exploration of how various accounts of post-modernity posit fundamental changes in social relations to time. Second, we turn to reflections on time in scientific and philosophical thought in search of ways to strengthen or reimagine planning’s relationship to time by understanding the creative possibilities opened up by re-envisioning temporalities and time-space relations. Thirdly, we delve more concretely into the quandaries that time presents for planning theory and practice, emphasizing how both modern and postmodern time horizons challenge the future orientation of planning and discussing planning’s relations to the past, present and future. Finally, we propose a set of eight propositions that can better integrate plural and changing temporalities in planning thought and practice.

A. On the Evolution of Time

Time is a composite notion that defies definition. It is “mellifluous” and multidimensional (Thrift 1977, 92). It is a scarce resource and an unescapable constraint. It is made up of duration, change, sequence, a continuum of past, present and future, trajectory, evolution, memory and meaning, anticipations and goals, it is cultural, linguistic, social, normative, a threat and a necessity (Thrift 1977). Nearly all fields of philosophical and scientific inquiry therefore address time as a fundamental feature of human experience. A comprehensive review of its treatment across disciplines is therefore beyond the scope of this paper. Rather than seeking to define time, we start by exploring key debates about changing *social* understandings of time before going on to selectively consider some significant developments in thinking about time across a range of other disciplines.

1. Modern clock time (Is it cuckoo?)

Sociological theory and research has long recognized how treatments of time and understandings of self, social origins and norms co-emerge within every culture (Adam and Groves 2011). Tracking

time through calendars has long allowed pre-modern societies to make the future predictable, to anticipate and plan, especially in agriculture, and this turned time knowledge and associated predictive abilities into a means to control the future and thus the present. In other words, knowledge of time is power.³ The historical emergence of what is known as ‘modern time’ can be traced to ruptures in dominant understandings resulting from changing economic, political and social realities in the mid-eighteenth century, with the Enlightenment challenge to God’s eternal time in Europe and the subsequent opening of the future. This is neatly symbolised by the new meaning of the word ‘revolution’ in France, from a cyclical motion to a moment of radical break in a linear conception of time (Kosselleck 2004). The inauguration of modern time is founded on a new understanding of the future as open and malleable. Knowledge of the past can no longer serve as an adequate guide to what is to come. Crucially, an open future is also a future that can be purposively shaped. A growing awareness of the freedom this creates is a defining feature of Enlightenment thought.

For example, this is reflected in Simmel’s classic sociological view of society as a becoming (sociation) and in Mead’s continuously emergent, evolutionary, open-ended but steerable “great adventure of human life” where “human beings with their reflexive intelligence can shape (their) evolutionary future” (Mead 1899; Strauss 1991, 416). Mead’s evolutionary future opens the possibility of applying reason and knowledge to propose “an order which is more adequate than the order which has been there” (Mead 1938, 663)- i.e., to plan. He also proposes that this evolution can enlarge “the scope of moral social consciousness (...) expanding universes of discourse” and increase “social differentiation, complexity and integration” (Strauss 1991, 418). The inauguration of modern time thus created the conditions of possibility for planning: a means of applying reason to shape an open future (Connell 2009).

Modern time is lived by the clock which powerfully conditions our common-sense understanding of time. Abstract clock time is disconnected from natural cycles or human biology and has become essential for fine-grained social coordination and the standardization of activities across space. The power of clock-time obscures the extent to which it is a social construction:

...clocks not only include time as a measure, they also measure time. It is this dual function of clock time that requires some attention since the two are qualitatively different. The invariant measure is a human abstraction whilst that which is being measured is a physical, natural phenomenon whose very essence is repetition with variation. (Adam 1990, 53)

³ For instance, in pre-colonial Olmec and Mayan cultures, political power was strongly associated with calendars and tracking time cycles.

In the West, clocks became common in the mid-14th century on churches and in Christian monasteries, imposing the timing of devotional services. These clocks later assumed increasing importance for coordinating market-trading hours. Today, most of the world lives by clock time. Time is standardized into zones, and everywhere daily life is disconnected (desynchronized) from natural cycles. After churches, clocks were added to schools, factories, banks, train stations, gaining in preeminence in the urban landscape. By the 19th century, the bourgeois ideal was to be “regular as clockwork.” Throughout the 19th century, as clocks and watches became affordable, their wide diffusion became “essential to a well-articulated system of transportation and production” (Mumford 1934, 2010 ed,17).

In *Technics and Civilization*, Mumford sized the essential contribution of the clock to western culture and industrialization. The punchclock transformed time into an instrument of class domination over production and social behaviors. Deeper still, the clock became a “second nature,” with a:

pervasive and strict (effect): it presides over the day from the hour of rising to the hour of rest. (...) Abstract time became the new medium of existence. Organic functions... regulated by it: one ate not upon feeling hungry but when prompted by the clock; one slept not when one was tired but when the clock sanctioned it. A generalized time-consciousness accompanied the wider use of clocks – dissociating time from organic sequences. (Mumford 1934, 2010,17)

Clocks are central to the development and intensification of capitalism, where time literally becomes money, treated as a commodity that can be lost, saved, sold and given. Intensifying working time and accelerating the circuits of capital are central factors of productivity and profit (Thrift 1977). The imposition of time-discipline on a reluctant proletariat through strict factory working hours is understood as a key battle in the industrial revolution and establishment of capitalist social relations (Thompson 1967). Clock time is therefore a precondition for industrial and capitalist development, and perhaps the greatest influence driving modernity (Mumford argues that the clock is a more powerful driver of modernity than the steam engine).

Within the industrial and post-industrial age, imposed times (work/school schedules, curfews) are simultaneously central to economic and social production and techniques of domination. Sociologists have long noted how time *disciplines* social life. Temporal *habitus* (or norms) are fully internalized forms of self-restraint that are both pervasive and implacable (Tabboni 2001). Norbert Elias went as

far as to argue that the level of “civilization” (a term consistent with Mead’s notion of social evolution) reflects the extent to which social actors are able and willing to acculturate and submit to an imposed, although invisible, time discipline. Rejecting clock time thus becomes a potentially revolutionary act: “Refusing to carry a watch ... is one of the ways of declaring independence from conventional society” (Lynch 1972, 66).

Clock time not only structures human experience, it also renders the future abstract, empty and ready to be exploited -especially when accounting for time means that future values are discounted to the benefit of Net Present Values (Adam and Groves 2011; Adam 2006). When time can be sold and traded, it generates both relations of indebtedness and the potential for investment decisions calculated on anticipated rates of return. The abstraction of clock-time also underpins the idea of planning in largely unquestioned ways, where an open future is waiting to be ‘colonized’ and can be to some extent known and controlled. Whilst plans may acknowledge the need to ‘phase’ development, review or update proposals amidst the uncertainties affecting implementation, they typically remain premised on defining a desirable end-state and the mechanisms by which it might be reached. Time is therefore viewed as largely open and empty; little more than a measure of spatial change marking the realization or disruption of spatial ordering.

2. “Live from postmodernity!” Living in real time

Modern time is homogeneous and linear, and modernity increased speed in information and communication dramatically, compressing time and duration, thus extending and globalizing the present –to the detriment of the past and future (Adam 2006). The further intensification of the speed of flows, or space-time compression (Harvey 1990), is a fundamental feature of post-modernity with profound consequences for understanding human capacities to purposively plan for the future. Post-modernity is sometimes characterized as a collapsing of the time-space continuum. Postmodern time is defined by immediacy and simultaneity, when time becomes, paradoxically ubiquitous and yet less relevant. Just as places become placeless, everywhere identical, time has become featureless, every time a simultaneous ‘now.’ This is linked to the advent of immediacy in communication that eradicates both time and distance.

The modern world abridges all historical times as readily as it reduces space. Everywhere and every age have become here and now. History has been abolished by our new media.
(McLuhan and Zingrone 1995,304)

This timeless “now” is often described in terms of “real time” experience, inherently related to GPS-enabled, or place-identifying devices. From a critical perspective, Rattray argues that:

Today, we are real time. We carry with us gadgets, small inventories and surveillance equipment that monitor our every move.... Rather than seeing a march of eras, a narrative progression towards a better future ... we are contemporary, simultaneous ... Each of one of us is a behavioral algorithm, clocked, analyzed, monitored... We exist in a panopticon and we ... pay our ... dues (to) feel connected to it, this real time network of simultaneity... the permanent now. (Rattray 2015,5)

The significance of ‘real time’ technology has intensified with the promise of disruptive change to patterns of social life and urban development. Debates about this “panopticon” of intensified spatio-temporal control are, for example, being rehearsed in relation to the “SMART” city imaginary (e.g., Deakin 2015; Komninos 2008; Marvin et al. 2016; Vanolo 2016). In Smart Cities, the Internet of Things connects people and devices in real time via networked data collection systems. Monitoring 24/7 promises connectivity, sustainability and efficiency, using big data analytics, “smart meters,” “smart grids” and cell phones that track our every move, plugging us into grids of control. Dystopian interpretations of life lived in both real time and traceable space describe a possible police state relying on 24/7 mass surveillance, predictive and *proactive* policing and threatening privacy and democracy (Van Brakel and de Hert 2011; Marvin et al. 2016; Vanolo 2016; Giroux 2015; Hentschel 2007).

Independent of the risks inherent to Smart Cities development, increasingly accurate clock time enables the precise synchronization of activities in fast-paced service-oriented economies (e.g. “just in time” supply chains). Social acceleration is driven by technologically-enabled economic change and the increasing functional specialization of society (Rosa 2009). These increase the pace of life and social change, generating the pervasive experience of stressful time shortages or “time famines” (Linder 1970) –there are “not enough hours in the day”. Whilst hard to gauge, Lübke (2009) suggests this can be measured by the extent to which the past no longer holds true in the present, or acts as a guide to the future. In these circumstances, the present becomes “contracted” and the horizon of experience (past) and expectation (future) no longer coincide sufficiently for people to make plans:

... adherence to a time-resistant life plan [is] incompatible with the demands of the late modern world. Thus, a conception of the good life based on long-term commitments, duration, and stability is thwarted by the fast pace of social change. (Rosa 2009,100)

In response to the stress of social acceleration, some cultivate practices of deceleration, e.g., attending “temporal retreats” with yoga, spirituality, mindfulness meditation and/or digital detox to be “in the present.” Meanwhile, a mass market of “productivity” apps sells us ways to extract more value from our precious time. This assumes we are drowning in a quagmire of fast-flowing (flying) time, losing track of the present and squandering opportunities for “quality time.” Social acceleration is not, however, evenly distributed across societies and is often accompanied by parallel processes of deceleration, whether as an intentional political response to the alienation of a speeded up world (e.g. Slow food, Slow towns movements) or as a consequence of unequal access to the motors of acceleration (Rosa 2009).

Acceleration dynamics have changed the key phenomenological categories of past, present and future in ways that continue to be debated. The future no longer operates as an “open horizon of expectation” into which problems, hopes and possibilities can be deferred. Instead, according to Nowotny (1996,50), the unravelling of Enlightenment faith in progress has created an “extended present” with little prospect of escape from unsustainable trajectories:

Thus it is not just that (the) ‘future is not what it used to be’ ...It is increasingly overshadowed by the problems that are opening up in the present. The future no longer offers that projection space into which all desires, hopes and fears could be projected without many inhibitions because it seemed sufficiently remote to be able to absorb everything which had no place or was not welcome in the present. The future has become more realistic (...). But this also means that it is drawing closer to the present. (...) a momentum of the present has been established which has to concentrate on itself.

For many, the contemporary experience of the present may be of an extended “impasse,” where, for example, the optimistic promises of a better future that characterized the post-war period have unraveled, leaving people stuck in conditions of precarity and marginality (Berlant 2011). Under these circumstances, Berlant argues the persistence of optimistic attachments to a better future become “cruel” since the possibility for their realization has eroded – a cruelty she identifies as a dysfunction of modernity. She therefore points towards the *affective* dimensions of the politics of time as generated by an extended present within which actors have little scope to realize the ‘good’ life that dominant ideologies continue to construct.

The contemporary relation to time also creates experiences of rupture and loss. Guyer (2009) suggests the near future, previously a horizon of possibility towards which individuals and societies could act, has largely disappeared, replaced by long-term promises of the future prosperity that free-

markets or evangelistic religion offer to the faithful. For others, the end of history, neoliberal hegemony and the absence of alternatives to capitalism have hollowed out not just the mid-range future but also the longer-term utopian horizon necessary to motivate belief in a better future (Harvey 2000; Friedmann 2000).

With different emphases, these accounts engage with concerns that technological, societal and environmental changes, interacting with the neoliberal focus on free markets as *the* way to determine the future, have reworked time, undermining the scope for purposively shaping futures. Rosa (2003) further suggests that social acceleration fundamentally challenges the possibility of democratic governance since many social transformations now happen so quickly as to defy the ponderous processes required to govern change (democracy takes time). In Luhmann's (1976) terms, economic and technological change are creating 'future presents' at a rate that surpasses societal capacity to deliberate about 'present futures' or switch trajectories towards the realization of desirable alternatives.

Contemporary sociological work, drawing on theoretical frameworks focused on complexity, frequently conceptualizes futures as emergent products of complex socio-technical systems that are powerfully path-dependent, generating lock-in effects that are hard to reshape (Urry 2016). Presenting change as a product of systemic processes that seem to defy ready steering does not offer much hope for responding to the urgent need for transformation to avoid impending ecological crises. Paradoxically, then, at a time when climate change and associated fears speak to an unprecedented need to plan for a radically different future, there is limited faith that it is possible or desirable to do so on the scale required to transform society. The weak contemporary status of ideas of planning (e.g. Gunder 2016) and their association with anachronistic, governmental practices, must therefore be critically assessed in relation to changing ideas of time, with a view to somehow separating political and ideological influences from underlying social changes that potentially challenge the possibility of planning.

Before turning our attention more fully to planning's engagement with time. In the next section, we first set out to explore a variety of perspectives that have the potential to generate new insights into the relationship between planning and time.

B. Searching for new times in other disciplines

So far, we have shown that changing social relations to time seem to have weakened societal capacity to steer change or avert future threats to life, justice and prosperity. We now draw selective lessons from some of the ways time has been redefined in physics, biology and philosophy to extend our conceptual understanding of time. We will then draw out the implications of these insights to rethink planning in its relationship to time.

Newton's conception of absolute time as a constant backdrop to all physical events whose duration, pace and progression can be mathematically measured provides the basis for the development of mechanical engineering and underpins clock-time –as well as everyday temporal perceptions in western cultures (Adam 1990). However, led by Einstein's theory of relativity, twentieth century advancements in physics revolutionized the concept of time, transforming it from an absolute universal linear continuum to a relative characteristic of objects in space. Relative time is observer-dependent and non-homogenous, which relates intuitively to certain aspects of the lived experience of time. Subsequent developments in quantum physics have given rise to many counter-intuitive paradoxes where, for example, time can appear 'imaginary' or even disappear altogether.

If developments in physics problematize any common-sense equation of clock-time with an underlying physical reality, considering biological ideas of time reveals the depth of social alienation from natural rhythms (Grosz 2004; Adam 1990). By imposing Newtonian clock time, late modern societies deny the biorhythms that underlie our health and well-being, including circadian rhythms, changing seasons and ageing.

Biologists' accounts of time point towards a rich and dynamic understanding of a:

“world of orchestrated rhythms of varying speed and intensity, of temporally constituted uniqueness, a realm of organisms with the capacity for memory and foresight and of beings that time their actions and reckon time.” (Adam 1990, 72)

The dynamic ways in which organisms grow, transform, repair and recycle themselves over the life course and succession of generations indicate that change does not happen in some externally measurable time. Rather, it is constitutive of the varying times of different forms of being and becoming⁴. Such accounts of becoming problematize any tendency to see evolutionary processes as fixed or deterministic, pointing to a more open, creative process of emergence from within complex systems (Grosz 2004). They also point to a plural or multiple conception of time, formed from the

⁴ The 2017 Nobel Prize in physiology/medicine was awarded to Jeffrey Hall, Michael Rosbash and Michael Young for their findings about the complex mechanisms of circadian rhythms, linking all living beings to the earth's rotations.

inter-dependent becomings of different life forms, from individual organisms to the vast expanses of ‘deep’ geological time that ideas of the anthropocene invoke. Biology and physics both therefore suggest a shift away from the absolute or linear towards a more multiple, relativist, and complex understanding of how time is produced and perceived as a fundamental feature of life.

Philosophically, Aristotle conceptualized time as a number of movements (“arithmos kineseos”), a quantified succession related to change in space (movement). Everything that changes is thus “in” time, and time and change are mutually co-generated. Modern philosophers have, however, considered time as a fundamental, yet still oddly elusive, facet of human consciousness, identity formation and free will. Heidegger’s ‘dasein’, for example, defines selfhood in terms of an existential temporality where “Being ... must be conceived in terms of time” (Heidegger 2010, 222) and “being and time determine each other reciprocally” (Heidegger, 1996, 3). We project our lives and actions towards our death, thus the term "being-towards-death." This challenges the self to become “what it is” by making choices and creating meaning out of our finitude, and identifies an anticipatory (future-oriented) dimension to all being. (In contrast, the eternal sacro-religious time of God(s) “cancels out historical time ... (resulting in) the suspension of the future” [Tabboni 2001, 8])

Husserl focused on the way we experience time and the structures of consciousness that enable time perceptions, linking time-consciousness to memory, expectation, imagination, habituation, self-awareness, identity and generally what it means to be oneself (Husserl 1893-1917, 1991). The starting point of his phenomenology of time-consciousness is that Aristotelian and Newtonian time cannot explain how consciousness experiences continuity or temporal objects. Thus, articulating the experience of lived-time requires a non-Newtonian understanding of time. Husserl proposes that Now is our absolute point of orientation from which things appear as past or future (Husserl 1991).

Our consciousness of internal time, of the succession of lived experiences in the Now, enables the unification of successive moments, events and emotions and makes our very identity possible (Husserl 1991; Sokolowski 2000). We form primal impressions which we retain (memory objectifies past events). Consciousness then extends beyond the Now into the past (retention) and future (protention). The relationship between time and meaning is essential here. The subjective meaning of an action is tied to the actor’s inner (*eigen*) time, and consists of “the act projected as an aim in the stream of consciousness” (Tada 2018,1). That is, we always act in the future perfect tense, so that *we will have achieved* something in the future.

Bergson meanwhile connected time, duration and the possibility of free will (Bergson 1889, 2001). Against classical philosophical calls to transcend the temporal, Bergson argues that thinking is not a

matter of getting “outside of time” but of getting back “into duration” (Bergson 1934, 1946). He starts from a contrast between quantitative-homogenous time and qualitative-heterogenous time. For Bergson, time as it is lived (as duration) cannot be reduced to an Aristotelian juxtaposition of fixed or ‘spatialized’ moments, but is instead a series of heterogeneous processes and durations that flow into, overlap and permeate each other. Like Husserl, Bergson is interested in the continuity of time-consciousness. However, he also sees the possibility of philosophical reflection enabling a deep, “intuitive” connection with the processes of becoming that characterize all forms of life (Grosz, 2005). This has important implications. While Kant (1781, 1998) conceptualized free will outside of time,⁵ Bergson asserts the possibility of free will *within duration*. Freedom is the possibilities opened up by connecting with multiple levels of duration. An actor’s *eigen* time creates meaning and opens the possibility –and obligation- of making choices (Tada 2018).

Drawing on Bergson, Deleuze proposes a more complex theory of time as a non-measurable manifold of coexisting syntheses (Williams 2011; Deleuze [1968] 1994). The manifold component refers to a non-chronological concept of time as an n-dimensional and non-measurable series of networked and interacting processes. It is characterized by infinite variability. In this sense, time is not a continuous flow, but a combination of singular, chaotic events. Syntheses are processes through which paths emerge "out of a chaos of unrelated particulars" (Williams 2011, 30).

This very brief overview of some major themes emerging in physics, biology and the philosophy of time suggests the complexity and centrality of time as both an object of thought and fundamental aspect of life. For present purposes, we do not seek a philosophically rigorous definition of time. Rather we note key features and developments that we might use when considering ways of re-thinking planning’s relationship to time. These include moves towards an understanding of time that is more biological than mechanical, an emergent property of all forms of life. In this understanding, time is no longer an abstract and empty form, a linear progression or a simple measure, but is instead a complex, relational and plural set of potentialities that enable diverse processes of becoming and differentiation which can be experienced in diverse ways and described using multiple traits: its grain, or the precision of time divisions (Wall Street v. Island time); the period or frequency of recurrence of events (days v. centuries); the amplitude, or degree of change during or between events; the rate or speed of change; the synchronization of cycles and phases; and one’s orientation to the past, present and future (Lynch 1972, 76).

⁵ For Kant, the extent to which the past conditions the present, and our actions, means that free will can only exist *outside of time*, implying a form of transcendental idealism where the free noumenal self is not subject to the deterministic past.

These ideas point towards rich possibilities for re-thinking planning in its relations to time, exploring new ways of understanding and working with and against processes of social acceleration. To consider the implications of these possibilities, we first move on to review existing perspectives on the relations between planning and time.

C. Time quandaries: What do they mean for planning?

In this section of the paper we review prevailing conceptions of time in planning theory before considering important dimensions of planning's relationship to the past, present and future. In doing so we seek to establish how the temporal horizons of planning have been understood in existing literature.

1. The (post-) Modern time horizons of planning theory

In 1993, John Friedmann wrote that planning's traditional "*Euclidean*" model of time-space geometry had become an anachronism:

"The engineering model of planning (...), with its penchant for advance decision making and blueprinting and its claims of superiority to other forms of decision making because of its scientific character (...) must be abandoned." (Friedmann 1993,482)

Assuming a "*collapse of the space-time continuum*" (*op cit*), Friedmann called for a "*post-Euclidean planning*" to embrace multiple space-time geographies. In *temporal* terms, this means planners must get closer to the action, engaging in "*real time*" right "*now*" rather than claiming a dubious capacity to shape an unknowable future.

Identifying 'modern' planning with a discredited faith in scientific methods and misplaced expectations of control over the future aligns with the broad temporal shifts discussed above, and with wider postmodern critiques of modernist planning (Beauregard 1989). The post-modern condition reduces trust in the future, progress, and our ability to shape either. Instead, it shifts the socio-political focus towards the present. Distrust in future progress also replaces planning's "grand plans" with *incremental* risk mitigation, adaptation and resilience. Planning still seeks to normalize and shape the future to support stability, security and certainty but that future is increasingly short-term (Connell 2009).

Cautious of the limits of prescriptive forecasting and of planning's capacity to control the future, Friedmann proposed two temporal coordinates for planning: one, a utopian horizon to navigate towards, and the other concerned with immediate, real-time incremental actions in the present (Beauregard 2015). Arguably, these remain the limiting timescales for much of planning theory today. Few would disagree with Beauregard (2015) when he argues that planners should cultivate a creative orientation towards the possible rather than resigning themselves to the probable. However, prevailing approaches typically stress the immediate complexity and indeterminacy of the world, the likelihood of unexpected outcomes and thus the superiority or necessity of incrementalism and pragmatism. Communicative planning theories focused on learning from practice have, for example, illustrated how planners have no choice but to improvise and muddle through (Hoch 2016; Connell 2009; Lindblom 1959; Laws and Forester 2015). This promotes a pragmatic focus on deliberation about the here and now as a means of debating change, but arguably pays less attention to how the future is represented or to the impact of such representations (Myers 2007).

Alternative theoretical approaches drawing on complexity theory (de Roo 2018), co-evolutionary theory (Van Assche 2018) and various strands of post-structuralism, including assemblage theory and the philosophy of Gilles Deleuze (Hillier 2018), have begun to introduce different conceptions of time into planning thought. These share a common concern to leave the future open to processes of becoming or emergence. Like pragmatism, they are skeptical of traditional attempts to "normalize" a future by controlling change. The potential tension between common-sense conceptions of planning as 'control' and open-ended ideas of emergence raises questions about contemporary relations to time and the desirability and possibility of planning as a means of envisaging and shaping futures within complex socio-material systems.

These accounts of contemporary planning *theory's* future-orientation do not, however, exhaust the temporal complexities of planning practices that operate within culturally distinctive regulatory regimes which produce their own temporalities and rhythms, typically encompassing multiple relations to past, present and future (Abram 2014). It is to these that we now turn.

2. Behind the times: Planning and the past

Time is deeply intertwined with history. Humanity lives "historically", i.e., with awareness of the past and of the present's position relative to the past. According to Nietzsche:

"The historical and the unhistorical are equally necessary for the health of an individual, a people and a culture." (Nietzsche 1874,1980, 10).

The balance between strong roots (Nietzsche's historicity) and freedom from the past (Nietzsche's unhistoricity) should be the core concern of historic preservation, and maybe of planning as a whole. In the 1500s, Western Europe developed an aesthetic relation to relics and ruins, which mark the flow of time and place the now in a chosen relation to the past. By the 18th century, preservation was an upper-class fashion, and by the 19th century it had diffused to the middle-class and grew into the preservation movement. Today, it is so well ingrained that saving "significant" structures is a generally accepted moral imperative. In addition to romantic tastes, preservation can evoke patriotic feelings and social unity by representing collective histories and trajectories. The choices involved in decisions about remembrance and preservation-worthy past periods or events are value-laden. Since the remote past is less threatening than the recent past (bad memories fade), the recent past tends to be discarded (e.g., 1970s gas stations), until it is remote enough to become "vintage" (e.g., 1950s gas stations). The inevitable politics of preservation involve a highly-selective construction of pasts that enable particular "imagined communities" to control the present and therefore shape the future (e.g., Zukin 2012; Lindgren 1993). Under capitalism this frequently involves commodifying the past as part of strategies to generate economic returns.

In addition to anchoring us in the grand flow of history, historic preservation makes the implicit promise that a friendly future will also preserve our present. Relations to the past and to a friendly future are important to wellbeing, quality-of-life and property values, e.g., in the well-preserved historic centers of Florence, Paris or San Francisco. However, to the extent that historic preservation seeks to 'fix' certain elements of the built environment in time rather than viewing them as dynamic parts of a fluid and ever-changing system, it may also mark a retreat from the complexities of historical change (Tait and While 2009).

Conversely, the logic of development leads planners to ignore, problematize or write-off aspects of the past considered unworthy of preservation, such as obsolescent "dilapidated," "insalubrious" or "dated" structures, demolished to facilitate progress towards the new. Cultural attachments to places and their unique histories and meanings can lead people to mobilize resistance against demolitions, generating conservative politics against change and its promises of planned progress. Planning's complicity in processes of creative destruction generates a range of responsibilities towards the past, and towards people who find the loss of valued attachments traumatic (e.g. Erfan 2017). This responsibility is rarely acknowledged, except perhaps in belatedly recognizing the historic failings of urban renewal programs (Schweitzer 2015).

If historic preservation has the potential to link the past, present and possible futures of built environments, planning history plays a similar function in building narratives about the nature of planning as a societal activity. As Sandercock (1998) argues, making visible previously hidden stories that challenge the dominant account of a socially reformist, professional activity populated by white, male heroes and villains has a distinctive political purpose. Reframing histories can lead to the critical reshaping of understandings of contemporary planning and how it should develop in the future.

3. Now is the Time for change: Timing, urgencies, delays and conflict in the present

Plans and planning decisions are often criticized for taking too long, for getting their timing wrong. Plans intended to guide developments over a fifteen to twenty year period are often out of date before they are implemented, due to delays in their production, political wrangling, or changes in circumstance that undermine their rationales and aspirations.

However, despite concerns that planning for the future has become impossible or unfashionable, plans continue to be made for various timescales, from longer-term strategic visions to shorter-term, detailed master-plans for particular sites or neighborhoods (Abram 2014). In response to criticism of inflexible blueprints, planning theory and practice have attempted to imagine more flexible, adaptable and incremental plans. Contemporary ideas of strategic planning, for example, see plans as part of ongoing deliberative processes intended to influence stakeholder actions towards the realization of a shared vision (e.g. Balducci et al. 2011; Throgmorton, 2003). The persuasive power of such visions to mobilize action across time and space is perhaps less certain (Shipley 2006), and they are often accompanied by shorter-term action plans and monitoring to ensure they are responsive to changing circumstances.

Concerns and complaints about the impact of decision-making delays on development are common, even though ‘delay’ itself is often not clearly defined (Booth 2002). In many Western nations, plan implementation is primarily measured by the speed of development permit processing (e.g., Ball 2011). These concerns are particularly marked in a neoliberal era when state planning processes are seen as imposing unreasonable restrictions on market-forces, hindering private development and thus economic prosperity. Attempts to limit regulations and speed-up decision-making have been central to neoliberal reform initiatives. The imperative of speed, however, often conflicts with other goals, like ensuring meaningful public participation which requires sensitivity to the time needed to engage diverse publics (Abram 2014; Weber 2015; Raco et al. 2018).

Marshall et al.'s (2015) study of the time taken for major infrastructure decision-making in the UK suggests that widespread concerns about *planning* delays may be overstated compared to delays due to developer behavior, financing issues or political influence. This draws attention to the multiple temporalities that need to be coordinated to implement development projects, including: bureaucratic and legal processes, electoral terms, political machinations to secure public support, macro and micro-economic, investment and redevelopment cycles. Each operates on distinctive rhythms that require synchronization for development to occur. Timing is therefore a crucial and deeply challenging dimension of planning practice. Disjunctions between activities can, and do, generate conflict and delay. Legal and/or processing agreements can thus be used to try to bind actors to an agreed timeline (Lloyd and Peel 2012) -with the risk that those excluded from such agreements (typically wider publics) will contest their terms.

Failures in the timing of planning processes can have profound effects on people and places. 'Planning blight' is a consequence of the uncertainty generated by temporal lags between a publicly stated intention to develop and change happening on the ground. In recent years, attention has focused on temporary uses of vacant sites or "pop-ups," whether as a formal means of dealing with problems of temporal coordination to reanimate underused space, or as an insurgent tactic to reshape development trajectories where the promises of market-led improvement have not materialized (see Henneberry 2016; Mandanipour 2016).

Time and timing are experienced differently by different social actors and powerful social institutions seek to impose temporalities that may jar with the experiences of those affected by change (Matthews and Livingstone 2016). In the context of urban regeneration in the UK, Raco et al. (2008) explore the politics of space-time and show how administrative-bureaucratic time (e.g., phasing, ordering, milestones), political timeframes and developers' short profit-oriented timeframes clash with residents' expectations about the timing of the delivery of benefits. The politics of redevelopment become conflicts over whose timeframes dominate (see also Raco et al. 2018).

On the other hand, time is also used strategically and tactically by a range of actors. The use of pacing and delay by the powerful to wear down resistance is, for example, apparent in opposition to lawsuits launched by workers, residents and environmentalists seeking redress for environmental harms committed by petrochemical plants in Louisiana:

"They (residents of a heavily contaminated bayou) have been kept waiting for years for word on a lawsuit, a wait that has nearly worn them down and spent their anger " (p 43) "... it is

common corporate strategy, with the cooperation of the state agencies, to string these lawsuits out for so long that plaintiffs die before money is due." (Hochschild 2016,53-54).

However, tactics of resistance to power involving timing are not uncommon either. In the context of redevelopment of a low-income neighborhood in Barcelona (including large-scale demolitions), Degen describes the “resistance of place” (2017, 142) in the form of “temporal and experiential dynamics” that subvert and destabilize the implementation of formal plans. For instance, a new large empty esplanade was appropriated by skateboarders and homeless people, imposing a diversity of practices and rhythms that were not part of the original plan, and thereby preventing the planned “homogenization of the sensescapes” (2017, 146). Boudreau (2017) provides another example of how cyclical and linear time conceptions play out in development in Vietnam. She highlights the use of time for power formation (by citizens) and maintenance (by the state), and the use of duration and pace as political tools. Waiting (duration, stalled time) can create particular uncertainties and stresses for residents so “[d]uration is a powerful tool for the state to control villagers” (p 136-37, see also Auyero 2012). Pace is also key to private speculation and investment but can be modified by protests or administrative complications. In Mexican Colonias, “waiting is employed as a tactic that is often strategic rather than passive” (Lombard 2013, 817).

Further, micro-level research is required to explore the complex forms of temporal regulation on which all planning instruments and processes are premised. However, all of these examples point towards distinctive facets of a still rarely considered politics of time that is central to planning, especially when it comes to the pace and timing of development and change. While this politics may be something planning actors are intuitively attuned to, thinking more explicitly about time and temporalities may open up a range of possibilities for thinking and acting differently.

4. Only time will tell: Planning and the future

If the “plan operates as a temporal hinge from a secure past to loss in the present, and from a known future to an unknown future” (Abram 2014 p.140), the future can be understood as that which is “not-yet” (Adam, 2006). Planning, investment and development are future-oriented in so far as they seek to normalize the future, reducing risk and uncertainty (Connell 2009). Paradoxically, this often involves systematically discounting the future. This discounting is explicit in cost-benefit analyses but also implicit in legal frameworks that hold us responsible for past actions but not for the future consequences of present decisions. As a result, the “commodified empty future” is exploited in the interest of the present (Adam and Groves 2011, 18).

“Industrial extension into the future is characterized by parasitical borrowing from the future, by prospecting and plundering it for use and benefit in the present without regard for time-space distantiated effects...” (Adam 2006, 125).

This puts the future at risk, a risk often raised by environmental activists, because:

“in industrial societies today the present is transcended and the future as last frontier (is) colonized with enduring things, belief systems and institutions, with cultural and technological products, with insurance and economic practices. As such, the future is pursued, prospected, produced and polluted” (Adam 2006, 125).

Driven by concerns about the pollution of the future and doubts about the ability to move social practices onto sustainable pathways, futures have recently re-emerged as a key concern across the social sciences (e.g. Poli 2014). However, social science research methods are often inadequately equipped to understand and shape futures, because they focus on existing (past or present) empirical facts (Adam 2006). In contrast, planners necessarily must rely on forecasts and projections, whether of future economic growth, demographic change or household formation rates. Policy-makers and politicians sometimes seek certainty or political protection in such seemingly ‘factual’ quantification. Others worry that the dominance of probabilistic approaches has undermined more imaginative and creative engagement with possible and preferred futures (Isserman 1985). Alternative approaches might incorporate design-based knowledge or understand how plans tell “persuasive stories about the future,” engaging and influencing stakeholders (Throgmorton 2003). Much of planning practice, however, remains technocratically wedded to the logics of probabilistic forecasting.

Significantly, the planning literature on futures rarely recognizes that engaging people with the future poses particular challenges in societies where the “capacity to aspire” is not universal or evenly distributed (Appadurai 2013). Individuals and communities have different orientations towards the future and the possibility of planning. Planning also largely fails to engage with the complex psycho-social or affective dimensions of engaging with the future, which often involves collective negotiation of the past in order to build understanding and hope in the present (Baum 1997; Erfan 2017).

Futures Studies, emerging from corporate and governmental exercises in foresight, emphasize that the future is socially constructed and that exploring possible, probable and preferred futures facilitates anticipatory action (Bell 1997). This has led to the development of a variety of tools that can engage planning practice more fully with the future, including scenarios, visioning and backcasting. However, links between the two fields remain underdeveloped (Myers and Kitsuse

2000; Connell 2009; Freestone 2012). Other ways of exploring possible futures, might include speculative fiction, a practice dating back centuries, from Louis-Sébastien Mercier's 1771 vision of Paris in Year 2440 through to Peter Frase's (2016) recent call to explore a speculative social science fiction. Such work has the potential to engage a broad public in envisioning the future more effectively –and affectively- than standard planning approaches (e.g. Abbott 2016).

D. Discussion: It's Time for New Planning Terms and Propositions

This paper started from the premise that late capitalist societies have an increasingly troubled relationship to time. We described how intensifying space-time compression characterizes modernity, how clock-time came to be internalized as natural rather than a socially constructed form of temporal discipline, and how modernity opened up the future. We also discussed how the post-modern condition and social acceleration pose challenges for our sense of time, especially by undermining the future as an open horizon that can be purposively shaped and reducing the present as a 'switching point' from which new historical trajectories might be initiated.

Here, we suggest how planning might become more attuned and sensitive to multiple temporalities. Drawing on the ideas introduced above, we present eight propositions for re-articulating planning's relationship to time and how we experience time in urban life. In the physical domain, they are mainly oriented towards streets and public spaces that provide communities a sense of place and time (Degen 2018), acting as "timescapes" (Adam 1998) and "communal registers" (Hebbert 2005). They are also aimed at planning processes, deceleration, potential resistance, and opening up possibilities for multiple temporalities to coexist. By encompassing many dimensions of time, they illustrate the potential for an *explicit* focus on planning's temporal dimensions to develop a rich range of possibilities for practice at various levels of granularity, period and amplitude; encompassing multiple time-horizons, rates or tempos, degrees of synchronization, regularity, dominant orientations (to the past, present or future), and various time-budgets -from excesses to shortages of time (Lynch 1972; Eshuis and van Buuren 2014).

1. Developing a sense-of-now through now-making strategies

When envisioning new ways for planning to apprehend time and temporalities, we need a few new time-related terms. A place is a specific point in a generic, undefined space. Placelessness, lack of sense of place, is detrimental to well-being because humans need a sense of place (we dwell in place, not in space). Thus, place-making, or creating a sense of place, focuses on the uniqueness of places.

Let us assume that the position of a particular moment or Now in time is equivalent to the position of a particular place in space. Then, what we call the need for “sense of time” might really be a “sense-of-now.” As Heidegger, Husserl and Bergson all variously suggest, human wellbeing requires a sense of when we are in the progression of time. Humans need a sense-of-now, in relation to past and future. Lack of sense of time cannot be called “timelessness” because this term refers to a positive quality of object permanence, and because it is not a “sense of time” that we need, but a sense-of-*now*. A place with a strong sense-of-now would be one where people know “when we are” and how this moment in time connects to past and future periods, events and possibilities. Lacking a sense-of-now might then become “nowlessness.” Similarly, while place-making strives to make a place unique, “making time,” in general parlance means securing “free” time.

Thus, we refer (in perhaps ungainly terms) to efforts to put a place, event, city or person in a unique and identifiable now or moment in time as “now-making.” Alongside the more familiar vocabulary of place-making, we suggest planning needs to support sense-of-now and address nowlessness by developing now-making strategies. The challenge becomes to facilitate the answer to the question “What time is this place?” (Lynch 1972). This temporal orientation might be reimagined as a core aspiration for planning. Adopting a pragmatic or Meadian understanding of human action and understanding planning as bringing knowledge to action, the Now of the present “involves bringing the future into the act, and reconstructing the past in terms of the present” (Strauss 1991,419). The future emerges out of the present, conditioned by the past but remains nonetheless an emplaced moment of possibility and choice.

Practically, how do we show present choices and emerging futures in the Now? Whilst World Fairs can be seen as spectacles commodifying the future and manipulating audiences into accepting an imposed future (Benjamin, 1970), they are also examples of now-making events in so far as they explicitly position space and society in time. Perhaps less problematically, Patrick Geddes’ “Learning the City” Planning exhibitions sought to get audiences to think about the evolution of urban space through time and thus about how we dwell in time (Amati et al. 2017). Permanent ‘Urban Studies Centres’ such as that in Bologna, Italy seek to develop similar forms of civic exchange and engagement in the transformation of the city⁶. The possibility that events might (deliberately or otherwise) generate an altered sense of Now, stimulating new possibilities, recalls Benjamin’s ‘jetzeit’. Massey’s notion of space becoming event also draws attention to something similar (Massey 2005), indicating for instance how countercultural moments (e.g., May 1968,

⁶ see <http://www.fondazioneinnovazioneurbana.it>

Woodstock, the 2017 women's march) can reposition society in the Now, with an eye towards a better future.

2. Now-management for coping with changing times

Planning's relation to time also requires thinking about change, rates of change and inflection points. Change is unavoidable, marks time, and entails risks. Resilience lies in preparing for and coping with change, not searching for an impossible state of equilibrium. Planning thus has a responsibility to prepare, orient and care for possible changes and their myriad effects on people and places. Given the exploitation and spoiling of the future, we need to be guided by an ethics of care for our common fate, by the need to tend to interdependencies and to the future, i.e., a focus on the "timeprints" (in addition to footprints) of our actions (Adam and Groves 2011). We also need to respond to urgent demands to explore transitions and pathways that may take us towards a more sustainable future.

Change operates on multiple levels, including growth and decay, spatial redistribution and migration, variations in intensity, disturbance and restoration cycles and longer-term climatic changes. We also need to manage entropy and obsolescence, and limit how much waste the future will inherit (Nowotny 1996). All changes have economic, environmental, social and psychological costs and can stimulate fear, regret and loss (Marris 2016).

Change is easiest when it responds to intentional and announced plans, and where conflicts are clarified, if not resolved. Change is difficult when it responds to external shocks or disasters. It is even more difficult when change is an effort to transition away from abandonment (waste, derelict buildings, neighborhoods and lands) and in situations of conflict (in the absence of consultation and trust, in climates of unfair processes and outcomes).

Planners frequently express frustration when they encounter opposition to change and development that they view as urgent or necessary. An improved relation to time might, however, prepare both planners and the publics they encounter to understand and cope with change. The considerations above lead us to consider "now management" (in addition to space management) as a new rationale for planning. Time and change are (and should be) evident in the social and physical world. In particular, our urban environments could (and should) not seek to reflect an impossible permanence or an artificially stable, reconstructed history, but instead teach us about change. They should seek to ease change by making it transparent, announced, and piecemeal.

Understanding that socio-spatial worlds are always *in process*, for example, might help cultivate the intuition towards duration that Bergson advocates and which seems to overlap with the existential imperatives of Heidegger's "Dasein." Connolly (2011,72), drawing on Deleuze and Bergson, argues that time is neither empty nor homogenous. Instead, we might seek to "[dwell] in a fecund moment of duration" opening up possibilities by learning how "multiple layers of the past resonate with things unfolding in the current situation." This might offer a path to purposively (re)shape planning's sense-of-time, towards a planning-in-time, and to strengthen the sense-of-time in urban places/dwellers, by building collective capacities to "read", evaluate, appreciate and value time and change in space.

Connolly (2011) further suggests that connecting with and shifting between different temporal registers by, for example, contemplating deep ecological timescales that extend across millions of years, may offer rich potential for reframing political debate and recognizing matters of importance that extend beyond habitual planning horizons. Similar perspectives are advanced in Deleuzian-inspired planning theory, pointing towards a more open and less normalizing future-orientation, enabling favorable futures to emerge from within complex and contingent socio-material contexts that are in a constant state of becoming (Hillier 2018). All of which gives rise to further questions: Does Connolly's idea of "dwelling-in-duration" offer a position from which to plan whilst accounting for the multiple forms of becoming that shape cities and lives? How can we learn not just to dwell in duration, but also *prepare* our collective becoming for the future? How to avoid doomed efforts to control or micromanage the future, and instead facilitate intentional change and adaptive steering in the direction of (normatively defined) desired futures? And how do we do this in realities marked by conflict and profound power inequalities?

3. Taking the time to plan, improvising and challenging acceleration

Faced with both the neoliberal refrain that planning takes too long and the argument that social acceleration undermines thoughtful democratic governance, we must explore the possibilities and consequences of taking the time to plan. This includes exploring how new technologies accelerate planning and urban governance processes. However, it also entails making the case for the selective acceleration or deceleration of some forms of urban change, finding ways to stimulate deliberation and debate in response to the multiple temporalities affected by the development of cities.

Accounting for the embodied energy and lifetime resource use of new building, for example, may reconfigure our understanding of good urban development, reshape thinking about investment,

development and growth. Challenging conceptions of urban development ‘cycles’ as somehow “naturally” occurring temporal rhythms that must be accommodated to may meanwhile open up new possibilities for intervention (Weber 2015).

By encouraging practices of “*dwelling in duration*” as advocated by Connolly, it may become possible to make time for a form of planning that explores the multiple temporalities, synchronicities and asynchronicities involved in urban change and their short, medium and longer-term consequences. For instance, planning processes could consider not only the goals and objectives of multiple stakeholders, but also the timeframes they envision or expect, i.e., when the costs and benefits of changes may accrue. Extending the call for “slow cities” and “slow building” (Weber, 2015), “slow planning” can be a selective tactic for accommodating multiple temporalities and concerns, tempering the negative impacts of urban development processes dominated by financial rates of returns or the preferred pacing of dominant actors (Raco et al. 2018).

Innovation can happen during “pregnant moments” or “fugitive glimmers of becoming” when our action-oriented perception of time is briefly suspended (Connolly 2011, 33). Selective deceleration tactics could aim to set aside time to stimulate thinking about the now and the future by making time slow down or stand still. In practice, challenging acceleration could aim to support what Appadurai calls a “politics of patience” or “politics of slow.” In the case of development in Mumbai, the politics of slow allowed for local learning and incremental change, and countered the “tyranny of emergency” in development (Appadurai 2001, 30; Raco et al. 2018). In the Mexican Moctezuma Colonia, slowness and patience allowed things to “flow over time according to locally situated (rather than externally imposed) timeframe” (Lombard 2013, 817).

Connecting planning action into the wider flux of decision-making that shapes urban change may also involve the cultivation of identifiable forms of temporal expertise. This is implicitly recognized in planning theory already with Laws and Forester’ (2015) discussion of improvisation as a mode of planning practice. Improvisation involves a deep, intuitive connection to the possibilities inherent in what has come before, a capacity to seize the moment and open up new potentialities. Far from a slow, deliberative or rational-technical mode of acting, improvisation is responsive, agile and alive to emergent futures. Equally, it is important to remain aware of the uneven development of the capacity to aspire and engage with the future (Appadurai 2013), suggesting a need to work through non-expert, everyday temporal horizons to cultivate inclusive opportunities to “dwell in duration.” In other words, we need to explicitly explore what it means to collectively and inclusively muddle through the various temporalities involved in plan-making and urban change.

4. 'Making time' through surprises in urban space

Due to complex bio-neurological mechanisms, humans are subject to temporal distortions when time is perceived to slow down, speed up, stop or run backwards.⁷ Features of space and experiences affect time perceptions in ways that are highly relevant to planning. For example, we overestimate shorter intervals and underestimate longer intervals (Fortin and Rousseau 1998). We recall recent events as more distant in time and distant events as more recent. Motivation decreases, and interruptions increase, perceived durations. Separation between stimuli affects perceived durations, e.g., a trip covering a long distance appears to take longer than a shorter trip of the same duration (Sarrazin et al. 2004). These distortions can be used or corrected to modify perceived distances and durations. For instance, short blocks, landmarks in the distance (as opposed to the New York “canyon effect”), “time to destination” signs (e.g., “6-minute walk to City Hall” or “5 blocks to City High School”) and signage about near-future events (e.g., “4 minutes until the next bus,” “3 more days until Spring”) can reduce perceived distances and durations. The “Society for the slowing down of time” (Verein zur verzögerung der Zeit) and the Slow Movement take a different approach: they encourage people to slow down, bracket clock time and its false urgencies, to enjoy the “flow” of pleasurable activities. Social events that can slow down or stop time include music, myths and rituals, which Levi-Strauss called “machines for the suppression of time” (1964, 276 in Thrift 1977).

Perhaps most importantly, “oddball” unexpected stimuli (experiencing awe, surprises, changes, disruptions) “slow down” perceived time. Deceleration increases our focus and gives us the sense of having more time (Aaen-Stockdale et al. 2011). This oddball effect slows time during stress-induced fight-or-flight responses, but also, and more positively, when we dedicate all our attention to what we do or to making sense of the world around us. Adult minds rarely step outside physical and mental routines and our brains, adapted to repeated stimuli, disengage from the present moment. Thus, adult time “flies.” Calls for reconnecting to our “inner child” seek to exploit the link between happiness and being “in the flow”, i.e., completely absorbed in the task at hand (Csikszentmihalyi 2002). With new stimuli, awe and surprise “oddball” events, cities might therefore decelerate time. Unexpected events can make time slow down, anchoring us “in the now.”

This is something mindfulness meditation practitioners, flâneurs and flash mob participants, build on. For instance, the New York based “Improv Everywhere” group organized a time-travel subway

⁷ Edith Wharton commented on this subjectivity: “Time, when it is left to itself and no definite demands are made on it, cannot be trusted to move at any recognized pace. Usually it loiters... But it may suddenly break into a wild irrational gallop.” (Wharton 1905, 1994 p.318).

prank where sets of twins staged arguments between a man and his future self (enacted by his twin) about the merit of building a time machine. A surprise pizza delivery to a random subway car, reenactments of scenes from the Matrix and a car-alarm symphony in a mall parking lot are examples of memorable events that audiences of commuters and shoppers probably experienced as surprising events, anchoring them deeply in the Now that day. Planners too could seek to make the urban landscape *surprising* rather than aim for predictability.

5. Opening ‘progressive’ futures in the here and Now

Heidegger (1996, 2010) locates the possibility of free will in the Now whilst also emphasizing the future-orientation of Dasein, a "being-there" that is active in the world through projections and projects. In this sense, both Bergson and Heidegger think of the present as a moment of freedom ("the only resemblance between Bergson and Heidegger --and it is a considerable one- lies here: both base the specificity of time on a conception of the open" [Deleuze 1986 in Massey 2015]).

As Dasein gives ontological basis to the future, it also opens the possibility-and existentialists would add the responsibility- of choice and free will. As we anticipate and project towards the future, what comes out of the future is our past (our "baggage") embodied in our "having-been-ness" (Gewesenheit). The present is characterized by freedom, a moment when possibilities open, a moment of vision or action. When we anticipate the future and act, our having-been-ness brings action into the present. This present moment of vision provides a glimpse of the Dasein, the free individual, informed and shaped by her past and freely choosing a path towards her future. Thus, time is the process of unity ("ecstases") of future, past and present.

These considerations are important for planning: Can we rethink and reframe the "now" as the freedom to plan? The moment where our past and baggage shape our options, and where we act now into a future? Can a city's having-been-ness morph into some kind of collective and multiple 'dasein': a capacity to envision desirable change, beyond teleologies of progress (Campbell 2005)? Can cities and/or planning processes somehow render the presents' "ecstatic temporality" visible, joyful or productive? Can the new be consciously and thoughtfully constructed as an actualization of Deleuze's differences, singularities, divergence and multiplicities in practice? Such a mode of planning must navigate the tensions between planning's desire to secure a normalized future (Connell 2009), the need for preparedness and flexibility, and the openness to emergent possibility that theorists advocate (e.g. Beauregard 2015; Hillier 2018).

Recognising an imperative to open the future, raises a range of challenges for practice: to render planning processes exciting, novel and important; joyful and positive opportunities for communities to engage in envisioning their shared future(s). Such a vision stands in contrast to much of what passes as planning where processes become ensnared in problematic zoning/legal (“our hands are tied”), economic (“we just don’t have the budget”) or political (“we don’t have the support of council/developers”).

6. Urban “Time services”: anchoring the Now in the flow of time and accommodating *all* biorhythms

Several types of planning interventions could provide a variety of “time services.” This can involve marking the flow of time in the urban landscape, supporting biorhythms, helping us predict timing and durations, or creating oddball awe-inspiring moments. “Time services” might open the possibility of intentional steering of temporal dynamics, speeding up or slowing time where desirable, whether by “extending the experience of the present” or “making visible a socially acceptable future” (Connell, 2009). Such moves would resonate with psychological research as well as phenomenological ideas about time that each emphasize the subjective variability of temporal perception and the capacity for different stimuli to speed up, slow down, intensify or dilute the experience of time (e.g. Aaen-Stockdale et al. 2011).

We might also consider how to mark time and change in space. Artifacts and events can make time stand still. With historic preservation and monuments, we slow down urban change while informing the future in the present. In this perspective, historic preservation should not become “heritage branding” (Hetherington 2013), seek to capitalize on the rhythms of a place, or profit from a local experience economy (Degen 2018). Instead, planning for historic structures should seek to retain elements of the past that place us and the Now in the flow of time, recognizing that: “We preserve present signals of the past or control the present to satisfy our image of the future” (Lynch 1972 p.65). We preserve some structures deemed “historic,” whilst demolishing others. Sometimes we preserve whole districts to create a grand illusion of the past remaining alive (downtown Tombstone). Sometimes we collage historic and futuristic structures (e.g., the Royal Ontario Museum with its glass shard emerging from the historic building). The collage approach signals change more effectively than an artificial movie-set-looking preserved downtown and also has the advantage of marking open futures.

Planning should actively display or render visible open and adaptable futures, e.g., with flexible uses of space that allow for growth, decay, shrinking and change. Signals of futurism, of long-term change starting “now” help anticipate and prepare for further changes to come. The first iconic skyscrapers paved the way for many more mundane high rises. Architectural collages of old and new can prepare us for the forms of the next century. Planning should provide the public with clues about future states and clearly communicate public intentions about the near future. This can include statements and visual cues about involuntary changes (e.g., climate change, as by marking the elevation of floodwaters or water supplies). It can also make explicit what Merton (1984) calls “social expectation of durations” so that people can anticipate what is likely to happen in the future, and the prospective timing of change. For instance, “coming soon” signs can signal urban densification projects. Similarly, Lynch calls for “prototype centers” or “museums of the future.” Building on planning’s ‘exhibition’ and urban studies centre traditions and adopting a more participatory mode, these could be called “workshops for the future,” public spaces where residents can explore the future and reflect about new possibilities.

As they mark the flow of time, cities and urban activities should also support a variety of body times. We cannot all be expected to rise at 6am, commute at 7:30am, leave work at 6pm, eat at 7pm, sleep at 11pm. Babies, teenagers, adults and the elderly have different wake/sleep cycles. This also raises questions of urban services. What do cities have to offer teenagers when they emerge in late summertime evenings? Where can the elderly go for a healthy breakfast at 5am on a Tuesday? Viewed like this, time can be understood in its equity dimension, enabling access to time, and ensuring that the burdens of temporal dysfunctions do not fall disproportionately on certain people (e.g., single working parents who need to navigate public transit during peak commuting hours or need access to formal services outside working hours). Italian experiments in ‘time planning’ are instructive here, involving the production of “time plans,” investigation of how diverse temporal needs and dysfunctions affect urban life, and proposing ways of realigning activities in time to enable more equitable or innovative use of time and space (Belloni 1998)⁸.

Cities should also support our preoccupations with actual time and biorhythms and provide “temporal cues” of circadian socio-ecological times, near future time and long-term evolutionary time (Thrift 1977, 83). Clocks on city walls allow the coordination of activities and provide the all-important answer to daily concerns about the time. Urban design features could also support

⁸ In planning, temporal behaviors were described in early studies of activity patterns, time allocation and routine task sequencing and coupling by Chapin (1974) and operationalized in Sweden by Hägerstrand (1975). However, neither these works nor those that followed considered temporalities other than clock and calendar times.

biological clocks with displays of time that synch us to natural cycles, and make change visible, e.g., marking sunrise, sunset, tides and seasons on modified clocks, or with festivals, seasonal lights, fireworks. At the streetscape scale, planting deciduous trees rather than evergreens reveals the passing of seasons, and experiencing Fall and Spring gets us ready for harsh winters and summers. The aesthetics of passing time are perhaps best captured by water courses, and riverfront promenades are often favorite city walks (Portland, San Antonio, Savannah). At the building scale, choosing reflective facades or sandstone that turns pink in the sunrise and sunset can confirm biorhythms and indicate that the day is starting or ending.

7. Now-making and placemaking: Embodying time and identity in space

Now-making implies that users of a specific place have a sense of now. To support this, clocks could be designed not only to display clock time and biological rhythms, but also “shadow times”, e.g., geological times. A local sense of now is also one that places the current moment (now) in the perspective of broader local cultures, stories and histories.

Mikhail Bakhtin’s (1981) concept of “chronotopes” illustrates the idea that space can be used to give form to time. Chronotopes are:

“points in geography of a community where time and space intersect and fuse. Time takes on flesh and becomes visible... likewise, space becomes charged and responsive to the movements of time and history... chronotopes thus stand as monuments to the community itself” (Bakhtin 1981, 7 cited in Basso 1996, 43-44).

On Western Apache land, stories are embedded in places and the landscape is “full of named locations where time and space have fused...” these places embody stories and strengthen communal norms and rules. Thus, the landscape acts as “repository of distilled wisdom” (Basso 1996). Some monuments may act as story repositories (the Lincoln Memorial, Place de la République), and historic preservation choices tell (often highly selective) stories about the history of places. Historic markers at the neighborhood and building-scales, such as the 770 historic markers installed throughout Paris to narrate historical events associated with selected buildings and places, can serve this purpose. Anchoring memory in space can strengthen and empower identities, remembering the past and (re)claiming history can turn the present into a resource to guide the search for different urban futures (Till 2012). Remembrance, anchored in signs, art or other mnemonic devices “is reconstructing the present in a collective past” in a way that speaks to the history of a group

(Halbwachs in Tabboni 2001). It also raises important political questions about the practice of remembering. Rather than simply reflecting dominant narratives, we could imagine multiple identities and temporalities represented in space, with markers that vary across neighborhoods, themes or sub-themes of local histories.

Raco et al. (2008) talk of a “principle of persistence” where collective identities and legacies shape ideas, attitudes, expectations and imaginations. Degen (2018) describes narratives and lived experiences involving memories of space as a form of resistance to urban renewal. In a different setting, plaques in Paris commemorate the deportation of school children and massacres of Algerians at the hands of the French police during World War II and in 1961-62. These plaques, installed many decades after the events, acknowledge the events and the suffering of communities -as do monuments to fallen soldiers. Publically remembering the experience of disenfranchised groups can help anchor their present in history, opening the possibility of different futures. In less dramatic circumstances, community planning processes that aim to “help a community experience itself in time” (Baum 1999, 10) should also aim to excavate understandings of the past in order to effectively link the present to possible futures (Erfan 2017) asking what made us who we are? When and where? Where do we go next?

8. Making time for inclusive temporalities

Urban forms and activities should support a variety of cultural temporalities and be attentive to the challenges involved in synchronizing or working across temporalities. Different cultures and social groups have different understandings, perceptions and measures of lived and abstract time. Creating cities that are open to multiple temporalities is a challenge that some nations are beginning to take on. For instance, white (Pakehas) and Maori culture in New Zealand operate with different relationships to time. Maori procedural rights create moments for Maori customary time to prevail while Pakehas respectfully wait. There may also be reasons to provide opportunities for female time, Latino/a time, Black time, Indian times etc. These temporalities should be determined by the communities involved, rather than the dominant rhythms of late capitalist accelerationism.

Planning that is sensitive to multiple temporalities and varied senses-of-time must understand cities as “polyrhythmic ensembles” (Degen 2017, 145). The human experience of change and choice comprises a mosaic of temporalities, consisting of each actor’s own temporality, his/her *eigen* time (Tada 2018), of collective social times, and of natural times (Tabboni 2001). Dates are charged with different meanings for different people: time marked by the traces, persistence and legacies of past

events; generational time through which societies evolve, and; time mediated through narratives about the evolution and change of society and self (Browne 2014). These multiple temporalities vary across communities and individuals, operate at different speeds and rhythms, and coexist and collide daily in cities (Crang 2001).

Planning should support these multiple rhythms and temporalities in sensory and temporal urban practices, with a special attention to the temporalities of the least advantaged. Urbanism, architecture and signs can materialize in space the passing of time as well as diverse histories, memories and experiences. To guide this effort, Lefebvre (2004) calls for “rhythm-analyses” to identify the activities that punctuate urban life and give residents a sense of time and place. This entails asking: Who is using what space? When? and How? At the core of these rhythms are the circadian (daily but variable) rhythms which form urban timescapes (Bates 2006; Adam 1990). Control over timescapes is a constant stake in the politics of urban change, whether in visions of a 24/7 city, heritage branding, or discourse about areas that are “stuck in time” and in need of accelerated change (Degen 2018, Raco et al. 2018)

Based on a solid understanding of timescapes and urban rhythms, communities and planners can propose locally relevant modes of time representations. Indicators of times (calendars, clocks, festivals) in the landscape can display Islamic, Jewish, Chinese, Christian and Orthodox calendars and festivals. Public discourses, narratives and policy documents, can make explicit multiple times, including residents’ and developers’ diverging temporalities.

Conclusion: It’s a matter of time

As we have seen, time is a constituent dimension of change, memory, identity, meaning, organization, free will, choice, and protention towards goals. It is “the attribution of meaning to change... and its organization in terms of goals and other affirmation of values. ... a uniquely social way of pronouncing on ‘the meaning of life’” (Tabboni 2001, 9). Thus, planning only exists in time, and time opens up the possibility of planning.

Given that planning is such a richly temporal activity, fundamentally concerned with change, timing and the possibilities of controlling space through time, it is striking that planning theory has yet to engage in any substantive way with the implications of contemporary concerns about social

acceleration. Planning activity has in general not developed an explicit discourse about how to develop a repertoire of consciously-temporal practices.

In this paper we have reviewed the implications for planning theory of a range of contemporary concerns about changing social relations to time, including the (im)possibility of shaping futures in the extended present and neoliberal critiques of the time ‘wasted’ on planning delays. Beyond meta-narratives that posit the loss of an open future and question planning’s traditional commitments to progressive change, we have highlighted the richness and variety of contemporary conceptions of time. We have also identified how features of urban life and urban forms might enhance the visibility and social understanding of the multiple and complex possibilities of change.

In doing so we identified possibilities for rethinking how planning relates to time, and how paying attention to multiple temporalities might shape debate about the possibilities and conditions for planned change: planning, we have argued, is a richly temporal practice which has not-yet fully explored the possibilities that could be opened up by adopting explicitly *temporal* ways of knowing and acting. To illustrate this we have explored how planning might address urban “nowlessness” and support a strong and inclusive sense of time, particularly a “sense of now.” From this perspective, planning’s temporalities encompass not just political, administrative and economic times but also calendar and clock times, socio-cultural times, narrative times, times of historical legacies and traces, generational times, individual psychological and biological times, natural and geological times. We have discussed how planning might draw on these resources, strengthening local senses of time through a variety of “now-making” strategies that seek to make a mosaic of temporalities visible and explicit in the built environment, in planning narratives and in planning processes (e.g., making urban landscapes surprising rather than predictable). We believe that these propositions should be as integral to planning as place-making.

We hope this paper will help planning theorists do better justice to the many times and temporalities of practice, and that it will initiate further, rich discussion, amongst theorists, educators and practitioners, about the importance of reflecting on time and the forces underlying and enabling all emergence and becoming. By highlighting the multiplicity of temporalities and rhythms that underpin social life and the production of uneven social relations to the past, present and future, we have opened up a still seldom considered agenda for researching the role and purpose of planning as a form of *temporal* governance that must find its place in time. With these thoughts and propositions, we also therefore hope to stimulate future planners’ imagination with regards to the multiple ways in which a mosaic of temporalities could reshape planning practice.

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