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Digitalizing Newspaper Journalism: Instituting and Negotiating New Temporalities in the Digital Workplace

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ABSTRACT

Digitalization of the labour process has occasioned the emergence of new temporal orders at work. For newspaper journalists, it has resulted in a radical reorganization of newsrooms and the temporalities of news production, offering a key site for studying this process of temporal reordering. This article develops Orlikowski and Yates' (2002) concept of temporal structuring as an active and intentional process in which journalists have enacted the emergent temporal order. Drawing on observations of the temporal practices of journalists in a London-based newsroom, including 28 in-depth interviews, the article demonstrates how the temporal structuring conditions which shape journalists' action within the labour process emerge from the temporal ruptures and conflict resulting from digitalisation as journalists accommodated, negotiated and resisted the new temporal order. The role of objectification is identified as a strategy used by managers and workers to resolve these tensions.

1 | Introduction

As the digital landscape has come to be characterized by greater connectivity, the uninterrupted operation of networked systems is seen as a contributor to the acceleration of time in contemporary life (Rosa 2013; Wajcman 2014; Hassan 2017), and the abstraction—or homogenisation—of time; the untethering of time from its spatial and temporal context, or what Castells refers to as “timeless time” (1996). The digitalization of work and, specifically, the widespread use of information and communications technologies (ICTs) which enable constant connectivity (Holtgrewe 2014), has reinvigorated discussions of the relationship between technology, work and time. At work, this shift from industrial to digital time appears to be reflected in the organisation of work and working time, with digital transformations often accompanied by both intensification (Felstead et al. 2013), and extensification of work (Gold and Mustafa 2013; Cavazotte et al. 2014; Smith 2016; Smith and McBride 2021), extending work in space and time—beyond the physical workplace and beyond the boundaries of standard working hours. Trends in working hours have tended towards

what we might characterise as the homogenisation of working time, where the distinction between working time and non-work (e.g. evenings; weekends; holidays; personal or family time) starts to blur or collapse (Adam et al. 2002). Workers increasingly face unpredictable working hours which can fragment working time and undermine their time sovereignty (Smith and McBride 2021) or extensification of working hours and accompanying work-life conflict (Smith 2016). These discussions have become reanimated as changing technologies and temporalities at work change the nature and quality of work and the experience of workers.

While new digital temporalities often confront workers as external, objective properties of technology, this can downplay the social relations—in this case, social relations of production—from which they are constituted (Joyce et al. 2023). Orlikowski and Yates (2002) have sought to transcend the dichotomous opposition which is often posited between objective and subjective time through their concept of “temporal structuring”, viewing time as an *enacted* process where actors produce and reproduce the contours of time, engaging in temporal ordering

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which is constructed socially (subjective) within clear temporal and structural constraints which are outside human action¹ (objective). This approach potentially aligns with studies of work and employment, which have long recognised the social negotiation of time involved in the organisation of work – as discipline, as with the imposition of clock time to regulate factory workers with the rise of industrial capitalism, (Thompson 1967) or time management practices (Adam et al. 2002) where workers learn to internalize the temporalities enforced through work; as a mechanism for standardisation, such as time-motion studies (Adam 2006), and for coordination, particularly in practices such as just-in-time management (Harvey 1989). Whereas Orlikowski and Yates (2002) focus on the enacting of temporal structures in organisations through recurrent practices which are broadly consensual, studies of work and employment tend to emphasise how time and time measurement can extend the power of control (Adam 2006:119). Following from this, there is scope to develop the concept of temporal structuring with greater attention to the dynamics of enactment in which different actors in the labour process have different relations and resources in the making of time.

This paper examines processes of temporal structuring in digital news production, specifically, how the temporal order is structured and negotiated, both formally and informally, through everyday work practices of journalists, focusing on what Adams et al. refer to as “competing attempts to order, regulate and control time in the act of managing” (2002:2). Contemporary newspaper journalists have a unique and peculiar position in relation to time, working at the intersection of 24-h global information flows where their role is one of organising and re-contextualising events in time – time-keeping for the public record; while their own work practices are shaped by new digital temporalities. The digital transformation of their work presents a key site for interrogating how temporal structures are enacted through a period of technological change.

Much research on ICT-mediated work and working time focuses on telework and the challenges of digitalisation in relation to work-life boundaries and conflicts (e.g. Thulin and Vilhelmson 2022) with less written about the rhythm and scheduling of office-based work which becomes digitalised—with some important exceptions (e.g. Pritchard and Symon 2023)—or, where they do, the focus is on individual strategies for managing constant connectivity (e.g. Moen et al. 2013; Aljabr et al. 2022) rather than the role of new technology in re-ordering and pacesetting work processes within the labour process. To that end, this study answers two questions: 1) what are the processes through which a new digital temporal order was established in the newsroom and 2) whose choices and interests bear on the enactment of time and re-pacing the working day for journalists.

I first outline how the relationship between technology and temporal ordering has been understood in the workplace before reviewing the temporal structuring approach which frames the study. Second, I detail the methodology which draws on non-participant observation and interviews to examine the temporality of the digital newsroom. Third, I provide an account of the ways in which a new temporal order has been established in the newsroom through working practices, orientations to time, strategies for managing time and navigating multiple and conflicting temporalities. I argue that the removal of the print deadline has created a fragmented, multiplicity of deadlines in

the newsroom which necessitated the development of new temporal structures which discipline and pace the work of journalists. I conclude by contextualizing these findings in light of wider debates which have posited the 24/7, fragmented and boundless nature of digital time, arguing that, while technological change has resulted in new temporalities in the newsroom, journalists had a strong incentive to reassert the ordering and coordination of linear synchronous time.

My contribution is threefold: first, I highlight instances of temporal structuring as an intentional process; second, I identify ways in which actors with differing resources engage in temporal structuring and the interests and choices which drive their enactment of new temporalities and third, drawing on these insights, I identify the process of *objectification* of temporal structures as a strategy used by management and workers to work through tensions in the temporal order, repositioning objectification – or reification of time structures – as an intentional practice. Together, these contributions develop the notion of temporal structuring with a more acute awareness of the social relations at play in the structuring of time.

1.1 | Time and the Digitalized Labour Process

Unlike with many workplace technologies, such as the moving assembly line, digital technologies generally do not result in the mechanical pacing of work (*pace* Taylor and Bain 1999), yet the temporal effects of technology at work have figured centrally since early discussions of ICTs. Temporal transformations associated with the digitalization of the labour process are often understood as stemming from the combination and recombination of the asynchronous (text, email, cloud storage) and synchronous (phone, instant messaging, VoIP/video conferencing) communications which digital technologies afford (e.g. Azad et al. 2016). While there is widespread acceptance that digitalisation has at least accompanied, if not enabled, acceleration, overarching characterisations of digital time tend to offer unsatisfactory accounts of the role played by technology—being both technologically determinist, while also lacking detail about how technology is implicated in the emergence of new temporalities (Wajcman 2014). Castells' (1996) early observations on virtual time in the network society, while largely determinist, provide the insight that ICTs and our access to networked information allow us to take time and space out of their context: ‘the whole ordering of meaningful events loses its internal, chronological rhythm, and becomes arranged in time sequences depending on the social context of their utilization’ (1996:462); what Castells terms “timeless time”. Rosa (2013) identifies a similar tendency towards temporal multiplicity; even in the context of the overall acceleration of social life, paradoxically, speed can create decelerations and inertia (e.g. traffic jams). This contemporary relationship with time, which is simultaneous, immediate and non-sequential, contrasts with the linearity clock time, which is measurable and predictable.

In the labour process, digital technologies have facilitated the diversification of working time, with implications for the nature and experience of work. For Castells, these plural, divergent temporalities disaggregate the labour process (1996:441) and, cumulatively, undermine ‘the structuring capacity of working time over everyday life’ (1996:442), while requiring “skilled labourers” or professionals to self-manage their time flexibly.

Empirical research supports this to some extent (Mazmanian et al. 2013; Mullan and Wajcman 2019; Thulin and Vilhelmson 2022; Foley et al. 2024), suggesting that digital technologies enable a flexibility of use which potentially affords workers greater autonomy over work and working time, while also complicating our understanding of flexibility and autonomy as benefits for workers. For knowledge professionals studied by Mazmanian et al. (2013), mobile connectivity leads to an “autonomy paradox” which offers employees flexibility and control over when and where they work, giving them a sense of greater autonomy but simultaneously intensifying their commitments to managers, colleagues and clients and limits their ability to disconnect from work. Foley et al. (2024) show how women professionals, in particular, face a paradox inasmuch as connectivity supports greater flexibility and scope to reconcile work and care, but simultaneously engenders expectations of long working hours. A study of teleworkers by Thulin and Vilhelmson (2022) draws attention to how hierarchical relations in organisations influence pacesetting, wherein professionals have greater ability to set the pace of work than less-skilled workers, and show employers using digital temporal structuring as a tool to discipline workers. The changed relationship that workers have to working time in each of these studies is as much the result of the social structures and cultural practices at work—such as changed norms and expectations about worker availability—that develop round its use, as the result of technology.

1.2 | A Temporal Structuring Approach

Starting from the perspective of time as a (if not *the*) prime organising tool (Adam et al. 2002), alongside the prerogative for coordination and control within the labour process—as highlighted in the work and employment research outlined above—the temporal orders which arise at work can be seen as, at least partly, structured by the actors within the labour process and, as such, subjective. Equally, temporal structures—clock time, deadlines, calendar dates, news cycles, time zones—act as a ‘quasi-material constraint’ (Barley et al. 2011:890) on human activity and are experienced by workers as forces external to them and so objective, hence the tendency to attribute new temporalities to digital technologies. For example, Foley et al. found that even professionals working with high degrees of autonomy and labour mobility generally accepted the intensification which accompanied the digitalisation of their work, feeling unable to address or change it; it was “something being ‘done to’ them” (2024:16).

To bridge these objective and subjective approaches to time, Orlikowski and Yates (2002) propose a ‘practice lens’ which allows us to think about how and why particular temporal structures and orders are brought into being through human action and institutionalized or objectified, and how this relates to the introduction of technology. Drawing on Giddens (1984), they argue that social structures—in this case temporal structures which make up the social order—do not have an ongoing ontological existence outside of their enactment by social actors. As a result, focusing on practices or ‘enactment’, enables an examination of the kinds of agency which constructs and re-constructs temporality through day-to-day activities, as well as the means through which new temporalities become habituated or institutionalised and thereby stabilised as temporal

structures. Within this, the appearance of objectivity reflects periods of relative stability in the ongoing constitution and reconstitution of temporal structures.

Objectification is an important process in Orlikowski and Yates’ account (2002) by which temporal structures become established as legitimate and start to act as enabling or constraining forces on actors’ ongoing activities. They show how objectification can be implicit; achieved through repetition and habituation, where structures are “routinely and unproblematically drawn on” until they are “taken for granted” (2002:686). Alternatively, they suggest temporal change can be a reflexive practice which is explicitly or purposefully established, requiring processes of acceptance and enactment by the wider community in question to become institutionalized or collectively meaningful. In Orlikowski and Yates’ account temporal structuring is most often described as emerging through processes of accommodation, consent and cooperation, with limited attention to the influence of power and ideology in routinising and stabilizing some temporal structures while others remain contested or do not stabilise—a critique of practice-based or sociomaterial approaches highlighted elsewhere (Leonardi and Barley 2010; Bailey and Barley 2020). While Thulin and Vilhelmson’s research (2022) demonstrates the importance of horizontal interaction of coworkers for pacesetting in telework, it also emphasizes that hierarchical relations in work organisations mean that not all members of a community or organisation are equal in practices which construct and reconstruct time. Similarly, legitimacy of new temporal structures may be ascertained through coercion in addition to acceptance.

This paper considers a temporal structuring approach to time alongside Adam’s (2006) insistence that time is an instrument of control, placing greater emphasis upon first, how power relations enter into the practice of temporal structuring, and second, how we might explain the emergence of temporalities that contain tensions such as work intensification, extensification or unpredictability of hours which lead to conflict between workers and their employer and rupture (e.g. introduction of new technology and new forms of work organization, or disputes over time) where not all parties have equal power to structure time. The resulting analysis contributes to debates on the digital temporalities by examining evidence from a newsroom to assess how new temporalities are situated within, normalized, and structured through the labour process and the employment relation during the process of digital transformation with attention to the temporal structuring capacities of actors.

1.3 | Methodology

This article examines the emergence of a new digital temporal order in the newsroom, drawing on findings from a case study conducted in a broadsheet newspaper in London, referred to as *Digital Paper*. Case selection was purposive—theoretically constructed (Emmel 2013:45–65) as a case of digital transformation of the work of newspaper journalism, then refined to examine the temporal structuring of work, when early study revealed that time was a central element in the reorganisation of journalists’ work.

TABLE 1 | Participant roles.

Role	#	Pseudonym (length of service, contract type)
Reporter	9	Sarah (10, ongoing); Lesley (8, ongoing); Kathryn (6, ongoing); Tom (5, ongoing); Chris* (4, temporary); Charlotte (4, ongoing); Leah* (3, temporary); Josh (2, ongoing); Rachel (2, temporary);
Features Writer	2	Nicholas (8, ongoing); Liz (7, ongoing)
Content Coordinator	2	Katie (2, ongoing); Ruth* (1, ongoing)
Section Editor	4	Gillian* (9, ongoing); Amelia (7, ongoing); Megan (5, ongoing); Eleanor* (3, temporary)
Commissioning Editor	1	Yasmin (6, ongoing)
Sub-editor	2	Alan (24, ongoing); Tom (15, ongoing)
Executive Editor (technical)	1	Mel (1, ongoing)
Managing Editor	2	Bob (20, ongoing); Ed (15, ongoing)
NUJ		
Father of the Chapel (union rep)	1	
Representative Newspapers and Agencies	1	
Industrial Council		
National Organiser	3	
Total	28	

*Participants who were shadowed

In 2015, national newspapers were undergoing digitalization, and all were grappling with the related loss of advertising revenue, albeit responding with diverse strategies—paywalls, niche audience targeting, and internationalisation—making any outlet a potential candidate for study. *Digital Paper* was selected because it was in early stages of digitalization, enabling a detailed examination of the dynamics of this process of transition and possibility to theorize the process of temporal structuring.

Data derives from 106 h of observations in the newsroom between 2015 and 2016, including 28 in-depth interviews with journalists and other media workers. Non-participant observations involved shadowing five participants for sessions lasting between 10 and 25 h. This facilitated detailed examination of how journalists enacted time in their daily work practices and, was followed up with interviews, which provided scope for journalists to reflect on their experiences through this period of reorganisation of production, precipitated by technological change and resulting in a new digital temporal order. The ethnographic site developed iteratively (Hannerz 2003), starting with observations of temporal practices in the newsroom and extending to include workplace union meetings, when it was evident that negotiations between the employer and the journalists' union, the National Union of Journalists (NUJ) over working hours and shift patterns were central to shaping newsroom temporalities.

Purposive sampling of participants ensured perspectives from across the newsroom, including roles from all aspects of news production for the newspaper's online site—reporters, sub-editors, editors and content coordinators, and journalists from news desks² and those writing or commissioning longer-form features on specialist desks, covering topics including culture and lifestyle, whose labour processes have differing rhythms and temporalities. Participants at all levels of the newsroom

hierarchy were sought, because they could offer differing levels of oversight and detailed knowledge of the immediate process of news production. The gender balance reflects that of the organization (12 of 28 were women), while one respondent was from a racialised minority³, indicative of a recognized under-representation of global majority workers in British journalism (Thurman et al. 2016). Both permanently-employed journalists (23) and those on temporary contracts (5) were interviewed. Table 1 provides detail of the roles of participants at the time they were interviewed.

Interviews were conducted between May 2015 and June 2016 and lasted, on average, 75 min (ranging from one to 2.5 h), focusing on themes that had emerged from observations in the newsroom, including: the organization of work around new deadlines, the speed and rhythm of the working day, and shift patterns. Additional interviews were conducted with key informants with extensive and specific insights into the negotiations which had resulted in the working time provisions within the employer-union negotiated house agreement—two union representatives, a management negotiator and union organizers.

Transcripts and field notes were coded abductively; first, to label segments of time use in digital production in the newsroom; pacing, coordination, deadlines, pacing routines, shift practices, and negotiation episodes. Second order coding involved closer examination of those structures, focusing analysis on identifying the processes through which journalists enacted these temporal structures. This enabled a third step of alignment between first and second order codes, and concepts from the theoretical lens (temporal structuring; objectification; power dynamics and agency), guided by the question: *What [are] the interests, conditions, and actions that allowed these temporal structures to be adopted, objectified, and institutionalized?* (Orlikowski and Yates 2002: 696) (Table 2).

TABLE 2 | Sample coding process.

Excerpt	First order code	Second order theme	Connection to conceptual constructs
“We need a take up in 15–20 min.”	Timeliness imperative	Pacing through implicit deadlines	Temporal structuring: Imperative for speed Objectification: (implicit) deadline as external constraint Agency/Interests: Disciplining role of editors
“Work quite fast for 8 h... leave on time.”	Shift adherence	Boundary reassertion via shift times	Temporal structuring: Intensification of work within bounded time Objectification: shift times as external constraint Agency/Interests: Reporters reasserting linear time
“there is an awful lot of stuff ... I don't really want to fight that”	Strategic launching	Prioritising timing over speed	Temporal structuring: Identifying spaces of relative calm Objectification: data spikes as external constraint Agency/Interests: Reporters returning certainty and predictability to competing temporal structures
“Spike around midday... have new stuff up then.”	Analytics-driven spikes	Temporal ordering based on audience	Temporal structuring: Pacing rather than speed Objectification: data spikes as external constraint Agency/Interests: Journalists using audience data to re-establish order to conflicting temporalities

1.4 | Context

Journalists have engaged in computer-based work since the 1980s, and digitalisation in this study is understood as the move to produce online content rather than print. In 2015, *Digital Paper* had just started implementing its digital-first strategy—for the first time, news and features were being written for publication first on the web, and many exclusively for online publication. This transformed existing ways of organizing production. Notably, it removed the primacy of the clock time structured around print deadlines which historically had imposed a time discipline on journalists, and was reinforced by the need for synchronization and coordination of different sections of the production process. In addition, it brought three key differences to journalists' work: the use of new content management software; greater exposure to a 24-h news cycle and the increasing use of social media and other apps for newsgathering and distribution (Hermida 2017). Within journalism studies, early characterizations of the resulting changes noted a speed up of publication with online news giving rise to “conditions of immediacy” (Usher 2014) resulting in low-quality, low value news, or “churnalism” (Van Hout and Van Leuven 2016).

1.5 | Findings: Out of Chaos and Panic Emerged a New Order

Acceleration and a speeding up of the newsmaking process had clearly accompanied the shift to digital at *Digital Paper*, and

news reporters were working with the ‘conditions of immediacy’ Usher (2014) had described. Digitalization brought with it ‘an insane pressure’ in the newsroom for journalists to get as much news online as quickly as possible: ‘to just keep pumping words out’ (Sarah, reporter).

For breaking news, the pressure for speed appeared to emanate from outside the newsroom, driven by events being reported but, while events acted as a structural constraint, providing the content and broad contours for news reporters' work, the pace of work—or how quickly events were produced into news—was set by two structuring factors: new expectations for ‘timeliness’ which developed within the newsroom, and the creation of new journalistic forms such as live blogging, which made use of constant information flows and immediacy of publication.

Without deadlines, the speed of breaking news was guided by notions of timeliness, long central to the value of news (Galtung and Ruge 1965), but which took on new meaning in the digital context. The constant flows of online information journalists were working with, combined with the ability to publish online news immediately, turned timeliness into an imperative for speed, seemingly only bounded by how fast journalists were able to work. Bob (managing editor) described breaking news as ‘just shoveling through as fast as you possibly can. It's harder for most journalists than it was’.

News events would spark a hive of activity in the newsroom, with reporters preparing different elements of a story as quickly as possible to get them online. Over time, what constituted timeliness was distilled into targets, removing the panic while producing expectations and a sense of time pressure for

journalists. An unofficial but well-recognized target of 15 to 20 min to get breaking news online was often repeated and had become newsroom commonsense. Tom, a managing editor explained: “Now if something happens, it’s, like, ‘Well, we need to get a take on it up there in 15 or 20 min’”. Targets were also reinforced through managers applying direct pressure and editors hustling reporters, standing behind them as the internally-imposed deadlines drew near: “Have you done it yet? Have you done it yet?”. Journalists were very aware that they were ‘being judged partly on how quickly you write things’ (Chris, reporter).

Competition with other outlets also informed notions of timeliness and journalists aimed to be first to break a story. Editors visibly were pleased with themselves whenever *Digital Paper* announced a big story on alert⁴ before the BBC, celebrating and exclaiming: “We beat them!”. The pace of news production was set in terms of launching stories before rival outlets, or at least not being too late. To that end, timeliness was externalized as a relative measure which intensified journalists’ focus on the speed dimension of market competition.

The emergence of these new understandings of ‘timeliness’ in the context of breaking news, provides a good example of the implicit objectification of a temporal structure which paced work—both appearing to be driven by external events and competition, as well as habituated through practice and new expectations. The change was not imperceptible, because journalists were aware that the pace of work had increased, but they attributed this speed up to new technology; constant connectivity was exposing journalists to what one production editor described as ‘a constant wall of material coming at you...and you’re pushing it on and pushing it on and pushing it on’.

When asked to reflect on these new practices, journalists explained and legitimized them through alignment with news values:

There’s a theory that if you can be earlier with the story, you’ll get more traffic [readers] in the long term, but also, there’s just the reputational thing of not wanting—if you think something is a big story, you don’t want to be late on it. And you want to be the place people go to for breaking news. You don’t want to be that editor, or that paper, that has a reputation for doing everything late.

(Chris, news reporter)

Reporters and editors working on breaking news settled on this shared meaning of timeliness, which was rarely explicitly stated nor questioned, but instead was routinely drawn upon and integrated into existing standards of journalistic professionalism and personal and organisational reputation. This both created an expectation that breaking news stories should be written up and launched in 15–20 min, while establishing limits to immediacy and providing a degree of predictability about how news should be handled.

1.5.1 | Live Blogging: Temporal Ordering through Journalistic Form

Acceleration was not just reactive, as with breaking news, but also a strategy institutionalised through the creation of new forms of journalism, such as live blogging for significant “diary events”⁵.

Live blogging developed as a form which could harness the possibilities of digital technologies – specifically, constant connectivity. Stories are updated in real time as new information, images or commentary becomes available, requiring constancy and producing conditions of immediacy. Journalists who had engaged in liveblogging or observed their colleagues liveblogging described it as stressful. Richard, the father of the chapel (FoC)⁶, discussed the intensification associated with live blogging: “The stress [live blogging] causes is an area of concern. And difficult to quantify—much harder to quantify than actual extra hours.”

This digital temporal order was further underpinned by and objectified through shift times. For tasks which required constant connectivity, such as breaking news and live blogging, journalists started to adhere more strictly to their scheduled shifts, handing over tasks to colleagues at the end of their shift. This was in sharp contrast with how news journalists have worked historically, when they would pursue a story to its completion. Alan, a sub-editor for over twenty years commented:

You know what it’s like with journalists. You tend to sort of want to stay on and finish what you’re doing. If you’re a reporter, it’s because it’s your story...it’s actually hard to get them to stop doing it!”

He recounted how, historically, reporters might follow a big story for days, working long hours, then “disappear for a few days – to claim that overtime back”. Although the continuous reporting associated with online breaking news or live blogging seemed relentless, it was more likely to be bounded by shift times. This move towards shift working was common for journalists whose working rhythms had become more intensive:

I found it to be quite nice to just come in and work quite hard for 8 h and work quite fast for 8 h. And I know that I can leave on time.

(Charlotte, Reporter)

The constancy of online news production was experienced as an intensification of work for journalists inasmuch as it removed porosity, and the absence of moments for reflection had added to their perception of time pressure. As an objective temporal structure, shift times were utilized by journalists as an external constraint which imposed a limit on the length of their working day, with work becoming predominately time-orientated, rather than story- or task-oriented.

1.5.2 | Objectification As Practice: Standard Working Day Asserted as Immutable Fact

The institutionalisation of this new temporal order through shift times also occurred through an intentional strategy in which the union drew on the wider social temporal order and sought to emphasize and objectify the standard working day as a constraint upon changes to working hours. Formal negotiations between *Digital Paper’s* management and the National Union of Journalists’ (NUJ) chapel⁷ over shift times and working hours constituted a deliberative and conflictual process. Management at *Digital Paper* seemed intent on instituting 24/7 reporting and proposed the introduction of new temporal structures in the form

of working rotas which would enable the staffing of newsrooms throughout the day and night. The plan included 6am starts and moving the editorial working pattern from a 9-day to a 10-day fortnight and provoked a formal dispute with the union. Journalists, as represented through their union, responded by seeking to preserve their existing working hours.

The two sides negotiated over competing attempts to bring a new digital temporal order into being, with the union using a strategy of objectification to develop arguments against the proposed changes. This included drawing on notions of the 'standard working day' as a way to objectify, and thereby protect, current working conditions, referring to "my working day" or "my day" to present their current 9–5 contract as a self-evident 'thing'. Arguments were aimed at anchoring working hours to the wider social temporal order. One union member presented their personal situation as a general experience: "I've got a 5-year-old, so a couple of days I take him into school first". The comment intended to highlight unmovable, objectified temporal structures – like the school day – which organized journalists' time, with the implication that journalists' working day needed to accommodate these because the reverse was not possible.

The union emphasized that newsworthy events tend not to be generated around the clock, arguing that big, unpredictable news stories are rare and tend to occur during standard working hours. Even when news occasionally breaks outside these times, journalists maintained their ability to report them is limited because sources operate according to standard working hours. As one union member pointed out, the likelihood of someone answering their call late at night, was minimal:

If it's 10 o'clock at night, not many places have out-of-hours press offices and they're normally very unhelpful. If it's the police, they'll probably say, "We've got a statement on our website and if we haven't, sorry, phone back in the morning". So, there's often not much you can do. Apart from rehash other things. Or just wait.

The dispute ended with an agreement whereby most full-time journalists are contracted to work from 9 to 5 on a five-shift week. The initial management push for 24/7 working had been pushed back to 7 a.m. starts for a smaller core of staff, rather than rolled out across the newsroom, and the standard working day is recognized when it is breached; through compensation for journalists who work weekend shifts or overnight (starting after 10 p.m. or before 6 a.m.) in the form of fewer shifts per week or fortnight. To that end, journalists' work, continues to be structured around social temporal norms.

In practice, the final agreement involved a degree of mutually enacted conceptual slippage. Rachel (reporter) pointed out, a night shift, 'is not really a night shift', but runs from 5:30 p.m. to 1:30 a.m. The compromises delivered through negotiations had resulted in a collective redefinition of what constituted day and night. Management never managed to instigate 24/7 newsroom work and the standard working day remained intact for most staff journalists.

Following formal agreement, these hours were not strictly enforced by management, nor strictly observed by all journalists working outside a breaking news context—Gillian, whose

working day ended at five, usually left after six, and content coordinators Katie and Ruth regularly stayed back half an hour or longer to finish tasks. There is some drift towards people starting earlier. According to Richard, (FoC): "The company would certainly like more people in at six or seven in the morning", but journalists at *Digital Paper* had largely avoided this and successfully reframed the meaning of 24/7 working.

1.5.3 | *The Homogenization of Time: Fragmentation of the Labour Process and Constant Connectivity as a Constant Churn*

Historically, the print deadline had been the primary temporal structure determining work routines and pacing workflow. The first evening edition was a common focus for everybody in the newsroom, coordinating and linking, if not synchronizing, journalists' work. Activity built pace throughout the day, peaking immediately before that deadline: reporters, then editors and subeditors worked to produce the first edition of the newspaper for editorial sign-off by 8:30 p.m. and each desk would have a specific deadline to stagger incoming pages. This was followed by discrete deadlines for the second and third editions. The print deadline had a sense of concerted effort, but also of finality:

There was an excitement to hitting the 8:30 deadline. You could hear the presses in the building rumble, go downstairs and pick up a copy of the first edition and go through it and think, 'oh shit, we spelt that wrongly, oops'. But just hitting the return key is...[shrugs].

(Craig, NUJ organizer and former print journalist)

In the absence of a print deadline, journalists are more likely to complete their work in small teams on specialist desks, disconnected from the rhythm of the newsroom as a whole and, increasingly, juggling multiple temporalities which structure their work. This is particularly the case for journalists working on features and specialist desks rather than breaking news. Direct comparisons between the intensity of print and digital work are difficult because digital jobs tend to combine tasks which formed discrete roles for print journalists:

Before perhaps you would have been a sub or reporter and now... everyone does a bit of everything. I do social media, organizing the content schedule, writing, subbing, editing, commissioning...dealing with freelancers, dealing with bloggers.

(Megan, section editor)

These multi-faceted roles exposed journalists to multiple temporalities, which were sometimes in tension, often working simultaneously on stories with day- or week-long deadlines, or monthly lead-in times. Katie, a content coordinator, talked me through the tasks she was scheduling one morning:

This has to be done for tomorrow, so [today] we'll have to edit this for tomorrow. Next month I'll need to have all these things...I need to commission those now. Also, [commissioning] could be done this afternoon because tomorrow's piece needs to be subbed now. When

[tomorrow's story] launches we have to immediately do all of the stuff around that [principally preparing the accompanying social media posts].

She reflected:

I find it hard to manage my own time...because it is just so many different...juggling plates of so many different things to do.

These journalists worked with elements of immediacy; a quick 'take' on a developing news event might be rushed online, but these moments of acceleration coexisted with a constancy or sense of "endlessly rewriting". During newsroom observations, Ed (managing editor) explained: "It depends on how complicated [a story is] and there are some things you will put up faster... just as a couple of lines, and then, 20 min later or half an hour later, you'll add another couple of lines of stuff you've picked up, and then you'll just keep adding to it during the day."

New kinds of monitoring work have arisen with digitalization; once a news item is launched, journalists monitor the development of the story along with internal flows of information from data analytics dashboards. Principally these data signal whether a story is performing as expected, specifically, the level and kind of audience interaction, often prompting journalists to update, revise, repackage or retag stories to ensure they are reaching their expected audience, or to amend any errors or issues highlighted through audience interactions. Working with constant connectivity has changed the rhythm of the working day making it less porous and work intensity more sustained:

It's just the churn on a story; it just keeps going and going and you think, "Well, I'll need to be in again at 7 o'clock tomorrow morning to update that because—" It's not like, "Phew. Now we've got another 24 h until we have to do another version in the next day's papers."

(Bob, managing editor)

From a temporal perspective, the labour process for journalists no longer ends once a story is published online. Digital stories can also have a longer life on the Internet than stories in print and journalists' work now includes responding to the long tail of news; when old, archived stories occasionally go viral and so require curating. The temporal dislocation of internet time requires new kinds of journalistic labour to resituate old stories into their temporal context; providing temporal markers such as links to developments in the story, or to more contemporary articles on the same story or topic. While some social media interactions can be anticipated and planned, the intensity of audience interactions or older stories going viral are reactive and less predictable. Often the effect of these competing temporalities was a perception of overload from journalists: 'I do have a bit too much and too many different deadlines really' (Gillian, editor).

Compared with print production, this process of immediate publication and online monitoring has resulted in a homogenization of time. Time takes on a circular quality where technology allows for updating and a story can never be said to be finalized. The workflow is more constant, journalists find it

harder to switch off during the working day, and the seeming reactive nature of much of the work produces a sense of haste and pressure. "Seeming" because, this sense of ongoing, never-ending work and responsiveness has been externalised in the way journalists view and speak about it as an attribute of "the story", whereas, this orientation is the result of fundamental shifts in the product of journalism – print stories were published and if details evolved, a new story would supersede it; online stories evolve with the details and consequently, journalists' practices have changed.

1.5.4 | News Spikes: Internal Deadlines, Ordering and Timing

Journalists responded to conflicting temporalities with attempts to order and thereby control time by developing new work routines, prioritizing and planning. On one specialist desk, all commissioned pieces were tabled into a grid detailing which stories had been filed and edited (at least 3 days prior to publication) and publication date. Even tweets associated with each story were pre-planned using social media scheduling software. For these pre-planned stories and features, different temporalities have emerged where speed is not necessarily the imperative: "It's more about organization... in advance" (Ruth, content coordinator).

Ruth explained how she uses publishing software to pre-time the launch of stories, principally when a story needs to go live in the early morning and expressly so her team need not be physically present in the newsroom: 'I think that's kind of why we started scheduling stuff—to go up in the morning, before we get to work'.

The institutionalization of digital deadlines was key to the new digital temporal order in the newsroom. Analytics tools, which monitor audience traffic on the website, have been used to identify "news spikes"—moments in the day when audience site visits tend to cluster—and these were used to assert new deadlines as editors made greater use of audience analytics data. News spikes may create two or three deadlines throughout the day, with the number and timing of spikes specific to each desk and the behaviour of its readership. While news spikes act as objective constraints which structure the working day and journalists' use of time, they are less about speed and immediacy than timing. The pace at which stories must be produced and launched is driven in response to audience behavior and with the aim of getting "maximum traffic" (Amelia, section editor). Gillian (online editor) explained:

There are a number of deadlines, so you know that you get page traffic at a particular time—like there's going to be a spike in your page views at around midday or between midday and 1:00—so you want to make sure you have new stuff up for people to look at then.

The intensification which had accompanied the initial digitalization of news gave way to temporal structures which stabilized, providing greater certainty and predictability about workflow. Analytics tools had effectively objectified audience engagement into news spikes which became a new set of temporal constraints to pace journalists' work. The process, was informed by audience behaviour: "you can have too much [content] and you're limiting the chance of people reading or

sharing each piece” (Katie, content coordinator) and, emphasis was redirected to capturing audience attention:

[I look at]...what else is going on, I know that there is an awful lot of stuff—like on a Friday there is a lot of film, music and some stuff coming forward for the weekend—which is all much more interesting to read about than the stuff we are doing so I say, “I don’t really want to fight that.”

(Amelia, section editor)

This emphasis on timing, rather than speed, accords with Rosa’s (2013) paradox that, even in the context of the overall acceleration of social life, some aspects will be afflicted by decelerations and inertia. In digital journalism, acceleration is present in the increasing speed and volume of information flow in the digital sphere, which pushes against the limits of journalists’ ability to filter and process it. Inertia in this context comes in the form of information overload and scarcity of attention for consumers of news—akin to a traffic jam in high-speed flows of information. Journalists’ efforts to manage time respond to this overload by ordering time into predictable patterns and leveraging spikes to publish more strategically. Crucially, these strategies seek to exploit lacunas—the pauses, gaps, and slow zones created by inertia within accelerated flows. By co-ordinating story launches to coincide with these temporal spaces, journalists attempt to capture limited audience attention in moments when the informational torrent temporarily subsides.

While they were treated by journalists as shaped by audience behaviour—and so objective constraints on their working time—these new priorities and approaches were internal to the organisation, driven by the search engine optimization team:

“the audience people say that we shouldn’t launch everything on 1 day. They like us to drip-feed some of the pieces.

(Amelia, section editor)

The integration of news spikes to order and pace journalists’ work has been one process of accommodation—“a process of adaptation in many respects” (Andy, managing editor), with the benefit of bringing order to the void that had been created with the removal of print deadlines and the conflicting temporalities which had emerged in their place.

2 | Discussion and Conclusion

Digital transformation of the newsroom has brought major changes to the temporalities in which journalists work and produce news. This is characterized by acceleration enacted through the establishment of short timelines for the publication of breaking news and forms like live blogging, which journalists experience as an intensification of work. Alongside this acceleration, organization or sequencing of work in time has been radically altered without the anchoring and collective buildup previously provided by a print deadline. In its place, the uniformity of continual monitoring and revising produces time as homogenous but also fragmented, leaving journalists working on tasks often within many different time frames and with a range of different and sometimes competing timelines. In this sense, digital technologies have facilitated a speed up of time, taking time out of its context through its severing from

the linear sequencing that holds it in place and gives it meaning. Fragmentation appears to have led to more individualized time pressures as journalists have internalized the competing priorities that arise; talking about the need to be better organized, or get better at prioritizing, or faster over time; trying to embody these many temporalities, but often with the result of feeling rushed and losing the time to think. Moreover, the findings presented here demonstrated that theorists of acceleration (Rosa 2013; Hassan 2017) or timeless time (Castells 1996) underestimate the drive by actors engaging with new temporalities to manage speed and, in doing so, reassert the ordering and coordinating of linear synchronous time—they engage in temporal structuring in the broader context of acceleration, homogenization and fragmentation of digital time.

This research asked what are the processes through which a new digital temporal order was established in the newsroom? Specifically, it sought to understand the processes through which digitalization precipitated temporal restructuring, with a view to understanding the role that actors and interests play in the objectification of the new digital temporality. In this case, that drive to order was asserted through a combination of social institutions, economic competition and the individual and collective agency of journalists. Rather than creating runaway acceleration or “timeless time”, constant connectivity and the absence of deadlines has led to more complex time arrangements through the institutionalisation of practices which impose new time structures, deadlines and time discipline for journalists’ work.

New technology enabled journalists to relate to time differently, enacting new temporal structures in the newsroom as a way of providing order and attempting to limit the speed and unpredictability brought by publishing in a context of constant connectivity. Whereas the internet and the abundance of information journalists can access are often perceived as a pressure bearing down on the production process from outside the organization, speed and timing associated with the temporalities of the digital newsroom have tended to be driven by internal factors. For breaking news, deadlines were externalised to the extent that they were competition-led—by the perception of the speed of competition, if not *actual* competition—but other elements of urgency had to be manufactured. A print deadline was a non-negotiable final arbiter, but its removal has placed greater emphasis on management to objectify new time structures through direct supervision, instilling norms around how quickly breaking news is compiled, and translating audience spikes into deadlines. A series of temporal structures emerged to set expectations and provide contours to journalists’ work through:

- i. Targets—what constituted the ‘timely’ publication of news, from external event to story launch, was distilled into an agreed, specific measure of 20 min;
- ii. News spikes—the imperative for speed was replaced by a temporal order which emphasised ‘timing’ and objectified audience rhythms of engagement into news spikes which became patterns of mini-deadlines; and
- iii. Lacunas—another aspect of pacing redirected journalists’ focus on capturing periods of calm, when there is less news or content, to maximize audience attention.

Findings demonstrate how the temporal structural conditions which shape these workers’ action are not imposed from outside but emerged principally through everyday practices and the

working through of temporal ruptures and conflict within the labour process—in this case to manage the intensification and overwork that accompanied digitalisation and to order competing priorities. Importantly, temporal structuring was a purposeful and reflexive practice, with temporal structures arising often to resolve tensions or as the outcome of conflict. Identifying how and why particular temporal structures are brought into being through human action, then institutionalized or objectified, involves identifying the choices and interests which bear on the enactment of temporalities for journalistic labour. Importantly, not all actors are equal in the practices which construct and reconstruct time; for example, managers and editors in the labour process were shown to have different relations and resources in the making of time than non-managerial staff such as reporters and content coordinators. With many of the new temporal structures identified here, journalists and their editors, or managers, had a mutual interest in slowing down the pace of digital work and bringing it under control. Journalists' engagement in these temporal practices and collective meaning-making appeared to be normalized or habitualized in a more consensual, less conscious way, as with the adoption of news spikes, which seemed to mitigate the tyranny of immediacy. In other instances, their temporal structuring capacities varied. Some temporal structures constituted forms of time discipline, for example managers and editors were able to enforce 20-min targets for breaking news. In contrast, journalists experienced the intensification of their work as an immutable feature of digitalization and so they drew on temporal structures in a way that was more reactive and adaptive; news reporters no longer working beyond their scheduled shifts; features writers internalizing different notations of time and developing time-management strategies. Studies of digital technology and time use at work have drawn attention to the flexibility of digital technologies, which give workers potentially greater autonomy over how they negotiate their time (Mazmanian et al. 2013; Azad et al. 2016; Mullan and Wajcman 2019), whereas this study has emphasized that for journalists, enacting digital temporalities was less about generating greater autonomy than exercising the autonomy they had to manage work intensification.

The social relations of the digital temporal order described here are most evident where temporal structures became sites of conflict or contestation and the management of time has been used to control processes and, in doing so, structure labour and workers' experience of work. The dispute over staffing a 24-h newsroom led journalists collectively to challenge and negotiate with management over attempts to extend their working hours. While bargaining around hours of work is common terrain in employment relations, the temporal structuring frame allows us to think about objectification—the process by which time structures are reified into seemingly immutable things that confront actors as external and objective—as an active strategy in the process of enacting new temporalities. To do this, the union drew upon the institutions and conventions of the wider social temporal order and asserted that the standard working day operated as an objective limit around which working hours must be ordered and organised. The standard working day became an anchor for industrial bargaining, providing limits to management attempts to extend the hours journalists might be scheduled to work. The union successfully challenged the original management proposal of 24-h working yet, despite evoking the

working day to preserve existing ways of working, once agreement was reached, journalists' working hours moved with some flexibility around agreed times albeit more on their own terms.

As a way of thinking about the difference between subjective and objective time, temporal structuring is useful for uncovering how the time structures enacted as part of the labour process come to confront workers within the labour process as objective. This article provides an account of how the new temporal structures that accompanied digital ways of working were embedded in working practices through acceptance (if not willingly, then resignedly), at which point they were objectified and became taken for granted; socially constructed or negotiated up to the point at which they become constraints outside of human action, or at least enacted and acted upon as such. Importantly, this article clarifies and extends earlier discussions of temporal structuring by showing how enactment can also be an active and intentional practice which brings different, sometimes competing, interests to bear on the shaping of a new temporal order. Significantly, digital time continues to be most sharply circumscribed by the institution of the standard working day, even when this has increasingly come under pressure and been eroded for many workers (Rubery et al. 2015). As an institution, the standard working day remains central in shaping shared time in society, as reflected in the timing of traffic spikes, and continues to be an important point of reference for journalists in defining the terms of their working time agreements, as evidenced by their editorial contractual agreements. Journalists who are permanently employed are working 5 h longer every week, importantly, however, their working time has been limited through their collective resistance to changes to their working hours and shift times. Shared historical understandings of the working day and the disciplines, norms and rituals that work imposes on daily life continue to be key influences on how these journalists orientate towards time.

To conclude, this study shows how digitalization reconfigured a newsroom, not as a technological inevitability, but through practices of temporal structuring that were often intentional and occasionally contested. It extends the theory of temporal structuring by demonstrating how social relations, power and strategies of objectification stabilize new temporal regimes. From a practical standpoint, it draws attention to the temporal structure—in this case set by internal deadlines, analytics-driven pacing and negotiated working hours, and how it influences the speed and predictability of work, with implications for worker wellbeing through digital transformations.

Endnotes

¹Or, more accurately, precede the actions of those agents engaging with them in the present (Archer 1995) and so confronting them as objective.

²Desks refer literally to desks where editorial teams sit together, but also to work teams which produce distinct sections of the newspaper, for example, UK news, politics, foreign, financial, sport, with reporters (news) or writers (features) working under the direction of an editor and deputy editor. They usually sit in a shared area on the editorial floor.

³Not highlighted in Table 1 to avoid compromising anonymity

⁴Breaking news notifications on a news outlet's website

⁵Regular or predictable events such as budget days or elections, which could be anticipated in advance and planned, but where the detail was embargoed or evolving through the event.

⁶Workplace union representative

⁷Workplace union branch

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