Geographies of night work

Robert Shaw
Newcastle University, Newcastle-upon-Tyne, UK

Abstract
Night work is an area in which transformational changes are occurring, many identified by geographers, but in which the role of night itself – the ‘nocturnality’ of night work – has often been overlooked. This article looks at how geographical research into work and interdisciplinary research from night studies could inform one another, arguing that a focus on the nocturnality of night work can generate wider insights into existing social and economic geographical research into labour. Importantly, the challenges brought by the nocturnality of night work make its study valuable for understanding social justice under contemporary capitalism.

Keywords
night work, night, labour, temporality, rhythms, social justice

Questions as to when we are working – and its relation, of course to where we are working – are becoming increasingly important in geography. In labour and economic geographies, work–life balance has become a fully established research agenda (James, 2018), following earlier critiques of a field that had failed to leave the workplace (Gregson, 2000). It is not coincidental that such research has emerged alongside the belated recognition of the time pressures on the working of many academics (Tucker and Horton, 2019). Changes in contemporary capital have continued to blur the boundaries between what it means to work and what it means to be human, with social theorists of various stripes arguing that contemporary labour is becoming synonymous with human capacities of communication and activity (Virno, 2007). This results in what Crary (2013: 71) describes as ‘the disappearance of gaps, of open spaces and times’ away from either work or sleep. Relatedly, long-standing attention from feminist scholars (e.g. Myrdal and Klein, 1956) has highlighted how conceptualizations about work, labour and paid employment lead to expectations about what does and does not count as work (McDowell, 2015). Here, two critical impulses sit in productive and political tension: first, the need to critique the gradual expansion of working lives into private lives; and second, to criticize the analytical distinction made between ‘public work’ and ‘private rest’.

It is in the context of these trends that the topic of night work has begun to appear on the geographical agenda. This topic emerges as geographers contribute to the new interdisciplinary field of night studies, or nightology. Nightology has emerged primarily out of two fields: first, the study of the ‘night-time economy’ and alcohol; and second, research into artificial lighting and light pollution. But scholars within it have begun to explore the wider phenomenon of night, revealing how interdisciplinary night studies can connect different phenomena together to reveal new understandings of the

Corresponding author:
Robert Shaw, Newcastle University, Henry Daysh Building, Claremont Road, Newcastle-upon-Tyne NE1 7RU, UK.
Email: robert.shaw2@ncl.ac.uk
social world. Despite this, research into night-time labour has largely been contained within disciplinary silos, specifically in psychology and health studies, as well as to a lesser extent economics. Certain sectors – healthcare, nightlife, cleaning and maintenance – are relatively well studied, while others are not. There are therefore significant gaps in knowledge and understanding, with detailed research developed around a small number of themes that connect to particular disciplinary areas of interest, rather than about night work as a whole. Notably, two recent papers have called for an interdisciplinary approach to nightology (Acuto, 2019; Kyba et al., 2020), with Kyba et al.’s paper citing night working as an area in which interdisciplinary knowledge would be valuable.

This review reflects this interdisciplinary imperative by both bringing together work from outside of geography on night, work and night work, and, geographical literatures which might engage with these areas. Core to the argument is the claim that while geographers have studied night working, both in paid employment and outside of it, they have not paid attention to what I call the ‘nocturnality’ of night work, treating it largely as circumstantial. But, in line with the progress made in night studies, greater attention to that nocturnality of night work would help explore the multiple axes along which inequalities are (re)produced through how night working is experienced and accessed. Furthermore, by studying the nocturnality of night work, we begin to open up understandings of the places and spaces that are uniquely produced by night working, and how these differ from the spaces of the day.

I Night studies and geography

Studies of ‘the night’ have started with a definitional problem. Common, everyday use of the word night typically covers two overlapping but not commensurate concepts: the first is the ‘downtime’ portion of the recurring daily rhythm of activity/alertness and inactivity/rest; the second is the dark part of the circadian cycle of light and dark. Neither can be taken as the totality of what night means. Shaw distinguishes between the ‘biogeoastronomical’ components of the night, that is, those which emerge from physical and material conditions of darkness, and the social components of night, which emerge from practised social rhythms and routines (Shaw, 2018). Both forms of night are, broadly, associated with sleep and rest but with sufficient exceptions to mean that equating them with these would also be a mistake. Central to the agenda that has come from night studies (Kyba et al., 2020) is that narratives which attempt to tell of a simple ‘expansion’ of day into night should be eschewed in favour of understanding the ways in which diurnal and nocturnal societies come to mix, merge and interact as society apparently speeds up and temporal organization fragments (Gwiazdzinski, 2016). In other words, researchers are trying to conceive of night in ways which incorporate the expansionary tendencies of capital, but which do not describe the night as written over or replaced by a society of ‘24/7’. While in most (though not all) places the night is a periphery to the mainstream capitalist society of day, it is also rarely a dark time of inaccessibility. There has been what we might call a ‘nocturnalization of society and diurnalization of the night’ (Straw and Gwiazdzinski, 2018: 1), without this implying an end to the distinction between night and day in most places and for most people. Drawing from this claim, it becomes useful to refer to the ‘nocturnality’ of a particular phenomenon, that is, the extent to which it consists of features that are associated with night. Rather than trying to claim a particular definition of night, a shift to nocturnality allows us to think through the difference that the nocturnal makes (Shaw, 2018). Crucially, nocturnality is a spatio-temporal concept as it looks at the ways in which temporal features are more or less present in a particular place, at a particular moment. It grounds discussion of ‘the night’ at specific places and at specific times.

Geographers have explored nocturnality in three areas. The first is what we might call ‘nightlife studies’: research into bars, clubs and pubs, largely in cities and largely with a focus on alcohol consumption. While often labelled the ‘night-time economy’, the object of study really is broader than the purely economic, and thus the term nightlife is more satisfying. This linguistic pedantry has its point; ‘night-time economy’ is a political phrase, concocted to appeal to local authorities under
neoliberal urban governance seeking to increase economic activity at night as part of strategies of urban regeneration and competition (Bianchini, 1995). Development of nightlife has now become a common part of urban planning, central to attempts to attract tourists or the elusive ‘creative class’ (Hadfield, 2015). Researchers have argued that the combination of deregulation of alcohol sales combined with attempts to increase its consumption has often led to the nightlife emergent out of such strategies being less diverse, more centrally controlled and socially more damaging than was expected in planning stages (Hadfield et al., 2001). In other words, social scientists have argued that the ‘night-time economy’ has been used in urban boosterist language to allude to a multi-sectoral nocturnal expansion, while actual changes in the city prioritize high-volume alcohol sales at the expense of the diversity of the nightlife on offer within a city (Roberts et al., 2006). Within geography, the work of Jayne, Valentine and Holloway has been leading in this area (Jayne et al., 2006, 2011), and they have helpfully focused on a critical reading of debates surrounding nightlife, criticizing some of the puritanical leanings that can be present in social science and which can overlook the benefits of alcohol-fuelled nightlife in favour of its harms, while also shifting the research out of city centres into more diverse spaces. This latter trend has been subsequently followed by other researchers (Fjær et al., 2016; Nofre et al., 2018; Wilkinson, 2017), who have painted a wider picture of the when, where and who of alcohol consumption, both in the night and day.

Second, geographers have also explored darkness and artificial lighting (Edensor, 2017), in the broader context of a turn to infrastructure as part of a wider ‘materialisation’ of social sciences (Anderson and Wylie, 2009; Graham and Thrift, 2007). Empirically, the development of new LED lighting technologies in the late 2000s introduced new opportunities for public artificial lighting, in the context of a need to reduce global energy use (Ebbensgaard, 2019), although LEDs have failed to reduce light pollution as promised (Kyba, 2018). The interest in artificial lighting has also been driven by these new technologies facilitating both creative arts practice and the possibility of ‘smart’ lighting solutions (Edensor, 2017; Edensor and Holloway, 2008; Green et al., 2015). In turn, studying artificial lighting has driven geographers to explore the relations between lighting and darkness, connecting up large scale themes of climate change and urban planning to phenomenological accounts of everyday life, and producing an eclectic range of empirical accounts on topics as diverse as the ‘dark dining’ experiences of restaurants without lights (Edensor and Falconer, 2015) and the spread of urbanism through lighting infrastructure (Kyba et al., 2017). Third, nocturnal geographical research has focused on issues of crime and safety. Researchers have repeatedly found that fear of crime is higher in cities at night, and higher in spaces which are darker (Brands et al., 2015; Brown, 2016), despite no evidence of direct causal links between lighting levels and crime (Farrington and Welsh, 2002). Research into reductions in street-lighting associated with the move to LED lighting has found no correlation with night-time crime levels (Steinbach et al., 2015). Still, issues of crime and safety at night are important. Women’s mobility is significantly reduced by both crime and fear of crime in cities at night, and research has shown that similar constraints are found by other marginal groups too (Weintrob et al., 2021). Pain summarizes the issue well:

“Fear of attack may mean a ‘virtual curfew’ on women at night in some urban areas (Kinsey, 1984), but more often it means an assiduous state of vigilance and the deployment of well-developed coping strategies as women continue to use particular spaces and domains in a highly restricted way” (Pain, 1997: 234)

In other words, fear of crime at night reduces both the quantity and the quality of women’s use of the night-time city (Parikh, 2018).

These three research areas have, over the last decade, been geography’s main contribution to the new night studies interdisciplinary field. Together this has shown how places are transformed at night such that the same location may be experienced quite distinctly from the day. In other words, a place at night is a distinct time-space from a place at day. As night studies has grown, the value of this approach is being shown over an increasing number of areas. For
example, there is a growing literature on nocturnal mobilities which ties together work on darkness, fear and nightlife, and which shows some of the insights that can be created by bringing these themes together (Cook and Edensor, 2017; Ebbensgaard and Edensor, 2021; Farina et al., 2021; Duff and Moore, 2015; Smeds et al., 2020; Wilkinson and Wilkinson, 2018). Across this research, by turning attention to the nocturnality of nocturnal mobility researchers have found new insights and new phenomena that might otherwise have been overlooked. In particular, a focus on night pushes us to the limits or margins of many social practices and processes, revealing some of the injustices that are bound up in these margins, and who is forced to inhabit them. However, in most social science and geographical research, the nocturnality of a phenomenon is presumed to be coincidental to the phenomenon being studied; as no more or less notable than if it always took place on Wednesdays. In the next section, I want to pursue this argument by looking at trends in research on labour and to show where geographers have, and have not, taken the opportunity to explore the difference that night makes to their topic, before arguing why a greater exploration of nocturnality in this area would be beneficial.

II Geography and the temporal organization of labour

The story as to how the ‘nine to five’ has become the dominant rhythm for labour under capitalism has been well-told (see the edited collection from Hermann, 2014). For Berardi, the fixed hours of the working day have been a sort of ‘temporary death from which [the worker] could wake up only after the alarm bells rang’ (2009: 77). In this understanding of work, the existence of a working day is framed as a fragile compromise between capitalists and workers. Marx (1887) argued that this compromise would eventually collapse as capitalists seek ways to make the working day more ‘intensive’, that is, to squeeze more value out of the workers within fixed working hours by ever-increasing productivity. Marxists have explored how the working day has evolved: several classic texts have explored how working times shape everyday life (Lefebvre, 2005; Thompson, 1967), and more recently work has explored how the temporal organization of labour shapes also shapes our identities and conditions of living (Du Gay, 1996; Virno, 2007). Gregg helpfully shows the bidirectional flow of logics of productivity between the workplace and the home, arguing that the ‘history of time management begins with the experience of women in the home prior to industrialization’ (Gregg, 2018: 22). Under contemporary capitalism, intensity has by and large come not from increased pressure on the hours worked during the day (Harvey, 2007), but instead from the technically aided erosion of the boundaries established by law between work and rest (Crary, 2013), and from the development of a range of time-management and productivity tools (Gregg, 2018).

Writers in the social studies of time have described the associated trend of ‘acceleration theory’ (Wajcman, 2008), commonly seen as having three key components. Schöneck neatly summarizes two of these: first, that ‘technology and economy operate as the main drivers of social acceleration’; and second, that they also cause the ‘acceleration of change itself’ (2018: 7). In other words, not only is there a techno-capitalist driven social acceleration, but this acceleration continues to speed up. The third component is known as the ‘acceleration paradox’ (Wajcman, 2015). If technological acceleration implies a “decrease of the time needed to carry out everyday processes and actions” then it should result in ‘an increase in free time, which in turn would slow down the pace of life’. It does not. Instead, time is experienced as ‘more and more scarce’ (Rosa, 2003: 9). This scarcity of time is a repeated finding in many of the topics studied by economic and social geographers in recent years. An editorial in a special issue of *Time and Society* from 2005 warned that ‘more pessimistic interpretations of the new economy, however, refer to growing risk and insecurity, falling fertility, the fragmentation of communities and the erosion of traditional social rhythms and practices, as the boundaries around work dissolve, raising the intensity of work as people are never “off line”’ (Perrons et al., 2005: 54), and subsequent research has followed how these (and other) social negatives have emerged from increased intensity of working
life. Precarity has been perhaps the most studied field (James, 2018; Richardson and Thieme, 2020; Worth, 2016), but geographers have also explored how such trends negatively affect family or reproductive life (Hughes, 2021; Lewis et al., 2015), social rhythms (Sewell and Taskin, 2015) and health or well-being (Gorman-Murray and Bissell, 2018). These trends are having the effect of bringing working patterns in formal economic activity closer to that of working patterns in informal sectors. Breman’s (1996) classic description of labour in India’s informal economy includes accounts of workers, lacking many of the protections that labour rights bring in the formal economy, working well into the night. This is intensified in forms of bonded labour and modern slavery (Guérin, 2013; Hewamanne, 2020), with night work reflecting either the specific requirements of the task at hand, or the advantages of carrying out the work at a time when surveillance is lower. Across this work in both formal and informal economic sectors, geographers have emphasized matters of social justice, and how this has often been the victim of changes made to adapt work to temporal scarcity.

As well as these wider impacts, the nature of the work that people do has also evolved, making ‘more efficient’ use of workers’ time (Gregg, 2018). Autonomist Marxist and poststructuralist theories have explored how this acceleration has come alongside the exploitation and marketization of skills and talents which are inherent to humanity, reducing the ways of living which are outside of capitalist exchange (Berardi, 2009; Virno, 2007). In other words, contemporary labour draws more from skills of (affective) communication than earlier forms of labour as capitalism has expanded to capture more of everyday life and humanity. Geographers have used this to explore the ways in which work has been reframed along a discourse of ‘skills’ (Richardson, 2017), which in turn facilitates precarity by requiring bodily capacities rather than knowledge or experiences. Rossi argues that platform working engrains these forms of labour into the fabric of the built environment, producing ‘an intensified relationship with urban society’ (Rossi, 2019: 1419) in which workers are left to make greater use of urban facilities during their working day, rather than relying on traditional employer support. Scholars exploring racialized and class inequalities have also pointed out how such practices fall inordinately on ethnic minority and working-class communities (Joseph, 2020). In parallel, geographers have looked at how these changes to the embodiment of work are gendered. McDowell makes connections across multiple sectors of both paid and unpaid work, to show how the emergence of a service economy is the emergence of a bodily economy (McDowell, 2011), and also explores how many of the low-paid industries that have emerged in which women are the predominant workers, such as care work, are reliant on expectations of both providing bodily service, and serving bodies.

Researchers in the social study of time have also explored how work tasks may now be more spread across the day, with an increased fragmentation of tasks. Hubers et al. (2018), for example, describe how working time has not been spread evenly across the 24 h of the day. Rather, we see ‘activity episodes’ (p. 95) of work spreading out over 24 h, with gaps of non-work maintained between them but more hours of the day which contain some sort of labour. The more fragmented someone’s work, the greater the spreading of these tasks. The core argument here is that this form of working has increased and that this is contributing to the feelings of time pressure (Hubers et al., 2018). As Wajcman argues, ‘reconciling the temporal regimes of paid work, leisure and family life has become increasingly complicated’ (2015: 140), driven by the fragmentation of working tasks – and as previously noted, the burden of this coordination is more likely to fall onto women. This research agenda has been largely associated with office workers, but the growth in platform and digital working has widened this phenomenon significantly, as the task becomes the measured unit of work (Rossi, 2019), and working conditions blend home and workspace (McDowell, 2011).

Geographers and social scientists have thus identified a series of interconnected changes in the nature of labour, paid and unpaid, which to broadly summarize have increased the scarcity of time for many people, often through the fragmentation of working patterns into more ‘task’-based processes which can take place in a wider variety of places, at a wider variety of times. These trends all change the
nature of night work in important ways, and there are moments when geographers have directly addressed issues relating to the night. For example, some have studied how night-time shift work and family care have required forms of temporal coordination, which have often become the responsibility of women within a family unit (Hanson and Pratt, 2003; Melbin, 1987). Relatedly, the concept of the ‘double shift’ is central to feminist analysis of contemporary labour, identifying that as women have increased their participation in the labour market, they have not reduced the amount of unpaid caring and domestic work (Fraser, 2007). To do the double shift, women must be working either paid or unpaid labour at night; Kwan found that ‘women... cope with their time-budget constraint by shifting a considerable proportion of their non-employment activities to the evening’ (1999: 378), but increasingly it may be paid employment that moves to night. Geographers have shown how this practice crosscuts borders; Kea’s work in Gambia is particularly interesting in showing how girls’ required contribution to household labour is institutionalized in development and education practices (Kea, 2007), while Dyer et al. (2011) note its prevalence among migrant communities in London.

At an international scale Graham and Anwar speak of the production of ‘a planetary labour market in digital work’ (2019: 1), while also identifying that this planetary market transforms time too. In their research, digital workers in Kenya, Uganda and Nigeria reported having to work through the night, responding to demands of international time zones (p. 22). This results in workers having little control over when they work, undoing traditional modes of governing working hours that are based on local conventions. Exploring the labour of digital freelancers, it has been argued that ‘online platforms wield significant influence on [their] schedules by structuring their time associated with the invisible labour of searching for jobs and communicating with clients, operating in real time across time zones’ (Schevchuk et al., 2021: 97). Here there may be an intersection of scales, whereby global economic relations shape people’s home lives, with freelancers sat at home during the night searching for work in time zones where others are working during the day. What emerges from across geographical research is the way that work is being restructured at intersecting temporal and spatial scales.

For the most part, however, geographers who have studied industries in which workers are active at night have not paid much attention to the nocturnality of night work. By way of an example, it is possible to find highly influential researchers who have worked for decades, who have repeatedly brushed up against the importance of the night, but do not make an analytical move to explore it. McDowell, for example, touches on the masculinity of security and bouncing work in the night-time economy (McDowell, 2011), and while she identifies the ways in which this labour is shaped by its copresence with high levels of alcohol consumption (and her distaste for this form of nightlife is clearly expressed (p. 146)), she does not further develop insights into the nocturnality of this labour. With colleagues, she finds participants choosing nightshifts to escape managerial surveillance, but the point is skipped over in a sentence (Dyer et al., 2008). From a different political starting point, Florida (2014) is similarly quiet across his corpus of research into the creative class about night work. He briefly identifies the challenges faced by low-paid workers servicing higher-end ‘creatives’ (‘the all-night restaurant might be wonderful for the code writer who wants a hamburger at 3:00 a.m., but it might not be so wonderful for the waitress. She is not on a flexible schedule after all, just the night shift’ (p. 128)), and that his creatives are attracted to cities with a diverse nightlife (a concept he defines lazily as ‘all entertainment activities that happen after dark’ (p. 289)) but does nothing to expand on these points or to unpack how higher quality night work can be provided for nightlife employees, in order to facilitate the rise of creatives. Despite their influence as researchers, few if any of those building on Florida or McDowell’s ideas have identified these nocturnal moments in their work as points to develop.

To summarize, my argument is that geographers and social scientists have identified transformations in labour that are both spatial and temporal, but have largely missed a key aspect of spatio-temporality, the night. This is important due to the meaningful
differences to health, self, family, society and other institutions that occurs when more work – whether paid or unpaid – is done at night. Research has rejected arguments that there are new ‘global’ working patterns; these relations are international or planetary, in that they involve cross-nation or cross-planet interactions, rather than a singular global system (Graham and Anwar, 2019). We can note the similarity here to Straw and Gwiazdzinski’s (2018) rejection of the claim that night is being lost to day, instead insisting on a more complex mixing of the diurnal and the nocturnal. It is important to recognize the local differences in how day and night are conceptualized. Amid (2018), for example, shows how boundaries between day and night are traditionally less strictly imagined in Iran than in European societies. Thus, we are dealing with trends that are complex in both their spatiality and temporality, and which intersect with culturally distinct understandings of day, night and labour. Nonetheless, it is clear that there are several directions of geographical research which point towards an increased relevance in understanding the particular nature of night work and the geographies with which it is entwined as these become subject to significant transformations.

III Night work research

Despite the general oversights of the discipline, there are of course areas of geographical, and other social science research, which have identified both the presence of increased night working, and the relevance of its nocturnality. A few key themes emerge. As hinted at in the previous paragraph, there is a clear necessity of night working for globalized economies, and an inequality in who does that work and when (Graham and Anwar, 2019). This is exemplified in the nocturnal labour of tech support and call centres, particularly in India and south-east Asia (Patel, 2010; Tadić and Permanadeli, 2015; Tara and Ilavarasan, 2011). Call centres in these areas often operate on a three-shift pattern, following the working days of East Asia, Europe and North America, respectively (Mirchandani, 2004: 363), resulting in a high number of relatively well-paid night shift jobs. This work is notable for its reliance predominantly on women, despite the risks encountered by women working at night due to the negative connotations of night working with prostitution (Patel, 2010; Tadić and Permanadeli, 2015). These jobs are central to the ‘global’ being of these cities, and more broadly to the functioning of the international economy, facilitating as they do vital cross time-zone connections. They illustrate the co-transformation of time and space in the international economy. Parikh’s (2018) research in Mumbai explores how women may be simultaneously encouraged to participate in night working, while being admonished for being out of the home at night. In other words, female night workers become essential in maintaining connections between global cities but are nevertheless labelled as irresponsible for being out at night. Maintenance and cleaning work in global cities is also by necessity at night, and research into cleaners explores how this hides such low-paid infrastructural labour from view (Allen and Pryke, 1994). This allows both the cleaners themselves and the mess that they remove to be less prominent in the displayed image of a city (Brody, 2006; Tomic et al., 2006) and also facilitates the intensity of daytime global city life. MacQuarie highlights the prevalence of migrant workers among those who must work at night to facilitate the daytime functioning of the global city, and refers to them as ‘glocturnal’ (MacQuarie, 2017) workers producing the global city through nocturnal practices. MacQuarie’s work is perhaps the most important in describing the very damaging effects that doing this work at night can have. As he says, ‘night shift work depletes the workers’ bodily resources’ (MacQuarie, 2019: 201), making it harder for workers to develop the skills required to move onto higher paying work. What emerges here is a picture of planetary relations facilitated by workers absorbing the challenges of working at night in order to facilitate cross time-zone labour and daytime intensity.

A second research area has been the experience of night work within clubs, pubs and bars, although in contrast to other research on nightlife it is perhaps a little limited, and not much of it has come from geography. The most common insight here has been the challenges of encounters with violence in the night, reflecting the criminological disciplinary interests that have driven this agenda (Brands et al., 2015; Hadfield et al., 2009). In terms of labour, the
most notable study in this field is perhaps that of Hobbs and colleagues, who carried out a body of research exploring the class and gendered embodiment of the work of bouncers, whose labour straddles the legal and illegal elements of nightlife (Hobbs et al., 2003). Research has similarly shown the embodied challenges that bar staff face in regularly dealing with violence at work (Graham and Homel, 2008), and what is notable too here is that such work and its risks often fall to the poorer or more precariously employed. Studies of informal, illegal or unauthorized uses of space within nightlife have shown that this work can be an opportunity to claim space in the city for marginalized groups (Talbot, 2007), including during the COVID-19 pandemic (Nofre, 2021; Palamar and Acosta, 2021), involving forms of more or less legal and informal night working. Similar areas in which the formal and illegal economies merge include sex work (Allison, 1994; Dalla, 2002; Weitzer, 2009; Tadié and Permanadeli, 2015). Here, Colosi’s research on lap-dancing stands out as interesting first because it is a rare example of where night work is presented as enjoyed by its workers (Colosi, 2010), and second, because that enjoyment is itself located largely in the nocturnality of the labour, or at least in its location within nightlife industries. Relatedly, performers in creative sectors and entertainment may also enjoy the nocturnality of their labour and being present in leisure spaces for work (Rapuano, 2009). Night work has offered opportunities to express identities, notably for LGBTQ+ people or for immigrant communities (Güney et al., 2014; Talbot, 2007), and recent research has started to explore where this might happen outside of nightlife and entertainment industries (Eldridge et al., 2020). Of course, it is important to note that the possibility of enjoyment does not undo the damage that may come from such work being precarious and poorly paid (Güney et al., 2014), or having other nocturnal dangers associated with it (Weitzer, 2009). Nonetheless, when researching nightlife researchers have at times been quick to engage in critique or highlight harms, when the presence of pleasure and enjoyment is equally important to acknowledge.

A third trend, followed largely outside of geography again, has been to explore the health or other risks associated with night working. This research has had two branches to it. The first has been to explore hospitals as a working space which involves night work. Healthcare is an example of a sector in which night work is widespread, across pay levels from cleaners and porters up to management, surgeons and doctors. Concerns about working conditions are driven over the possibility of excess night deaths, a small number of which some studies have observed (Silbergleit et al., 2006), being caused by fatigue or poor shift handover practices (Melbin, 1987). Recent research has also shown how night working can form part of workplace identity in healthcare, helping nurses ‘cope with the realities of night shift work by supporting each other through conversation and, sometimes, the sharing of stories. The sharing of these stories with students and new nurses may help future staff to learn from such narratives, and perhaps to internalize the positive attributes that some of the characters portrayed’ (McAllister et al., 2021: 10). The second strand of research focuses on the broader health impacts of night working and has identified fairly comprehensively that ‘shift work severely interferes with the health and well-being of employees, both acutely and chronically’ (Kantermann et al., 2010: 95). The medical problems are extensive: Rajaratnam and Arendt (2001) list ‘sleep disorders (which can become chronic), gastrointestinal disease, increased incidence of cardiovascular disease, lipid intolerance evidenced by increased triacylglycerol concentrations and possibly an increase in late-onset diabetes’ (p. 999). Due to changes in melatonin production in the body caused by night shift work, it has since 2007 been listed by the World Health Organization as carcinogenic (Straif et al., 2007). Research has found correlations between night shift work and multiple negative well-being outcomes beyond health, although the mechanisms for these are often poorly understood. In particular, a challenge in health research is to try and disentangle the biophysical effects that disrupted sleep and circadian rhythms have on the body from the social context of night shift work. This is not helped by the dominance of the biomedical disciplines in this field, although again MacQuarie stands out as an exception for paying attention to the intersection between the socio-
economic conditions of labour and the physical challenges of night working (MacQuarie, 2019). Again, there are matters of social justice at play here. For example, one study noted that there was an absence of negative health outcomes for the husbands of female night shift workers, and the authors used qualitative methods to reveal that many women who work at night are expected to ‘manage the domestic consequences of night work, thereby minimizing any adverse effects on their partners and children’ (Lowson and Arber, 2014: 239). This contrasts, but does not contradict, previous research with male night shift workers, which found that the impacts of night shift work were spread into the family and in particular to female partners of male night workers who would take on the role of managing the disruption caused by night work (Melbin, 1987). In other words, this research suggests that female partners of night shift workers in heterosexual couples are likely to take on the logistical load of managing family life, where male partners are not. From economics, researchers looking into this topic found a similar contrast between experiences of male and female night shift workers, concluding that ‘irrespective of when and how much they work, women remain largely responsible for the care and happiness of family members’ (Maume and Sebastian, 2012: 488). Relatedly, night shift working has been shown as having negative health outcomes for the children of night workers (Li et al., 2014), and here we see night shift work as causing strains that stretch out beyond the individual worker.

What connects these three major themes in research on night work, across diverse disciplines and sectors, is an interest in night work as a marginal activity: employment which is often poorly paid, taken by migrants or those with few qualifications, out of necessity rather than choice. Even where it is mainstream, such as in healthcare, night work can be problematic if not carefully managed. It is work which can both be risky itself, and which exposes people to secondary risks of violence, or negative health outcomes. These secondary risks are themselves felt more severely by women and other marginalized groups. As noted, such work can also be enjoyable or chosen, and the need to explore and unpack inequalities and difficulties should not blind us to this, particularly because night workers may enjoy the nocturnal elements of their labour – the reduced surveillance/greater freedom, the ability to produce and create new social spaces, the ability to mix work with leisure. Nonetheless, this emerging body of research does pick out some potential themes that may start to appear when considering the nocturnality of night work. In the final section of this paper, I would like to start to open out how geographical research into night work might further engage with nocturnality.

IV Night work in geography: Rhythms and justice

Given the above focus on night work as risky, the question of who works or is forced to work at night is a question of social justice. More could be done to explore how this interacts with other trends associated with neoliberal capitalism: increased mental health difficulties, rising loneliness, increasing obesity levels and other public health problems that have been described as ‘neoliberal epidemics’ (Schrecker and Bambra, 2015). Of note, both night work and these neoliberal epidemics affect socially marginalized groups, most notably both immigrants and minority ethnic groups, to a greater extent than socially powerful groups. There is evidence of geographers expanding into this area, with labour emerging as a theme from the ongoing interdisciplinary Night Spaces: Migration Culture and Integration in Europe (NITE) research project, as evidenced by a stream of presentations on work in their (forthcoming at the time of writing) 2022 conference programme (NITE, 2022). There is greater scope to extend research into questions about the broader effects that this has on migrant groups, for example, in their ability to interact with ‘mainstream’ society. Furthermore, within the night-time city, public service provision is generally weaker. Public transport at night is often absent, or when present infrequent, more dangerous, less convenient and more expensive (Plyushteva and Boussauw, 2020). By and large the provision of nocturnal services is designed around the imagined users of pubs, bars and clubs, rather than the workers servicing
those sites, creating challenges for those working in the night. A major question of justice and night working centres on safety such that, even where enjoyment or choice of night work has been identified (Dyer et al., 2008), researchers might further explore how ways of working at night might be made less risky, drawing from the broad consideration of physical health and social exclusion, as well as more immediately apparent dangers around physical violence or assault.

A second research theme to explore is the places that emerge in the night-time city and how workers shape those. Just as the busy train station on a morning is shaped by commuters, or a city square at noon shaped by people buying lunches during the working day, night workers produce space at night. Traditionally imagined night shift work has been in the closed-off spaces of factories or hospitals, but night-time labour is increasingly present in public space and residential suburbs. And it is not just public spaces that are changed with night work. Literature has started to open up questions of sleep, rest and ‘always-on’ culture, but there is more to be said about the ‘where’ of these changes in working patterns (Wajcman, 2015). Presumably, much of this work is being shifted into the home, but perhaps also into other spaces such as those of commuting (see some discussion in Bissell, 2018), care and leisure. How does the movement of paid work into a wider range of spaces interact with other activities that occur in those spaces? What remains somewhat unexplored is how fragmenting temporal rhythms impact differently on certain spaces, by deferring or shifting the location of different activities. Geography has done a good job of expressing the globalized transformation of time and space together but can apply some of these understandings to the temporal division of labour too.

Third, geography can use changes in night work to explore in more depth how ‘day’ and ‘night’ interact. Again, this becomes a question of recognizing the ways in which nocturnality is a matter of shifting relations in both time and space. Research into work–life balance has become a more common topic (James, 2018), but relatively little of the existing research on either the night or night-time labour engages with the acceleration paradox and the ways in which night-time labour in the home is increasing, and how this transforms home (Wajcman, 2015). Delving further into the complexities of night work might open up a more subtle picture of what constitutes both day and night, as well as how they interact and perhaps crucially how capitalist practice continues to spread and/or to reach limits. Here, the decline, for example, in LGBTQ venues in London, connected to gentrification which increases rent and imposes noise restrictions at night (Burchiellaro, 2021), can be understood as an example of a ‘victory’ for the expansionary day, but resistance can be found in other spaces, for example, in informal uses of night-time urban ‘between-spaces’ (Ebbensgaard, 2019), in the dark-skies movement (Lapostolle and Challeat, 2021), in the work of lighting designers who have sought to counteract inequalities through design practice (Entwistle and Slater, 2019), and of course in the ways in which sleep and rest can be used as modes of resistance (Crary, 2013). Bringing these questions to work, geographers might help reflect on the night as a time of volunteering, of social care, in which people who work through the day donate labour differently. We might explore both how such forms of labour fall into patterns of exploitation – for example, in the cultural sector where volunteers might be expected to participate in evening and night work to gain experience – and ways in which these might be an attempt to resist or mitigate capitalist structures – for example, in participating in schemes which cook and distribute waste food products from supermarkets. Academics might also consider how such pressures extend into their own practice, as workers within a university sector which in many places has conspired in extending expected working hours (Sang et al., 2015).

Finally, a focus on night-time labour offers a new dimension to the understanding of place in the global structure of working relations, and specifically in the production of the global city. MacQuarrie’s previously discussed neologism of ‘glocturnal’ is attractive here (MacQuarrie, 2017: 78), describing how the global city is predicated on lower-paid nocturnal workers resetting and maintaining the city at night, or doing the work of managing connections to cities which at that time are awake in other time zones, with higher-paid diurnal workers returning during the day.
MacQuarie identifies ways in which night-time labour is a result of global flows of capital, but also how global capitalism relies very specifically on this nocturnal work. Remembering the similar research of Parikh (2018), both show how the nocturnal work of lower-paid, marginalized groups oils the gears of the Global City. Internally, global cities generate a huge demand for night labour too, as the population size creates a capacity for a greater range of services to run later into the night – see for example of the proliferation of nocturnal driving services in many global cities (Yun, 2021). To better understand work in the nocturnal global city then is to better understand the role that such cities as places have in producing global capital.

V Conclusion

My central argument is that while night or nocturnal workers may appear in geographical research into work, attention to what I have called the nocturnality of that night work is rare. In other words, research has less frequently addressed how spatial and temporal transformations interact to change places at night. But capturing that nocturnality is important and can help show how changes in labour conditions, changes in the scheduling of labour and work tasks and changes in the accessibility of work are connected with other struggles both in the world of work and outside of it. A focus on night work can also illustrate global interconnections, and the impacts that cross time-zone working have on people and places. Expanding this research agenda would complement other turns towards a greater study of work–life balance, and the sociological conditions of labour, within geography. In other words, geographers have showed themselves to be interested in issues of who gets to work where, how and in what conditions; bringing a focus on the when can add additional analytical insight. This is underpinned by a series of empirical prompts that have made the ‘when’ a more important questions. Central to these are the expansionary pressures of capital, enabled by new technologies of communication, which fragment labour into a series of temporally footloose tasks. In turn, these tasks intervene with, and interact with, the night’s use as a time for social reproduction, for unpaid care, or for other work outside the workplace. Regardless of the type of work being done, nocturnal work, to generalize, is harder, riskier, less visible and less appealing than daytime work. That of course, is not to deny the importance of drilling down into the differences occurring in night work in specific sectors. In some, night work may offer opportunities for creativity or freedom not available in the day, while in others night work may be an inherent part of exploitative employment practices. Regardless, across all sectors the potential for short- and long-term health risks remains. It is important therefore that research explores how the burden of nocturnal work falls unevenly on the shoulders of groups of people who have less choice and freedom in how and when they work, even if a wider range of middle-class jobs are now more likely to also see some level of night working.

From across social and physical sciences, night studies has begun to emerge as a field in the last decade (Acuto, 2019; Kyba et al., 2020), and this has revealed the added value of an interdisciplinary understanding of the night across multiple domains. Research in this area has skewed towards sites of leisure and consumption, over sites of labour and production. This article has identified emergent new trends within night studies which are seeing it turn attention to mobilities, public culture at night, and yes, to questions of work and labour (Farina et al., 2021; MacQuarie, 2019; Nofre, 2021; Yun, 2021; Weintrob et al., 2021). But these latter topics remain under-researched. Work which takes place in private spaces at night has received even less attention than public spaces, and the home remains particularly unexplored – despite the increased recognition that nocturnal home work is growing as ‘always-on’ connectivity facilitates night work in the home. To pay attention to the nocturnality of work is thus to open several questions about contemporary economic, social and political life, and how everyday spaces are being reshaped.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.
Funding
The author(s) received no financial support for the research, authorship, and/or publication of this article.

References
Acuto M (2019) We need a science of the night. Nature 576(7787): 339.
Allen J and Pryke M (1994) The production of service space. Environment and Planning D: Society and Space 12(4): 453–475.
Allison A (1994) Nightwork Sexuality, Pleasure, and Corporate Masculinity in a Tokyo Hostess Club. Chicago: University of Chicago Press.
Amid A (2018) Mashhad, Iran: challenging the concept of a twenty-four hour city. In: Nofre J and Eldridge A (eds) Exploring Nightlife. London: Rowman & Littlefield, 85–99.
Anderson B and Wylie J (2009) On geography and materiality. Environment and Planning A 41(2): 318–335.
Berardi F (2009) The Soul at Work. London: Semiotext(e).
Bianchini F (1995) Night cultures, night economies. Planning Practice & Research 10(2): 121–126.
Brands J, Schwanen T and van Aalst I (2015) Fear of crime and affective ambiguities in the night-time economy. Urban Studies 52(3): 439–455.
Breman J (1996) Footloose Labour: Working in India’s Informal Economy. Cambridge: Cambridge University Press.
Brody A (2006) The cleaners you aren’t meant to see: order, hygiene and everyday politics in a Bangkok shopping mall. Antipode 38(3): 534–556.
Brown B (2016) Fear of crime in South Korea. International Journal for Crime, Justice and Social Democracy 5(4): 116–131.
Burchiellaro O (2021) There’s nowhere wonky left to go’: Gentrification, queerness and class politics of inclusion in (East) London. Gender, Work & Organization 28(1): 2–38.
Colosi R (2010) Just get pissed and enjoy yourself’: understanding lap-dancing as’ anti-work. In: Hardy K, Kingston S and Sanders T (eds) New Sociologies of Sex Work. Ashford: Ashgate, 181–196.
Cook M and Edensor T (2017) Cycling through dark space: apprehending landscape otherwise. Mobilities 12(1): 1–19.
Crary J (2013) 24/7. Los Angeles: Verso.
Dalla RL (2002) Night moves: a qualitative investigation of street-level sex work. Psychology of Women Quarterly 26(1): 63–73.
Du Gay P (1996) Consumption and Identity at Work. London: Sage.
Duff C and Moore D (2015) Going out, getting about: atmospheres of mobility in Melbourne’s night-time economy. Social & Cultural Geography 16(3): 299–314.
Dyer S, McDowell L and Batnitzky A (2008) Emotional labour/body work: the caring labours of migrants in the UK’s national health service. Geoforum 39(6): 2030–2038.
Dyer S, McDowell L and Batnitzky A (2011) Migrant work, precarious work–life balance: what the experiences of migrant workers in the service sector in Greater London tell us about the adult worker model. Gender, Place & Culture 18(5): 685–700.
Ebbensgaard CL (2019) Making sense of diodes and sodium: vision, visuality and the everyday experience of infrastructural change. Geoforum 103(1): 95–104.
Ebbensgaard CL and Edensor T (2021) Walking with light and the discontinuous experience of urban change. Transactions of the Institute of British Geographers 46(2): 378–391.
Edensor T (2017) From Light to Dark. Minneappolis: University of Minnesota Press.
Edensor T and Falconer E (2015) Dans Le Noir? Eating in the dark: sensation and conviviality in a lightless place. Cultural Geographies 22(4): 601–618.
Edensor T and Holloway J (2008) Rhythmanalysing the coach tour: the ring of Kerry, Ireland. Transactions of the Institute of British Geographers 33(4): 483–501.
Eldridge A, Chetty D and Hussain N (2020) It’s therapy and it’s fun. In: 1stInternational Conference on Night Studies, Lisbon, Portugal, 2–3 July 2020, 30–42.
Entwistle J and Slater D (2019) Making space for ‘the social’: connecting sociology and professional practices in urban lighting design. The British Journal of Sociology 70(5): 2020–2041.
Farina L, Boussauw K and Plyushteva A (2021) Moving safely at night? Women’s nocturnal mobilities in Recife, Brazil and Brussels, Belgium. *Gender, Place & Culture* 1-22. Epub ahead of print 14 June 2021. DOI: 10.1080/0966369X.2021.1937064

Farrington DP and Welsh BC (2002) *Effects of Improved Street Lighting on Crime: A Systematic Review*. Report no. 251, August 2002. London: Home Office Research, Development and Statistics Directorate.

Fjær EG, Pedersen W and Sandberg S (2016) Party on wheels: mobile party spaces in the Norwegian high school graduation celebration. *The British Journal of Sociology* 67(2): 328–347.

Florida R (2014) *The Rise of the Creative Class: Revisited*. Basic Books.

Fraser N (2007) Feminist politics in the age of recognition: a two-dimensional approach to gender justice. *Studies in Social Justice* 1(1): 23–35.

Gorman-Murray A and Bissell D (2018) Mobile work, multilocal dwelling and spaces of wellbeing. *Health & Place* 51: 232–238.

Graham K and Homel R (2008) *Raising the Bar*. London: Willan.

Graham M and Anwar M (2019) The global gig economy: towards a planetary labour market? *First Monday* 24(4). Available at: https://journals.openedition.org/rgea/3979.

Graham S and Thrift N (2007) Out of order: understanding repair and maintenance. *Theory, Culture and Society* 24(3): 1–25.

Green J, Perkins C, Steinbach R, et al. (2015) Reduced street lighting at night and health: a rapid appraisal of public views in England and Wales. *Health & Place* 34(1): 171–180.

Gregg M (2018) *Counterproductive: Time Management in the Knowledge Economy*. Durham: Duke University Press.

Gregson N (2000) Family, work, and consumption: mapping the borderlands of economic geography. In: Sheppard E and Barnes T (eds) *A Companion to Economic Geography*. Oxford: Blackwell, 311–324.

Gu´erin I (2013) Bonded labour, agrarian changes and capitalism: emerging patterns in South India. *Journal of Agrarian Change* 13(3): 405–423.

Güney S, Pekman C and Kabas B (2014) Diasporic music in transition: Turkish immigrant performers on the stage of “Multikulii” Berlin. *Popular Music and Society* 37(2): 132–151.

Gwiazdzinski L (2016) Penser la ville, panser le temps. In: Gwiazdzinski L (ed) *La Ville 24 heures sur 24*. Paris: Rhythmos, 7–12.

Hadfield P (2015) The night-time city. Four modes of exclusion: reflections on the Urban Studies special collection. *Urban Studies* 52(3): 606–616.

Hadfield P, Lister S, Hobbs D, et al. (2001) The ‘24-hour City’ - condition critical. *Town and Country Planning* 70(11): 300–302.

Hadfield P, Lister S and Traynor P (2009) This town’s a different town today’: policing and regulating the night-time economy. *Journal of Criminology and Criminal Justice* 9(4): 465–485.

Hanson S and Pratt G (2003) *Gender, Work and Space*. London: Routledge.

Harvey D (2007) *A Brief History of Neoliberalism*. Oxford: Oxford University Press.

Hermann C (2014) *Capitalism and the Political Economy of Work Time*. London: Routledge.

Hewamanne S (2020) Surveillance by another name: the Modern Slavery Act, global factory workers, and part-time sex work in Sri Lanka. *Signs: Journal of Women in Culture and Society* 45(3): 653–677.

Hobbs D, Hadfield P, Lister S, et al. (2003) *Bouncers: Violence and Governance in the Night-Time Economy*. Oxford: Oxford University Press.

Hubers C, Dijst M and Schwanen T (2018) The fragmented worker? ICTs, coping strategies and gender differences in the temporal and spatial fragmentation of paid labour. *Time & Society* 27(1): 92–130.

Hughes SM (2021) Wait for a permanent contract” : the temporal politics of (in) fertility as an early career researcher. *Environment and Planning C: Politics and Space* 39(8): 1725–1736.

James A (2018) *Work-life Advantage*: Sustaining Regional Learning and Innovation. Oxford: Wiley.

Jayne M, Valentine G and Holloway SL (2006) Drunk and disorderly: alcohol, urban life and public space. *Progress in Human Geography* 30(4): 451–468.

Jayne M, Valentine G and Holloway SL (2011) *Alcohol, Drinking, Drunkenness: (Dis)Orderly Spaces*. Aldershot: Ashgate.

Joseph E (2020) *Critical Race Theory and Inequality in the Labour Market: Racial Stratification in Ireland*. Manchester: Manchester University Press.
Kantermann T, Juda M, Vetter C, et al. (2010) Shift-work research: Where do we stand, where should we go? Sleep and Biological Rhythms 8(2): 95–105.

Kea P (2007) Girl farm labour and double-shift schooling in the Gambia: the paradox of development intervention. Canadian Journal of African Studies/La Revue canadienne des études africaines 41(2): 258–288.

Kwan M-P (1999) Gender, the home-work link, and space-time patterns of nonemployment activities. Economic Geography 75(4): 370–394.

Kyba C, Pritchard SB, Ekirch AR, et al. (2020) Night matters—why the interdisciplinary field of “night studies” is needed. J—Multidisciplinary Scientific Journal 3(1): 1–6.

Kyba C (2018) Is light pollution getting better or worse? Nature Astronomy 2(4): 267–269.

Kyba C, Kuester T, Sánchez de Miguel A, et al. (2017) Artificially lit surface of earth at night increasing in radiance and extent. Science Advances 3(11): e1701528.

Lapostolle D and Challéat S (2021) Making darkness a place-based resource: how the fight against light pollution reconfigures rural areas in France. Annals of the American Association of Geographers 111(1): 196–215.

Lefebvre H (2005) Critique of Everyday Life. London: Verso.

Lewis H, Dwyer P, Hodkinson S, et al. (2015) Precarious lives: Migrants, work and forced labour in the Global North. Progress in Human Geography 39(5): 580–600.

Li J, Johnson SE, Han W-J, et al. (2014) Parents’ non-standard work schedules and child well-being: a critical review of the literature. The Journal of Primary Prevention 35(1): 53–73.

Lowson E and Arber S (2014) Preparing, working, recovering: gendered experiences of night work among women and their families. Gender, Work & Organization 21(3): 231–243.

MacQuarie J-C (2017) Invisible Migrants. PhD TheSis, Central European University, Hungary.

MacQuarie J-C (2019) Invisible migrants: a micro-ethnographic account of bodily exhaustion amongst migrant manual labourers working the graveyard shift at new spitalfields market in London. Journal of Health Inequalities 5(2): 198–202.

Marx K (1887) Capital: A Critique of Political Economy. Marx/Engels Internet Archive. Available at: https://www.marxists.org/archive/marx/works/1867-c1/.

Maume DJ and Sebastian RA (2012) Gender, nonstandard work schedules, and marital quality. Journal of Family and Economic Issues 33(4): 477–490.

McAllister M, Ryan C, Simes T, et al. (2021) Rituals, ghosts and glorified babysitters: a narrative analysis of stories nurses shared about working the night shift. Nursing Inquiry 28(1): e12372.

McDowell L (2011) Working Bodies: Interactive Service Employment and Workplace Identities. London: John Wiley & Sons.

McDowell L (2015) Roepke lecture in economic geography—the lives of others: body work, the production of difference, and labor geographies. Economic geography 91(1): 1–23.

Melbin M (1987) Night as Frontier: Colonizing the World after Dark. New York: Free Press.

Mirchandani K (2004) Practices of global capital: gaps, cracks and ironies in transnational call centres in India. Global Networks 4(4): 355–373.

Myrdal A and Klein V (1956) Women’s Two Roles: Home and Work. London: Routledge.

Night Spaces: Migration Culture and Integration in Europe (NITE) (2022) 3rd International Conference Programme. Available at: https://www.nightspace.net/wp-content/uploads/2022/04/Conf-Prof_NITE.pdf (accessed 7 April 2022).

Nofre J (2021) Nightlife as a source of social wellbeing, community-building and psychological mutual support after the Covid-19 pandemic. Annals of Leisure Research Online Early Access: 1–9.

Nofre J, Giordano E, Eldridge A, et al. (2018) Tourism, nightlife and planning: challenges and opportunities for community liveability in La Barceloneta. Tourism Geographies 20(3): 377–396.

Pain RH (1997) Social geographies of women’s fear of crime. Transactions of the Institute of British Geographers 22(2): 231–244.

Palamar JJ and Acosta P (2021) Virtual raves and happy hours during COVID-19: new drug use contexts for electronic dance music partygoers. International Journal of Drug Policy 93(1): 102904.

Parikh A (2018) Politics of presence: women’s safety and respectability at night in Mumbai, India. Gender, Place & Culture 25(5): 695–710.
Patel R (2010) Working the Night Shift: Women in India’s Call Center Industry. Redwood City, CA: Stanford University Press.

Perrons D, Fagan C, McDowell L, et al. (2005) Work, life and time in the new economy: an introduction. Time & Society 14(1): 51–64.

Plyushteva A and Boussauw K (2020) Does night-time public transport contribute to inclusive night mobility? Exploring Sofia’s night bus network from a gender perspective. Transport Policy 87(C): 41–50.

Rajaratnam SM and Arendt J (2001) Health in a 24-h world. Autonomy, control, and spatial-temporal scaling in telework. Current Sociology 49(3): 1507–1529.

Straw W and Gwiazdzinski L (2018) Nights and mountains. preliminary explorations of a double frontier. Journal of Alpine Research 106(1). Available at: https://journals.openedition.org/rga/3979.

Straw W and Gwiazdzinski L (2018) Nights and mountains. preliminary explorations of a double frontier. Journal of Alpine Research 106(1). Available at: https://journals.openedition.org/rga/3979.

Shevchuk A, Strebkov D and Tyulyupo A (2021) Always on across time zones: invisible schedules in the online gig economy. New Technology, Work and Employment 36(1): 94–113.

Silbergleit R, Kronick SL, Philpott S, et al. (2006) Quality of emergency care on the night shift. Academic Emergency Medicine 13(3): 325–330.

Smeds E, Robin E and McArthur J (2020) Night-time mobilities and (in)justice in London: Constructing mobile subjects and the politics of difference in policy-making. Journal of Transport Geography 82(1): 102569.

Steinbach R, Perkins C, Tompson L, et al. (2015) The effect of reduced street lighting on road casualties and crime in England and Wales: controlled interrupted time series analysis. Journal of Epidemiology and Community Health 69(11): 1118–1124.

Straif K, Baan R, Grosse Y, et al. (2007) Carcinogenicity of shift-work, painting, and fire-fighting. The Lancet Oncology 8(12): 1065–1066. doi: 10.1016/S1470-2045(07)70373-X.

Tadié J and Permanadeli R (2015) Night and the city: clubs, brothels and politics in Jakarta. Urban Studies 52(3): 471–485.

Talbot D (2007) Regulating the Night: Race Culture and Exclusion in the Making of the Night-Time Economy. Aldershot: Ashgate.

Tara S and Ilavarasan PV (2011) Marriage and midnight work: a qualitative study of unmarried women call center agents in India. Marriage & Family Review 47(4): 197–212.

Thompson EP (1967) Time, work-discipline and industrial capitalism. Past and Present 38(1): 56–97.

Tom P, Trumper R and Dattwyler RH (2006) Manufacturing modernity: cleaning, dirt, and neoliberalism in Chile. Antipode 38(3): 508–529.

Tucker F and Horton J (2019) The show must go on!” fieldwork, mental health and wellbeing in geography, earth and environmental sciences. Area 51(1): 84–93.

Virno P (2007) General intellect. Historical Materialism 15(3): 3–8.

Wajcman J (2008) Life in the fast lane? Towards a sociology of technology and time. The British Journal of Sociology 59(1): 59–77.
Wajcman J (2015) Pressed for Time: The Acceleration of Life in Digital Capitalism. Chicago: University of Chicago Press.

Weintrob A, Hansell L, Zebracki M, et al. (2021) Queer mobilities: critical LGBTQ perspectives of public transport spaces. Mobilities Online Early Access.

Weitzer R (2009) Sociology of sex work. Annual Review of Sociology 35: 213–234.

Wilkinson S (2017) Drinking in the dark: shedding light on young people’s alcohol consumption experiences. Social & Cultural Geography 18(6): 739–757.

Wilkinson S and Wilkinson C (2018) Night-life and young people’s atmospheric mobilities. Mobile Culture Studies. The Journal 3(2017): 77–96.

Worth N (2016) Feeling precarious: millennial women and work. Environment and Planning D: Society and Space 34(4): 601–616.

Yun J (2021) Seoul’s nocturnal Urbanism: An emergent night-time economy of substitute driving and fast deliveries. Urban Studies. Epub ahead of print. 6 May 2021. DOI: 10.1177/00420980211005963

**Author biography**

**Dr Robert Shaw** is a Senior Lecturer in geography at Newcastle University. His research has explored the night and artificial lighting, and he was the author of the 2019 book *The Nocturnal City*. 