Article

Fixing the future? How architects make time in buildings for later life care

Siân M. Beynon-Jones, Daryl Martin, Christina Buse, Sarah Nettleton and Ellen Annandale
Department of Sociology, University of York, UK

Abstract
Drawing on scholarship that explores the making of time, this article aims to develop sociological understandings of architecture's relations with temporality. Commentary from within and outside architecture has often suggested that a sensitivity to time is missing from its practices (and indeed, that time is actively excluded from architecture). We argue that, rather than attempting to rectify a perceived absence of engagement with time in architecture, it is more fruitful to explore architecture as *inevitably implicated in the making of time(s)*. Mobilising empirical material from a qualitative study of building design for residential care in later life in the UK, we illustrate various relations with, and visions of, the future that are produced through architectural practice. Rendering architecture's time-making practices explicit, we suggest, makes it possible to reflect on whether, and to what extent, its time(s) could be done differently.

Keywords
architecture, design, futures, later life, making, time

> . . . there *will* be adventures however the space is designed, whether it be laboratory, home, or the urban park. The chance encounter intrinsic to spatiality cannot be totally obliterated. It is (in part) this indeed that makes time-spaces, however much we try to close them, in fact open to the future; that makes them the ongoing constructions which are our continuing responsibility. (Massey, 2005, p. 180)

Corresponding author:
Siân M. Beynon-Jones, Department of Sociology, Wentworth College, University of York, York, YO10 5DD, UK.
Email: sian.beynon-jones@york.ac.uk

Introduction

As a recent special issue of this journal attests, there is a 'need for new theories, methods and practices to question the status, role and salience of the future' (Coleman & Tutton, 2017, p. 445). In this article we show that the practices of architects offer an important, yet hitherto underexplored, opportunity to consider how relations with the future materialise. We illustrate how time(s) are 'made' (Latour, 1993, p. 76) through architectural practice, and how this co-constructs particular relations with, and visions of, the future. Rendering the temporalities of architectural practice explicit, we suggest, makes it possible to reflect on whether, and to what extent, its times – and thus, the futures of buildings and their users – might be done differently.

Commentary from within and outside architecture has often diagnosed a temporal deficit in its practices. For example, Grosz claims that architecture (along with other spatially concerned disciplines) has 'tended to neglect or ignore temporality or to reduce it to the measurable and the calculable, that is, to space' (2001, p. xix). This neglect has implications for architecture's relationship with futurity; specifically, its capacity to produce an 'openness to the future, the promise of time unfolding through innovation rather than prediction' (Grosz, 2001, p. 92). Such an openness and relinquishing of control over the future is, Grosz argues, vital for architecture's capacity to support positive political and social transformations, and for architecture itself to be defined as a dynamic set of social practices (rather than understood through the more static prism of its buildings on the ground).

Moreover, Till argues that 'time is . . . engaged with as an enemy of architecture' (Till, 2009, p. 79) and that, rather than admit the contingencies that time creates, architectural practice attempts to deny it. He notes that architectural photography and architecture have become synonymous, connecting this to a modernist conceptualisation of architecture as a practice which involves 'freezing time' (Till, 2009, p. 79) in the static object of the building. This conceptualisation, Till argues, prevents engagement with buildings as 'temporalized space' (Till, 2009, p. 96), i.e. as enmeshed in ongoing, shifting socio-material relations. As a consequence, architecture becomes distanced from its responsibilities for the future and, in particular, to users of buildings.

In this article, we reframe discussions of architecture and time. Rather than addressing a perceived absence of engagement with time in architectural practice, we argue that it is more fruitful to explore architectural practice as *inevitably implicated in the making of time(s)*. This inevitability is suggested by a rich history of research that illustrates how time is always a critical, yet routinely taken-for-granted, dimension of social life (Adam, 1995; Nowotny, 1994). Within medical sociology, classic studies have demonstrated how the socio-spatial ordering practices within particular buildings are invariably infused by temporal regimes and organisational rhythms, such as Zerubavel's (1979) ethnography of a teaching hospital (see also Rosengren & DeVault's study of an obstetric hospital [1963]). Nonetheless, with some notable exceptions (Jones, 2020), to date more general analyses of the temporalities of architectural practice remain limited. Drawing on material from a study of building design for residential care in later life in the UK, we illustrate various relations with futurity that materialise through architectural practice. The varying times made through architectural practice have differing implications for the

possibilities open to building users; in this case, those who live and work in residential care settings.

Sociology, architecture and time

Latour and Yaneva (2008) argue that accounts of architecture as static and atemporal spatial forms obscure the inevitably complex, shifting relations through which buildings are constituted (see also Till, 2009) and with which architects themselves are intimately familiar. When architecture is instead approached as a practice involving myriad moves and counter-moves by human and nonhuman actors it becomes possible to see that 'a building is not a static object but a moving *project*' (Latour & Yaneva, 2008, p. 80). Recognising the social and political significance of such projects (Gieryn, 2002; Jones, 2011), an emerging sociology of architecture has begun to unpack the 'doing' (Jacobs & Merriman, 2011) of architectural work (Buse et al., 2017; Imrie, 2007; Martin et al., forthcoming; Martin et al., 2015; Nettleton et al., 2020; Yaneva, 2005, 2009). For Ingold (2013), this begins with a shift in conceiving of architecture, moving from a focus on building as noun, in terms of physical objects, and towards an understanding of building as verb, as an unfolding process of making, involving human activities and nonhuman agencies. Architects are designers and, for Ingold, design (in an everyday sense at least) involves the skill of *seeing forward*, where to foresee is 'to see *into* the future, not to project a future state of affairs in the present; it is to look where you are going, not to fix an end point' (2013, p. 69). Architectural practice is clearly about the making of spatial form, but it also involves a mode of temporal imagining, wherein the future uses of the built environment are anticipated at the design stage, even if these uses are never entirely predictable in advance (Pallasmaa, 2009). Instead, architectural practice could be said to entail a sense of perpetual discovery and radical uncertainty in terms of the futures it imagines (Cuff, 1991).

Till introduces the notion of 'slack space' (Till, 2009, p. 133) to advocate an architecture that accommodates an openness to the future and:

> . . . to changing use – not in terms of a literal flexibility of moving parts and sliding gizmos, but in terms of providing a frame for life to unfold within. It is a space that something will happen in, but exactly what that something might be is not determinedly programmed. . . . Slack space is thus manifestly designed, but probably not overdesigned. It allows the user to make choices within its frame, and in this asks eventually who the designer of the space is – in effect, it asks architects to share their design with the designs of others that evolve in the course of occupation. (Till, 2009, p. 134)

In arguing for a more participatory approach to design, Till proposes an awareness of the built environment in terms of its provisional qualities. This is reminiscent of classic contributions about the inherently 'unfinished' nature of all architectural projects, even in the case of realised buildings (Lerup, 1977). It also aligns with Stoner's arguments for the practice of a 'minor architecture', in which the conventional focus on completed buildings is de-centred towards a more provisional definition of architecture as a process of '*becoming space* rather than *being form*' (2012, p. 68).

Few studies have considered empirically how architectural practices are implicated in the making of time(s) and the consequences of this for architecture's relations with the future. A notable exception is research by Schmidt et al. (2012) concerning the production of 'adaptability' through building design. Defining adaptability as 'the building's capacity effectively to accommodate the evolving demands of its context' (Schmidt et al., 2012, p. 75), they emphasise the importance (for example, in terms of environmental sustainability) of being able to understand how this property becomes engineered into/out of buildings. Through ethnographic study of a particular building development, they demonstrate the micro-level negotiations (involving, for example, architects, the city council, trees, planning documents, regulations and developers) through which a building site becomes configured with regard to present concerns, closing down future possibilities for its use.

In this article, we are likewise concerned with the everyday practices of architecture as sites at which times are made. However, rather than prioritising a particular temporal form of design, such as 'adaptability' (Schmidt et al., 2012), or the production of open-ended 'slack space' (Till, 2009), we are interested in exploring the various temporalities constructed through architectural work, and what these 'do', as well as *for whom* they do it. While the notion of contextually responsive buildings is appealing, feminist scholarship indicates the importance of caution concerning the blanket promotion of open-ended temporal modes of doing and being. Writing outside the domain of architecture, Martin (1994) illustrates the slipperiness of the idealisation of 'flexibility' in North American culture. Signalling the possibility of ongoing individual change and creativity, the prioritisation of 'flexibility' simultaneously enables the *requirement* of these attributes, for example, by employers who need workers to be available as and when their labour is desired (on the tensions of 'flexibility' in the context of employment law, see Grabham, 2014). In a similar vein, Coleman (2013) reflects on the ways in which 'transformation' has increasingly become an *imperative* for particular (gendered, classed) subjects, who are compelled to act in the present to bring about radical self-change.

The complexity of valorising or denigrating particular temporalities in the specific context of design is highlighted by Tonkiss (2013) in her analysis of urban practices which reclaim derelict and/or abandoned city spaces created through austerity. Community-based projects that reformulate these spaces, for example as gardens, or places to play, are frequently dismissed in terms of their 'temporariness'. In contrast, urban planning and development is promoted as a means of preparing properly for the sustained long-term use of space. However, as Tonkiss (2013) points out, such characterisations conceal the cyclical temporal dynamics of urban development, geared towards the rapid production of value for investors. This generates a 'frenetic cycle of urban obsolescence, investment and intervention', and 'investment histories marked by oversized credit bubbles and break-neck sudden stops' (Tonkiss, 2013, p. 320). The dismissal of critical urban practices as 'temporary' fails to capture the different values this temporality renders possible; specifically, a capacity to effect near-term future change through small-scale actions, generating 'gradual spatial, social and economic value and continued returns to actual users' (Tonkiss, 2013, p. 320).

Projects that enable new practices of sharing space in contemporary cities are important as they hold open the promise of architecture to facilitate alternative urban cultures

(Petruscu, 2012), even if we must always be alert to the in-built assumptions around accessibility that characterise architectural design cultures (Boys, 2014; Imrie, 2003). It is also important to consider how novel approaches to sharing space remain vulnerable to co-option in support of existing socio-economic inequalities (Tonkiss, 2013). This is illustrated in Harris's analysis of the space-times of 'pop up', temporary structures which are, on the one hand, generative of new imaginaries of urban living and, on the other, facilitative of 'processes of commodification, gentrification, precaritization and spatiotemporal control' (2015, p. 601).

In this article, rather than assuming the value of particular temporalities, we interrogate the various relations with the future which materialise in the process of designing buildings for care in later life. Our analysis mobilises Latour's insight that it is 'the sorting that makes the times not the times that make the sorting' (1993, p. 76). In contrast to a linear view of time as the context or 'container' in which socio-material action unfolds, this analytic move conceptualises time(s) as *made* through such action (Grabham, 2016). It involves an imagining of time as dynamic, complex and contingent, in contrast to absolute and fixed understandings of time (Kwinter, 2002). This is a move reflected in the growing body of scholarship which explores how, and with what implications, times are enacted in, for example, healthcare and the biosciences (Beynon-Jones, 2017; Brown & Michael, 2003; Brown et al., 2000; Selin, 2006), law (Beynon-Jones & Grabham, 2019; Grabham, 2016), security and governance (Adam, 1998; Adam & Groves, 2007; Amoore, 2013; Anderson, 2017; de Goede & Randalls, 2009).

An understanding of time(s) as 'made' does not mean that they are infinitely malleable or purely discursive. Indeed, the focus of Science and Technology Studies (STS) on the making of futures (Borup et al., 2006; Brown & Michael, 2003; Brown et al., 2000) within the acutely 'material' context of scientific and technological innovation has underscored the significance of nonhuman agencies in this process (Tutton, 2017). In what follows, we consider architectural futures as 'enacted through particular material-discursive practices' (Tutton, 2017, p. 488) and in exploring their 'doings' (Jacobs & Merriman, 2011), we remain sensitive to constraints which limit their potential to be done otherwise. Attentiveness to these issues is facilitated by our focus (shared with others – Imrie, 2007; Yaneva, 2005, 2009) on the everyday aspects of architectural practice. As Michael emphasises in another context of future-making, apparently 'mundane' and small-scale socio-technical practices always contain potential 'as an occasion for the emergence of new possibilities' (2017, p. 521).

Methods

The data explored here are drawn from an ESRC funded project – *Buildings in the Making* – that sought to analyse how care for adults in later life is designed into the making of residential care homes and extra care housing in the UK. Data collection comprised two core strands: interviews with architectural professionals, followed by ethnographic research observing live projects for later life care. The initial stage consisted of 20 semi-structured interviews with 26 architectural professionals (some interviews were with multiple architects from the same practice). The scope of these interviews was wide-ranging, though with a focus on their previous and ongoing care sector

projects. These interview findings informed the later ethnographic strand of the research, where we followed nine architectural projects that served as case studies of the making of buildings. Of these projects, three were followed in depth over timescales of between 10 and 18 months. Following these three cases allowed us to observe projects at different stages of development, ranging from the early stages of designs being worked up for planning purposes in one case, right through to on-site construction and delivery in two other cases. Case studies were selected to include variation in the size of architectural practice; contractual model; type of care environment with different degrees of specialist support, and clients from different sectors (i.e. private, public and third sector bodies). In total 172 hours of observation were completed in different locations, including architectural offices, construction site settings, meeting rooms, and public events to promote the projects and to fulfil planning requirements. In addition to fieldwork observations, we conducted documentary analysis of plans; drawings; project meeting minutes; planning regulations and design guidelines. Also, eight further interviews were undertaken with clients, developers and building contractors involved in the case studies, along with more informal ethnographic discussions and nine audio-recorded discussions with architects involved with case study projects as they talked though documentary sources and plans. Data analysis involved close reading of transcripts and fieldnotes, noting down emergent themes, which were then regularly discussed within the research team. The process of data analysis was supported with the use of NVivo. The research was approved by the University of York social sciences ethics committee and thus all of the following quotations and fieldnotes are anonymised (interviews are numbered, and fieldnotes make use of pseudonyms).

Making pasts and futures interchangeable?

Elsewhere, in exploring the making of residential buildings for care in later life, we have discussed the standardisation of these spaces (Nettleton et al., 2018), and how this results from the negotiation of competing design pressures. In particular, we have demonstrated how the intensification of the market-based production and delivery of care in the UK produces individual 'beds' and 'bedrooms' as critical sites of value, upon whose density – and spatial configuration – the commercial viability of a care home or extra care housing scheme depends. Such viability is also contingent upon compliance with an array of regulations (for example, fire safety and building control) and best practice standards for care settings in later life, further constraining the parameters of design. Here, we reflect upon the convergence and repetition of building design as a temporal as well as spatial phenomenon that produces particular pasts, futures, and relations of responsibility.

During interviews, architects often drew attention to the ways in which care settings come to resemble one another through practices of repetition. In the following extracts, architects describe such practices as methods of guaranteeing positive financial outcomes for clients. They position future change as a source of risk, which can be avoided through the act of replicating completed pasts with fixed values:

> . . . when business is good, business is good, why do anything else? When business is bad, then it's a huge risk to do something different, so stick to what you know . . . it's just very, very

> conservative, that people have their models, you can't move away from them. (Interview 10, Architect)

> Another drawback for the architect is that they might have, this is the way we've always done it . . . a care home has this, this, this and this, because we worked out this design criteria, you know, 15 years ago, and this got through planning, so we just stick with it. And you'll often find that buildings start to look very similar to other buildings, . . . because design time costs money, so they'll often cut and paste from previous jobs (Interview 1, Landscape Design Consultant)

A notable feature of these extracts is the way in which architects critique repetitive practice as something done by 'other' architects. Claiming this orientation to the past/future in one's own practice appears problematic – a 'troubled' (Wetherell & Edley, 1998) subject position. Several architects insisted that it was unacceptable to simply reproduce past projects on new sites because architecture should always 'be informed by the site context' (Interview 4, Architect).

Nonetheless, perhaps underscoring the different opportunities that interviews and ethnography afford the analysis of temporalities in action, our observations of practice provided multiple examples of design repetition. In one case study, this was threaded throughout day-to-day decision-making on-site. Queries regarding building materials or interior design choices were routinely resolved with reference to what had been done in past projects:

> There is a discussion about the dimensions of the windows. Arthur (Architect) says he would 'prefer 400', Owen (Site manager) says he was planning to, 'get the lads to do 400' because, 'that's what they always do'. (Fieldnotes, Case Study 6)

During this project, the sites of previous care homes were often used as a 'shorthand' in keeping records of design decisions, with 'same as [*previous care home*]' listed as the instruction next to, for example, choice of door colour, or brick type. It is important to note that these practices of repetition were produced through a longstanding collaboration with a particular client, thereby creating an unusual proximity between past and future projects. Previous care homes were treated as sites of active, ongoing *use* (as opposed to completed units of fixed value), which generated knowledge about aspects of architecture that 'work' in terms of building users' experiences (as well as financial viability, regulations, etc.), and those which did not:

> Ed (Contracts Manager) says, 'Do the bathroom towel rails need doing . . .?'

> Arthur (Architect) says, 'There is no point, it never gets used.' (Fieldnotes, Case Study 6)

Accounts of past buildings as ongoing (rather than finished) spaces, from which architects could gain useful knowledge, were central to several interviewees' accounts:

> . . . in my mind a care home needs to be a research site, because you do need to be looking, continually looking, at how well it's working for people. (Interview 1, Landscape Design Consultant)

However, while many participants talked about their *desire* to explore experiences of building use, the actual employment of post-occupancy evaluation was widely described as practically limited due to project budgets.[1]

Fixing the future

Articulations of responsibility for users' experiences of residential care buildings were central to architects' accounts. Previously, we have illustrated how 'the design process, in the context of residential care, involves a form of "body work", as architects anticipate and "imagine" bodies that will populate their buildings' (Buse et al., 2017, p. 1451). Architects' imaginings of users' bodies reproduce contradictory notions of care, reflecting tensions in dominant discourses about ageing bodies, as well as the purpose of the buildings in which they reside (so, should these create a sense of 'home', or facilitate the management of risk?). Here, we are interested in how architects imagine their building users as part of a broader set of *anticipatory architectural practices* which are central to the making of buildings.

Analyses of the uncertainties of futurity within contemporary liberal democracies have noted the prevalence of anticipatory or pre-emptive temporal modes of action within this context (Adams et al., 2009; Amoore, 2013; Anderson, 2017; de Goede & Randalls, 2009). Adams et al. illustrate how 'anticipation' is increasingly produced as the only possible affective stance in relation to a future figured as 'always uncertain and yet . . . necessarily coming and so therefore always demanding a response' (2009, p. 249). As Anderson highlights, in order to 'act before the disaster takes place, futures must somehow be known and made present' (Anderson, 2010, p. 783). Through an exploration of the contexts of climate change, terrorism and trans-species pandemics, he draws attention to various 'anticipatory practices' through which uncertain futures are made tangible enough to effect present actions. In what follows, we consider the anticipatory practices through which architects enable the future to be 'made present' (Anderson, 2010, p. 783), in order to navigate (and construct) its uncertainties. At the same time, we draw attention to the dimensions of this process that seem specific to *architectural* anticipatory practices, namely their co-construction of the future as a site of inevitable, *yet avoidable*, professional disappointment due to various 'losses' that occur in the materialisation of design. Architects describe the future as a time already 'lost', both in terms of their design intentions and the material costs of realising them. Simultaneously, they insist upon their responsibility to mitigate such losses.

Architects who participated in the study often articulated concerns about the future actions of the building, and its material resistance to change during and following the construction process. Emphasising the difficulties involved in reconfiguring a design once it is written in cement and steel, architects positioned themselves as responsible for pre-empting the actions of the building through detailed anticipatory digital modelling. Through this work, buildings (and the multiple forms of expertise contributing to them, such as architecture, engineering, construction and law/regulation) are pre-produced virtually. Architects' accounts of modelling – both digital designs and physical models (Yaneva, 2009) – express its capacity to make a building's future tangible, avoiding uncertainties. Inevitably, however, these accounts of certainty contain within them the possibility that the future might be otherwise:

> . . . we do a lot of our care homes now in Revit, building information modelling, so we are able to use three-dimensional object based design, that will give you visual outputs very early on, so you understand the spaces in a three-dimensional form as opposed to a two-dimensional form. . . . Basically we're trying to *design out shock* of what the end product is; we're trying to design in as much information and thought . . . prior to being on site. (Interview 18, Architect – emphasis added)

In the following extract, an architect describes using an anticipatory computer simulation which enables staff to imagine possible work routines. This example demonstrates the dual way in which the materialised future signifies potential 'shock' – of the lost possibilities of use and/or of unanticipated costs incurred in attempting to re-open these possibilities:

> . . . if someone has got a spill and we need to have a cleaner, where do we need to go, to go and get the things we need? And they may end up finding, oh actually I've got to walk down a floor then right down to the end of this corridor, and then get into this cupboard that's tucked way around the side, and that whole process is going to take me ages, and during the time I'm not going to be able to see anything that's going on . . . once it's built the opportunity to make changes is really lost, it would be very expensive to do. (Interview 16, Architect)

In this extract, detailed user knowledge (in this case, that of care home staff) is portrayed as another means of anticipating and ensuring the workability of a building. Access to such knowledge varied across projects, depending, for example, on funding for user involvement, but also on the (material and imagined) difficulties of consulting building users (see Buse et al., 2018). User involvement was often described as a desirable technique of anticipation, providing that it was mobilised at the correct *point* in time. In one case study, attempts to involve users in design choices throughout the construction process were seen to generate indeterminacy and delays, at times thwarting rather than facilitating the realisation of design (Fieldnotes, Case Study 9).

Notably, architects' repeated moves to render the future unsurprising were maintained alongside continual refusals of humans and nonhumans to behave in predictable ways. As would be expected from a wide body of literature concerning users' engagements with technology (Oudshoorn & Pinch, 2005), and buildings (Blau, 1984; Gieryn, 2002), architects cited many cases where users had undermined their design intentions (e.g. by covering over windows designed to promote sociability in order to protect privacy – Fieldnotes, Case Study 7). Additionally, buildings themselves routinely acted in ways that 'surprised' (Cuff, 1991; Yaneva, 2008) their makers. In one project (Case Study 7), full-length windows were included in the lounge to provide a view for residents. Due to energy efficiency requirements, these windows had to be triple glazed. Ultimately, because the windows were so well-insulated, they 'steamed up' and nobody could see out of them properly.

Alongside the unpredictable future actions of buildings and building users, architects were also concerned about potential losses generated through processes of value-engineering.[2] Such concerns were particularly acute when buildings were procured through the 'design and build' model, in which, following initial architectural design, the project is tendered to a building contractor, who is responsible for delivering the building at a

fixed cost to the client. During this process, attempts to save costs through the use of particular building materials often take place (Sahin-Dikmen, 2013). Architects described how an awareness of their potential loss of control over the production of the building structures the early stages of the design process, with efforts made to specify as much detail as possible to ensure future experiences of building use:

> . . . we didn't go into the details specifying which taps we wanted for example, so contractor comes along installs cheap and nasty taps. . . . So what we tend to do now is, particularly for these care home projects, is anything that the residents will see, use or touch, we specify a design one way or the other. So we will specify the taps, and the sanitary ware, and the size of radiators, and leave the contractors to choose the roof trusses and the wall insulation and the foundations, the unseen parts. (Interview 8, Architect)

> We need to see some of these issues ahead of us and design around them, because at the end of the day a design and build contractor will always be in charge, so we should almost look at where he will be trying to save money and make those decisions before he gets to make them. (Interview 13, Architect)

Interviewee 13 reflected on the implications of 'design and build' for her profession, arguing that 'we have to be more proactive' in order to protect the integrity of an original design and to maintain the quality of material finishes, whilst operating within the economic constraints of the overall project. Doing so involves using a degree of foresight or '*seeing forward*' that Ingold associates with everyday design (2013, p. 69); in this, Ingold is drawing on Richard Sennett's understanding of the skill of anticipation, defined as the maker being 'always one step ahead of the material' (Sennett, 2008, p. 175).

Anticipatory architectural practices seek to pre-empt future uncertainties by making futures tangible (e.g. in the form of digital modelling, or detailed building specifications) in ways which render future 'losses' avoidable. Such practices both propel, and are propelled by, the notion of the future as a time of architectural loss and professional disappointment. The losses that concern architects centre on the non-malleability of constructed buildings, their failures to enact design intentions and/or to bend to users' needs, as well as the costs of reshaping them to achieve these goals. Somewhat paradoxically, anticipatory architectural practices all aim to make buildings more certain, more stable and *less open to change* at earlier points in time. In the final section of our analysis we consider an alternative mode of architectural working with the future, in which uncertainty and fluidity are (to an extent) promoted as valuable achievements.

Opening up the future

During interviews, architects (and others involved in the making of buildings) often suggested that, in order to function as a 'home', buildings designed for care in later life needed to enable their residents to take ownership of the space in some way:

> . . . it's creating something that people can respond to in the way that they want to. (Interview 17, Architect)

> We'd done the flats to a level, which we gave the client a choice of finishes for their end users to select from, so they were kind of looking after that, in terms of what tiles were going to go in which bathrooms, and which kitchen colours each resident got to choose. So the people moving in had . . . their own stamp on their own flat. (Interview 14, Director, Architectural Practice)

Such accounts align with Till's notion of 'slack space' in the sense that creating the possibility of 'ownership' involves sharing 'design with the designs of others that evolve in the course of occupation' (Till, 2009, p. 134). Such evolution also implies a future that – rather than being fixed – is open, uncertain and changeable.

One of the case studies provided a particularly detailed insight into the processes involved in trying to keep the future 'open' for user appropriation. Local authority involvement in this project meant that it contained a ring-fenced fund for public art in the care home garden. Perhaps because of this specification, the garden was protected from potential 'losses'[3] through value-engineering. The team involved in the landscaping project emphasised the importance of not 'locking up' (Artist, Case Study 3) the design of the garden, and of working collaboratively with users to ensure that it could be made open to redesign and use by future residents. Although this was described as 'designing for the unknown' (Landscape Architect, Case Study 3), through observations of project workshops and meetings, we found that this process involved alternating 'doings' of the future landscape as unknown/open and as anticipatable/fixed:

> The artist then turns to the model. She explains that it is a demonstration of the design physically, but it is also a 'proposal', a 'travelling work table'. . . . She says this . . . makes it possible to use it as a work table with people at West Care, and discuss where things are going to be, how they are going to organised. The proposal [i.e. *the broader proposal for the care home garden project*] involves five workshops, before and after it is built, which will involve doing the planting later on with families and staff working together. It is a way of getting engagement from people who live and work there, creating ownership. The artist suggests that this is often the 'missing piece' in terms of the normal production of a building. . . . The artist turns back to the model, and points out the private gardens, where she will be 'recycling ways of planting in private gardens'. Instead of institutional procedures the logic is that the garden is private (e.g. people being able to move things if they want, choosing where they would like to put plants). The artist stands up by the plan on the board. She reassures the group that while they might be nervous about having something that it is ongoing, the structural areas will be fixed, although other areas will be open. They don't need to worry about something unfinished. (Fieldnotes, Case Study 3)

The cardboard model is used simultaneously to demonstrate what the landscape 'will be' and as a basis to render this future uncertain, inviting redesign by building users (at previous meetings, care home staff had been provided with props to move around the model and were asked to draw desired modifications to the design). The artist stresses the necessity of ongoing redesign of the garden, emphasising that this process will take place not only prior to, but following the completion of the building, to create a sense of ownership for its occupants. At the same time, boundaries are established between something that is 'open' versus a design that is simply 'unfinished'. To avoid the

potentially troubling implications of 'unfinishedness', the artist draws attention to the fixity of elements of the space. In the absence of access to the not-yet-existent staff and residents of the care home, these elements (for example, spaces and types of grass, positionings of trees and paths) have been created through discussion with 'proxies' for building users, such as staff in existing care homes, or residents living nearby. In turn, these discussions have enclosed and delineated the spaces that are to be left open for appropriation by building users.

Our observations of the garden project also revealed how the planning permission process required a partially rigid future landscape, capable of accommodating changes of use, but with sufficient specification to secure approval to proceed. A partial fixing of the design also occurred in negotiation with the building contractor, who required knowledge of the landscape to plan costs and to ensure that future changes of materials could be reconciled with the needs of the building site (Fieldnotes, Case Study 3). This example of an attempt to hold the architectural future 'open' for change and reappropriation reveals the complex labour involved in generating a 'frame for life to unfold within' (Till, 2009, p. 134).

As noted previously, notwithstanding the transformative potential of attempts to engineer 'open' the future, we also recognise that it is important to avoid uncritically celebrating such moves (Coleman, 2013; Martin, 1994). Logics of exclusion can be found even in progressive design traditions, which can be underwritten by normative assumptions of future end-users (Boys, 2016). In the garden example, the importance of future flexibility was described in terms of *residents'* capacities to transform their own spaces. In most cases however, the question of for whom the 'openness' and transformative potential of the building mattered was more slippery:

> In terms of interior things . . . rather than give residents carte blanche to pick five different types of the floor finishes to five different types of tiles to five different types of kitchen, we almost bundled them up into packs . . . because otherwise you end up with . . . finishes that clash, which obviously fit into one person's taste. And that helps the client as well also future proof it for future residents and also helps the construction process in terms of ordering. (Interview 14, Architect)

In this extract, the architect describes how the degree of ownership enabled is circumscribed by the need to keep the space 'open' enough to allow the unknowable, future desires of *subsequent* residents to be accommodated within it. Case study observations similarly revealed how decision-making about current uses could become shaped by concerns about much longer term 'future proofing', i.e. a building's capacity to be reconfigured as a different kind of space, if required (Fieldnotes, Case Study 3).

Conclusion

This article has questioned framings of time as 'missing' or 'excluded' from architectural practice (e.g. Grosz, 2001; Till, 2009) by illustrating that the making of time(s) features routinely within the work of designing residential care buildings for later life. In this concluding discussion, we reflect upon some of the implications of conceptualising architectural practice as *making times*.

We have shown how different temporal practices co-produce material differences in the possibilities that emerge during building design. Some architects were concerned with the repetition of care home and extra care housing designs, and how this forecloses innovation. However, our analysis suggests differences between the treatment of past buildings as completed units of fixed value versus their positioning as changing, unfinished spaces of *use*. The latter approach provides opportunities for architects to learn about what 'works' for building users, and to attempt to conserve this (while discarding elements that do not). We highlighted the way in which the latter formulation emerged within the context of long-term working relationships, where architects had ongoing interactions with completed care home sites. This underscores the significance of feminist caution (Coleman, 2013; Martin, 1994) concerning the automatic privileging or denigration of particular temporalities. Clearly, the form and possibilities of architectural 'repetition' depend on the relational contexts in which it is enacted.

Throughout this analysis, we have foregrounded the ambiguous possibilities that emerge through the everyday time-making practices of architects. We found that the construction of the future as a site where design intentions and material costs are 'already lost' was co-produced through a range of 'anticipatory practices' (Anderson, 2010) that attempted to stabilise designs in the early stages of a building's production. Such stabilisations aim to mitigate particular forms of loss, for example, of quality finishes or aesthetic features assumed to improve the experiences of building residents. However, it can be argued that this process potentially produces other 'losses', for example, the opportunity for building users to redirect, and appropriate the spaces they inhabit. We have shown how keeping a building 'open' to future transformation by its users requires particular forms of work which, paradoxically, may include elements of anticipation and fixity. Finally, we noted the potential contradictions of 'open-ended' design (or 'slack space' [Till, 2009]), and how a concern with future transformation could be mobilised to shape buildings in ways that did not necessarily concern users' experiences of occupying them.

As our analysis has shown, if building times are made, they can potentially be made differently, in ways that materialise different possibilities for the lives of those who inhabit them (e.g. in terms of capacities to shape the space in which one resides). Nonetheless, as work within the sociology of the future attests, not all futures are equally realisable or desirable (Adam & Groves, 2007; Tutton, 2017; Urry, 2010). In exploring how times are made through, and organise the work of, architecture, it remains important to foreground constraints upon this process. This emerged clearly in our data, in which the material actions of buildings themselves and their refusals to (easily) accommodate change during and following construction featured heavily. We have shown how architects' concerns about the actions of buildings are routinely entwined with other material constraints, specifically the financial costs involved in making residential care homes. The withdrawal of government funding and the increasing marketisation of care in the UK (Lewis & West, 2014) contribute to the construction of future deviation from past 'successes' in building design as too risky. Financial constraints are also central to the production of the architectural future as a site of loss, generating anticipatory practices that seek to firm up designs during early stages of the building process. Conversely, in one – unusual – case study that we explored, financial support made it possible to hold

the future open deliberately as a space for residents to redesign (albeit, in ways that were prefigured to some extent through a particular participatory process). We have argued that a distinguishing feature of this project was how a space for future indeterminacy was created via the building's procurement process (i.e. the ring fencing of the public art budget), and the contractual responsibilities and values this generated. In considering architecture's capacity to enact particular temporalities, it is thus vital to attend to 'the complex of social relations involved in the production of design, and the logics of social distribution which determine who gets how much of it' (Tonkiss, 2017, p. 880).

Tonkiss's observations arise from her analysis of changing urban cultures in the context of austerity economics, where she argues that architecture can be a socially progressive force. To realise this, she contends, we need to think of buildings in the city as comprising 'not only physical interventions in space, but the remaking of space *in time*' (Tonkiss, 2013, p. 322). Put another way, perhaps architecture should be thought of as experiments in *the making of time through spatial forms*. To suggest this is not a semantic play on words, for it is neither easy nor correct to think categories of time and space apart (Massey, 2005). Thinking about architecture as a noun encourages a reification of static physical form (Stoner, 2012); thinking of architecture as verb instead helps us to be alert to the temporal implications of its making, in addition to its spatial effects (Ingold, 2013). As we have demonstrated throughout this article, architects are involved in the crafting of qualities of time(s) as much as quantities of spatial form. In observing their everyday decisions and practices, we found architects striving to enact a variety of temporal practices that are approximate rather than absolute, and contingent rather than closed (Kwinter, 2002); in short, they have tried to make time differently. Conceiving of architecture as everyday design practice means considering the work of an architect as 'a matter not of predetermining the final forms of things and all the steps needed to get there, but of opening up a path and improvising a passage' (Ingold, 2013, p. 69). This prompts an understanding of architecture as 'a space of temporal experiment' (Jones, 2020, p. 76), full of the tensions that arise from aspirations to fix the eventual functions of buildings, alongside conflicting desires to keep open their future uses for future users.

Acknowledgements

Funding

Notes

1. Architects pointed to the way in which post-occupancy evaluation is not part of the Royal Institute of British Architects (RIBA) Plan of Work (the basis for the UK building design and construction process) and is not viewed as a core part of architectural labour.

2. In construction, value-engineering involves assessing the selection of materials, equipment and processes, and looking for more cost effective solutions. For a critical discussion of this term see Samuel (2018).
3. Gardens, while highly valued as 'therapeutic landscapes' (Gesler, 1992) by architects and care home staff, were also described as the most likely element to be cut from a project because they are made at the end of a build, i.e. the point at which financial constraints become most pressing.

References

Adam, B. (1995). *Timewatch: The social analysis of time*. Polity Press.

Adam, B. (1998). *Timescapes of modernity: The environment and invisible hazards*. Routledge.

Adam, B., & Groves, C. (2007). *Future matters: Action, knowledge, ethics*. Brill.

Adams, V., Murphy, M., & Clarke, A. E. (2009). Anticipation: Technoscience, life, affect, temporality. *Subjectivity*, *28*(1), 246–265.

Amoore, L. (2013). *The politics of possibility: Risk and security beyond probability*. Duke University Press.

Anderson, B. (2010). Preemption, precaution, preparedness: Anticipatory action and future geographies. *Progress in Human Geographies*, *34*(6), 777–798.

Anderson, B. (2017). Emergency futures: Exception, urgency, interval, hope. *The Sociological Review*, *65*(3), 463–477.

Beynon-Jones, S. M. (2017). Gestating times: Women's accounts of the temporalities of pregnancies that end in abortion in England. *Sociology of Health and Illness*, *39*(6), 832–846.

Beynon-Jones, S. M., & Grabham, E. (Eds.). (2019). *Law and time*. Routledge.

Blau, J. (1984). *Architects and firms: A sociological perspective on architectural practice*. MIT Press.

Borup, M., Brown, N., Konrad, K., & van Lente, H. (2006). The sociology of expectations in science and technology. *Technology Analysis and Strategic Management*, *18*(3/4), 285–298.

Boys, J. (2014). *Doing disability differently: An alternative handbook on architecture, dis/ability and designing for everyday life*. Routledge.

Boys, J. (2016). Architecture, place and the 'care-full' design of everyday life. In C. Bates, R. Imrie, & K. Kullman (Eds.), *Care and design: Bodies, buildings, cities* (pp. 155–176). Wiley-Blackwell.

Brown, N., & Michael, M. (2003). A sociology of expectations: Retrospecting prospects and prospecting retrospects. *Technology Analysis and Strategic Management*, *15*(1), 3–18.

Brown, N., Rappert, B., & Webster, A. (Eds.). (2000). *Contested futures: A sociology of prospective techno-science*. Ashgate

Buse, C., Nettleton, S., Martin, D., & Twigg, J. (2017). Imagined bodies: Architects and their constructions of later life. *Ageing & Society*, *37*(7), 1435–1457.

Buse, C., Martin, D. & Nettleton, S. (2018) *Buildings in the making: A sociological exploration of architecture in the context of health and social care*. Final Report. University of York. Available at: http://buildingsinthemaking.org.uk/wp-content/uploads/2019/03/Buildings-in-the-Making-final-report.pdf

Coleman, R. (2013). *Transforming images: Screens, affect, futures*. Routledge.

Coleman, R., & Tutton, R. (2017). Introduction to special issue of *Sociological Review* on 'Futures in question: Theories, methods, practices'. *The Sociological Review*, *65*(3), 440–447.

Cuff, D. (1991). *Architecture: The story of practice*. MIT Press.

de Goede, M., & Randalls, S. (2009). Precaution, preemption: Arts and technologies of the actionable future. *Environment and Planning D: Society and Space*, *27*(5), 859–878.

Gesler, W. (1992). Therapeutic landscapes: Medical issues in light of the new cultural geography. *Social Science and Medicine*, *34*(7), 735–746.

Gieryn, T. F. (2002). What buildings do. *Theory and Society*, *31*(1), 35–74.

Grabham, E. (2014). Legal form and temporal rationalities in UK work–life balance law. *Australian Feminist Studies*, *29*(79), 67–84.

Grabham, E. (2016). *Brewing legal times*. University of Toronto Press.

Grosz, E. (2001). *Architecture from the outside: Essays on virtual and real space*. The MIT Press.

Harris, E. (2015). Navigating pop-up geographies: Urban space-times of flexibility, interstitiality and immersion. *Geography Compass*, *9*(11), 592–603.

Imrie, R. (2003). Architects' conceptions of the human body. *Environment and Planning D: Society and Space*, *21*(1), 47–65.

Imrie, R. (2007). The interrelationships between building design and architects' practices. *Environment and Planning B: Planning and Design*, *34*(5), 925–943.

Ingold, T. (2013). *Making*. Routledge.

Jacobs, J. M., & Merriman, P. (2011). Practicing architectures. *Social and Cultural Geography*, *12*(3), 211–222.

Jones, P. (2011). *The sociology of architecture: Constructing identities*. Liverpool University Press.

Jones, P. (2020). Architecture, time, and cultural politics. *Cultural Sociology*, *14*(1), 61–79.

Kwinter, S. (2002). *Architectures of time: Toward a theory of the event in modernist culture*. The MIT Press.

Latour, B. (1993). *We have never been modern*. Harvard University Press.

Latour, B., & Yaneva, A. (2008). Give me a gun and I will make all buildings move: An ANT's view of architecture. In R. Geiser (Ed.), *Explorations in architecture: Teaching, design, research* (pp. 80–89). Birkhauser.

Lerup, L. (1977). *Building the unfinished: Architecture and human action*. Sage.

Lewis, J., & West, A. (2014). Re-shaping social care services for older people in England: Policy development and the problem of achieving 'good care'. *Journal of Social Policy*, *41*(1), 1–18.

Martin, D., Nettleton, S., & Buse, C. (forthcoming). Drawing atmosphere: A case study of architectural design for care in later life. *Body & Society*. Accepted for publication.

Martin, D., Nettleton, S., Buse, C., Prior, L., & Twigg, J. (2015). Architecture and health care: A place for sociology. *Sociology of Health & Illness*, *37*(7), 1007–1022.

Martin, E. (1994). *Flexible bodies: The role of immunity in American culture from the days of polio to the age of AIDS*. Beacon Press.

Massey, D. (2005). *For space*. Sage.

Michael, M. (2017). Enacting big futures, little futures: Toward an ecology of futures. *The Sociological Review*, *65*(3), 509–524.

Nettleton, S., Buse, C., & Martin, D. (2018). 'Essentially, its just a lot of bedrooms': Architectural design, prescribed personalisation and the construction of care homes for later life. *Sociology of Health & Illness*, *40*(7), 1156–1171.

Nettleton, S., Martin, D., Buse, C., & Prior, L. (2020). Materializing architecture for social care: Brick walls and compromises in design for later life. *The British Journal of Sociology*, *71*(1), 153–167.

Nowotny, H. (1994). *Time: The modern and postmodern experience*. Polity Press.

Oudshoorn, N., & Pinch, T. (Eds.). (2005). *How users matter: The co-construction of users and technology*. The MIT Press.

Pallasmaa, J. (2009). *The thinking hand: Existential and embodied wisdom in architecture*. Wiley.

Petruscu, D. (2012). Relationscapes: Mapping agencies of relational practice in architecture. *City, Culture and Society*, *3*(2), 135–140.

Rosengren, W., & DeVault, S. (1963). The sociology of time and space in an obstetric hospital. In E. Friedson (Ed.), *The hospital in modern society* (pp. 266–269). Free Press.

Sahin-Dikmen, M. (2013). *A Bourdieusian lens on to professions: A case study of architecture* [Unpublished PhD thesis, University of York].

Samuel, F. (2018). *Why architects matter: Evidencing and communicating the value of architects*. Routledge.

Schmidt, R., Sage, D., Eguchi, T., & Dainty, A. (2012). Moving architecture and flattening politics: Examining adaptability through a narrative of design. *Architectural Research Quarterly*, *16*(1), 75–84.

Selin, C. (2006). Time matters: Temporal harmony and dissonance in nanotechnology networks. *Time and Society*, *15*(1), 121–139.

Sennett, R. (2008). *The craftsman*. Yale University Press.

Stoner, J. (2012). *Towards a minor architecture*. The MIT Press.

Till, J. (2009). *Architecture depends*. The MIT Press.

Tonkiss, F. (2013). Austerity urbanism and the makeshift city. *City*, *17*(3), 312–324.

Tonkiss, F. (2017). Socialising design? From consumption to production. *City*, *21*(6), 872–882.

Tutton, R. (2017). Wicked futures: Meaning, matter and the sociology of the future. *The Sociological Review*, *65*(3), 478–492.

Urry, J. (2010). Consuming the planet to excess. *Theory, Culture and Society*, *27*(2–3), 191-212.

Wetherell, M., & Edley, N. (1998). Gender practices: Steps in the analysis of men and masculinities. In K. Henwood, C. Griffin, & A. Phoenix (Eds.), *Standpoints and differences: Essays in the practice of feminist psychology* (pp. 156–173). Sage.

Yaneva, A. (2005). Scaling up and down: Extraction trials in architectural design. *Social Studies of Science*, *35*(6), 867–894.

Yaneva, A. (2008). How buildings 'surprise'. The renovation of the Alte Aula in Vienna. *Science Studies*, *21*(1), 8–28.

Yaneva, A. (2009). *Made by the office for metropolitan architecture: An ethnography of design*. 010 Publishers.

Zerubavel, E. (1979). *Patterns of time in hospital life: A sociological perspective*. University of Chicago Press.