

Ciolfi, L.; Gray, B.; de Carvalho, A. F. P. (2020): Making Home Work Places. In: Proceedings of the 18th European Conference on Computer-Supported Cooperative Work: The International Venue on Practice-centred Computing on the Design of Cooperation Technologies - Exploratory Papers, Reports of the European Society for Socially Embedded Technologies (ISSN 2510-2591), DOI: 10.18420/ecscw2020_ep10

Making Home Work Places

Luigina Ciolfi*, Breda Gray^ and Aparecido Fabiano Pinatti de Carvalho°

*Sheffield Hallam University (UK) & Maynooth University Social Sciences Institute (Ireland)

^University of Limerick (Ireland)

°University of Siegen (Germany)

lciolfi@shu.ac.uk; breda.gray@ul.ie; fabiano.pinatti@uni-siegen.de

Abstract. This exploratory paper makes the case for deepening and expanding CSCW research on how knowledge and digital professionals work at home. The steady rise of flexible and ‘mobile’ working policies and burgeoning of freelance work and solo entrepreneurs, means that working from home is now commonplace. Yet, there are few investigations of how people make working from home ‘work’. In response to this gap, this paper focuses on how homes become sites of complex coordination and negotiation for those who use them as workplaces. Following a review of how the relevant literature frames working from home, this paper opens up a set of urgent research questions. It argues that CSCW research needs to attend more closely to those intricate *emplaced* negotiations and coordination efforts that occur at home, not only to collaborate remotely with colleagues and clients, but also to ensure that the more ‘intimate’ relationships of households and families are protected. In particular, this paper examines how both sets of relationships are shaped by the spatial and environmental organisation of the home as a shared space for most.

Copyright 2020 held by Authors, DOI 10.18420/ecscw2020_ep10

Except as otherwise noted, this paper is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.



Introduction: Flexible Work and Place Making

While ‘telework’ or ‘remote work’ have been practices supported by employers for decades (Olson, 1989; Olson and Primps, 1984; Lozano, 1989; Kraut, 1989; Huws et al, 1990; Habib and Cornford 1996; Orlikowski and Barley, 2001; Hardill and Green, 2003), the sharp increase and take-up of flexible work policies in many organisations, as well as of people working independently (freelancers, consultants, etc), means that working from home on a regular basis is growing.¹ It is also likely that the Covid-19 pandemic, which has already shifted working patterns into the home, might bring about a reluctance to return to the office when the closures are lifted.

Digital technologies and infrastructures have long been marketed to companies and entrepreneurs as easy solutions to support work ‘anywhere, anytime’ (Perry et al, 2001; Sørensen, 2013), including domestic spaces. However, critiques of the promises and actual role of technology in such set-ups show that these forms of work carry their own challenges and require extensive (and often invisible) second-order work in order to happen (Bannon, 1995; Star and Strauss, 1999; Olson and Olson, 2000; Perry, 2007; Erickson and Jarrahi, 2016). Enabling and supporting work away from offices and other institutional spaces is not just about designing digital technologies to replace those aspects of co-located work that are lost or diminished (such as social interaction with colleagues), for example, via ‘telepresence’ mechanisms (Takayama et al, 2012), or remote activity monitoring within teams (Vuolle, 2010). Rather, it is about understanding how workplaces emerge in and through practices of negotiation and coordination in various environments (Felstead, 2005, Erickson et al., 2014; de Carvalho et al., 2017).

CSCW research on mobility and nomadicity, and related research in organisational studies, sociology of work, mobilities and science and technology studies, have detailed the practices of establishing temporary (and often fleeting) workspaces, of maintaining a range of such workspaces, and therefore of managing a complex constellation of environments, (digital) resources and relationships in their interconnection to locations and work practices (de Carvalho, 2014; Erickson et al 2014; Rossitto et al, 2014). These extend from the ‘mobilisation work’ of configuring temporary workplaces as part of short and

¹ Although *telework* and *remote work* are labels often used interchangeably (Schall, 2019), slight conceptual differences between the terms may be noted. The former assumes a key role of information and communication technologies to enable work away from an institutional workplace (Nilles, 1994); the latter focuses on the physical distance from the workplace (Daniels et al., 2001). Remote work, as portrayed in the literature, also seems to refer to greater physical distance between the workers and the workplace, which could make it difficult for workers to commute. Remote work can also refer to a temporary configuration of work – for example, when a person is on a business trip. Telework refers to a more stable arrangement, where work occurs mainly away from the workplace, with only occasional in-person presence (Daniels et al., 2001). Telework has been also strongly associated with the idea of working from home, and this is possibly due to the connection between telework and *telecommuting*, which refers more specifically to the practice of drawing on telework and remote work to decrease commuting time (Schall, 2019).

long distance physical mobility (Perry, 2007), to the ‘meta-work’ of maintaining infrastructural and practice stability and flow among the disruptions and fragmentations of unsettled workspaces (Mark, 2015).

From this body of scholarship, it is clear that place is very much a concern for these workers (Brown and O’Hara, 2003; Ciolfi and de Carvalho, 2014; Rossitto et al, 2014). As such, an understanding of place making is essential to comprehending how work is accomplished. For example, practices such as *officing* (Humphry, 2014) entail efforts to actively configure environments, resources and the professional self in context. Liegl (2014) unpacks the ‘care of place’ that mobile workers practice in making workplaces, including their concern for aesthetics and atmosphere in cultivating productivity and creativity (Pink and Leder Mackley, 2006).

Because place experience has a social dimension, place making is also about maintaining interpersonal relationships with people who are co-located but not colleagues as, for example, in co-working spaces (Spinuzzi, 2012; Swezey and Vertesi, 2019). In such places individual workstations are configured relationally in support of visibility, connectivity as well as in unique and individualised ways to ensure comfort, efficiency and productivity (Mazmanian, Orlikowski and Yates, 2013). While their work practices are mobilised, flexible workers also rely on ‘moorings’ (Hannam, Sheller and Urry, 2006) and the creation of ‘holding environments’ (Petriglieri et al 2019) to identify and establish those bonds that provide an anchor for their flexible and fluid practices.

The constant reconfiguration of places (through practices, artefacts and relationships as these intersect with time and identities) underpins contemporary mobile and nomadic knowledge work (Gray, Ciolfi and de Carvalho, 2020).² These efforts in making work happen in ‘flexible’ workplaces include the configuration and use of digital tools and infrastructures.

Space, place and place making have been studied in CSCW and related disciplines in terms of how environments are lived and experienced by human actors (Brewer and Dourish, 2008; Brown and O’Hara, 2003; Ciolfi and de Carvalho, 2014; Liegl, 2014; Rossitto et al 2014). However, this body of work needs to be extended to consider place and place making as relational assemblages of material, social and experiential elements (Malpas, 2012; Pierce, Martin, and Murphy, 2011). We argue for the need to approach mobile and

² As with telework and remote work, the terms *mobile* and *nomadic work* have also been recurrently used interchangeably in the literature (Ciolfi and de Carvalho, 2014). Nevertheless, we, like many other authors, think it is important to differentiate between them, as this has some conceptual and theoretical implications (Rossitto, 2009). We use the term mobile work to refer to work involving movement for or during the accomplishment of productive activities. Theoretically, these movements could be both physical or digital – like in telecommuting. Nomadic work, on the other hand, refers to work involving the colonisation of different locations from time to time, depending on the resources that they offer for the accomplishment of productive activities (de Carvalho, 2014; Rossitto et al., 2014; Erickson et al., 2014; Gray et al., 2020).

nomadic work as a process of place making – where places emerge as ‘bundles’ of space-time configurations as well as values, emotions, and relationships, all of which are shaped in relation to other places and movement (Frello, 2008; Massey, 2005). These *place bundles* are socially negotiated and contingent (Kabachnik, 2012): they form ‘temporary constellations’ (Massey, 2005, p. 141) with purpose and meaning that may be reconfigured when viewed from other perspectives (Kabachnik, 2012, p. 5).

For the purposes of thinking of the home as a particular kind of place, we start with the view that place is a process, that emerges and is continuously made and remade in practice. This framing of place resonates with the CSCW agenda of understanding digitally-mediated, situated practices. It is particularly relevant to the making and remaking of homes as places of work (paid and unpaid), care, leisure, rest and social reproduction. In other words, understanding place and place making as processual (Frello, 2008; Kabachnik, 2012; Massey, 1993; Urry, 2007) rather than static and bounded, allows us to capture home work as a situated, relational, socially and often intimately negotiated practice (Gray, Ciolfi and De Carvalho, 2020). Home in this sense is a place of work that is also interconnected with other workplaces, people, infrastructures and resources.

While the study of mobile and flexible work is not limited to examining how homes are made and re-made as work places, an explicit focus on these practices would add novel and prescient contributions to this broader scholarship. This exploratory paper proposes two contributions to such research agenda: first, by reviewing key findings in the existing literature on home work, it identifies specific gaps; second, it draws on original data collected by the authors over many years of empirical study of mobile work to propose pressing questions about homes as relational, emergent and practiced work places. In the following section, we review key literature on work at home, highlighting some key contributions and gaps.

Homes as Work Places

Homes are places of work (social reproduction work, household work), but also the site of paid labour since pre-industrial times (Bishop, 1999; Christensen 1988). Certain lines of work, such as family farming (Leshed, Håkansson and Kaye, 2014), indeed remain bound to homesteads to this day. Besides paid labour, homes are also sites of other skilled activities: examples are personal finance management, healthcare appointments, supervising children’s homework, etc. (Steward, 2000; Verne and Bratteteig 2016). For yet others, their work takes place in other people’s homes, for example, the work of personal tutors and health professionals such as caregivers (Grönvall and Lundberg, 2014). Work in the

home has strong gendered connotations, as care work has been long identified as ‘women’s work’ and doing paid work at home is sometimes celebrated as a way of reconciling the (material and emotional) needs for employment and for care (Hochschild, 1997).

In more recent times, the home has become a place for white collar, knowledge-intensive work, including the IT, digital and creative sectors. This occurs via different arrangements: some people work entirely ‘out of home’ (Olson, 1989), and therefore professional offices are setup in the home to be primary workplaces for solo entrepreneurs, or freelancers or subcontractors (Lozano, 1989; Salazar, 2001; Thomson 2013). Others work from home in response to specific circumstances or on certain days (i.e. by virtue of their employer’s support of flexible work). Finally, the home is where people who have offices or other designated places of work do ‘supplemental’, ‘overflow’ (usually unpaid) work (Kraut, 1989; Venkatesh and Vitalari, 1992) outside business hours, such as in the evenings or weekends (Olson, 1989; Salazar 2001; Venkatesh, 1996). Kraut terms these typologies of people, respectively, as *self-employed*, *substitutors* and *supplementers* (Kraut, 1989, p. 23).

Work at home ‘under the conditions of independent contractor status (i.e., self-employment) is very different from work at home for a full-time employee, particularly if the employee is on full salary and benefits’ (Olson, 1989, p. 322). Indeed, the different status of the worker and of the type of work done might either signify the freedom to choose the home as a preferred workplace for those privileged enough to be able to do it, or the constraints imposed by lack of opportunity or other obligations. Using one’s home for work is in some cases the only option: this is the case, for example, for solo entrepreneurs starting up a business with limited resources, or for workers with care responsibilities that cannot be delegated. The ‘home office’ takes on different connotations based on the status of the worker and the work: from carefully designed, comfortable and highly connected, to makeshift, uncomfortable and relying on precarious (physical and digital) infrastructure.

Initially, white collar work at home was characterised as *telecommuting* or *telework*, thus constructing the home office as a ‘virtual’ extension of corporate premises, from where people could step into the corporate workplace by digital means. The use of ICTs for this kind of ‘remote office work’, particularly in the case of technologically skilled workers such as IT professionals, has been studied since the 1980s (Kraut, 1989; Olson and Primps, 1984; Venkatesh, 1996). The (optimistic) goal of these ICT systems was to connect the person to the corporate workplace and replicate management and control mechanisms typical of co-located workplaces, i.e. performance monitoring by managers, relationship building between coworkers, etc. These early studies showed that the productivity of telecommuters seemed to be higher due to fewer interruptions and distractions,

however home workers tended to earn less and progress less in their careers (Greengard, 1995). Becker and McClintock (1981) described this as the ‘mixed blessing’ of work at home: i.e. lower wages and slower careers, but more independence and productivity. A later study by Habib and Cornford (1996) highlighted concerns about working from home expressed in terms of job satisfaction, career progression, and those physical health issues associated with a more sedentary lifestyle. The impact on family and household in terms of a more unbalanced work-life relationship was also reported by these professional workers. Such individual-level studies focused on whether telecommuting and its blurring of the separation of work and home spaces and rhythms were beneficial or not to workers, their family members and their employers. In contrast, organisational-level studies focused on the institutional issues arising from telecommuting, mainly with regard to monitoring workers and maintaining organisational culture outside the corporate workplace (Orlikowski and Barley, 2001).

Recent studies on the long-term impact of home working have shown that it has generated some benefits (i.e. enabling careers for women and those with care responsibilities), and that it is still linked to increased productivity (Halford 2005). However, home workers who are employed by companies also feel the pressure to demonstrate their worth and professional performance, and this can mean a tendency to overwork, particularly for women who might have to perform both paid and unpaid work in the home (Halford, 2005: 21). Indeed, research on people who work exclusively at home has shown that work time becomes ‘task-based, rather than clock-based’ (Halford 2005: 27). This means that they work long hours and have difficulties deciding when to end the working day (Steward 2000).

One of the downsides of work at home is that it may be an isolating experience for members of a distributed team (Takayama et al 2012; Pierce and St.Amant, 2011). Mechanisms for coordination and communication between remote workers have been studied and evaluated in depth by CSCW researchers (see for example Olson and Olson, 2014 and Nelson et al., 2017). The focus of this work, however, is on how distributed teams achieve collaboration and coordination, rather than on the situatedness of home workers’ in relation not only to remote collaborators and environments, but to their immediate surroundings and social relations (Orlikowski, 2007).

Our review of the literature suggests that research on how home work is shaped by the (social, material and emotional) context in which it is done is scarce. Those who have focused on homes as workplaces beyond a concern solely with remote organisations and teams have begun to consider the individual practices of how work is integrated into the spaces, routines and roles of everyday life (see Orlikowski and Barley 2001). Some studies have addressed how

boundaries are set and configured to ‘carve’ out work in a place that is designated for other aspects of life (Salazar 2001; Thomson 2013). Thomson (2013) identified how *physical*, *temporal* and *psychological* boundaries characterise the practices of making professional offices at home (Thomson 2013). Salazar articulated a ‘mandala’ of nested boundary categories that emerged from her study of home work, classified under macro-categories of *space*, *electronic*, *psychological*, *roles*, *time* and *working tasks*. The configuring of these boundaries has been identified as a way not only to define locations, times and moods for work at home, but also the relationships with other aspects of life at home.

This work echoes Nippert-Eng’s analysis of how people manage the fragmented boundaries between “doing” home and work, not just as locations, but as ‘realms of experience’ (Nippert-Eng, 1996). The complexity of establishing or managing boundaries is down to the need to constantly reflect on whether they work and how it is done, leading to a constant process of boundary sculpting (Ciolfi and Lockley, 2018; Gray et al., 2017). Boundaries are also seen not only as defining mechanisms (e.g. work vs. personal spaces, busyness vs. rest, etc.), but as coping mechanisms to manage stress. Indeed, some research has found that digital technology design can contribute to the setting and maintenance of ‘healthy’ boundaries between realms of life to encourage digital wellbeing (Cox et al 2014; Cecchinato, 2014). In other types of entirely home-bound work such as family farming, boundaries between work and life are harder to establish and uphold; however, ‘soft’ boundaries are constantly sculpted and negotiated around space, time and roles in the home (Leshed, Håkansson and Kaye, 2014). Overall, setting these work-life boundaries is no easy feat, and the failure, or preference not to do so can generate additional stress and difficulties (Ciolfi and Lockley 2018; Gray, Ciolfi, de Carvalho, D’Andrea and Wixted, 2017).

Furthermore, the private and personal aspects of home can be even more closely entwined with professional or income generation activities: an example is network hospitality, whereby parts of the home are made available to paying guests (Lampinen, 2016). Another example is the *Hoffice* network (founded in Sweden in 2014), which facilitates the collective use of private homes as co-working spaces open to external people, according to an agreed code of practice (Rossitto and Lampinen, 2018). While initiatives such as *hoffice* provide lone workers with support and social mechanisms that they might not be able to access on their own, they introduce yet another aspect of fragmentation between realms of life within one’s home.

In her study of Australian ICT workers, Melissa Gregg (2011) argued that ‘work’s intimacy’ is what characterises these professions. Intimacy as a dimension of work, and also how digital technologies differently mediate this sense of intimacy, is a main characteristic of home work: both in terms of how it is done (i.e. in intimate places, such as responding to emails in bed) and how it is

communicated to peers and clients (i.e. intimacy of a relationship of constant contact and availability). Interestingly, Gregg (2011) also notes that the women participating in her study had home offices that were located more centrally in their houses, enabling them to monitor other ongoing activities (such as children). This further highlights the need to delve deeper into the ways in which homes are constantly made into place bundles assembling locations, material configurations, social relationships, and shared understandings.

Overall, there is considerable knowledge about the tasks of home work, its organisational and economic implications, the technologies that may be used in support of it, and the roles that individuals embody to accomplish home work and manage its definition and boundaries. However, we know much less about how homes are made and re-made as relational, processual places where routines, physical/digital infrastructures and tools, bodies, identities, values and understanding. We also need to learn more about how these continuously emerge in ever-evolving configurations at the juncture of paid labour, care work, personal life and leisure. CSCW is ideally placed to unpack the spatial, temporal, infrastructural and relational practices that enable collaboration and coordination beyond co-workers when working at home. From the earlier literature-based examples, it is clear that the role of technologies in this domain is multi-faceted: across all realms of a worklife, it is a matter of infrastructure, of cooperation, of productivity, of monitoring (and even surveillance), of identity definition and ‘identity work’ (Coupland and Spedale, 2020), of reputational management, and of boundary sculpting. Homes are constantly remade places in all these ways, and how this occurs needs unpacking.

Making Homes as Place Bundles: Some Empirical Insights and Open Issues

We now present some data excerpts that give a glimpse of how homes emerge as complex and relational *worklife* place bundles. These are intended to flag issues for further analysis and open up research themes for future empirical work. The excerpts are drawn from qualitative data collected as part of two extensive interview studies of mobile knowledge workers that we conducted in Ireland and the UK over the past number of years, and that involved a total of 74 people (36 women and 38 men) in knowledge-intensive professions. The participants were a mix of IT company employees (mainly software developers and development managers), independent workers in digital industries (web designers, social media managers, design freelancers, etc.), and academics (lecturers and researchers).

These two studies had the goal of unpacking practices of nomadic and flexible work and of work-life boundary sculpting, and therefore they were not limited in

focus on capturing practices of work at home. However, as part of the wider themes of each study, participants gave first-person accounts of how their work takes place at home, therefore providing a rich body of data where homes emerge in their complexity of *worklife* places (Gray et al., 2020), as it is impossible to artificially separate work and life in the accounts of these participants.

The Home as Hybrid Place in the Making

The data portrays not only how boundaries are sculpted, but how homes emerge as hybrid places (de Souza e Silva 2006; Halford, 2005), personal/professional places characterised by complex second-order work of cooperation, coordination and negotiation in a physical and material context invested by diverse values, negotiations and understandings.

To begin with, getting work ‘right’ is not straightforward at home, in the same way as it is not uncomplicated in other workplaces: it requires the right spatial arrangements and configurations, but also self-knowledge of how to be effective and productive. At home, it can be even more challenging to achieve this in an environment that might only be familiar, or set up to be comfortable, for non-professional tasks, and that has to be re-thought of in a new light - as the quote below by Noel (freelance designer) describes:

I never worked from home before (...) It’s a really hard thing to get used to (...) because the environment is incredibly important. I was in the box room and there is a little small bed and a tiny little desk and a really old laptop with keys and stuff missing on it and (...) it really frustrated me. (...) Every week I’d move things around in the room, whether I’m facing the window or away from the window to try and figure out (...) what way am I getting more stuff done. I’ve recently moved down into the sitting room which is much better because I used to be at the back of the house, which was always cold because the sun wasn’t shining in, so now I’m at the front of the house and it’s just a little bit more friendly and [with] more desk space, and the main thing is to get organised and just try and not lose focus during the day (Noel)

As Noel’s account indicates, a configuration that suits work in place is not fixed for long and not yet permanent, but always evolving, because the nature of work and its demands change too. This is also the case for Jill: *‘I don’t always kind of take off to the room [the home office] - that tends to be when I’m doing intensive work where I really need that kind of complete concentration’* (Jill).

Performing different tasks might mean ‘local’ mobility and movement within the home, rearranging resources and relational configurations to other spaces and people in the home in support of mood or demand. Achieving work at home is not just about setting a boundary between a work-conducive space and the rest of the home, but actively seeking and practicing the right set-up at a particular moment

while being mindful of ever-present hybridity that is perceived and managed in different ways.

When work starts and ends, and how work places are remade in light of this, are not just about setting boundaries: for example, Angela (a software development company owner) has designated one room in her home as only for work. The room is set apart from the rest of the house, so that work does not spill out into family space. Closing the door to that room in the evening signals Angela's decision to end of her working day, but she sometimes returns to her home office after finishing work if she needs to talk to her brother in Australia. However, to avoid the temptation to go back to work, she signs into Skype with a different account set up specifically for non-work conversations. She is in the same space, using the same technology but she actively makes the room the place for a family conversation with her brother. When she opens that door in the evening Angela uses the workaround of a separate account to avoid being drawn into work.

Locations in the home are hybridised to the extent that they are not always dedicated solely to professional purposes, sometimes by virtue of relative position and connectivity. Bob, a freelance consultant working entirely from home, has a permanent home office. However, it is the room nearest main entrance to the house so that it sometimes doubles up as 'holding place' for stuff that needs to be taken in and out, such as mail, packages and bags. While Bob does not mind this very much, he is very aware of the stuff stored in his office, and that this is unlikely to happen in a corporate office. This hybridisation of home work space is also the result of the various ways in which members of the household make these spaces work for themselves, and not just professionally.

Each home also becomes a configuration of space designations and relationships that need to be actively made and understood as worklife shifts through time and routines. Lily (a start-up owner), has an external office, but she also has converted a room in her home into an office to work in on certain days:

The den...is a fantastic office but I'm kind of pushed out of there now because [the children] do their stuff in there and I tend to actually sit on a high table in the kitchen...is where all my work stuff is now, but yes that office [the den] is there. (Lily)

The home office is remade into a *den* as her children are using it for their own activities. Lily is pushed out of the office that she has designed and which she likes. Yet, it is also her children's den, and when that is the case then her work is displaced to the kitchen table.

Other workers don't have a designated home work room, or space, and much effort goes into creating one and taking it down every day, although it is not completely erased, but often just put aside. For example, Aoife (an academic)

describes how every evening she removes all her work stuff from the kitchen table to make space for dinner with her husband: disconnecting her laptop, stacking papers and books, and moving everything to the floor nearby, and doing it all again when it is time to do some more work.

Worklife Negotiations in Place

These practices of re-making places and of re-imagining them for different activities and moods, of assembling and arranging interactions with place, devices and other people are not always smooth, or unproblematic. Making a temporary workplace (as in the kitchen table examples) also occurs in negotiation with family members, as a particular room, location, or corner, is used or can be used for other purposes. Different points in the home are co-constructed together and relationally, and often not without tension:

I've got my printer, fax machine, computer, all set up in there. So I would go down there, make myself a cup of coffee, head in and I'd usually start with checking the emails and then I might just check twitter...The kids get up and the rule is 'Mammy is working' so quite often I'll come in [the kitchen] and have a quick breakfast with them...and then...head back in. At least they've seen Mammy...My office is quite often used as a den in the evening because it's a smaller room and it's cosy and the chairs are closer to each other, so quite often [husband] might put a film on, animation or something...and there's a piano inside, [daughter] is learning the piano, so he might be doing the piano with her. (Sharon)

In Sharon's example, family life and work shift in relation to rooms and spaces of the home, but also in relation to their meaning. When Sharon is in the office, she is working and must not be disturbed. Going into the kitchen for breakfast means family time, however family activities also take place in the office (now den) in the evening.

Sharing a home with family members, interruptions and breaks can also be unexpected. In this case, they are not necessarily negative, but need management:

I'd be having office time while my wife has our daughter and the odd time...she might pop into the office with my daughter. And I sometimes could well do with just taking my head out and screaming before I get square eyes, and just chat with her for five or 10 minutes, that suits me fine too (Dean)

Dean is a start-up owner working solely at home. Having his wife and child around can mean interruptions, but also relief when he is overwhelmed or frustrated. While Dean's priority is getting work done, having his family in the office shifts the emotional register in the place, and can mean a brief moment of support and rest. The management of shifting activities, boundaries and emotions

linked to the home does not only refer to designated work spaces such as offices, but it can be ‘carried’ into the rest of the home:

Even if you're working for yourself and you have your own office space, there is a sense of when you physically close the door, you will still have things on your mind but there's a better sense of separation (...). Just walking from one room to another room doesn't really give you enough closure on the day to some extent. (Sharon)

Sharon describes the challenge of achieving mental distance from work when leaving her office. Sharon's quote is also another example of how boundary sculpting is an ever-present practice in home work, in relation to configurations of work demands, family demands, temporal frames, and spatial arrangements. The substantial effort involved in making place bundles where work locations, environments and mobilities, and their interconnections, are identified, managed and appropriated deserves more attention in the study of the home as a workplace.

Managing Tensions and Conflicts at Home

Regarding tensions and possible conflicts, it is clear that the home is far from how it is often idealised as environment of rest and comfort (Bødker, 2016; Greengard, 2006; Hill, Ferris and Martinson, 2003). Sylvia (an academic) works at the breakfast bar in the kitchen in the evenings and her husband joins her with his own laptop:

We kind of just fell into it together. It could of course cause tensions...But we've got a breakfast bar in the kitchen (...) And we have a laptop on there. So we do have our laptops there constantly. And they can move around the house as we do (...). [Husband] is on the laptop as well cause you know he's checking football, and a bit of social media, newspapers ...More his own interests and sometimes if he's got a particular spreadsheet to sort out...but he is much better. He leaves and office and...He does a lot of hours, and when he leaves he can switch off. (Sylvia)

The tension arises between Sylvia and her husband because he can do most of his work in his company's office, while she ends up working in the kitchen almost every evening. Although they share a space to be together (the breakfast bar) and both use their laptops, Sylvia is not relaxing or pursuing non-work interests like her husband is. They occupy the space in almost identical ways and are close to each other, but the suggestion is that he is ‘much better’ at making it into a place of leisure.

Another example is that of Betty (a start-up owner), who has an office as part of a business accelerator centre, but does not use it often as she has a poor relationship with the centre's director. Instead, Betty works mainly from her home, which also enables her to take care of her two young daughters:

I have a home office...which is kind of in the centre of the house...It's not a closed-off room, it's actually an open room on the second floor so I have full access to everything that is happening around the house...I mean I can switch off and switch on very easily from one thing to another. (Betty)

Betty's business is not profitable yet, and her husband is not very supportive of her. For Betty, her home is the right place to work on her business because of a previous conflict with the business centre manager. It also enables to meet her childcare needs. But it is also the place of tension with her husband and where she experiences simultaneous pressure to deliver on the business front and to care for their daughters: *'I do pretty much everything around here'* (Betty). In all of these accounts, the practices and expectations of intimate others in the home are key factors in shaping the diverse and intricate ways in which the home is (re)made to facilitate work.

Conclusion

Our review of relevant studies, as well as our illustrative examples from two empirical studies highlight the importance of addressing the home as a place of work in a relational and processual way. Different agencies across environments, artefacts, resources, technologies, relationships and meanings construct the home not as a static and bounded place, but as a *nexus of place bundles*: i.e. agentic and relational space-time trajectories drawn together by individuals through cognitive and emotional processes (Massey, 2005, p. 119). These trajectories are in a constant process of becoming, making and unmaking. The same rooms and the same technology can emerge differently into place configurations shaped by different relationships, understandings, practices and values in a short span of time. These are often interwoven with other trajectories occurring in other parts of the home.

Our exploratory discussion of existing studies highlighted four themes for further exploration: First, homes as hybridised places in which hybridity is produced, recognised and engaged with in different ways but that nonetheless need to be managed and worked around. Second, the active work of making and re-making home places. Third, the relationality of home as a place bundle is more than individuals tending to work and life in the same environment, it is also the negotiation of co-located (but also interactively shaped) spatialities, temporalities and understandings—both one's own and those of other people. Finally, as well as being a supportive environment, the home can be the site of conflict and tensions that add additional layers to the work of place making in relation to both work and life: this requires both 'relationship management' and 'self management'. Different understandings of and relationships to the same location in the home

often create tensions that can be recurrent and more visible to some members of the household than others.

Home work places emerge out of these processual bundles as ephemeral and impermanent - the result of constellations of agencies and understandings that alternatively shift and settle. Place bundles are also characterised by identity work in the home, as in the examples of Sharon and Betty: spaces where their work ebbs and flows as do their identities, practices and routines as mothers and as entrepreneurs. To the extent that these identities are recognised and evaluated by others as well as themselves, they affect the way spaces in the home are understood.

Overall, the second-order work of making homes work places is substantial and complex: previous research has illuminated how home work relates to work in corporate spaces, and how boundaries of various kinds are set and configured to make work emerge in the home. However, there is a need to further unpack the nuanced practices of relational and processual place making that make home work 'work', and in turn make people feel 'at home in the work' (Petriglieri, 2019, p. 144). As the home becomes a more commonplace site of work for some work sectors, it is also important to identify how this reconfigures household relations and understandings of home as a 'private' space of potential respite from work demands. What aspects of work and/or life thrive when home becomes a more regular site of work? And for which members of the household in which ways? And similarly, which aspects of work and/or life are diminished or adversely affected by home as workplace? What kinds of home-based place making enable the best outcomes for worklife? To address these questions it is important that the home is conceptualised home as a relational and processual place and to examine the ways in which it is enlivened by these many trajectories. Only by such investigations can we begin to grasp the complexities of working from home, and illuminate the nuanced ways in which digital tools and infrastructures can become entangled in emergent, sociomaterial, configurations of making the home a place of work.

Acknowledgements

This paper includes data collected as part of the 'Nomadic Work/Life' project funded under the Irish Social Science Platform (Higher Education Authority, European Regional Development Fund and Department of Enterprise Trade and Innovation), and the 'Managing Technologies Around Work and Life' activity grant funded by the EPSRC Balance Network.

References

- Bannon, L. J. (1995): 'The Politics of Design: Representing Work', *Communications of the ACM*, 38(9), pp. 66–68.
- Becker, F. and C. McClintock (1981): 'Mixed Blessings: The Office at Home', paper presented to the *National Telecommunications Conference*, Houston, March 23-25, 1981.
- Bishop, L. (1999): 'Visible and Invisible Work: The emerging Post-Industrial Employment Relation'. *Computer Supported Cooperative Work: The Journal of Collaborative Computing*. 8(1-2), pp. 115-126.
- Brewer, J. and Dourish, P. (2008): 'Storied spaces: Cultural accounts of mobility, technology, and environmental knowing', *International Journal of Human-Computer Studies*, 66(12), pp. 963–976.
- Brown, B. and O'Hara, K. (2003): 'Place as a Practical Concern for Mobile Workers': *Environment and Planning A: Economy and Space*, 35(9), pp. 1665-1587
- Bødker, S. (2016): 'Rethinking technology on the boundaries of life and work', *Personal and Ubiquitous Computing (PUC)*, 20(4), pp. 533–54
- Cecchinato, M. E. (2014): 'Email management and work-home boundaries', in *Proceedings of the 16th international conference on Human-computer interaction with mobile devices & services (MobileHCI '14)*. Association for Computing Machinery, New York, NY, USA, pp. 403–404.
- Christensen, K. (1988): *Women and Home Based Work*, Henry Hold and company, New York, NY, 1988.
- Ciolfi, L., and de Carvalho, A. F. P. (2014): 'Work Practices, Nomadicity and the Mediatonal Role of Technology'. *Journal of Computer Supported Cooperative Work*, 23(2). <https://doi.org/10.1007/s10606-014-9201-6>
- Ciolfi, L. and Lockley, E. (2018): 'From Work to Life and Back Again: Examining the digitally-mediated work/life practices of a group of knowledge workers', *Computer-Supported Cooperative Work*, 27 (3-6), pp. 803–839.
- Cox, A. L., Bird, J., Mauthner, N., Dray, S., Peters, A. and Collins, E. (2014): 'Socio-technical practices and work-home boundaries', in *Proceedings of the 16th international conference on Human-computer interaction with mobile devices & services (MobileHCI '14)*. Association for Computing Machinery, New York, NY, USA, pp. 581–584.
- Coupland, C. and Spedale, S. (2020): 'Agile Identities – Fragile Humans?', in A. D. Brown (Ed.), *Oxford Handbook of Identities in Organizations*, Oxford University Press
- Daniels, K., Lamond, D., and Standen, P. (2001): Teleworking: Frameworks for organizational research. *Journal of Management Studies*, 38(8), pp. 1151–1185.
- de Carvalho, A. F. P. (2014): 'Collaborative Work and Its Relationship to Technologically-Mediated Nomadicity', in C. Rossitto, L. Ciolfi, D. Martin, and B. Conein (Eds.): *COOP 2014 – Proceedings of the 11th International Conference on the Design of Cooperative Systems*. Nice (France): Springer International Publishing, pp. 209–224.

- de Carvalho, A. F. P., Ciolfi, L., and Gray, B. (2017): 'Detailing a Spectrum of Motivational Forces Shaping Nomadic Practices', in *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing - CSCW '17*. New York, NY, USA: ACM, pp. 962–977.
- de Souza e Silva, A. (2006): 'From cyber to hybrid: Mobile technologies as interfaces of hybrid spaces', *Space and Culture*, 3, pp. 261–278
- Erickson, I. and Jarrahi, M. H. (2016): 'Infrastructuring and the Challenge of Dynamic Seams in Mobile Knowledge Work', *CSCW '16 - Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing*, San Francisco, California, 27 February-2 March 2016. New York, NY: ACM Press, pp. 1323–1336.
- Erickson, I., Jarrahi, M. H., Thomson, L., and Sawyer, S. (2014): 'More than Nomads: Mobility, Knowledge Work, and Infrastructure', *EGOS 2014 Subtheme 52: Mobile Work, Technology, and Issues of Control*, pp. 1–20.
- Felstead, A., Jewson, N. and S. Walters (2005): *Changing Places of Work*, New York: Palgrave Macmillan.
- Frello, B. (2008): 'Towards a Discursive Analytics of Movement: On the Making and Unmaking of Movement as an Object of Knowledge', *Mobilities*, 3(1), pp. 25–50.
- Gray, B., Ciolfi, L. and de Carvalho, A. F. P. (2020): *Made To Work. Mobilising Contemporary Worklives*. London: Routledge.
- Gray, B., Ciolfi, L., de Carvalho, A. F. P., D'Andrea, A. and Wixted, L. (2017): 'Post-Fordist Reconfigurations of Gender, Work and Life: Theory and Practice', *The British Journal of Sociology*, 68(4), pp. 620–642.
- Greengard, S. (1995): 'All the comforts of home', *Personnel Journal*, 74(7), March 1995, pp. 104–108.
- Gregg, M. (2011): *Work's Intimacy*. Cambridge, UK: Polity Press.
- Grönvall E, Lundberg S (2014): 'On challenges designing the home as a place for care', in: Holzinger A, Ziefle M, Röcker C (eds): *Pervasive health*. Springer, London, pp. 19–45.
- Habib, L. and Cornford, T. (2001): 'Computers in the home: Domestic technology and the process of domestication', *Proceedings of ECIS 2001*, p. 45.
- Halford, S. (2005): 'Hybrid workspace: re-spatialisations of work, organisation and management', *New Technology, Work and Employment*, 20(1), pp. 19–33.
- Hannam, K., Sheller, M., and Urry, J. (2006): 'Editorial: Mobilities, Immobilities and Moorings', *Mobilities*, 1(1), pp. 1–22.
- Hardill, I. and A. Green (2003): 'Remote Working: Altering the Spatial Contours of Work and Home in the New Economy', *New Technology, Work and Employment* 18(3), pp. 158–165.
- Hill, E. J., Ferris, M., and Martinson, V. (2003): 'Does it matter where you work? A comparison of how three work venues (traditional office, virtual office, and home office) influence aspects of work and personal/family life', *Journal of Vocational Behavior*, 63, pp. 220–241.
- Hochschild, A. R. (1997): *The Time Bind: When Work Becomes Home and Home Becomes Work*, New York, NY, USA: Metropolitan Books.

- Humphry, J. (2014): 'Officing: Mediating Time and the Professional Self in the Support of Nomadic Work', *Computer-Supported Cooperative Work*, 23(2), pp. 185–204.
- Huws, U., Korte, W.B. and Robinson, S. (eds.) (1990): *Telework: towards the elusive office*, Chichester: John Wiley & Sons.
- Kabachnik, P. (2012): 'Nomads and Mobile Places: Disentangling Place, Space and Mobility', *Identities*, 19(2), pp. 210–228.
- Kraut, R. (1989): 'Telecommuting: the trade-offs of home work', *Journal of Communication*, 39, pp. 19–47.
- Lampinen, A. (2016): 'Hosting together via Couchsurfing: Privacy management in the context of network hospitality', *International Journal of Communication (IJoC)*, 10(20), pp. 1581–1600.
- Leshed, G., Håkansson, M., and Kaye, J. (2014): '“Our life is the farm and farming is our life”: home-work coordination in organic farm families', *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing (CSCW '14)*, New York, NY, USA: ACM, pp. 487–498.
- Liegl, M. (2014): 'Nomadicity and the Care of Place– on the aesthetic and affective Organization of Space in freelance creative work', *Computer Supported Cooperative Work (CSCW)*, 23(2), pp. 163–183.
- Lozano, B. (1989): *The Invisible Work Force: Transforming American Business with Outside and Home-Based Workers*. New York, NY, USA: The Free Press.
- Malpas, J. (2012): 'Putting Space in Place: Philosophical Topography and Relational Geography', *Environment and Planning D: Society and Space*, 30(2), pp. 226–242.
- Mark, G. (2015): 'Multitasking in the Digital Age', *Synthesis Lectures on Human-Centered Informatics*, 8(3), pp. 1–113.
- Massey, D. (1993): 'Power-Geometry and a Progressive Sense of Place', in T. Putnam, B. Curtis, J. Bird, and L. Tickner (Eds.): *Mapping the Futures: Local Cultures, Global Change*. London: Routledge, pp. 60–70.
- Massey, D. (2005): *For Space*. London, UK: SAGE Publications.
- Mazmanian, M., Orlikowski, W. and Yates, A. (2013): 'The Autonomy Paradox: The Implications of Mobile Email Devices for Knowledge Professionals', *Organization Science* 24(5), pp. 1337–1357.
- Nelson, S. B., Jarrahi, M. H., and Thomson, L. (2017): 'Mobility of Knowledge Work and Affordances of Digital Technologies', *International Journal of Information Management*, 37(2), pp. 54–62.
- Nilles, J. M. (1994): *Making telecommuting happen: A guide for telemanagers andtelecommuters*, New York, NY, USA: Van Nostrand Reinhold.
- Nippert-Eng, C. (1996): *Home and Work. Negotiating Boundaries Through Everyday Life*, Chicago: University of Chicago Press.
- Olson, M. H. (1989): 'Work at Home for Computer Professionals: Current Attitudes and Future Prospects', *ACM Transactions of Office Information Systems*, 7, pp. 317–338.

- Olson, G. M., and Olson, J. S. (2000). Distance matters. *Human-Computer Interaction*, 15(2), pp. 139–178.
- Olson, M. H. and Primps, S. B. (1984): ‘Working at Home with Computers: Work and Nonwork Issues’, *Journal of Social Issues*, 7(3), pp. 97–112.
- Olson, J. S., and Olson, G. M. (2014): ‘How to Make Distance Work Work’, *Interactions*, 21(2), pp. 28–35.
- Orlikowski W.J. (2007): ‘Sociomaterial practices: exploring technology at work’, *Organisational Studies*, 28(9), pp. 1435–1448.
- Orlikowski, W. J. and Barley, S. R. (2001): ‘Technology and institutions: What can research on information technology and research on organizations learn from each other?’, *MIS Quarterly*, 25(2), pp. 145–165.
- Perry, M. (2007): ‘Enabling Nomadic Work: Developing the Concept of “Mobilisation Work”’, in *ECSCW 2007 Workshop Beyond Mobility: Studying Nomadic Work*. Limerick, Ireland.
- Perry, M., O’Hara, K., Sellen, A., Brown, B., and Harper, R. (2001): ‘Dealing with Mobility: Understanding Access Anytime, Anywhere’, *ACM Transactions on Computer-Human Interaction (TOCHI)*, 8(4), pp. 323–347.
- Petriglieri, G., Ashford, S.J., and Wrzesniewski, A. (2019): ‘Agony and Ecstasy in the Gig Economy: Cultivating Holding Environments for Precarious and Personalized Work Identities’, *Administrative Science Quarterly*, 64(1), pp. 124–170
- Pierce, J., Martin, D. G., and Murphy, J. T. (2011): ‘Relational Place-Making: The Networked Politics of Place’, *Transactions of the Institute of British Geographers*, 36(1), pp. 54–70.
- Pierce, R. and St.Amant, K. (2011): ‘Working from home in a globally distributed environment’, in *Proceedings of the 29th ACM international conference on Design of communication (SIGDOC ’11)*. New York, NY, USA: Association for Computing Machinery, pp. 223–226.
- Pink S and Leder Mackley, K. (2016): ‘Moving, Making and Atmosphere: Routines of Home as Sites for Mundane Improvisation’, *Mobilities*, 11(2), pp. 171–187.
- Rossitto, C. (2009). *Managing Work at Several Places: Understanding Nomadic Practices in Student Groups*, PhD Thesis, Stockholm: Stockholm University.
- Rossitto, C., Bogdan, C., and Severinson-Eklundh, K. (2014): ‘Understanding Constellations of Technologies in Use in a Collaborative Nomadic Setting’, *Computer Supported Cooperative Work (CSCW)*, 23(2), pp. 137–161.
- Rossitto, C. and Lampinen, A. (2018): ‘Co-Creating the Workplace: Participatory Efforts to Enable Individual Work at the Hoffice’, *CSCW Journal*, 27(3-6), pp. 947–982.
- Salazar, C. (2001): ‘Building boundaries and negotiating work at home’, in *Proc. of the 2001 Intl. ACM SIGGROUP Conference on Supporting Group Work (GROUP ’01)*. New York: ACM, pp. 162–170
- Schall, M. A. (2019): *The Relationship Between Remote Work and Job Satisfaction : The Mediating Roles of Perceived Autonomy , Work-Family Conflict, and Telecommuting Intensity*, Master’s Thesis, San Jose State University. <https://doi.org/10.31979/etd.2x82-58pg>.

- Spinuzzi, C. (2012): 'Working Alone Together: Coworking as Emergent Collaborative Activity', *Journal of Business and Technical Communication*, 26(4), pp. 399–441
- Star, S. L., and Strauss, A. L. (1999): 'Layers of Silence, Arenas of Voice: The Ecology of Visible and Invisible Work', *Computer Supported Cooperative Work (CSCW)*, 8(1–2), pp. 9–30.
- Steward, B. (2000): 'Living Space: The Changing Meaning of Home', *British Journal of Occupational Therapy*, 63(3), pp. 105–110
- Swezey, C. and Vertesi, J. (2019): 'Working Apart, Together: The Challenges of Co-Work', *Proc of ACM Hum.-Comput. Interaction*, 3, CSCW, Article 2014.
- Sørensen, C. (2013): *Enterprise Mobility*, London: Palgrave.
- Thomson, L. (2013): "'When I've packed it in and they send me something...": information boundaries in professional home offices', *ASIST '13: Proceedings of the 76th ASIS&T Annual Meeting: Beyond the Cloud: Rethinking Information Boundaries*, November 2013, Article No.: 158, pp. 1–5.
- Urry, J. (2007): *Mobilities*, Cambridge: Polity.
- Venkatesh, A. (1996): 'Computers and Other Interactive Technologies for the Home', *Communications of the ACM*, 39(12), pp. 47–54.
- Venkatesh, A. and Vitalari, N. P. (1992): 'An Emerging Distributed Work arrangement: An Investigation of computer-Based supplemental Work at Home', *Management Science*, 38(12), pp. 1687–1706
- Verne, G. and Bratteteig, T. (2016): 'Do-it-yourself services and work-like chores: On civic duties and digital public services', *Personal and Ubiquitous Computing (PUC)*, 20(4), pp. 517–532.
- Vuolle, M. (2010): 'Productivity Impacts of Mobile Office Service', *International Journal of Services Technology and Management*, 14(4). <https://doi.org/10.1504/IJSTM.2010.035782>