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3 Key methodological orientations in doing rhythmanalysis: The body as central, displaced or insufficient

Introduction

Chapter 2 considered how Lefebvre himself envisaged and undertook rhythmanalysis. It then provided an overview of how rhythmanalysis has been taken up and developed in recent research across the social sciences. This chapter goes into more depth on the methodological strategies and practices used by contemporary researchers of rhythm. I have chosen to focus here on three examples which operationalize rhythmanalysis as an embodied research practice in three different ways: where the body is central, displaced or insufficient.

The first example is actually a series of rhythmanalytical projects undertaken by the British cultural geographer Tim Edensor. Here, the body is *central* to doing rhythmanalysis and is deployed as a key tool in the research process. In this approach, the body is an autoethnographic and metronomic device for registering rhythm at a corporeal scale, for sensing rhythm in the practices and performances of others through empathy and imagination, and for analysing other people's narrative accounts of embodied rhythms.

In contrast, in the second example the body is present but *displaced* as it cannot directly register rhythm. Researchers at Copenhagen Business School, Christian Borch, Kristian Bondo Hansen and Ann-Christina Lange, analyse the work of high-frequency traders in financial markets whose bodies are calibrated to their algorithms rather than to one another as was the case in a more traditional and immersive 'pit' market. This example demonstrates rhythmanalysis as a material method and as one which analyses 'how *capital's own everyday* is organized' (Borch, Bondo Hansen

and Lange 2015: 1082, emphasis in original). In it the body is still present as a tool of research but is no longer central.

From finance to fish, the third example is from my own research where the body is necessary but *insufficient* to record the rhythms of the market (Lyon 2016). It focuses on the use of audiovisual methods and the construction of an audiovisual montage based on time-lapse photography and sound recordings as a means to identify different coexisting rhythms in the fish market.

Example one: The centrality of the body in research on rhythm and mobility

As discussed in Chapter 2, Lefebvre calls for the rhythmanalyst to use his or her own body as a central device or research tool for revealing rhythm: 'To grasp a rhythm, it is necessary to have been *grasped* by it; one must let oneself go, give oneself over, abandon oneself to its duration.' It is equally important to retain the capacity to shake off that rhythm, to perceive it critically as if from the 'outside' (2004: 27, emphasis in original). In this section, I discuss research which does just that: the rhythmanalytical geography of Tim Edensor. *Geographies of Rhythm*, edited by Edensor and published in 2010, did much to advance discussion of rhythm within and beyond geography, demonstrating the gain of developing Lefebvre's thinking to understand the multiple temporalities of everyday life in the twenty-first century, from 'ravalejar' (an invented verb conjuring a way of living in El Raval, Barcelona) to rumba. Edensor (and colleagues) has undertaken multiple studies of rhythm, most related to place-making and mobility, including walking, running, cycling, driving and dancing. The following discussion draws out the gain of 'grasping' rhythm with the body for advancing understanding, and it critically considers the different combinations of techniques Edensor employs for apprehending rhythm.

Walking in rhythm

Let's start with walking. The activity of walking has long been documented as an embodied routine of everyday life (de Certeau 1984; Solnit 2014) and is widely used in arts practice.¹ Edensor (2000, 2008, 2010b) shows

¹ Most famously perhaps in the Anglophone art world in Richard Long's work: [http:// www.richardlong.org](http://www.richardlong.org)

how the production of place happens (in part) through the collective choreographies of walking. The cross-cutting movements of people give rise to an 'ensemble of rhythms' and a 'complex polyrhythmy of place' through which 'time and space are stitched together' (Edensor 2010b: 77, 70). The rhythmic qualities of walking, whether smooth and 'eurhythmic' or uneven and 'arrhythmic', intersect with one another to produce place collectively. The extent to which they are coordinated and synchronized by institutional arrangements is evident as people's paths converge at workplaces, shops, cafes and parks then separate out again as they continue on their way.

This does not happen spontaneously. Edensor makes use of Lefebvre's concept of dressage to recognize the regulation of embodied rhythms, and how the supposedly natural practice of walking is 'styled' by socio-economic and cultural norms in specific times and places. Dressage underlies how pedestrians accommodate other moving objects – people, bicycles, cars – or comply with the ways their mobility is channelled – in museum visits for instance, or more strikingly in the regulation of public space which refuses the stationary bodies of the homeless (Blomley 2007). At the same time, these normative rhythms do not wholly compel or control: 'Whatever regime of spatial ordering persists, the body can never be assumed to passively acquiesce in the performance of a dance of duty' (Edensor 2000: 137). Walking is therefore both regulated *and* escapes that regulation.

This tension is clear in Edensor's (2010b) reflections (with Lefebvre) on the mobile interventions of several artists. First, Richard Long emphasizes the emergent and novel properties of walking; in other words, how 'difference' in Lefebvre's terms is inherent in and produced by repetition (as discussed in Chapter 2). Through walking we become aware of pace and speed, and tune into different relationships, forces, sounds and atmospheres. Second, Francis Alys causes an arrhythmic stir in *Railings* where he drags a stick along metal barriers in central London. This creates a new rhythmic experience of moving through city space that is both repetitive and disjunctive and which gives rise to an awareness of 'architectural features and material qualities' and the privatization of space in the capital. Edensor points out how Alys extends thinking and performing the walking body 'beyond the feet', embracing rhythmanalysis in a more fully sensual register. A third example is Jeremy Deller's *Procession* in central Manchester in 2009 where the absence of dressage which characterizes more formal parades makes way for greater improvisational and expressive modes. While these examples are at some remove from the everyday experience of walking in

cities, they bring to the fore the presence and operation of rhythm and the disciplining of bodies in urban space and thereby offer useful tactics for the rhythmanalyst.

In an earlier project, Edensor undertook walking as a form of autoethnography. In a bazaar area of the north Indian city of Agra, he documented how 'the walking body must continuously adapt to the contingencies, flows, materialities and interruptions' of the street (Edensor 2000, 2010b: 73). The bazaar is a porous space used at any one time in multiple ways. It awakens the senses of the stranger as she or he becomes aware of what bodies (human and non-human) do in space and what the space does to them. Edensor highlights the 'improvisational' quality of walking for how it pushes walker-rhythmanalysts to recognize themselves as subjects who must employ active thinking – how to navigate various obstacles; as steeped in habits and routines – such as the gendered gestures of stepping aside for others or pushing through a crowd; and who move in accordance with familiar embodied practices – knowing the length of one's stride and the power of one's legs for instance. In a similar way, Edensor's walks through ruins (2008) emphasize improvisation as the walker encounters irregular physical and material surfaces and textures in these disorderly spaces. The body is enlivened as a path 'evolves' and the walker develops 'a staccato rhythm rather than a repetitive pulse' (2008: 127). The body makes itself felt through 'hunger, blisters, [and] sore muscles' (Edensor 2010b: 73). Through this combination of liveliness and disruption around the body or underfoot, it is possible to see how we might quite literally use our bodies to tune into the multitude of competing rhythms that permeate places. The act of walking attentively is both a first step in sensitizing the body to rhythm and offers an explicit strategy for doing rhythmanalysis (see also Wunderlich 2008, 2013, discussed in Chapter 4).

Edensor is critical of abstract discussions of the body that tend to 'eclipse the lived bodily experience of city life' or accounts that put forward a 'disembodied view of what is an intensely somatic experience' (2000: 121, 130). He also refuses the use of narrative alone to 'talk the walk' as the material experience of walking through a ruin 'is not usually amenable to authoritative representation', he argues (2008: 123). Indeed, his writing on ruins is interspersed with evocative black and white images of the site. However, what is curiously absent from both his account of the bazaar and the ruin is any sense of the fleshy materiality of his own body in place. The reader learns little about his gender and ethnicity – beyond his name – and

get no more than a glimpse of his class background when he reveals that walking in ruins stirs memories of factory work, his own and that of 'long-dead working class relatives' (2008: 137). There is talk of materiality and muscles in a general sense but not what the walk felt like to him. This feels like a missed opportunity. A more explicit and reflexive use of the rhythm analyst's own body might foreground the operation of power through rhythm, for instance to expose the 'gendered conventions' (2000: 134) (among others) that he refers to as being present in the life of the bazaar.

On the move by coach and car

Picking up the pace, I now consider mobility and rhythm in two forms of vehicular travel: the commuter's car and the coach tour. First, with a focus on the 'experiential dimensions of commuting rhythms', Edensor draws out the 'pleasures and frustrations' of commuting. If rhythms are 'difficult to knowingly contravene', mobile subjects are not necessarily 'subservient' to traffic flow and find ways to 'appropriate time'. Gemma, a young woman who travels the twenty-three miles between Crewe and Macclesfield in the north of England for work, is the focus of this study. Gemma settles on her cross-country route according to the whim and mood of the day. There are variations in her journey time from forty-five minutes to one and a half hours which she experiences as 'an eternity' at times and as a 'flash' at others. Against the dominant representations of commuting as stultifying, 'a dystopian alienating practice', the extracts from Gemma's account reveal her lively and enlivened state of being on the road and on the move 'drinking in the feeling it gives you' (2011: 189, 192–4, 196, 199–200).

Although she is by herself in the car, Gemma nevertheless experiences her journey as shared: 'I am not alone,' she declares. Indeed, when she spots one of her "'drive by" people' (i.e. other drivers she regularly sees on the road) in a different context, she finds herself saying 'hello' despite the person not recognizing her. This attachment shows the depth to which she senses her journey as synchronized with others despite it remaining a secluded experience. She also appreciates the 'rhythmic predictability' of the stretches of solitary time she has in the car and the opportunity to be expressive: 'To shout, scream, cry, laugh, sing at the top of my voice and be free with only my self to worry about'. (Edensor 2011: 198). Not all commuting is this free or comfortable of course but this example does show how commuting produces a mobile sense of place and makes it possible for the social and affective dimensions of rhythm to come to the fore.

Second, in their rhythmanalysis of coach travel, Tim Edensor and Julian Holloway discuss the 'rhythmic qualities' of the coach tour as an 'experience of both mobility and situatedness' (2008: 498). Their research is set in the West of Ireland and explores 'the ordering of different rhythmic assemblages'. The tour itself contributes to and reinforces 'the selling of Ireland' and Irishness especially in relation to nature, landscape, and traditions of work and leisure. Tour participants largely see what they expect to see and behave in accordance with the rhythmic norms of their tourist roles – photograph the view, buy a souvenir, get back on the coach – their conduct further styled and sanctioned by the commentaries offered. If the tour drivers' narratives are one 'line of force' affecting the mood and meanings of the tour, the landscape itself is another: its visual offerings of bucolic idyll are interspersed with rural poverty, intrusions into the tourist gaze as documented by the authors' photographs. Edensor and Holloway also focus on the rhythmic forces experienced by tour participants at a corporeal level. They take the tour themselves and directly experience how 'rhythms are architectures of narratives, sensations and embodiment' (483, 489, 491, 499). They come to grasp the lack of 'rhythmic unity' of the tour through participating in it on six different occasions in addition to driving behind it on another. There is a clear methodological gain here of repeatedly undertaking a specific experience and this may be useful for other research.

The tour promotes a certain synchronicity of rhythm as passengers are subject to the motion of the coach on the road and the repetition of similar visual scenes such as telegraph poles, gates and fences. Nevertheless, different bodies react differently to its patterning. Indeed, the authors' grasp of rhythm allows them to appreciate how the temporal regularity of the tour is punctuated by stops and visits, and is never completely standardized as participants negotiate with the drivers in relation to their experience of hunger and thirst, restlessness, and the need to move or go to the toilet at different points. The sheer eventfulness of the excursion also contributes to its arrhythmic character and disrupts its apprehension as solely linear (Edensor and Holloway 2008: 497). The journey is marked by uneven movements and sound, and is disturbed by animals, road surfaces and weather.

In both the articles discussed here, the authors use the narrative accounts of drivers and passengers and, in the case of coach travel, their

own embodied experiences to access rhythm. While the body remains the primary instrument of research, the bodies which are bearers of rhythm belong to research participants as well as the author-researchers. Further, in the discussion of commuting, the reader sees Gemma's thoughts presented on the page but gains no sense of her relationship to the researchers. And in the case of coach travel, the reader knows little of the lives of these (perhaps inadvertent?) participants in this research – nor of the ethical decisions that bestowed this role on them. It is interesting to reflect on accessing rhythm 'second-hand' in this way as a means of doing rhythmanalysis.

Much qualitative research in the social sciences is dominated by talk and text and the gains and limitations of this reliance have been well rehearsed in recent years (e.g. Back 2007, Pink 2007), especially in the light of new developments in non-representational (Vannini 2015) and affective methodologies (Knudsen and Stage 2015). In Edensor's work, bodies are central to the story but access to bodily experience is through language and dialogue. First, embodied experience must be verbalized and shared with the researchers. There may be a methodological advantage here: To what extent does talking about rhythm – and perhaps finding oneself talking rhythmically – bring it into conscious awareness? Might we come to know it through speaking it in this way? Alternatively: What does language ignore? The recognition of unconscious and more recently pre-cognitive affective modes of being are important for how we conduct research (e.g. Hollway and Jefferson 2013). Which aspects of the experience of rhythm cannot be spoken? In short, what is beyond the reach of rhythmanalysis conducted in this way? Edensor has previously been critical of narrative arguing that it cannot effectively capture impressions, atmospheres, rhythms, sensations and effects in the case of walking (2008: 137). But these accounts on commuting and coach travel are rich and can be seen as a valuable element of the rhythmanalyst's tool-kit if more effective for some experiences of rhythm than others (cf. Ingold 2011).

Second, it is the author-researchers' voices which dominate these accounts without any reflexive discussion of how we got there. In the case of commuting, selections have clearly been made and on coach travel, there is little direct quotation from the driver and passengers. What is the process by which one set of voices gets translated into another? What does this mean for rendering the lived experience of rhythm? What forms of experience might be missed in the process? Finally, how is knowledge shared in the research team across different roles and expertise? These

questions are relevant to the knowledge claims made in much qualitative research and I return to them later.

One image taken from the coach window in Edensor and Holloway's discussion of coach travel (Plate 9: Mobility and visual apprehension; reproduced as Image 3.1) is especially evocative of the 'polyrhythmic

Images 3.1 and 3.2 Seen from the coach window, inside and outside, 2007 (Tim Edensor, with kind permission).

ensemble' of the coach tour and the landscape experienced through mobility that combines the inside and outside of the moving vehicle. The curtains framing one side of the window are also reflected in the glass and are rendered alongside the markings on the road and fence posts designating spatial divisions. Into the distance, the gentle curve of the green hill under a bright blue sky situates the tour participants within broader seasonal rhythms, mesmerizing them as the movement of the coach once again blurs the view. The landscape is thereby experienced as 'a space of rhythms and flows', of 'intersecting trajectories and temporalities' (2008: 497–8). In the second image included here (Image 3.2, not published in the original article) we sense the outside space reflected on the coach as it moves through the landscape. These images are indicative of the role the visual might play in showing and suggesting rhythm – and this is discussed in more detail in Example three in this chapter.

Running in the city and cycling in the dark

The liveliest accounts in Edensor's work are those based on autoethnography and 'embodied thick description' (Snyder 2016: 229). In collaboration with Matthew Cook in order to research cycling, Cook rides and keeps an autoethnographic and reflexive cycling diary for one year which both authors analyse (Cook and Edensor 2017). The experience of running the Berlin marathon is the subject of one study of running (Edensor and Larsen 2017), another based on the urbanized running culture of a park in Malmö, Sweden (Edensor, Kärrholm and Wirdelöv 2017). These accounts demonstrate the value of embodied action and autoethnography as modes of doing rhythmanalysis.

If cycling itself is a rhythmic practice, cycling on a murky night reveals 'the entanglement of sound and touch with the experience of looking'. This sensory mix enhances the presence of rhythm and of the landscape. Cook's thirty years of cycling experience underpins the research design and enables him to perceive the seasonal rhythms of cycling – marked by the routines and schedules of competition and shaped by nature – which are felt in the micro-level rhythms of each ride. To be ready to compete in the spring or summer, 'all the hard work is done in the winter and early spring', Cook writes. After that 'it's too late to change the body'. In addition, the cyclist always confronts 'an emerging landscape' (Cook and Edensor 2017: 12, 2) whether in the textures of the road surface, the liveliness of the natural world, the observation of contrasting forms of transport (road and

rail) or the experience of the elements such as wind or rain. For instance, a change in the weather can cause a shift away from a habitual and embodied sense of riding to a conscious awareness of pursuing a particular rhythm in a similar way to the active thinking of the walker discussed above.

The autoethnographic extracts in this article make explicit to both writer and reader the vitality and immediacy of the ride in the dark and the way it stimulates connections and imagination. The cyclist gets glimpses of other lives unfolding at a different pace from his own – ‘the smell of wood and coal fires’ for instance – and these odours evoke other times, perhaps other ‘moments’ in Lefebvre’s terms. Memory transports the cyclist to his paternal grandparents’ house and gives rise to feelings of isolation as he moves through the rural landscape. A further strength of this work is in the recognition of the materiality of the cyclist’s rhythm. Cook wears a headlamp (rather than a handlebar lamp) which both ‘shapes his gaze’ and empowers him to direct it (Cook and Edensor 2017: 15, 7). In addition, the weight of the bike and the coolness of the metal against warm skin are part of the feel of the ride.

Tim Edensor and Jonas Larsen’s (2017) analysis of the Berlin marathon weaves two rhythmic processes: running the ‘race’ itself and the everyday preparation over the previous months and weeks, of both runner and city. In this research, Larsen runs the marathon and captures the movement of his own body with a GoPro camera while Edensor films it as a spectator. Larsen also writes a diary of his preparation and experience of the event and both authors conduct interviews with other runners before and after the race, and cycle and film the length of the route the day after the event. Marathon training – as for the cyclist – contains its own rhythms. To be race-ready implies specific configurations of training in anticipation of the marathon and includes resting as well as running, and developing an understanding of pace and style. The aim is ‘to absorb rhythm through prolonged practice so that it becomes habitual’ at a corporeal level, as in Lefebvre’s dressage (Edensor and Larsen 2017: 7). Preparation also implies material relations around specialized clothing, measurement devices, advice and nutrition. And running routines must accommodate – or be accommodated by – other rhythms and commitments, of work, family or domestic life.

While the rhythmic repetition of marathon training for Larsen is cyclical, it is also situated in linear time directed to the date of the race itself. The days and hours before the race are full of potential arrhythmic

obstacles – the demands of travel, friends and family, and the need for rest and focus. Hours ahead of the race, Larsen's account of the micro-temporal arrangements of sleeping, eating and eliminating bodily waste convey the intensity and concentration of this phase. Linear time is important during the race itself as runners strive for a personal best or other record and measure themselves in relation to the clock and Global Positioning System (GPS) data. Unlike the uncertainty which characterizes the unfolding route of the night-time cyclist, the smooth terrain of the marathon track holds few surprises. Nevertheless the runner must focus 'on what is in front of us, and on our watches'. The soundscape is of 'shoes-hitting-the-ground, beeping watches, breathing bodies, sporadic music and almost ever-present clapping and yelling': 'no one says a word'. Training is rewarded as the runners settle into their rhythms and 'synchronise eurhythmically' (Edensor and Larsen 2017: 11–12).

Finally, in a study of the urbanized running culture of a park in Malmö, Sweden, in which Edensor collaborated with Mattias Kärrholm and Johan Wirdelöv (2017), the authors based their analysis on Wirdelöv's running diary kept from spring to autumn 2016 as well as interviews with runners in the park and observations of the intersecting mobilities of the park space. Wirdelöv was not an established runner prior to the research but this unfamiliarity meant he was able to notice much that is strange in 'becoming a runner'. In a similar way to Larsen, he had to absorb rhythm into the body which 'involves on-going negotiations with different rhythms'. First, there was the changing experience of time as Wirdelöv's fitness increased. Second, his body experienced 'a sort of unfolding' as he found new ways of moving through space and developing a smooth rhythm. For some runners this means synchronizing with other runners in 'shared rhythms' – or in relation to other moving objects such as cars or bicycles. Third, his awareness shifted between interior and exterior rhythms as, for instance, he accommodated the faster speed of an approaching runner (4, 7, 12–15).

Across these pieces of research, the methodology of reflexive diary-writing is successful for documenting the rhythms of the run and the ride in and over time. However, given that embodied perception of the world is so central to the practice of rhythmanalysis pursued in these examples, it is important to know something of the bodies that are the instruments of the research, especially since it is well established that different bodies perceive differently. We hear little about Larsen or Wirdelöv. Cook does openly present himself as a fit, middle-aged, white, British male but the

linkages between this experience and identity in a general sense and how they may dispose him to apprehend rhythm or in what kinds of rhythms his body is enfolded are not made clear. While the body is certainly present in this research, the analysis offered might be more fully situated in the specific bodies of the researchers. A more explicit autoethnographic orientation might add to the practice of rhythmanalysis here (Adams, Holman Jones and Ellis 2014).

Dancing on the street

The final piece of research I want to discuss in this section concerns dance, one of Lefebvre's 'preferred sphere[s] of experiment' for rhythmanalysis (1991: 205). Here the body is central in a different way from the examples discussed above as the rhythmanalysts explicitly analyse and undertake disruptive performances in urban space. The study I discuss is a collaboration between Tim Edensor and Caitlan Bowdler (Edensor and Bowdler 2015) who use rhythmanalysis to analyse recorded and live site-specific dance performances. The three dance works they discuss² in addition to the intervention performed by Bowdler in public space show how 'the quality of moving bodies contributes to the qualities of the spaces in which these bodies move' (McCormack 2008: 1822 in Edensor and Bowdler 2015: 710). Here I focus on *Traffic* (2004), choreographed and performed by Wayne Sables, and the 'experimental geography' (Edensor and Bowdler 2015: 711) undertaken by Bowdler herself.

Sables' *Traffic* is a solo intervention in city space which deliberately disrupts and simultaneously exposes everyday urban rhythms in the flow of pedestrian traffic. It takes place on a Saturday morning on a busy shopping street in Leeds in the north of England. From the publicly available film of the intervention,³ Sables is seen to position himself in a moving crowd against the current in several ways. First, he is still as the crowd pulses around him. Next, he weaves among pedestrians, cutting in and out, in front and around them. Finally, when he dances more conspicuously, the reach of his movements becomes a new, temporary obstacle in the street and the viewer witnesses how space reshapes itself around him. His

² Philippe Saire's *Mini-Golf du Petit Chêne* (2002), Wayne Sables' *Traffic* (2004), and a piece by the Bristol-based Guerilla Dance Project (2010).

³ *Traffic* is available on YouTube at: <https://www.youtube.com/watch?v=f2B6XXQBpFI&feature=c4-overview-vl&list=PL4ED2CE7C27432A8A>

gestures and his stillness both draw the viewer's attention to the regularity and automaticity of the movement of others on the street, especially the 'routines and conventions of walking'. Indeed, in each configuration, Sables 'provides a vivid counterpoint to the collectively steady pace of the pedestrians' as they tread along the pavement which 'confines and channels' them. Dancing bodies 'defamiliarise but also thicken a sense of place'. They alert the onlooker on the street and the rhythm analyst-viewer of the film to a certain 'consistency to place over time' on the one hand, and to the 'tactics' which might be employed to trouble that steadiness at any moment. Indeed, 'the dancer may act as a sort of rhythm analyst', explicitly using his or her body as 'an instrument to gauge and identify the rhythms of a place' (Edensor and Bowdler 2015: 710–16).

Using dance as a form of rhythm analysis is precisely what Caitlan Bowdler sought to do in creating a dance which was also filmed.⁴ Performed in Piccadilly Gardens, a park in central Manchester, with a colleague, it was 'embodied and immersive' for the two dancers and an opportunity to trace the reactions of others in the park. The setting is important as the gardens are already a space of play and possibility with fewer restrictions on action and movement than the street. The dancers unsettle the scene in an ambiguous way repeatedly blending their movements into everyday spatial practices such as sitting on a bench, and resurfacing from these poses at odds with the norms of the park as they climb over the same bench for instance. They refuse the pace of others on the bridge and make themselves an obstacle which provokes laughter and uncertainty. This can be seen in the bodies of passers-by who literally do not know where to put themselves. Both of these segments of the film are marked by the passage of birds around or across the dancers, hinting at other non-human rhythms which pervade the same space.

This intervention was an autoethnographic attempt to explore how the dimensions of play, rhythm and habit – previously identified as themes of the videos the authors analyse – are experienced live. This chimes well with Lefebvre: 'Play recalls forgotten depths and summons them up to the light of day. ... Play is a lavish provider of presence and presences' (2014a: 497). Bowdler wrote up her performance experience quickly, seeking to retain the immediacy of the affective and embodied sensations it produced,

⁴ The film is available on YouTube at: <https://www.youtube.com/watch?v=-CiPK-5yUGs&feature=youtu.be>

and she viewed the film of it to access otherwise neglected aspects of the performance. It is interesting how she recounts feeling ‘as if we were blending into the rhythms of the city’ through movement, sound and touch. This might be related to the relative freedom of the park compared to the street of Sables’ performance, or that she was one of two dancers moving in coordination with one another. However, it also hints at the varying configurations of rhythms that synchronize across the body and the ‘rhythmic diversity’ of a place, or in the case of Sables may jar in the face of a hostile reaction. Either way, the sensory grasp of the city is heightened by the ‘inventive technique’ of the dancer as rhythmanalyst (Edensor and Bowdler 2015: 717, 721, 723).

Reflections

Rhythmanalysis, argues Edensor, is effective for revealing how places are ‘seething with emergent properties, but usually stabilized by regular patterns of flow’ (2010a: 3). Across his own work he has worked with rhythmanalysis in imaginative and experimental ways and deployed the body as a device to register rhythms, as a source of experience, and as a means to sense rhythm in the actions and performances of others. He has gone beyond the body as a direct medium for grasping rhythm, working with talk, text, and the visual to gain access to rhythm, and has extended the attention of the rhythmanalyst to polyrhythmic ensembles of bodies, materials, atmospheres and environments. It is through this variety of embodied practices that Edensor and collaborators identify different configurations of rhythm. However, if rhythmanalysis is something of a work in progress, it might be further enhanced by more situated accounts of the rhythmanalyst’s body, not in the sense of autobiographical revelation for its own sake but to reflexively explore the different levels at which rhythms register for different bodies and what this means for understanding the polyrhythmic complexity of social life.

Example two: The displacement of the body in the study of market rhythms

The second example I have selected to focus on here takes issue with Lefebvre’s contention that rhythm is always experienced as embodied. It is based on the insights of Danish researchers, Christian Borch, Kristian Bondo Hansen and Ann-Christina Lange (2015) working in a cross-disciplinary

context spanning management, philosophy and politics. This section is shorter than the others in this chapter as it is primarily based on a single study. However, I consider it important for the ways in which it develops rhythmanalysis beyond the body and as a material method.

Borch, Bondo Hansen and Lange argue that existing scholarship using rhythmanalysis to examine everyday life, especially routine urban rhythms, recognizes Lefebvre's concern with the lived experience of capitalism at the level of the everyday. However, there is often 'a lack of systematic empirical attention to how these everyday rhythms are related to *capitalism*' and the connections between mundane practices and the workings of capital may be underspecified or missing altogether. Borch, Bondo Hansen and Lange's study of financial markets as a mid-level space of the operation of capital seeks to address this gap, analysing 'the rhythms of capitalism as expressed in particular configurations of financial markets, rather than how capitalism structures the rhythms of market-external everyday life in the city'. The authors thereby 'relax the strong opposition' that is found in Lefebvre's work between capital on the one hand and everyday life and bodies on the other (2015: 1082, emphasis in original).

Trading in the pit

Borch, Bondo Hansen and Lange (2015) explore the contrasting operation of financial markets from the so-called open-outcry 'pit' of the early twentieth century to current practices of high-frequency trading (HFT). The architecture of the Chicago Board of Trade – their selected example of pit trading – allows everyone on the inside to see and hear one another and has steps to the outside that facilitate the swift processing of orders. A late-nineteenth-century design, it is a 'unified marketplace with maximum visibility' intended to 'enhance market liquidity' and it leads to 'intensive' and 'effective' forms of trade (1087). This intensity is experienced at the level of 'bodily sociality' (MacKenzie 2004: 88 in Borch, Bondo Hansen and Lange 2015: 1087) where traders read one other's physical gestures and signs. In order to tune into the 'language' of the market and its micro-expressions, traders must configure and adjust their minds and bodies to its rhythms (Zaloom 2003 in Borch, Bondo Hansen and Lange 2015: 1087). At the extreme, the trader 'merges' with the market and in so doing gains access to its ebbs and flows. Immersion is the name of the game – or as Borch and colleagues interpret, eurhythmia is the goal. However, this reading of immersion as eurhythmia disregards Lefebvre's arguments that

rhythmanalysis always requires critical distance and movement across the inside and the outside (2004: 27). Immersed in the market, the trader feels rhythm but this does not make him or her a rhythmanalyst.

In addition to drawing on existing ethnographic studies, Borch and colleagues make use of an early-twentieth-century fictionalized account of pit trading set in Chicago. *The Pit: A Story of Chicago* published by Frank Norris in 1903 was based on well-known figures and events. Since pit trading was a dominant practice at the time this novel was written, Borch, Bondo Hansen and Lange argue it 'better capture[s] the market rhythms of pit trading prior to its demise' and 'offers a means by which to understand how pit traders' bodies are calibrated as metronomes of market rhythms' (2015: 1087). The reader encounters the central character of Cutis Jadwin (based on well-known trader, Joseph Leiter), Page Dearborn (the sister of the protagonist's wife-to-be), and Landry Court (a broker's clerk) and their different positions in relation to the market are used to explore the grip of its rhythms. Page remains too distanced from the workings of the market to properly assume its rhythm. Despite being 'in a position similar to Lefebvre's idealized balcony' since she has not previously been grasped by the rhythms of market life, she can experience it only as 'noise and chaos' (Borch, Bondo Hansen and Lange 2015: 1087-8). In contrast, Landry can "'feel" the market ... almost at his very finger tips' (Norris 1994[1903] in *ibid.*: 1088). This alignment of mind and body is triggered when trade commences, and he instantly experiences a heightened attentiveness. It gives him an edge but also puts him at risk as the rhythms of the market threaten to overtake such a zealous trader. We see this most clearly in Cutis' obsession with wheat which is the source of his rise and later his downfall. In this instance, capital is destructive. It penetrates everyday life and finally destroys it, just as Lefebvre tells us it will.

A different stance towards the allure of market rhythms discussed by Borch, Bondo Hansen and Lange is the tradition of 'contrarian speculation' developed in prescriptive American trade literature in the 1920s and 1930s. The contagious affective charge of the crowd meant markets were perceived as potentially 'deceptive' and contrarian traders would not therefore take them at face value. Instead, they sought to achieve balance between participation and observation, trusting neither their own bodies nor those of other traders. The techniques they developed to 'remain unaffected' and to avoid impulse buying included to 'fixate one's attention' for instance by

writing down their observations of the market during trade.⁵ The aim was 'to calibrate, in a literary sense, the body as a metronome of the market, in a manner that focussed attention on the market rhythms without the individual becoming *mentally* subsumed by the rhythms' contagiousness' (2015: 1089, emphasis in original). Borch, Bondo Hansen and Lange discuss contrarian speculation in terms of the separation of distinct 'bodily' and 'mental' rhythms which they say is not systematically tackled by Lefebvre. I read this differently. Lefebvre calls on rhythmanalysts to think with the body (2004: 21): the body itself and mental processes are not detached from one another. Indeed, Lefebvre's rhythmanalysis is, following Chen (2017), a phenomenological approach in which there is no separation between mental, physical and social aspects of being (Merleau-Ponty 2012[1945]). While there are varying cognitive frameworks through which practical understanding may be rendered – and different reflexive techniques such as fixating one's attention may help here – mental processes themselves cannot occur separately from the body situated in place and time.

High-frequency trade

The world of HFT is quite different from life in the pit and requires some contextualization. The closure of trading floors in stock markets across the world was set in motion by legal changes and technological developments in the latter part of the twentieth century.⁶ The first shift was to 'screen' trading where traders work in designated trading rooms engaging with the market via screens and the click of a mouse. However, there has been a second and fast-growing shift in the past decade or so 'characterised by an intensified computerization of markets' where trade takes place in a 'fully digital space' (Borch and Lange 2017: 284). HFT is a subset of this shift to algorithmic trading and now accounts for more than half of all financial trades. This has implications for financial stability, social crisis and insecurity and there have already been a number of flash or sudden crashes (Thompson 2016: 2). HFT also sheds light on the '*algorithmization of society*' more generally which is happening across a range of sites from social media to dating (Borch and Lange 2017: 303, emphasis in original). Little is known about how finance firms and markets operate and secrecy within these

⁵ They have much in common with ethnographers here.

⁶ For instance, what came to be known as the 'Big Bang' in the London Stock Exchange on 27 October 1986.

firms may actually be part of a protectionist strategy to prevent imitation and shield capital (Lange 2016). However, such technologies may 'prompt new ways of acting and thinking in markets' (Borch and Lange 2017: 284) and new ways of apprehending rhythm.

In HFT, algorithms – that is 'the practice of organizing a set of instructions to execute a decision that can be rendered into an electronic computable form' – are central. Trade takes place through the interaction of algorithms with one another as they seek to anticipate 'proper' prices and transact accordingly (Thompson 2016: 2). This happens at speeds beyond human capacity – in tenths of a second up to microseconds – and firms pay significant sums to locate physical infrastructure (servers, cables, etc.) so as to minimize execution times and thereby get an edge on their competitors.

Traders are spatially isolated from one another in HFT trading rooms that usually accommodate seven to ten desks. Each trader is literally surrounded by screens running the codes of their different algorithms. Traders' bodily proximity to one another in the pit is replaced by proximity to their screens. Visibility is no longer key. On the contrary, some have partition walls and privacy filters to conceal codes. Traders have two sets of screens. One set depicts market rhythms through the 'electronic limit order book, showing the bid and ask prices' but the trader is generally not concerned with these. The other set, comprising as many as six screens, shows the trader's algorithms, codes and graphs of performance and these are the focus of their attention (Borch, Boudo Hansen and Lange 2015: 1090–1). Borch and colleagues learnt about these machinic relations through the direct observation of the traders' working spaces. They asked questions about what was going on in 'real time' but noted that responses were often partial, either because discussions were interrupted by the demands of the algorithms or because traders were reticent to speak in front of one another. What talk there is in the trading room generally concerns code, software and algorithms rather than markets. Indeed, value is attached to the efficiency of code rather than understanding of market developments and company performance in real terms – although some traders do take part in informal exchanges in chat rooms trying to discern who is trading what, where and when (Thompson 2016: 3). It is significant that the majority of the predominantly male traders are highly educated mathematicians, computer scientists, physicists and engineers rather than economists or finance specialists (Borch and Lange 2017: 292, 294).

While traders might be understood as watching the market and its effects rather than acting within it (Zaloom 2006: 6 in Borch and Lange 2017: 287), HFT is not without human intervention. Direct bodily immersion in the market to gain access to its rhythms is not possible since the rhythm of the market is not 'compatible with a human timescale'. So, instead, traders '*calibrate their bodily rhythms to their algorithms* (and thereby *indirectly* to markets)'. They monitor and amend their algorithms intensively, switching them on or off or substituting one for another as market conditions change. This requires 'close physical-bodily proximity to the algorithms' as well as phone applications which alert them to trouble when the human needs for rest and breaks impose themselves and take them away from their desks (Borch, Bondo Hansen and Lange 2015: 1091–2, emphasis in original).

It is clear that the rhythm of the market has increasingly become out of synch with cyclical body rhythms. Borch, Bondo Hansen and Lange argue that this happens in two ways: through *extension* and *intension*. Extension refers to the market's temporal reach, and intension to the speed of HFT. Futures markets for instance are open twenty-three hours a day. Traders work long hours and in shifts to successfully oversee the operation of the algorithms. They must trust one another, a particular burden for the algorithm's writer-creator who may feel considerable emotional attachment to it (Lange 2016). Night traders frequently fall asleep at their desks or use 'optimising' substances to better calibrate and indeed modify their bodies and sleep patterns to the algorithm's own rhythms and its unrelenting enforcement of linear time (Borch, Bondo Hansen and Lange 2015: 1091–2). The hour that the market is shut is no time for rest either. It takes discipline not to intervene to adjust algorithms based on short-term emotive impulses and this gives rise to considerable psychological complexity. Market absorption is clearly not the goal in HFT (Borch and Lange 2017: 296, 301).

The rhythms and temporal reach of the working day of the HFT trader are strongly driven by the operation and needs of the algorithms themselves. While there is a cyclical rhythm to their maintenance (from constant to every couple of weeks) and replacement (every three to six months), this takes extended and linear working schedules to be accomplished. However, there are many instances when this linearization is suspended. When economic announcements are made for instance, traders consider it too risky to gain from the unpredictability that follows and wait for it to pass instead. Trade is also interrupted by the cyclical rhythms of the weather as

the microwaves that permit high-speed transmissions are susceptible to rain and other atmospheric interferences which limit their performance in linear time. This suggests that even in the case of such a technology in the forefront of capitalist processes, Lefebvre's emphasis on the colonization of the cyclical by the linear needs to be nuanced (Borch, Bondo Hansen and Lange 2015: 1092, 1094).

Finally, it is interesting to consider what the rhythms of high-frequency trade might mean for the production of gendered differences and identities in these settings.⁷ As in pit and screen trading, HFT is very male-dominated. However, the temporalities and social relations of these working practices are significantly different. While pit and screen traders are known to work, play and socialize intensively in highly sexualized and gendered ways which Linda McDowell has documented so well in *Capital Culture* (1997) – and a spate of legal cases attest to⁸ – high-frequency traders must work intensively *and* extensively. This calls for and produces different types of subjectivities and capacities. Gendering rhythmanalysis might offer new insights into the gendered relations of rhythm in the forms of trade discussed here, and the relevance of rhythm in the production of sexual difference more generally.

Reflections

Borch, Bondo Hansen and Lange have demonstrated the usefulness and limitations of rhythmanalysis for studying the everyday operation of capitalism in financial markets. In HFT, the speed of trade is beyond human perception. However, instead of giving up on rhythmanalysis because the body is no longer central, they show that rhythmanalysis can be done differently attending to constellations of bodies, material (screens) and immaterial (algorithms) elements that mediate the trader's relationship to the market. Being in the zone is no longer about bodily presence but about being 'algorithmically present in markets in order to be able to sense their rhythms and proactively adjust the strategies on this basis' (2015: 1093). Yet, the efficacy and success – or indeed failure – of the algorithms operating at extreme speed in HFT are accumulated over weeks or months rather than in days or minutes. There is a certain slowness then to the HFT trader's

⁷ Borch and colleagues make reference to gender in their published work but state that it is not the focus of their attention.

⁸ See Ellen Poe's *Reset: My Fight for Inclusion and Lasting Change* (2017).

work compared with the pit or screen trader in a 'paradoxical inversion of time horizons' (Borch and Lange 2017: 293–4, 302).

In the discussion of pit trade above, we heard how contrarian speculators considered that the body could not be trusted. In HFT, we learnt how the body is not central to market processes; so rhythmanalysis needs to take place through other tools. In the following example, we continue thinking about the means by which we might access and examine rhythm if the senses cannot always directly read the moves and rhythms of the market or interpret them clearly. The next section considers, contra Lefebvre, the value of the audiovisual for doing rhythmanalysis.

Example three: The insufficient body: Using audiovisual methods to capture rhythm

The third set of examples showcases the development of rhythmanalysis through audiovisual methods. In his Foreword to the second edition of *Critique of Everyday Life*, Lefebvre is explicit in his recognition that some forms of film and cinema 'reveal a truth about everyday life'. He discusses Charlie Chaplin and the 'secret of his comic powers' which do not reside in the body itself but 'in the relation of this body to something else: a social relation of the material world and the social world'. Chaplin's *Modern Times* is widely recognized as showing the rhythms of bodies at work under capitalism, the pace set by the machines at odds with the rhythms of Chaplin's body and tempo which he dramatizes with great hilarity, tragedy and insight. In relation to his early films, Lefebvre commends Chaplin for constructing 'a fiction truer than reality as it is immediately given' (2014a: 32, 35).

In *Rhythmanalysis* itself, Lefebvre seems to have mixed feelings about the use of the audiovisual. He is open to recording sounds when he writes:

The theory of rhythms as such has received solid support from the possibilities of reproducing rhythms, studying rhythms by recording them, therefore of grasping them in their diversity: slow or fast, syncopated or continuous, interfering or distinct. Putting an interview or background noises on disc or cassette enables us to reflect on rhythms, which no longer vanish whenever they appear. (2004: 69)

However, he is less convinced of the power of the visual to apprehend rhythm: 'no camera, no image or series of images can show these rhythms', he states (2004: 36), despite being able to view them with the naked eye from his balcony. To a twenty-first-century reader, however, with the 'unprecedented opportunity' (Back 2012: 18) of a vast range of everyday devices quite literally to hand, this position is too constraining. Indeed, Lefebvre's insistence that 'the rhythmanalyst calls on all his senses' (2004: 21) actually chimes with stances adopted by researchers who seek to tune into the environment using visual and sensory techniques and technologies as supplement to or an extension of embodiment in immersive and non-representational ethnographies today (see Pink 2015).

Several scholars have employed audio/visual methods to undertake rhythmanalysis, often in an experimental way.⁹ While taking inspiration from Lefebvre, Alan Latham and Derek McCormack nevertheless take issue with his insistence on the 'body as a metronomic sensory apparatus' and the only way to access rhythm. On a field trip to Berlin with cultural geography students, they found that far from being a 'technique of distancing or detachment', visually documenting interaction with a camera in urban space made apparent the rhythms of everyday sociality on public transport for instance. Working with images may therefore be a method for 'thinking through the rhythms of urban environments' (2009: 252, 256–7). Also based on recordings in Berlin, Michael Pryke (2000, 2002) constructed audio and photomontages to document 'the white noise of capitalism' in the rhythms of the global economy as they can be seen and heard in the newly created Potsdamer Platz and to evoke place-making through time. Tom Hall, Brett Lashua and Amanda Coffey worked primarily with sound by making recordings as they shadowed night workers in the city of Cardiff arguing that sound provides 'clues to the rhythms of an urban everyday' and a means 'to open up ... polyrhythmic complexity' (2008: 1028). James Evans and Phil Jones take this a step further, listening rather than solely looking at scientific data in their creation of a short film to 'make non-human rhythms palpable' in their work on the socio-natural rhythms of the city. They use rhythmanalysis to 'reveal, capture and resensitise' the set of rhythms that characterizes urban socio-nature (2008: 663–4).

⁹ Including Whyte (1980) to document small urban spaces, if not with a particular focus on rhythm.

In the discussion of Tim Edensor's work earlier in this chapter, video and photography were elements of ethnographic-rhythmalytic observation and documentation. Paul Simpson (2012) makes use of time-lapse photography to capture movement, interaction and rhythm in the public performance of a street magician.¹⁰ Time-lapse is an interesting technique as rhythm is inherent in the pulse of the sequence of images produced between what is seen and not seen (Jungnickel 2015). The shift from one image to the next is visible to the human eye unlike in the flow of images in film and video.¹¹ For Simpson, time-lapse provides an opportunity to record 'the *qualitative* unfolding of events as they happen' (2012: 31, emphasis in original) and is a means to perceive the variety of rhythms that permeate them as the researcher can subsequently play with time by accelerating or slowing the sequence of images in the process of analysis.

Documenting the rhythm of a fish market

In what follows I present my own study of London's Billingsgate fish market (Lyon 2016¹²) in which I created a montage of time-lapse photography and sound in order to explore the ways that rhythms intersect, coexist and clash. In autumn 2012, inspired by Henri Lefebvre's call to attend to rhythm and as part of a broader project on the fish industry, I embarked on a visual ethnography of the market. Trade at Billingsgate officially starts at four o'clock in the morning, but fish merchants and salespeople can be seen setting up from around one o'clock. Although fish cannot legally leave the market before 4.00 am, serious buyers, mostly for the hotel and catering industry, would have often browsed the samples on display and already made their decisions by then.

Arriving in the early hours, I deliberately wandered around the market hall letting myself get caught up in or 'grasped by' the rhythms, noises, tensions, buzz, chill and thrill of the place, hanging out with fish merchants, inspectors, porters and traders. I shadowed different workers and took numerous tea breaks in one of the cafes or, when I got the chance, with the fish inspectors. Good relations in the market were essential for obtaining

¹⁰ His videos can be viewed here: <https://www.youtube.com/watch?v=GjiwHwsX9L8> and <https://www.youtube.com/watch?v=fGjDn-IQRL0>

¹¹ There are twenty-five frames per second in film.

¹² Material from this section is taken from a longer discussion in Lyon (2016). The final, definitive version of this paper has been published in Sociological Research Online, 21/3, August 2016, All rights reserved. © SOCIOLOGICAL RESEARCH ONLINE.

formal and informal acceptance for the project and for the film – and for the ethical conduct of this research. The cultural tone of the market, characterized by banter and playfulness, structured many of my own interactions and added to the pleasures of being there. I was welcomed as a guest (Gherardi 1996), conspicuous as a relatively young woman in socially homogeneous space dominated numerically and culturally by older, white, working-class men. If I was treated with paternalism, there was no shortage of displays of ‘competitive’ masculinity too (Kerfoot and Knights 1993), performances mostly for and between men.

Whenever I arrived at Billingsgate, I felt myself absorb the atmosphere as ‘spatial bearers of moods’ (Böhme 1993: 119), transforming the experience of temporality – was I really this lively at four o’clock in the morning? And by the time I left the market, I had a sense of having been there *accumulated* through time. But in the hours that I spent there, I noticed that I kept looking over my shoulder. I came to think of this as a bodily expression of the uncertain sense of where exactly the market was happening, of its ‘perpetually forming and deforming atmosphere’ (Anderson 2009: 79). It’s as if the market comes to life behind your back then slips away before you had the chance to take it in, I often thought. Immersion in the market was it turns out an obstacle to perception of its rhythms (Lefebvre 2004: 28, Borch, Bondo Hansen and Lange 2015: 1085).

The idea of making a film based on time-lapse photography came out of this sense of the intangibility and sensory excess of the market space and offered a mode of documenting and rendering the temporal structure of the market. The architecture of Billingsgate provides a particular opportunity for seeing its ‘temporal unfolding’ (Simpson 2012: 431) from the vantage point of a gallery at either end of the first floor overlooking the market hall, akin to Lefebvre’s balcony. The market hall is central to the everyday life of Billingsgate as a space of display, interaction, movement, negotiation and exchange, and it is where trade can be observed. I repeatedly found myself climbing the stairs and looking down on it from the first-floor gallery, taking stock of the mood and patterning of the day’s activities. It was here that the concrete possibility of making a film based on time-lapse photography began to take shape. My body and senses were clearly instruments of this research (Turner and Norwood 2013), especially in alerting me to the dispersed feel of the market and sparking this way of apprehending market space, but they were insufficient to capture the polyrhythmic complexity of the place.

With a film-maker/collaborator, Kevin Reynolds,¹³ I chose one night in December 2012 to record the scene.¹⁴ Just after midnight, we set up two digital cameras (one as a backup) in the first-floor gallery location looking down the length of the market hall above one end of the central aisle. This position allowed us to look along as well as down on the market floor, the perspective emphasizing a viewpoint into the distance and proximity in the foreground, conveying a sense of immersion. The composition suggests the continuity of the space beyond what can be seen in the foreground and so keeps the viewer located within and not wholly above it. Most of the frame is taken up with the market floor, reaching up to the level of the clock suspended from the ceiling in the centre of the market hall, which also offered us the opportunity to explicitly mark clock-time for the viewer. This framing is a deliberate choice which heightens the unitary sense of place and the intensity of what goes on there. But it is a particular view. Another location, up high within the market space looking down on it from a bird's eye view or at floor level would certainly have conveyed a different sense of space (Simpson 2012: 430).

We took photographs from just before one o'clock in the morning until midday, from market setup until the market hall was (almost) still. The interval between photographs was ten seconds, based on Kevin's technical judgement and my preferred aesthetic that this would not mask and excessively 'smooth' the conditions of making the film. The depth of field allowed everything in the frame to be kept in focus. The fire glass against which the lens was pressed (and held in place with tape) is visible, also evidencing the making of the film, and situating the camera and the viewer in place. The sound of the market hall is muted in this gallery location but every hour (at varying times within that hour) I went down to the market floor to do some 'soundwalking' (Hall, Lashua and Coffey 2008). Slipping into the flow of the crowd I made brief recordings on a handheld digital recorder of whatever sounds were in my path.

The resultant film – or audiovisual montage, stills from which are shown in Image 3.3 – is a combination of a selection of the sounds I recorded

¹³ Kevin Reynolds runs *veryMovingPictures*: <http://verymovingpictures.co.uk/> [accessed 17 March 2018].

¹⁴ I obtained formal consent from the City of London Corporation and informal verbal consent from the tradespeople in the foreground of the frame to make the film and gave them an opportunity to comment on a preview before making it public.

Image 3.3 Stills from Billingsgate Fish Market, Dawn Lyon and Kevin Reynolds, 11 December 2012: https://www.youtube.com/watch?v=nw_kf32GfHY (Author's own images).

with the sequence of images speeded up so one hour is presented in thirty seconds. This is a deliberate calibration based on judgement and experimentation that this speed would both distil patterns and flows and immerse the viewer in the experience of the space. The rhythms of the space that I could sense were present were made visible by increasing the speed of the images. Once the speed and thereby duration of the film were settled, we edited the sound bites. We started at four o'clock in the morning, synchronizing the sound of the bell that signals the beginning of trade with the visual that shows the clock striking four, and worked backwards and forwards from there. This was a 'creative-analytic process' in which we sought to evoke Billingsgate with an 'affective force' that goes beyond representation (Garrett and Hawkins 2015: 145–6).¹⁵

The construction of the montage is explicitly artificial. If we accept that all methods help to produce the reality they study (Law and Urry 2004), this deliberate undertaking to render rhythm does not diminish the significance of the presence of rhythms in the real-time flow of the everyday. Since such rhythms are hard to grasp in their immediacy, montage offers an effective 'medium of anthropological [or ethnographic] inquiry' (Grimshaw 2011: 248) and 'a tool of multi-sensory and affective discovery' (Garrett and Hawkins 2015: 147) or a means of *doing* rhythmanalysis. It creates 'mentally prolonged spaces' in which attention is repeatedly renewed, 'a sort of meditation on time' (Lefebvre 2004: 33, 30). By losing the richness of the detail, we sidestep the sensory overload that live presence and video entail, and begin to distinguish some threads among this 'temporal, material, technological and cultural tangle' (Sharma 2014: 4). As from Lefebvre's window, 'the flows separate out, rhythms respond to one another' (Lefebvre 2004: 28).

The film both describes rhythm and does 'a distinctive form of analytical work' (Grimshaw 2011: 257). It exposes the polyrhythmic complexity of the market and evokes a 'sense of time as motion and transformation' (Crang 2001: 201). In particular, time-lapse delivers the 'spatio-temporal unfolding of everyday events' over a duration (in linear clock-time) and reveals 'how various rhythms and routines interrelate and interfere' (Simpson 2012:

¹⁵ Since making the film available on YouTube: https://www.youtube.com/watch?v=nw_kf32GfHY, it has (at the time of writing in July 2018) been viewed over twenty-two thousand times. At the market, reaction to the film was marked by pride in what workers saw as a positive representation of their working lives and community.

440), for instance as different workers occupy the space, from sellers and buyers to cleaners. Indeed, through the film, I was better able to explore the relationships between rhythm, atmosphere and mobility, and interconnections and interactions in market space which I discuss below.

Perceiving rhythm through the audiovisual

On the night we photographed the market, we tried to get to Billingsgate ahead of anyone starting work on the market floor. Despite arriving at midnight, we were not the first there. But we did get a feel of the place when it was still and quiet which the film conveys, especially in contrast to what follows. It was chilly – minus three degrees centigrade outside, and at least as cold inside – and the first sounds of preparation for the day can be heard clearly, echoing in and marking out the space around.

Day breaks inside the market hall from the left of the screen as the bright lights get switched on for traders to set up ahead of daylight seeping in from the outside when the sun comes up. The colours become more vivid, first dominated by the yellow of the overhead structure, the green of the floor, then the white of the trader's clean coats. By three o'clock in the morning, the lids are lifted on sample boxes of fish which are carefully placed on display. The glistening combination of skin, scales and ice adds to the intensity of the morning brightness and spectrum of colour. It's a new beginning and there's a sense of anticipation in the air.

Telephones start to ring, and the sound of the market hall imposes itself. Once it is set up for trade, the soundscape is intense, sometimes jarring or confusing as multiple rhythms compete for attention. It's possible to discern 'layers' (Makagon and Neumann 2008) as we hear the close ring of a telephone, someone shouting nearby, or the pervasive squeak of the polystyrene boxes being moved around. Walking around the market – the way we made the sound recordings for the film – accentuates this.

The mood quietsens by around eight o'clock in the morning as the market is 'undone' and its charge dissipates. The navy, black and red of the buyers' clothes are replaced by rubbish bins and containers in bright blue, grey and orange. The main lights are switched off at around ten o'clock and we see daylight from the roof windows reflected in the floor, wet from the washing down of the stands. It's quiet again, with just the final cleaning to finish off. Those ringing in from the outside don't seem to be aware of these rhythms.

While I asked questions of merchants and tradespeople about the length and organization of the working day, I would argue that the film is a more

powerful statement of the 'rhythmic production of space' (Pryke 2000), and the pace and excitement of market life (Dixon and Straughan 2010: 455) than quotations from interviews. In it we see 'different temporal itineraries that constitute social space'. The presence of the clock at the top of the images emphasizes variation in the intensity of work, the duration of different tasks and activities, and the tiring repetition across whole stretches of time, enhanced by the mesmeric quality of time-lapse. It also hints at 'the complexity of lived time' and the 'micropolitics of temporal coordination' with the world outside Billingsgate such as two-shift sleeping, calculated convergence with others' lives, patterns in which some bodies recalibrate to the time of others (Sharma 2014: 5–7, 20).

The 'sense of time' (Vannini 2012a: 243) of Billingsgate in a broader set of urban and natural rhythms is also evident once the market is still for the day. It's a contained world when trade is at its peak, but once the inside lights are switched off and daylight is seen reflected in the wet floor, the viewer recognizes the rhythms of the market as being at odds with the city space around it – an instance of arrhythmia. What we cannot observe however is the anticipation of rhythms that are beyond the present that make the market happen the next day, and the one after – orders placed and deals done in processes that extend well beyond the temporal frame of the film. A different kind of design attentive to the temporalities of these rhythms would be needed in order to grasp them.

The architecture of the market hall is very clear from the vantage point of the film, especially the central aisle which produces the encounters within it as customers 'walk' the paths made for them (Harvey, Quilley and Benyon 2002: 206 on Covent Garden), the 'verges' lined with fish. There are around fifty traders at shops or stands – some beyond the frame – back to back in four 'corridors' lengthways with several cross-cutting paths at intervals along them. The green of the floor indicates public space, the space belonging to the stands demarcated in dark red. These boundaries are fluid however, as buyers step behind the displays to make a more private deal, and boxes and trolleys encumber the main paths.

The relative immobility of the sales staff and merchants contrasts with buyers on the move. Groups form and scatter, like an uneven pulse, stimulated by sounds or gestures or the lure of the fish in ways that the film does not allow us to appreciate at a micro level. Indeed, there are multiple coexisting rhythms when trade is in full swing. While there is some jostling at the stands, what is striking is that this destabilizing of

the boundaries between self and other leads to an *accommodation* of bodies in space and a *fluidity* of the movement of the crowd (Dixon and Straughan 2010: 454–5) – a synchronization enhanced by the speed of the film. This includes the movement of porters in the market hall facilitated by cries of ‘mind your legs’, ‘... your legs!’ and the rumble of trolleys. The porters manoeuvre their loads skilfully, or cope with how their loads gain momentum – the trolleys have no brakes and cannot easily be stopped – acting as ‘pacemakers’ (Parkes and Thrift 1979: 360) in the market space. Customers and other workers familiar with the market are tuned in to ‘sensory information about the physical and social environment’ (Dixon and Straughan 2010: 449) and smoothly and spontaneously move out of the way. The visitors on tours of the market with Billingsgate Seafood Training School stand out for their lack of bodily comprehension of the space – as did I at first. But I soon absorbed the rhythms of market life, an instance of Lefebvre’s *dressage*, to ‘bend oneself (to be bent) to its ways’ (2004: 39).

Lefebvre argues that space is produced and enacted through physical gestures and movements (Merrifield 2000: 177), and that rhythms inhabit the body can be seen very clearly at Billingsgate. Workers are tuned into the environment around them through their bodies and their senses, to one another, and to their working tools and materials (Hockey and Allen-Collinson 2009). There is a ‘transpersonal dimension’ (Anderson 2009) to how they work together, coordinating tasks and movements (Lyon and Back 2012: 5.12) through a non-reflective practical knowledge. The sound track of the film also alerts the viewer to the materiality of the market. The squeak of the polystyrene boxes is omnipresent. The boxes resist being lined up closely together, protesting loudly at times, and neither are they quietly acquiescent when picked up by porters wearing gloves or with wet hands. While each noise is not necessarily rhythmic, their overall clamour makes us pay attention to the materiality of work, to the nature of the objects that occupy the working space alongside people and fish.

The rhythms, movement and intensity of the market change through the night. The fish merchants and salespeople move around fast but steadily when the space is clear, until they are slowed by the presence of the fish which leads to more uneven rhythms – darting here and there, squeezing past obstacles, negotiating with things on the move. At the ring of the bell at four o’clock in the morning, which signals the legal start of trade, there is a subtle shift in speed and activity on the part of traders and buyers familiar

with this repeated daily marker of official time. Movements gather pace and the pace gathers. We feel the polyrhythmic character of the market, including those stretches marked by a repetitive monotony. There is a linear character to the market, from preparation through to the sale and closing and cleaning up when the market is over, portrayed in the film by the steady and swift movement of the hands of the clock at the top of the frame. But there is more. The institutional rhythms of clock-time may structure the working night and day but the market is not characterized by this linearity alone. Alongside these lines through time, recursive loops, 'repetition, rupture and resumption' (Lefebvre 2004: 78) in an 'always emergent interaction' of linear and cyclical (Simpson 2008: 823) interfere with one another. We see and hear the cyclical repetitions of the sale and the movement of fish. We notice the differentiated rhythms of buyers and sellers and the temporalities of different types of work activity in harmony or at odds with one another.

Reflections

We can see through this example how rhythmanalysis 'provides a practical vocabulary' (Simpson 2008: 823) for research on the rhythms of market life – both in the traditional setup of Billingsgate and in the case of HFT presented in the previous section. It helps to generate new understandings of the 'rhythmic ordering' (Simpson 2012: 424) of work, and the specific way in which 'time makes space into place' (Parkes and Thrift 1979: 353) in the market. And it offers a research strategy for doing rhythmanalysis which has the potential to be applied in other fields. However, this particular mode of doing rhythmanalysis also obscures some of the temporalities of market life. Most obviously, the image of the market hall framed by the film is limited and does not inform viewers of the other processes and multiple temporalities that underpin the movement of fish through Billingsgate. We cannot see anticipation for instance, except for how it is inferred from the accommodation of moving bodies in space from one moment to the next. Yet my narrative interviews with fish merchants and salespeople reveal how multiple forms of anticipation and future-thinking are part of the everyday experience of work. Traders actively think about matching buyers and sellers when they make decisions about what products to offer, they plan in terms of seasons and holidays, and manage the vagaries of the weather and regulation and their implications for supply. It is therefore important to recognize that any one rhythmanalytical research strategy may be

insufficient to grasp the full workings of rhythm or that rhythmanalysis may be one strand of a research design that uses different tools to address different aspects of a study.

Conclusions

The aim of this chapter was to deepen the discussion of the practice of rhythmanalysis through projects which have developed Lefebvre's approach in different directions. In the first section based on the work of Tim Edensor and colleagues, the body is a privileged tool to directly observe, feel and register rhythm as a means to analyse mobility and place-making. However, the body is also deployed in conjunction with other instruments of data collection including narrative interviews, diary-writing, film and photography. These studies present rhythmanalysis as a flexible approach which blends embodied and sensory research with talk, text, sound and image. Questions remain about whose body registers which rhythms and what this means for the production of knowledge – and these are further addressed in Chapter 4.

In the second and third examples, the body is not centre stage. In their work on the rhythmanalytical practices of high-frequency traders, Christian Borch, Kristian Bondo Hansen and Ann-Christina Lange reveal the workings of capital *in* the everyday so disassembling Lefebvre's strong opposition between capitalism and everyday life. Within this, traders' bodies are found to be calibrated to their algorithms in contrast to earlier, corporeal and place-based forms of trade (see also Snyder 2016). However, such forms of trade persist, as in the case of my own study of Billingsgate fish market. Here the body was important to feel the presence of multiple coexisting rhythms, but alone it was an insufficient instrument to detect and disentangle them. Instead, audiovisual methods – time-lapse photography and sound recordings – provided a means of perceiving and presenting rhythm.

The working patterns of high-frequency traders, and buyers and sellers of fish as well as the night cyclist in Cook and Edensor (2017) all draw attention to working – and leisure practices – at night. There is a well-established literature that documents the social significance of the broken and disrupted sleep of shift-workers and the consequences for bodily and mental health (e.g. Snyder 2016, Wolkowitz 2006). More recently attention

has been focused on the 'ruinous consequences' of 24/7 capitalism (Crary 2013) and its demands for temporal coordination (e.g. Sharma 2014, Wajcman 2015) as its reach extends. These arguments certainly chime with Lefebvre's concerns and fears for the colonization of the everyday by linear over cyclical rhythms. However, in the examples discussed in this chapter, colonization is neither total nor always unidirectional. Rhythmanalysis offers a means to articulate and refine the relations between the cyclical and the linear and gain new insights into the ways we live.