Simmons, B. (2021) 'The production of social spaces for children with profound and multiple learning difficulties: a Lefebvrian analysis', *British Journal of Sociology of Education*, 42 (5-6), pp. 828-844.

This is an Accepted Manuscript of an article published by Taylor & Francis Group in '*British Journal of Sociology of Education*' on 13/5/21 available online: https://doi.org/10.1080/01425692.2021.1922269

ResearchSPAce

http://researchspace.bathspa.ac.uk/

This pre-published version is made available in accordance with publisher policies.
Please cite only the published version using the reference above.

Your access and use of this document is based on your acceptance of the ResearchSPAce Metadata and Data Policies, as well as applicable law:- https://researchspace.bathspa.ac.uk/policies.html

Unless you accept the terms of these Policies in full, you do not have permission to download this document.

This cover sheet may not be removed from the document.

Please scroll down to view the document.

Simmons, B. (2021) The production of social spaces for children with PMLD: a Lefebvrian analysis. *British Journal of Sociology of Education*.

The production of social spaces for children with profound and multiple learning difficulties: a Lefebvrian analysis

There is on-going debate about whether mainstream education is desirable for children with profound and multiple learning difficulties (PMLD). Whilst some hold that 'inclusion' is a human right, and that interaction with mainstream peers leads to socio-cognitive gains, others argue that profoundly disabled learners require developmental curricular provided by special schools. Despite such claims, there is little evidence to support either view. This paper contributes to the debate by presenting research that examined how mainstream schools and special schools, across nursery, primary, and secondary settings, provided alternative social spaces for children with PMLD. It applies a Lefebvrian lens to illuminate how social engagement depended on the extent to which prescribed practices ('abstract spaces') dominated the interaction ('spatial practices'), and the conditions which allowed novel forms of engagement to emerge ('lived spaces'). Novel forms of engagement correlated with positive social development. The conclusion challenges the 'mainstream-special' binary presupposed in inclusion debates.

Keywords: PMLD, Lefebvre, inclusive education, communication, social interaction

Introduction

'Profound and multiple learning difficulties' (PMLD) is a term used in the United Kingdom to refer to children who are said to experience very severe and complex intellectual impairments (DfE 2015). Researchers have traditionally framed these impairments in terms of global developmental delay, and children with PMLD are described as functioning at the pre-verbal stages of development (Simmons and Watson 2014). In addition to profound intellectual impairments, children with PMLD commonly experience a range of additional impairments (e.g. sensory and/or mobility), and require support for complex care needs. Whilst the 'PMLD' label is unique to the UK, terminological equivalents include Profound Intellectual Disabilities (e.g. Finland), Profound Intellectual and Multiple Disabilities (e.g. Australia) and Profound Multiple Disabilities (e.g. United States).

Researchers in the PMLD field have debated the extent to which children with PMLD could (or should) be educated in mainstream schools (e.g.Dreyfus 2020, Imray and Colley 2017, Simmons and Watson 2014). These debates often hinge on an evaluation of the goods that different spaces offer, and the extent to which these goods are appropriate for children with PMLD. The debates conceptualise mainstream schools and special schools as distinct geographical spaces that 'contain' certain kinds of materials, procedures and actors, and the value of these 'contents' become the focus of debate, particularly in the context of supporting children's behavioural and cognitive development. For example, Imray and Colley (2017) argue that mainstream curricular and pedagogy fail to address the profound learning needs of children with PMLD. The authors claim that children with PMLD are 'abnormal' (15) in their ability to learn and require a developmental curriculum rather than subject-based curriculum. By contrast, researchers who have conducted comparative studies of children with PMLD in both

mainstream schools and special schools have found that children were more awake, active and alert in mainstream schools compared to special schools (Foreman, Arthur-Kelly, Pascoe, and Smyth King 2004), and developed intersubjective awareness and communication skills after prolonged engagement with mainstream peers (Simmons and Watson 2014).

Despite the reported benefits of attending mainstream schools, empirical research in the field is rare, limited in scope, and there are significant gaps in knowledge. For example, whilst Foreman et al. (2004) were novel in their examination of alertness in children with PMLD, data collection was limited to one day of observation, and focused primarily on counting behavioural responses deemed indicative of the participants' levels of wakefulness and alertness. By contrast, the study reported by the current author (Simmons and Watson 2014) utilised ethnographic methods over the space of a year to provide a qualitative description of different social milieus (e.g. a special school classroom and a mainstream school classroom), and how a child with PMLD responded to these different milieus. However, the study only focused on one research participant with PMLD who was of primary school age. To date, there has been no published research that has explored the experiences of children with PMLD who attend mainstream pre-schools or mainstream secondary schools. Hence, whilst there is on-going debate about whether mainstream education is appropriate for children with PMLD, the debates lack substantial research evidence on which to draw.

This paper begins to address the research gap by presenting the findings of a three-year project funded through a British Academy Postdoctoral Fellowship (2014-2017) that examined how different school environments (i.e. special schools and mainstream schools, including nursery, primary and secondary provision) provided opportunities for children with PMLD to engage in social interaction, and the potential

impact of these interactions on children's emerging social awareness and communication skills. However, unlike previous studies which compared and contrasted different settings (alluded to above in terms of a 'container' view of space), this paper argues that such a conceptualisation of space fails to take into account social complexity, such as how similar interactions cut across different geographical spaces and age ranges, and how the same geographical space may produce qualitatively different and sometimes competing forms of interaction opportunities. To help illuminate this complexity, this paper draws on the work of Henri Lefebvre (1991) to develop a heuristic lens that guides analysis of different social spaces. Lefebvre's (1991) philosophy of space - his 'spatiology' (404) – reconceptualises space not as singular and static (i.e. space as the location of social interaction) but as something that is active, dynamic, and reproduced over time. Within the context of the PMLD field, a 'Lefebvrian' account extends debate away from the site(s) of social interaction towards an understanding of the conditions that shape or *produce* social interactions. As will be discussed later in the paper, this has ramifications for thinking about the inclusive education debate, and how we can foster children's sense of belonging regardless of location.

Whilst the examination of disability and space is not new, prior scholarship in the field has so far overlooked children with PMLD and the education spaces they encounter. Previous research has illuminated how society is shaped by ableist values, such as how 'practices, institutions, and social relations […] presume able-bodiedness, and by so doing, construct persons with disabilities as marginalized' (Chouinard 1997: 380). People who struggle to 'approximate the able-bodied norm' (ibid.) face 'barriered and bounded spaces' (Imrie 2001: 232) – inaccessible places or 'negative reactions to the presence of disabled persons in spaces construed as 'able-bodied" (Chouinard 1997:

382). This paper contributes to understandings of the socio-spatial dimensions of disability by problematising the idea of geographically distinct 'disabled spaces' and 'able-bodied spaces' in the context of education for children with PMLD. For example, far from experiencing 'negative reactions' to the presence of children with PMLD in primary mainstream schools (able-bodied space), the research illuminates how 'able-bodied children' made friends and played with children with PMLD. By contrast, secondary mainstream staff embodied a developmentally-normative style of interaction towards children with PMLD that was commonly found in special schools (disabled spaces). The following section will introduce the Lefebvrian framework that will be used to analyse data later in the paper.

Lefebvre's spatial triad

At the core of Lefebvre's account is his 'spatial triad', consisting of three interlinked concepts of space: (i) representations of space, (sometimes referred to as 'abstract space') (ii) spatial practices, and (iii) representational spaces (sometimes referred to as 'lived space'). The triad is used in this paper to examine the different kinds of social spaces that children with PMLD experienced in the study. The focus therefore extends beyond a comparative analysis of a binary (i.e. special school vs mainstream school) in order to explore the emergence of social spaces within, across, and even beyond these geographical sites. Because of Lefebvre's terminological similarity, this paper will use 'abstract space' in place of 'representations of space', and 'lived space' in place of 'representational spaces' for clarity.

Lefebvre's (1991) first concept in his spatial triad is abstract space, which refers 'to knowledge, to signs, to codes, and to frontal relations' (33). Abstract spaces are

conceptualised or conceived spaces, and include symbols, terminology or technical jargon, as well as paradigms used by professionals and institutions. As Merrifield (2006) notes: 'Representation implies the world of abstraction, what's in the head rather than in the body' (109). Embedded in abstract space are the 'logic and forms of knowledge, and the ideological content of codes, theories, and the conceptual depictions or space' (Shields 1999, 163). For Watkins (2005), the symbol systems provide manifestations of our mental constructs which codify dominant epistemological approaches by which truth and validity are measured. Within the context of this paper, abstract space includes specialist concepts derived from dominant learning theories in the PMLD field, i.e. behaviourism and cognitivism (Simmons and Watson 2014), the accompanying specialist terminology about cognitive-developmental milestones (e.g. 'intentional behaviour', 'contingency awareness', 'object permanence' etc.), the codes of practices, assessment tools and accompanying notation that prescribe interpretations of children's actions.

Lefebvre's (1991, 33) second concept is 'spatial practice' which 'embraces production and reproduction, and the particular locations and spatial sets of characteristics of each social formation'. Spatial practice refers to individual performance and the competence required for the everyday functions of society and social cohesion: 'In terms of social space, and of each member of a given society's relationship to that space, this cohesion implies a guaranteed level of competence and a specific level of performance' (ibid.). Spatial practices are described as secreting society's space, and include 'patterns and interactions that connect places and people, images with reality, worth with leisure' (Merrifield 2006, 110). In a professional context, this spatial practice (spatial competence) is based on descriptions found in abstract space (see above), e.g. those professional discourses, forms of knowledge, and

codes of conduct that shape practice. For teachers of children with PMLD, spatial practice refers to the acquired professionalised behaviours and competencies, the day-to-day routines, and specialist practices. Spatial practice refers to the embodiment of abstract space, the development of a professional style of interpreting and engaging with children who have the 'PMLD' label, and to the enactment of best practice guidelines and the performance of prescribed interventions.

The final concept in Lefebvre's (1991) spatial triad is 'lived space'. This concept describes space as 'directly lived through' and is the space of 'inhabitants' and 'users' (39). Lived spaces are described as 'embodying complex symbolisms, sometimes coded, sometimes not, linked to the clandestine or underground side of social life, and also to art' (ibid., 33). Lived spaces have a radical and resistive quality, as Merrifield (2006, 110) notes: lived space is concerned with the 'non-specialist world of argot rather than jargon'. Furthermore, lived spaces: 'don't obey rules of consistency or cohesiveness […] they don't involve too much head: they're felt more than thought' (ibid.). For Watkins (2005), lived space leads to deviations from the dominant abstract space – our lived experience is fundamental to all social encounters, and can conflict with abstract space, with how we are taught to think, feel and act, and this tension allows for an expression of individuality. Hence, Lefebvre's (1991) concept of lived space does not refer merely to 'having an experience', but to feelings of disruption, difference, and deviation, where protocol is not followed, where practitioners intuitively feel that something is not working, and where novel forms of engagement are allowed to emerge. Lived space is a space which breaks free from abstract space, and in doing so leads to new forms of action.

Within this paper, the spatial triad is adopted to guide analysis of data. However, it is important to note that Lefebvre did not intend for his triad to become a taxonomy or

a sequence of events. Instead, the spaces are interlinked or interlaced. For example, spatial practice may be seen in terms of being shaped by the tension between abstract space and lived space, or lived space is defined in relation to the abstract insofar as the abstract (as a culturally dominant interpretation) exists as the opposite to the lived. This fluidity will be revisited later in the paper.

Research

Research aims

The study reported in this paper presents the findings of a three-year project which examined how different learning environments (special and mainstream, including nursery, primary, and secondary settings) afforded alternative opportunities for children with PMLD to engage in social interaction. It also explored how children with PMLD responded to different opportunities to interact, and the impact of this on children's emerging communication skills.

The focus of the research emerged out of the researcher's doctoral study which examined how one student engaged in mainstream and specialist education environments (Simmons and Watson 2014). Using a methodology similar to that described below, the study found that the student displayed higher forms of social awareness and communicative intent in mainstream schools compared to special schools. However, the study was limited in both sample size (n=1), age range (primary school) and setting (one mainstream and one secondary). The postdoctoral research presented in this paper 'upscaled' the research to include to a larger sample, broader age range, and more diverse settings.

Sample

Seven children participated in the study. All children had Education, Health, and Care Plans (EHCPs), and were identified by their special school teachers and parents as having PMLD. All experienced either part-time or full-time mainstream education.

Table 1. Participants and time observed {INSERT TABLE 1 HERE}

Participant recruitment was initially difficult. The project began with the researcher emailing recruitment material to special school headteachers in Southwest England. Headteachers typically declined the offer to participate on the grounds that they either had no pre-existing relationships with mainstream schools or lacked sufficient resources to support mainstream placements. Some declined on the grounds that children with PMLD were too intellectually impaired to benefit from mainstream education. However, one special school headteacher was supportive of the project. The school had a history of working closely with a neighbouring mainstream school, particularly with regards to supporting student exchanges. However, these exchanges became less common over time until they eventually stopped. The headteacher was keen to renew the exchange programme and the project provided an opportunity to initiate this. The headteacher forwarded recruitment materials to her mainstream counterpart, and the materials were cascaded to teaching staff in each school. Teaching staff met with the researcher and indicated their enthusiasm for the project, before forwarding recruitment information to parents. Parents contacted the researcher and were particularly keen for their children to take part owing to the feeling that their children were hidden from the local community and had limited social circles. After parents gave consent for their children to participate, the researcher met the children in school in the presence of other members of staff who could gauge whether the children felt-comfortable interacting with the researcher.

Given the success of recruiting a special school with a pre-established relationship with a mainstream school, a targeted approach to recruitment was taken. The geographical remit of the project was significantly extended. A small number of schools were contacted, leading to the recruitment of an integrated nursery, a special primary school which visited a mainstream school one afternoon a week, and a co-located secondary school.

Methodology

Researchers in the disability field have a long-history of challenging ableism in the practice disability research (Barnes 2003). Following Oliver's (1992) call to change the 'social relations of research production' (11), disability studies researchers have moved away from approaches that position disabled people as objects of research to 'actively empowering those with disabilities in the production of […] knowledge' (Chouinard 1997: 384). Whilst the research reported in this paper does not fully adhere to an emancipatory paradigm insofar as the aims and design were researcher-led, it did draw heavily on participatory approaches in order to co-construct knowledge regarding the meaning of children's actions by working closely with children, school staff, and with reference to the wisdom of parents. This approach was developed to ensure that the researcher did not misinterpret the actions of the study participants with PMLD. The methods taken are described below, but have been described in more detailed elsewhere (Simmons and Watson 2014; 2015, Simmons 2018).

Pre-observation focus groups and interviews

Before undertaking any fieldwork, the researcher consulted significant others who knew the participants intimately and could inform the researcher's initial interpretative lens. This consultation took place through pre-observation focus groups with key school staff

(i.e. the classroom teacher and teaching assistants, though for some children psychologists and speech and language therapists also participated if available). The aim of the focus groups was to explore children's interests, abilities, and methods of communication. Similarly, the researcher also conducted semi-structured interviews with parents to explore the same topics. What emerged from these consultations was a communication profile for each child. For example, whilst Harry was visually impaired, he would turn to face the direction of familiar voices and 'talk' by moaning loudly in the presence of others. By contrast, Emma was not visually impaired, but would keep her eyes closed ('pretend to be asleep') around others until she was 'confident', at which point she would tilt her head back and slightly raise her eyelids to peek at others. These subtle descriptions guided the researcher's understanding during observation.

Participatory observation

The researcher's understanding of each child's actions was further developed through participatory observation (by supporting children in class). By immersing himself in the routines and daily activities of the participants, the researcher became familiar with children's responses to, and experiences of, everyday life in school. Participatory observation helped develop rapport with staff, which led to informal discussions with staff in real time over the meaning of children's behaviours. For example, staff would suggest what children were thinking and feeling, and propose interaction strategies. The researcher was also able to ask questions and seek out the wisdom of staff (e.g. during observation of new or unexpected behaviours from the children).

Vignettes

The main source of data consisted of observational fieldnotes written as storied "vignettes" during periods of non-participatory observation. Vignettes are rich and

prosaic renderings of fieldnotes about children's social interactions in school. They have a story-like structure and a chronological flow. Vignettes describe the interactions that took place and describe the location, time, and actor (or group of actors), and can vary from a few lines of descriptions to several paragraphs. When opportunities emerged for the children with PMLD to engage with others (e.g. when children with PMLD oriented to peers, or when staff attempted to initiate interaction), the researcher wrote detailed notes of the observed opportunity as it unfolded, paying particular attention to who initiated the interaction and how, the actions of the interactive participants over time, and contextual variables such as location (e.g. classroom or playground), context of the interaction (spontaneous peer interaction, or planned teaching session), the materials that were involved (e.g. sensory toys or paint). The vignettes consist of micro-descriptions of the child's changing facial expressions and body movements, which were crucial in the early research stages as they helped the researcher develop a basic awareness of how each child expressed emotions. The vignettes were shared with teaching staff who observed or participated in the event, allowing staff to offer their own interpretations and confirm or challenge the researcher's interpretation of the event.

Data analysis

A key assumption underpinning the research was that certain physical spaces (e.g. a mainstream school classroom or a special school classroom) would contain distinct social groups (e.g. specialist staff or mainstream staff) who would embody different interaction styles towards children with PMLD. Data analysis was initially guided by this assumption, and an inductive thematic approach was employed (Miles, Huberman, and Saldana 2019) to explore how different groups interacted with PMLD children, and the responses of children to these different groups. During the first wave of coding, the

researcher examined who initiated interaction and how, the sequence of events including objects used, the context (such as breaktime) and location. What emerged from this process was a fixed or static account of the data that was sometimes fruitful (e.g. in illuminating a consistent style of interaction embodied by specialist staff in segregated provision). However, the attempt to identify one style of interaction with one particular group proved to be overly reductionist, and failed to take into account the dynamic or fluid nature of observed social interaction styles, such as when the same style was observed across settings (e.g. in *both* mainstream schools and special schools). Furthermore, a static account failed to account for the way in which specialist staff shaped interactions between mainstream peers and children with PMLD, the shifting style of interactions between children with PMLD and their mainstream peers, and how at times specialist staff abandoned a specialist style in favour of a more spontaneous and playful style. In hindsight the binaries underpinning the research (e.g. 'staff vs. peers' and 'mainstream vs. special') proved to be naïve. Hence, a second cycle of analysis was undertaken to examine the fluidity of interaction styles. To these ends, the researcher applied Lefebvre's (1991) spatial triad to examine how far the interactive styles (spatial practices) cohered to those described in the literature (or abstract space), or reflected an alternative and resistant style (lived space). The Lefebvrian lens made the flexibility of social spaces intelligible and drew attention to the conditions that influence or 'produce' qualitatively different social spaces. The findings of this analysis are presented below.

Findings

As indicated above, the findings describe the qualitative differences between interaction styles experienced by children with PMLD across a range of ages (pre-school, primary and secondary) and settings (mainstream schools, special schools, and school trips). These interaction styles are framed in terms of Lefebvre's (1991) spatial triad, i.e. the

extent to which the interactions ('spatial practices') adhere to those described in 'abstract space' (i.e. prescribed interactions) or embody a freer, alternative, or 'lived' form of interaction.

Embodying the abstract: prescribed spatial practices

Prescribed spatial practices refer to the uniformity of interaction styles performed by specialist staff towards children with PMLD. This style of interaction demonstrated staff knowledge about established practices in the PMLD field described in the practitioner literature. These interactions were largely face-to-face and dyadic, meaning that one member of staff would interact with one child. The interactions were commonly functional in nature, meaning that staff interacted with children in order to teach them how to communicate. The interactions were also developmentally-normative rather than chronologically-normative (i.e. regardless of the age, the interactions aimed to support children's emerging social awareness and pre-verbal communication skills). For example, children were regularly encouraged to signal that they wanted 'more' access to a person, object, or activity by looking at, reaching out towards, and/or vocalising in the presence of what was desired (e.g. Felix was asked to indicate that he wanted more hugs from a teaching assistant by leaning forward and vocalising each time she stopped hugging him). Children were encouraged to express a preference for an object or event (e.g. smile at an object to express 'like', or frown and look away from an object to express 'dislike'). They were also regularly asked to make a choice between two or more objects (e.g. Ruby was asked to indicate whether she wanted a drink of water or a piece of fruit by hitting a symbol representing each item, whilst Harry was asked to choose between two different flavoured lip balms through prolonged looking at the desired lip balm). The interactions often began with staff issuing a question or a verbal instruction. If staff failed to receive a desired response they would employ a

range of prompts including verbal prompts (the question would be repeated, reworded, and/or spoken in a more dramatic tone), gestural prompts and visual prompts (such as pointing at an object or a Picture Exchange Communication System (PECS) symbol), and physical prompts (such as rubbing children's arms and shoulders to arouse them). Children's responses were regularly commented on and celebrated, including children's unprompted responses to environmental change (e.g. Noah was congratulated by his teacher when he noticed and tracked bubbles floating in the air). Staff sometimes communicated that a planned communication event was about to end by counting down to zero and/or declaring that the event had finished through verbalisation or sign language. Many of these interaction qualities are reflected in the vignette below.

> Vignette 1: Finn in his special school classroom.
>
> Finn is sat in his wheelchair watching his teacher connect a large, yellow button (a switch) to a laptop computer. Finn groans and rocks before extending his arms and legs. The teacher asks: 'Is Finn excited?' She places the switch on Finn's tray and tells him that he can watch his favourite TV show if he presses the switch. Finn frowns, sucks his lips, flares his nostrils, and vocalises: 'hmmm hmmm…'. He briefly looks at the screen before turning to face two TAs talking next to him. The teacher says: 'Not over there! You need to be looking here!'. She turns Finn's head to face the screen, then tilts his head down to look at the switch on the table. Finn looks at the switch before frowning and rocking. The teacher places Finn's hand on the switch and the TV show plays. Finn instantly looks up and watches as the theme tune begins. The show stops. Finn stares at the screen and waits. The teacher asks Finn to press his switch. He does not respond. She

repeats the question louder and more enthusiastically. Finn remains still. She taps her fingernails beside the switch and Finn looks down to locate the sound. She stops and Finn looks back at the screen. She lifts Finn's hand and places it beside the switch. He does not move his hand. She raises his hand and places it on the switch. The theme tune begins to play again and Finn instantly looks up, still, with wide eyes. This sequence of events is repeated several times before the teacher announces that the lesson has now 'finished'. She shows Finn the pictorial symbol for 'finish' before declaring it again using spoken and sign language.

This specialist style of interaction was cross-cutting in the sense that it was observed in both mainstream schools and special schools, and across the age phases (nursery, primary, and secondary). It was especially dominant in settings where specialist staff took the lead with regards to the education and care of children with PMLD, and where children with PMLD had very limited peer interaction. For example, whilst Noah and Eva were educated full-time in a mainstream secondary school, they were typically segregated from non-disabled children since they were taught in a specialist unit, spent breaktime in a separate playground, and ate lunch in a corner of the dining hall away from the mainstream children. There was no interaction between Noah/Eva and non-disabled children. Hence, despite Noah and Eva's locational integration in a mainstream school, observed interactions were consistent with those found in the special schools attended by Harry, Emma, and Finn. Similarly, despite their placement in an integrated nursery, Felix and Ruby experienced limited peer interaction because staff regularly extracted children with PMLD to work with them one-on-one, and rarely supported peer interaction.

This dyadic style of interaction was also observed during care routines (coded as 'care-based pedagogy'). However, not all care was designed to teach. A cross-cutting theme was 'Equilibrium of care' which involved staff administering medication and attempting to counteract the side-effects of medication such as significant drowsiness. Staff would attempt to arouse children by singing, talking using loud and/or dramatic intonation, wriggling or rubbing limbs ('shake-to-wake'), cooling children down by taking off shoes, socks, and jumpers. If children were distressed staff would hug them, reassure them in a soothing voice, and massage children's limbs. If children's actions appeared to be harmful (e.g. Emma frantically rubbing her nose or pulling her hair), staff would typically sing to them, hold their arms and/or put their arms in splints.

Lived spaces: differential styles of interaction

Lived spaces refer to social spaces where the nature of interaction was qualitatively different to the specialist style of interaction. These differential styles were largely observed in mainstream primary schools and involved specialist staff and mainstream peers interacting with children with PMLD in novels ways. Differential styles were also observed during school trips where staff abandoned their specialist style in favour of a more playful and spontaneous form of engagement. Lived spaces were more pronounced in places where PMLD-specific pedagogy, materials, and routines were absent, allowing for new forms of social interaction to emerge. For example, interactions between children with PMLD (Finn, Harry, and Emma) and their mainstream peers were dynamic and 'plural' in nature (they were typically group-based rather than dyadic). Special school staff who accompanied the children to the mainstream played a central role in teaching mainstream children how to interact with their PMLD counterparts. For example, staff would answer questions (e.g. 'Can he walk?' 'Does she like colouring?' 'How does she speak?') and invite peers to

communicate (e.g. asking peers to say ‘hello’ and shake the hands of children with PMLD). Staff would ask peers to help children with PMLD (e.g. to draw or paint hand-on-hand, use musical instruments, or read to them using dramatic intonation). Staff would model interaction and help peers ‘read’ the actions and body language of children with PMLD (e.g. ‘He’s moving his head to look at you, look he’s smiling, he likes that!’), and demonstrated ways of waking children if they appeared drowsy (e.g. by asking them to wiggle Harry’s arms).

Whilst peers sometimes engaged with PMLD children in a manner that resembled the interactive style of staff in a special school (e.g. they would help children with PMLD write their names using hand-on-hand support, or would use communication cues suggested by specialist staff), peers often radically deviated from this style and appear more spontaneous, physical, and playful. Since there was no clear pedagogic motivation for the interaction (i.e. peers were not instructed to help children with PMLD learn), this behaviour was coded as ‘interaction for interaction’s sake’. Peers would perform for children with PMLD by singing, dancing, pulling silly faces and making noises, wearing fancy dress, and acting out a scene from a book. Children with PMLD would receive objects of affection from peers such as handmade greeting cards, daisy chains, and friendship bracelets. Peers would utilise an array of objects to initiate and sustain interaction, such as showing objects made (drawings, Lego vehicles, painted masks), and giving PMLD children objects to play with, e.g. by placing toys in the hands and laps of children with PMLD or footballs at their feet, and dressing up PMLD children (e.g. wrapping a feather boa around them and putting on a hat), showing them how to use objects (e.g. pencil sharpeners, whoopie cushions and iPads), and re-contextualising classroom objects (e.g. making playdough shapes for children with PMLD to squeeze, or tickling them with dry paintbrushes). During playtime peers

would enthusiastically volunteer to play with children with PMLD, pushing their wheelchairs around the playground, fields and woods, playing hide and seek, and tag. Interactions were sometimes physical, such as peers greeting children with PMLD by rubbing their arms, holding hands, and displaying affection by hugging and kissing PMLD children on the cheek. Physical exchanges were also subversive, i.e. during quiet time on the carpet, peers engaged in non-verbal forms of interaction with children with PMLD which included rubbing children's legs, leaning on children, and using children's outstretched legs to rest whiteboards on.

Vignette 2: Harry on his mainstream school field

It's a hot, sunny day and three children hold on to Harry's wheelchair. They begin to run across the school field whilst laughing and screaming. Harry's eyes are closed (he has the sun in his eyes) but he laughs out loud. A group of children spot Harry and his friends, and chase them shrieking with laughter. The group easily catch up and encircle Harry and his friends. As I approach, I hear the group asking questions: 'Is he in your class?' 'Are you allowed to play with him?' 'Can I play?' One girl hugs Harry whilst Harry's friends explain that he visits them on Wednesdays. Several children start dancing in front of Harry and push each other around, laughing and shouting. Harry has a big smile on his face and moans as he looks around at the children encircling him. A boy notices a tennis ball on the floor (perhaps from a PE lesson), picks it up and gives it to Harry. Harry doesn't take it, but his friend tells the boy to put it on his tray (which the boy does). A child holds Harry's hands. The SSTA asks the crowd to move ('Don't crowd him

too much!'). The children look uneasy and move away. The three friends run off again, laughing with Harry.

Interactions between mainstream peers and children with PMLD were often emotionally charged and mutually pleasurable, with lots of excitement, smiling, happy vocalisations, laughter, facial looking, prolonged eye contact, and tracking. Emma was initially shy around peers but quickly found mainstream peers fascinating and amusing and was receptive to their presence, making eye contact, and sometimes squealing with excitement as they approached. Harry was excited from his first visit to the mainstream, with the SSTA noting that Harry was reaching his independent education plan (IEP) targets all at once – something that his teacher had been working on for several weeks. This included Harry noticing a change in the environment, raising his head for at least ten second, and initiating interaction. The latter was observed as a new form of symbolic communication that emerged during carpet time. Harry would stretch out his arm and open his palm whilst sat on the carpet with others – an action that was not observed in his special school. Peers would respond by holding Harry's hand, or stroking his palm, resulting in Harry smiling and groaning in delight.

School trips appeared to offer another opportunity for lived styles of interaction to emerge, but these interactions involved *special school staff*. Staff were boisterous during school trips (e.g. to beaches and woodlands) and their interactions with children with PMLD were energetic, humorous, playful, and sometimes involved light horse play. These social spaces were emotionally charged, with much laughter by all participants. Similar to the mainstream, the interactions were pluralistic or group-based (involving children and several members of staff interacting at the same time), and involved games (e.g. playing 'Piggy in the middle' with staff throwing a beachball over

children) and light-hearted teasing (staff chanting 'Dip him in the sea!'). Staff would bury children's feet in the warm sand or sprinkle sea water on their legs and arms, joke that seagulls were stealing children's snacks, dance for children, or walk about on all fours whilst pretending to be bears. The whole group appeared excited, smiling and/or laughing out loud. These playful interactions lacked pedagogic purpose, were often spontaneous (not timetabled or planned) and joyful in nature.

Enclaves of lived spaces were sometimes found within specialist provision. For Noah and Eva, the multisensory room provided such an enclave where they were freed from specialist pedagogy and placed in a ball pool or on the floor and encouraged to wriggle around, shout, sing and dance. Staff would mimic and dance with the children, sooth children through cuddles and rocking, and playfully tease them. For Harry and Emma, the children's kitchen presented as a place for lived space to emerge. Staff would help Emma and Harry bake (e.g. hand-over-hand to knead dough), and minor accidents such as flour being dropped was met with rapturous laughter and play, with staff sprinkling flour on each other, and dabbing flour on children's noses.

Parallel spaces and conflicting spaces: abstract vs lived

Parallel spaces refer to a juxtaposition of different interactions styles in the same geographical space. Conflicting spaces refer to a tension or conflict between the two styles, such as when specialist forms of interaction (prescribed spatial practices) compete with alternative, or non-specialist forms of interaction (lived spaces). Parallel and conflicting social spaces were largely observed in the integrated nursery and in a primary school class which was co-taught by special school staff one afternoon a week.

In the integrated nursery, Felix and Ruby experienced whole class input from the teacher (e.g. for the morning routine which included taking a register, singing, and discussing the day's activities). Staff would help Felix and Ruby take part through

bodily appropriation (e.g. holding and moving Felix/Ruby hands to help them perform the actions of a nursery). Most of the recorded interactions involving Felix/Ruby were led by staff rather than peers, and were specialist in nature (e.g. they resembled those described in the first section insofar as they were dyadic, normative, pedagogic and aimed to support children's emerging communication skills). These interactions took place during formal teaching, care-based routines, as well as on the carpet during indoor play. Non-disabled children observed these interactions and, on rare occasions when Felix was alone, initiated interaction by showing him toys, inviting him to play, and holding his hand. Staff did not offer support for peer interaction, and typically extracted Felix so he could work on his IEP targets. During outdoor play (e.g. breaktime) Felix would stay indoors and work closely with specialist staff. Hence, the preschool presented as a parallel space, whereby staff would interact with children using a specialist style, and children (on rare occasions) would engage using their lived style.

By contrast, Finn sometimes experienced a conflicting space when in the mainstream classroom, whereby staffs' specialist interaction strategies would clash with the playful style of mainstream peers. For example, whilst staff would give peers advice and demonstrate how to interact with Finn, the peers sometimes ignored the advice and played with (or around) Finn. This included running around in circles, playing hide and seek behind Finn's wheelchair, dangling a paper spider above Finn's head, giving him stickers, dancing for him, and asking him questions ('Do you like football?' 'What's your favourite colour?' 'Do you want to play outside with me?'). Peers would be reprimanded by specialist staff (which Finn found highly amusing).

Discussion

As described previously, a central assumption underpinning the research was that geographically separate sites (i.e. mainstream schools and special schools) would

'contain' distinct social groups (such as specialist staff or mainstream peers), who would embody different styles of social interaction when engaging with children with PMLD. The findings demonstrate that this was partially the case. Specialist staff interacting with children in the special school typically engaged in a style consistent with that described in the practitioner PMLD literature, i.e. by engaging in a dyadic style akin to that found in Intensive Interaction literature (e.g. Hewett, Firth, Bond and Jackson, 2015), using symbolic systems of communication such as the Picture Exchange Communication System (PECS) (Bondy and Frost 2001) and augmentative and alternative communication (AAC) technology. By contrast, peers in the mainstream school embodied a style of interaction towards children with PMLD that contrasted sharply to these specialist forms of engagement. This was particularly the case for Emma, Harry and Finn, who experienced a social space that was defined in terms of plurality, playfulness, performance, gift-giving, and intercorporeality (engaging and knowing children with PMLD through touch). Whilst descriptions of interactions in the special school are perhaps not surprising (whereby trained specialist staff shape their interactions in line with best practice literature), the description of differential social spaces provided by mainstream peers is novel and contributes to the emerging body of literature that suggests that mainstream schools can provide unique spaces for children with PMLD to develop social awareness and communication skills by practicing with different populations (Foreman et al 2004; Simmons and Watson 2014). For Emma and Harry, these qualitatively different social spaces were not a trivial matter, but correlated with particular displays of emerging social awareness. For example, Emma showed clear signs of being alert and engaged, tracking children, making eye contact with children around her, and laughing in excitement. Harry met his IEP targets on his first day in the mainstream (i.e. holding his head up for 10 seconds and noticing a change in

the environment), and also developed a potentially new form of symbolic communication – outstretching his palm during carpet time to initiate physical interaction with those sat near him. However, it is important to note that the conclusion being drawn here is not that mainstream schools were somehow 'better' than special schools, but that qualitatively different social spaces provided research participants with alternative opportunities to practice and demonstrate evolving social awareness and communication skills.

Lefebvre's (1991, 33) philosophy of space was outlined earlier in this paper as a heuristic lens that could be applied to the data to make the findings intelligible. At the core of Lefebvre's 'spatiology' is his triad of interlinked concepts of space, consisting of 'representations of space' (abstract space); 'spatial practice', and 'representational spaces' (lived space). From a Lefebvrian perspective, the actions of specialist staff (i.e. their 'spatial practices' consisting of professionalised behaviours and routines) are shaped by dominant concepts of 'PMLD' (including how to interpret and respond to 'PMLD behaviours'). Professional concepts are codified in the PMLD literature which contains received wisdom, terminology, dominant learning theories, and descriptions of assessment tools and interventions. The style of interaction embodied by teaching staff (their spatial practices) reflects the abstract space in the PMLD field. By contrast, the mainstream school children lacked specialist training, and their actions towards children with PMLD sometimes reflecting more relative cultures of play and interaction (Eichberg 2016), free from professional gaze and control. Interactions between peers and children with PMLD did not presuppose knowledge of developmental pathways, and peers did not try to 'teach' children with PMLD how to communicate. Free from this constraint, peer interaction embodied a style that was rarely observed in the special school contexts.

However, whilst the above account describes how two separate school sites provided qualitatively different social spaces for children with PMLD, this 'static' account of the data overlooks the fluid and complex nature of social spaces observed during the research. For example, staff played an important role in supporting early interaction between mainstream peers and children with PMLD, e.g. by answering peer questions, inviting peers to play, and modelling communication strategies. This resulted in peers initially engaging with children with PMLD in ways consistent with specialist styles of interaction, e.g. using hand-on-hand support and communication prompts. However, peers soon began to deploy their own communication strategies which contrasted radically to the specialist style. Furthermore, specialist staff embodied different styles of interaction depending on context. For example, during school trips (e.g. to the beach and woods) specialist staff behaved like mainstream peers, with lots of laughter, shouting, gentle teasing, performances, physical exchanges and group-based interactions. It was rare to see staff engaging with children in this manner on school grounds, though staff appeared more willing to abandon the consistent specialist style outside the classroom, e.g., in a multisensory room (Noah and Eva) or children's kitchen (Harry and Emma).

Furthermore, a novel finding of the research is that mainstream schools did not always afford peer engagement. Despite Noah and Eva attending a mainstream secondary school full-time, there was no recorded peer interaction. The children were educated in a high support needs unit, ate lunch in the corner of the dining room, and had a separate playground from their non-disabled peers. Similarly, whilst Felix and Ruby attended a mainstream nursery full-time, peer interactions were often limited due to a lack of support and encouragement from staff. Furthermore, Felix and Ruby were regularly extracted from timetabled play opportunities (e.g. lunchtime play) in order to

work one-to-one with staff, who employed a consistent specialist style. Finally, Finn – who attended a mainstream primary school one afternoon a week – appeared to experience a conflicting social space, consisting of staff using specialist styles of interaction in the mainstream, whilst peers experimented and engaged in playful and novel ways.

From a Lefebvrian perspective, lived space is not exclusively found in the mainstream, but emerges in places where the abstract space of the PMLD field is abandoned, forgotten, or resisted so it does not reign supreme. The spatial practices of the PMLD unit in the mainstream secondary school were heavily influenced by the abstract space of the PMLD field to the extent that the embodied communication was consistent with that found in the special schools taking part in the study. By contrast, the specialist staff on school trips, away from the materiality, lesson plans, scripts, timetable and regulation of the special school embodied the playfulness of mainstream school peers, i.e. it was boisterous, unpredictable, plural (group-based) and joyful. Following Lefebvre (1991), it may be argued that the abstract is imbued in the socio-material environment, and that the objects of the special school influence specialist spatial practices. In other words, free from assessment tools, routines, multisensory environments, hydrotherapy pools, timetabled interactions, high-tech alternative and augmentative communication devices etc, teaching staff abandoned specialist pedagogical styles to collectively and spontaneously live in the moment leading to the emergence of an alternative social space for children with PMLD (a space similar to the lived spaces described in the peer interaction data). This deviation from specialist practice, where practitioners veer from the path well-trodden, was not clearly present in co-taught spaces. Instead, the research indicated that co-teaching led to parallel styles of interactions (e.g. mainstream peer style juxtaposed with the specialist style) or

conflicting styles (e.g. specialist staff reprimanding or trying to shape peer engagement so it reflected the specialist style). This perhaps reflects the uneasiness of staff to let go of received PMLD wisdom, to experiment, or to see value in peer interactions that deviate from the schemas presented in the abstract spaces of the PMLD field.

To some extent, the findings resonate with distinctions between informal, formal, and non-formal learning (Eshach 2007), or official and hidden curricular (Dickerson 2007). However, these taxonomies are too rigid to make the data intelligible. For example, the emergence of Harry's new symbolic communication skill in the mainstream was incidental (not taught) and as such resembles non-formal learning. However, the concept of non-formal learning was developed with reference to *out-of-school* contexts. Similarly, the concept of the hidden curriculum is problematic since what was learned - initiation of interaction - was part of the (formal) special school curriculum, but the skill emerged in the context of informal peer interaction. This paper promotes a Lefebvrian (1991) approach to illuminate such complexity and reveal the diverse social spaces encountered by children with PMLD.

Conclusion

This paper presented the first qualitative study that compared and contrasted social spaces for children with PMLD across age phases (nursery, primary and secondary) and geographical sites (mainstream and special). Using a Lefebvrian lens, it demonstrated that special school staff were largely consistent in their spatial practices in segregated settings, reflecting the influence of abstract space. This style was also found in a mainstream secondary school where children with PMLD were educated full-time in a specialist unit. By contrast, children with PMLD attending a mainstream primary school experienced novel lived spaces in the presence of peers that contrasted to prescribed

spatial practices. In these spaces the children appeared to flourish during emotionally-charged, playful and physical forms of interaction (a style embodied by specialist staff on school trips). Finally, the research identified parallel and conflicting spaces, whereby both abstract and lived styles were juxtaposed or came into conflict.

The inclusive education debate in the PMLD field revolves around a simple binary (mainstream vs. special) and a 'container' view of space. The framing of this debate is ableist insofar as it focuses on which geographical site best supports the cognitive and behavioural development of children with PMLD, rather than examining the conditions that exclude this group. This paper challenges how inclusion is framed by drawing attention to the fluidity of social interactions within and across mainstream and specialist spaces. If inclusive education is about belonging to school communities, then this paper highlights the need for further examination of the conditions that lead to different forms of interaction as an integral component of belonging, and moves debate away from geographical space and its ability to normalise children with PMLD, towards an understanding of how we can best support the development of community for future generations.

References

Abrompa, W. 2020. The hidden curriculum and the development of latent skills: the praxis. *Journal of Curriculum and Teaching* 9 (2): 70-77.

Barnes, C. 2003. What a difference a decade makes: reflections on doing 'emancipatory' disability research. *Disability and Society* 18 (1): 3-18.

Bondy, A., and Frost, L. 2001. The Picture Exchange Communication System. *Behavior Modification* 25 (5): 725-744.

Chouinard, V. 1997. Making space for disabling differences: challenging ableist geographies. *Environment and Planning D: Society and Space* 15: 379–387.

Department for Education and Department of Health. 2015. *Special educational needs and disability code of practice*: 0-25 years. London: Department for Education.

Dreyfus, S. 2020. Belonging and segregation: the oxymoron of the special school. In *Belonging for people with profound intellectual and multiple disabilities*, edited by Nind, M. and Strnadova, I. Abingdon: Routledge.

Eshach, H. 2007. Bridging in-school and out-of-school learning: formal, non-formal, and informal education. *Journal of Science Education and Technology* 16 (2): 171-190.

Eichberg, H. .2016. *Questioning play: what play can tell us about social life*. Abingdon: Routledge.

Falzon, M.-A. 2009. Introduction. In m*ulti-sited ethnography: Theory, Praxis and Locality in Contemporary Research*, edited by Falzon, M. Abingdon: Routledge.

Foreman, P., Arthur-Kelly, M., Pascoe, S. and Smyth King, B. 2004. Evaluating the educational experiences of students with profound and multiple disabilities in inclusive and segregated classroom settings: an Australian perspective. *Research and Practice for Persons with Severe Disabilities* 29 (3): 183–193.

Hewett, D., Firth, G., Bond, L., and Jackson, R. 2015. Intensive Interaction. In *The Routledge companion to severe, profound and multiple learning difficulties*, edited by Lacey, P., Ashdown, R., Jones, P., Lawson, H., and Pipe, M. Abingdon: Routledge.

Imray, P., and Colley, A. 2017. *Inclusion is dead: long live inclusion.* Abingdon: Routledge.

Imrie, R., 1996. Ableist geographies, disablist spaces: towards a reconstruction of Golledge's 'geography and the disabled'. *Transactions of the Institute of British Geographers,* 21 (2): 397–403

Imrie, R., 2001. Barriered and bounded places and the spatialities of disability. *Urban Studies* 38 (2): 231–237.

Lefebvre, H. .1991. *The production of space*. Oxford: Blackwell Publishing.

Merrifield, A. 2006. *Henri Lefebvre: a critical introduction*. Abingdon: Routledge.

Miles, B., Huberman, M. and Saldana, J. 2019 *Qualitative data analysis: a methods sourcebook* fourth ed. London: Sage.

Oliver, M. 1992. Changing the social relations of research production? *Disability, Handicap & Society* 2: 101-114

Shields, R. 1999. *Lefebvre, love and struggle: spatial dialectics*. Abingdon: Routledge.

United Nations Educational, Scientific and Cultural Organization. 2009. *Policy guidelines on inclusive education*. Paris: UNESCO.

Simmons, B. and Watson, D. 2014. The PMLD ambiguity: articulating the lifeworlds of children with profound and multiple learning difficulties. Abingdon: Routledge.

Simmons, B. and Watson, D. 2015. From individualism to co-construction and back again: rethinking research methodology for children with profound and multiple learning disabilities. *Childcare in Practice* 21 (1): 50-66.

Simmons, B. 2018. The phenomenology of intersubjectivity and research with profoundly disabled children: development an experiential framework for analysing lived social experiences. In *Seen and hears: exploring participation, engagement and voice for children with disabilities*, edited by Twomey, M. and Carroll, C. Oxford: Peter Lang.

Watkins, C. 2005. Representations of space, spatial practices and spaces of representation: An application of Lefebvre's spatial triad. *Culture and Organization* 11 (3): 209-220.

Table 1. Participants and time observed

Child	**Time spent in each setting per week**	**Length of time observed**
Ruby	Integrated preschool 5 days a week	8 days
Felix	Integrated preschool 5 days a week	8 days
Harry	Special school 4 days a week, mainstream reception 1 day a week	10 days in special, 10 days in mainstream
Emma	Special school 4 days a week, mainstream primary 1 day a week	10 days in special, 10 days in mainstream
Finn	Special school 4.5 day a week, mainstream primary 0.5 days a week	10 days in special 10 half days in special with 10 half days in mainstream
Noah	SEN unit in mainstream secondary school 5 days a week	6 days
Eva	SEN unit in mainstream secondary school 5 days a week	6 days