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Place, space and time: A topological perspective of a forest school-based educational mode of existence

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Abstract

This paper explores the question: ‘how do teachers shape children’s connections to forest places and establish educational ways of being and knowing (an educational mode of existence) during Forest School sessions?’. A Forest School ‘movement’ has grown in popularity in Europe over the last decade, alongside a marked expansion in the field of learning outside the classroom (LOTG). Part of this movement has focused on the importance of developing children’s relationship with nature. However, little literature speaks to how child-nature relationships manifest, nor implications for educational ways of being (and knowing). This paper steps outside of popularised notions of ‘nature deficit disorder’ to reimagine Forest Schooling as intentional construction of a specific educational mode of existence, reliant upon careful evolution of children’s connections to forest places. The term ‘place’ is necessarily complicated in this paper, arguing that only through recent developments in (social) topological perspectives and theories of modes of existence can we begin to fully understand place connection. Drawing on ethnographic data, this paper argues for greater focus on intersections between materiality and meaning constructed in multidimensional time and space in establishing educational modes of existence and related place connections.

Keywords

social topology, modes of existence, forest school, place connection, Latour, education

Introduction

I am sat on a roughly sawn log in a clearing amidst a cluster of pines and beeches, whose springtime leaves shiver above me in a May breeze. Thirty children scurry busily about me, absorbed into imaginative worlds which transform sticks into swords and tree trunks into fairy castles. Their teacher walks amongst them, watching, listening, offering a thought here and there. I attempt to capture it all in words.

[Fieldnote, Forest School: May 2018]

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In May 2018, I was 2 months in to a 4-month ethnographic fieldwork project exploring influences on the formation of teachers' classroom practices. Each week I joined a different class in a three-form entry English primary school, observing and taking part in the daily professional lives of teachers. Although my focus was on classroom practices, following the lives of teachers inevitably took place beyond the classroom, to playgrounds, staffrooms and meeting rooms; and each week, to Forest School (a small, wooded area in the school grounds). Education in the forest looked very different to that of the classroom, rooted in a symbiotic relationship between the materiality of the forest and the lived experiences of the children. In this paper, I provide an account of what became my ethnographic fascination with the question: 'how do teachers shape children's connections to forest places and establish educational ways of being and knowing (an educational mode of existence) during Forest School sessions?'. It describes a clear intersection between materiality and meaning inherent to, and sparked by, artefacts and ideas both present and not present (of different, connected, times and spaces). This paper argues for greater focus on intersections between materiality and meaning constructed in multidimensional time and space in establishing educational modes of existence and related place connections; on how teachers deploy forest (and other) materials to shape children's connection to the (forest) place of learning and through this establish certain educational ways of being – an educational mode of existence – during Forest School sessions.

Reportedly founded on forest-based childcare provision in 1950s Denmark, globally the term 'Forest School' has been taken up and localised in many ways, although generally signifies experiential and explorative nature-based learning set in teacher-curated forest environments (Boileau and Dabaja, 2020). In England, as in many European countries, the term has been commodified, widely associated with an accredited programme of training and professional endorsement run by the Forest School Association (FSA). Each English Forest School operates towards community interests or needs; however, the FSA aim to provide a common pedagogical basis: '...giving "power" over to our learners for their own learning – through providing choice, tempered with compassion for the non-human. Nature is the teacher, the pedagogue. We could say, the *relationship* between the person and the natural world is the teacher' (Cree and Robb, 2021: n.p., original emphasis).

The importance of child-nature relationships has gained traction in education research, with continuing expansion of a field of research around learning outside the classroom (LOTIC). There are many pedagogical reasons for taking children outside of classroom environments – too many to discuss here – including arguments for opportunities, through LOTIC, for the generation of rich episodic memory, wellbeing purposes and holistic child development (Mannion and Lynch, 2016; Waite and Pratt, 2017). Associations between nature and wellbeing are coupled with cognitive development research to argue for an experiential, play-based pedagogy within natural settings, such as that advocated by the FSA (Cooper, 2015; Nawaz and Blackwell, 2014). Learning in nature is seen as holding potential to support multiple aspects of child development, including cognitive, social, and affective benefits (Waite, 2017).

Not all children come to Forest School with attitudinal parity towards nature. Children embody cultural ways of thinking about natural objects (Sadownik, 2021). Familial and community dispositions can be seen to influence children's desire to be in nature (positively or negatively; Thompson et al., 2008). Teachers, warns Sanderud et al. (2022), must pay heed to attitudinal differences rather than assume nature as a positive homogenous benefactor; didactic sensitivity is advocated, to create 'unique, thoughtful, responsive, and situated conditions for children's autonomous growth in natural environments' (p. 1086). This issue has been taken up by educationalists to argue the importance of 'slow pedagogy' or 'slow time' in placing education outside the classroom, giving

children time to build connections with natural environments (Clark, 2022; Payne and Wattchow, 2008).

Dickinson (2013), in a critique of Louv's (2005) 'nature deficit disorder', calls for an 'inward expansion' of the human-nature relationship (p. 329), asking us to 'go inside (psychologically, culturally, and relationally) and ask the difficult questions' about the cultural, economic and political factors which produce nature alienation/connection (p. 330). This paper builds on Dickinson's work and contributes to a growing interest in new materialist and post humanist perspectives in environmental education research and childhood studies. The socio-materialist ethnographic research presented here joins discourses which seek to go beyond generalised or anthropocentric usage of terms such as 'nature' 'place connection' which explicate 'the problem's symptoms without examining the underlying pathology' (Dickinson, 2013: 316). Specifically, this paper contributes a new direction to these discourses by considering how the philosophical/anthropological perspective, of existence provided by Latour's (2013) project *An Inquiry into Modes of Existence* offers a way to fruitfully explore child-nature connections and what is meant by such terms as 'education', 'place' or 'connection' when these are used in relation to 'Forest School'. This paper offers a glimpse of one school's approach to building children's relationships with the forest and how this establishes a very specific educational mode of educational existence in Forest School sessions. This first requires a foray into the philosophy of 'place' before a connecting of social topology, actor-network theory and Latour's AIME project. Detail of the ethnographic fieldwork follows, leading to narration of the tale of the forest. The latter is provided separately to analysis to enable the reader to immerse themselves in the educational mode of existence in the forest as it presented itself at the time. Finally, analysis and discussion explore this tale through a social topological-AIME perspective.

Exploring place connection

In speaking of education in Forest School sessions, I do not speak of children's connection to a broadly conceived 'nature', but to a specific forest *place*. In philosophical discourse, 'place' has long been a contested and complex notion, problematic largely due to ethereal qualities in the face of a well-established empirical turn in epistemology. For this reason, modern authors tend to favour a conceptualisation of place as a combination of measurable place-components: most commonly, (geographic) 'space', and in some philosophical accounts, (chronological) 'time' (Casey, 1998). To the ethnographer, geographic space and chronological time are equal parts vital considerations and restrictions of the study of social and cultural phenomena. Too much attention to measurable space or to era-based social activity has been criticised for confining cultural traits and the people of social groups to physical and temporal boundaries; to taken-for-granted locales which rather extend beyond geographic sites and moments-in-time (Appadurai, 1988; Rodman, 1992). Yet to lose sight of specifics of space and time is perhaps to do nothing to counteract an augmenting sense of global monoculture based on Western political and economic paradigms (Casey, 1998).

To my study of child-nature connections and educational ways of being and knowing in the forest, it is necessary to engage with constituent space-time of place. Each Forest School *space* is individually constructed and curated for educational purposes in certain places and certain times and must be considered as unique. But that is not to say that children's connections to this forest are bound to, or understood, solely through activity in units of time children spend within a physical (geographical) site. Rather, chronological time spent in the forest is wrapped up in past time, a historical-cultural time in the form of embodied past experiences of nature that children bring with them to the forest. The place of Forest School is metaphysically constituted by children's conceptualisation of other forests, other trees, other uses of the materials teachers put in the Forest School.

Put simply, the observed ‘here’ and ‘now’ also contains ‘then’ and ‘there’; ‘the past in the present’ (Munn, 1992) matters to time spent in the forest.

In a special issue of the European Educational Research Journal, several authors proposed and put to use a way of encapsulating these extended notions of space and time in education research: as a *social topological lens* (Decuyper et al., 2022). Drawing on a mathematical concept which describes the properties of an object preserved under continuous deformations, the authors use the term to describe the (mutual) social construction of space and time in education: ‘social topology explains times and spaces as relational, dynamic, and continuously unfolding yet, at the same time, as manifesting in powerful agential *forms*’ (p. 872). This echoes a line of thinking in geographic research: in considering what is ‘social’ about place, Cresswell (2014) suggests: ‘Two things stand out: meaning and materiality’ (p. 46). That is, a place may be seen as constituted by (continually evolving) subjective sociocultural meaning, derived from, and attached to ideas and materials which constitute the concept of geographical space, but which may be present either inside *or* outside of the physical space and time of the place. ‘Places’ may therefore shift and change: as people draw up (new) geographic boundaries or meanings attached to physical spaces; or as material is created, adapted, excluded, or introduced through ongoing social interaction with the material elements of physical sites. Place is therefore ‘no longer a category of fixed ontological attributes, but a becoming, an emergent property of social relationships’ (Jimenez, 2003: 140). Low (2009) argues that it is through this perspective that ‘we solve some of the problems of the current anthropological concepts [of place] with their misplaced rootedness’ (p. 22). The main concern of the researcher becomes one of exploring by what social processes places are constructed (Harvey, 1996).

This idea is echoed in education research around place-based pedagogies: put simply, the idea of ‘using the local community and environment as a starting point to teach concepts’ (Sobel, 2004: 7). One source of place-based pedagogical thinking is Dewey’s (1938, 1958) argument for education which provides students social and interactive processes of learning within real-world experience of abstract concepts, to contextualise and give depth to thought. Many place-based pedagogical approaches emphasise experiential encounters as educational ‘through grounded learning in lived experience via exploration’ (Edelglass, 2009: 71). This perspective asks educators to consider of the relationship between the kind of education they pursue and the kind of places social groups inhabit (Gruenewald, 2003). ‘Place’ is thus reconstituted as spatial aspects of social experience. A place of education/ where education *takes place* is not merely material, but also a product of wider constitutive social actors which determine students’ engagement (Smyth et al., 2008): opportunities for conversation, levels of community to school trust, identity and belongingness, to name but a few (McInerney et al., 2011).

Place *connection*, then, is caught up in socio-materially constructed meaning whose actors relate over multiple trajectories of space and time, through interpretations of experience and perception-in-motion, in historic and ongoing human attachment to ‘objects and landscapes invested with social meanings’ (Munn, 1992: 95). From this perspective, place connection is established through continuities and discontinuities in flows of meaning occurring through social interaction, in which spatial and temporal dimensions come together, extend and cannot be disentangled. This associative construction of place involves materiality present and not present, and also metaphysical actors present and not present: ‘metaphors, ideology, and language, as well as behaviors, habits, skills, and spatial orientations derived from global discourses and faraway places’ (Low, 2009: 34). To speak of place connection is thus to speak of a topological space: the structure of relations which construct and maintain the sense of place perceived, and continued/rejected, by the individual.

Place connection in this paper is construed through this social topological lens, as temporarily stabilised and necessarily complicated products of the social. The forest place that children connect

with is interpreted as a pause in the continuous flow of the social world, made concrete through the ways in which people and things connect in extended topological time and space.

Fluidity and reciprocity are key concepts to this view and important to understanding how people build relationships with place: 'People's assignments of meaning to physical segments of the earth's surface make places appear, and as such, the concept of place captures social construction while it at the same time recognizes the material basis for it' (Beery and Wolf-Watz 2014: 203). On the one hand, materiality collectively embodies and represents a *sense* of place. Artefacts, for example, signify *ways of being* in and *connecting* to a place: internet-connected interactive whiteboards shape classroom literacy practices (Unsworth, 2024); teachers and children 'sign in' to routine classroom activity through symbolically deployed non-educational objects (Plum, 2018). On the other hand, people interact with this materiality to form subjective and sociocultural meaning surrounding the physical space; an ongoing construction of social and cultural attachment (a sense of place developed over historical time, in which present-day experience occurs¹).

As a way to address and interrogate the fluidity and entangled reciprocity of socio-material actors in a topologically viewed 'place', it is useful to draw on the work of socio-materialist Bruno Latour as a theoretical 'sensitivity'. Firstly, on the tools of actor-network theory (ANT): a socio-material approach which has been used to explicate aspects of the social world as products of the associative activity of multifarious human and non-human actors (Latour, 2005). ANT accounts of education include describing the production of large-scale assessment systems (Gorur, 2011) and how nursery teachers and children attune to classroom activity and routines (Plum, 2018).

ANT is now integrated into Latour's (2013) wider philosophical framework, 'An Inquiry into Modes of Existence' (AIME), which details 15 different ways of being in the modern social world: 'modes of existence' denoted by three-letter signifiers, such as science [SCI] and politics [POL]. ANT is reconfigured in AIME as a 'network' mode – represented by the three-letter signifier [NET] –, a mode in which to discern associations between co-productive and co-reliant human and nonhuman actors in the *instauration* of what we perceive as reality (Latour, 2013). That is (and this is one of the ways in which ANT is transformed in being subsumed into AIME as (NET)), existence is accounted for as immanent: contained within, and distributed across, networks of heterogeneous actors in a recursive relationship in which actors and network activity associatively and continuously pervade and sustain each other. Within these actor-networks, patterned ways of associating constitute and characterise aspects of, and ways of being in, the social world (Latour, 2005).

Important to this view is the idea that actor agency is co-productive – a matter of actor *symmetry* – in that (human and non-human) actors have equal potential to *mediate* the agency and constituency of each other (Latour, 1999). Actors may, for example, *enrol* other actors into certain ways of being by the ways that they associate (Callon, 1986). Actor agency is thus partial (not absolute), dependent on interaction with other agentic beings. Nature is no longer universal, but performed differently according to how it is taken up as part of different ways of being in the world; different associations of co-productive human and non-human actors which give nature (different) ontological characteristics (Latour, 2004). Indeed, in studies of nature in relation to (science) education, AIME has been used as a lens to describe 'plural natures as sites of difference' (Gleason, 2017: 580).

[NET] also transforms ANT in that network description is not the whole inquiry, but a mode which requires *crossing* with an antithetical mode [PRE]. Through [PRE] we may describe the propositions of each mode (Latour, 2013): patterns in continuity/discontinuity of association which characterise the mode; conditions by which 'truth' is distinguished in the mode (felicity and infelicity conditions); the beings the mode leaves in its wake; and the alterity of these beings (Latour, 2013). Tummons (2021) extends Latour's 15 modes with education as mode of existence [EDU]. Whilst there is offered no explicit definition of an educational mode of existence as, say, is the case

for law [LAW] or politics [POL], this is perhaps the point. ‘Education’ is often a generic term (over)employed in the signification of many *different* sets of values, practices and organisational structures, dependent upon how its aims and purposes are conceptualised socially, culturally, politically and economically. Tummons distinguishes education as a mode which brings together ‘disparate activities’ which often pertain to *crossings* with activity of other modes. Examples include politics [EDU-POL], technologies [EDU-TEC] and ‘organisational schema’ [EDU-ORG] (577-8) such as curricula or timetables. Through these crossings we may perceive *indigenous beings* – textbooks or school buildings (Tummons, 2021) – and many heterogeneous actors which are *enrolled as educational beings* (a computer, a novel). Students, Tummons states, ‘although they will always only ever be temporarily enrolled within [EDU] . . . will carry traces of that network with them as they move through others’ (p. 580). Hence, the form of educational existence they are enrolled within (the prepositional characteristics and trajectories of [EDU] in each case) matters to future encounters within other modes. Tummons highlights how current prevalent forms of education in modern existence pertain to felicity/infelicity conditions which are caught up in the notion of right and wrong answers and qualification (Tummons, 2021). This is an issue problematised widely in education research as limiting the potential of educational experience in the service of political goals (see for example Biesta, 2022; Bojesen, 2019; Ingold, 2017). In this sense, [EDU] is a mode of existence riddled with *category mistakes* (Latour, 2013) – ‘crossings’ between modes whereby one mode of existence is mistaken for another: education for politics [EDU-POL] or social change [EDU-MET]. Whilst Latour talks of crossings of two modes in AIME as ways to define each mode (in the ways that one is taken to be another), Gilbert (2020) suggests that in practice more than two modes are often found in existence simultaneously. Gilbert offers the term *plaiting* to speak to multiple modes within category mistakes. This concept is particularly useful to education research, given the variety of modes with which education ‘crosses’. Plaiting of modes is denoted as: [MET-NET-EDU], to use an example taken up in this Forest School study.

From this perspective, place and children’s place connections may be viewed as simultaneously and mutually productive. The topology of the Forest School experience may be described as a network [NET], of which there is an educational quality or aspect [EDU]. Child-place connections can thus be explored through a crossing of these two modes: [EDU-NET]. Through this crossing may be described the pre-position [PRE] of the educational network: patterned connections which form the trajectory of educational activity and ways of determining truth in the forest. [PRE-EDU] thus describes ways of educationally being, knowing and doing in the forest.

This perspective supports exploration of associative co-production of place and place-connection within a social topological lens, affording detailed description of how children build relationships with place through interactions between people and materials. Meanwhile, the notion of social topology works to necessarily complicate Latour’s notion of place, altering the concept of an ordering of actors in which ‘the length and breadth of connections matter less than the *way* in which things are connected’. This becomes a focus ‘on the *intensive* relationships which create the distances between things, on the social proximities established over physical distances and the social distances created through physical proximity . . . it disrupts our sense of what is near and what is far by loosening defined times and distances’ (Allen, 2011: 290). In essence, social topology provides a way of speaking to the presence of complex relationships between actors which mediate network activity whilst not being physically present. An opinion, for example, formed by a parent in other spaces and times through other networks, influential on the engagement of a child in muddy play. Social topology provides a framework with which to articulate what is identified in Latourian terms as metaphysical actors – beings of metamorphosis such as emotions and psychic transforming forces – [MET]. A topological perspective offers a way to fruitfully explore a [MET-NET-EDU] plaiting. In this plaiting, beings of metamorphosis are crossed with network mode and

education as a mode of existence as a way of defining each mode whilst describing how they intersect and co-exist.

Exploring place connection ethnographically

The fieldnote excerpts in this paper were made during a wider ethnographic study of teachers' classroom practices in a primary school in the north of England, between April and July 2018. Ethnographic fieldwork is one way of understanding how people construct reality, in which experience underpins understandings we form of social life (Van Maanen, 2011). Based in observations of social activity, fieldwork can take some surprising twists and turns; for me, weekly forays into the school 'forest'. Within the fieldwork period, I spent 2 hours per week in the forest, with 10 different classes of children aged 3–11 (a total of 24 hours).

Running to a shorter timeframe than many year-long or multi-year studies, I followed common traits of short-term ethnographies and entered the field of study as insider, already familiar with the daily life of primary schooling from my background in teaching (Andreassen et al., 2020). From this insider perspective, I took up the stance of *observer as participant* (Higginbottom et al., 2013), a positionality common to many short-term ethnographies. This is an alternative approach to *participant as observer* often used in longer studies (Crang and Cook, 2007), but is not seen as a replacement for participant observation or learning through doing on the part of the observer. Rather, learning through doing and through participation still occurs, but is shaped differently in that background knowledge of the field is drawn upon in making intensive observations (necessary over the shorter time span) from the side-lines, with light (rather than more immersive) participation in the activities of the group (Pink and Morgan, 2013). I sat within the forest with my notebook, writing down actions of people and things, people with things and things with people. I made sketches of the physical environment and how teachers and children moved and interacted with(in) these. As I wrote, teachers and students often asked about my notes, which I would share; this led to clarification of action in the forest or extension of notes with teachers' views/reports of related action. Notes formed the basis of semi-structured interviews ($n=12$) and informal fieldwork conversations (noted within fieldnotes), following the threads of observations further.

Encounters within the forest were so varied and often unique to each student that iterative-inductive analysis used throughout the wider project often resulted in forest activity coded generally as 'behaviour in the forest'. Coding of specific actors showed repeated patterns in relation to artefacts within the forest space, such as 'wellies', 'fairy doors' and 'whittlesticks'. What children did with the artefacts of the forest was sometimes similar to other children, but more often was individualistic and anomalistic within the wider data set. Notes from forest sessions were hastily jotted as I followed different interactions, occurring simultaneously. Some of these diverse child-forest interactions are reported in this paper through fieldnotes made during one Forest School session in May 2018, involving a Year 1 class (children aged 6–7 years). In this session, typical to all sessions, children's activities were diverse and spread throughout the forest space, mostly involving individuals interacting with different materials.

To write about data anomalies is perhaps to step into an ethnographer's fear of the unusual or overly particular (Geertz, 1983). To write tales about the forest that encapsulate the idiosyncratic actions, which, as we will see, form the very essence of education in this forest, I choose to script the findings of this paper in what Van Maanen (2011) terms an 'impressionist tale' (p.101). Drawn from the art world, Van Maanen applies this term to ethnographic stories in the sense of capturing 'a worldly scene in a special instant or moment in time . . . everyday scenes done in situ' (p.101). These tales are figurative, highly personalised, in which the ethnographer is 'assembling something of a collage of brief images . . . presented as they may have appeared at the time to the

fieldworker' (p.121). This allows the researcher 'to dump all sorts of odd facts and speculations into a shaggy narrative' (p.117), such as the disparate and diverse relationships children build with a school forest. The attempt is one of being 'exact, but necessarily imaginative' (p.102) in that the impression deals with detailed observational data made during specific encounters, but woven into a story in which 'words, metaphors, phrasings, imagery, and most critically, the expansive recall of fieldwork experience' create 'a representational means of cracking open the culture and the fieldworker's way of knowing it so that both can be jointly examined' (p.102). The subject and object of fieldwork remain simultaneously in view, so that children's connections to the forest may be revealed through a tapestry of sewn-together snippets of observations whilst readers may also view the stitches I am actively making. I am also drawn to this approach by the somewhat ethereal concept of place that I am exploring, in that at least some of children's connections to the forest involve the work of metaphysical actors, such as socially constructed ideas about nature, or embodied experiences of books or other places that spark imaginative play with the objects of the forest. A storytelling form seems pertinent to these intangible actors.

There are limitations to this approach. Impressionist tales of the field are a sub-genre of ethnographic writing, largely found within more conventional pieces (as I attempt here, as the findings part of a more traditionally formulated academic paper). I don't here attempt to make the impressionist writing dominant the paper (as is evident in the writing thus far and in the discussion section of this paper), as other writers better than I do (see, e.g. Briggs, 1970; Geertz, 2000), who interweave theoretical and topical digressions in impressionist form to contextualise their studies. However, there remains the risk of the findings section of this paper seeming incomplete and insufficient in the sewing together of many short notes whilst trying to follow a class of children, a teacher, and a teaching assistant through a session in the forest. As some form of counterplay, Van Maanen argues that: 'Culture is not to be found in some discrete set of observations that can somehow be summed up numerically and organised narratively to provide a full understanding' (p.118); the researcher is imbued with interpretative faculties similar to learning to play an instrument rather than solving a puzzle. This is a tale sewn together from the scattered notes of one session, with authenticity remaining the prime endeavour: interpretation comes from analysis in relation to notes from other sessions, and in triangulation with interview and conversational data. I connect anomalous snippets of forest action to interpret them, teasing out the lived experience of children in the forest.

Wellies, whittlesticks and other things

It is a sunny day in the north of England; the kind of day that makes any northerner want to run outside. I sit next to the windows of a year one classroom, flung open to encourage the May breeze inside. This is a large school on the edge of a city, well-respected in local media, parent surveys and (as far as it matters) the national inspectorate. It is where I am conducting fieldwork which explores what constitutes and influences classroom practices. I am a teacher, but this is not my school. It is a very different school to any I have taught in, both in its large size and in the extensive facilities it has to offer. These include several playgrounds, allocated to different three-class year groups, large fields, and a 'forest': a gathering of trees at the edge of one of the school fields where teachers take their classes for an allotted one and a half or two-hour session each week. This is where this year one class are headed next.

Fanning myself with one of my completed field notebooks, I watch as 30 children come in red-cheeked from morning playtime, some smiling, some frowning, others yawning. They filter into the classroom, grabbing quick drinks from water bottles, shedding jumpers, and chatting. Alex is the teacher of this class. He has been teaching for nearly two decades. He stands at the

door to the classroom, facing the room. The children seem to take this as a signal and line up in front of him. Gradually, the burble of voices and clatter of water bottles and coat pegs settles down to silence.

‘Come on, then, let’s go,’ Alex says in a jolly tone. A twitter of voices pipes up from the line of children and I hear excited whispers: ‘Forest School!’, ‘It’s forest time!’. One even does a little dance. I join the back of the line, new notebook and pen in hand, glad to be finally going outside.

Quietly chatting, we file out of the classroom and turn right down a corridor, snaking our way through the school to a door leading onto an older year group’s playground, now empty. In front of this door is a perfectly straight line of paired-up and battered wellies. Green, blue, red, yellow, they stand like sentinels, feet smartly together lining the glass wall leading to patio-style doors. These are wellies that the school provides as part of forest time and are in a variety of sizes. At the sight of the wellies, the quiet chatter erupts into a flurry of activity and excited voices. Children tug on wellies, telling each other what they plan to do in the forest, or inviting each other to join in with different tasks or games. ‘Do you want to play with me again?’, one child asks another. ‘I wonder if anything’s grown that we planted?’, another child asks. ‘I heard from L’s class that there’s a *fairy door* there this week’, one child emphasises in awe to a friend. Alex pulls on a large pair of wellies from the end of the row.

‘Isn’t it a lesson then?’ I ask, sounding rather stupid to my own ears.

Alex laughs. ‘Yes, it is. You saw us plan it out last week as a team.’ And he strides through the door and into the sunshine, waiting, facing the door, a few feet away. The children fall into line in front of him, in pairs, holding hands with a partner.

Last week, I had joined Alex’s year group team for their weekly planning session. Amidst planning for curriculum subjects such as English and mathematics, the team had discussed Forest School. Alex had pointed out that as the year group were writing imaginative stories in English it might be nice to ‘put a fairy door or two amongst the trees next week’. These ‘doors’ were made of different materials – wood, cardboard, sticks – and shaped by teachers to look like miniature doors. Alex told me that in the forest, children have ‘freedom to roam . . . there is no correct way of being. The stuff we leave there, like the fairy doors, might be used by children, or they might not. And it’s often surprising what the children decide to do with them’. Charlie (one of Alex’s colleagues) told me that Forest School in this school is about ‘offering interesting things for the children to connect with, interesting possibilities’. Alex added, ‘There are things we want them to experience. We can give these experiences names like “problem-solving” and “confidence-building” if you like, but really for us it’s about widening their life experiences and also giving them something to latch onto when we talk about scientific concepts or writing a story set in a forest’.

In the corridor, I quickly get with the programme and pull on another adult-sized pair of wellies stood next to where Alex got his. I feel a frisson of excitement. I’m not entirely convinced that wellies are a good idea for my aching feet on such a warm day, or even needed; it hasn’t rained in days. But, putting them on seems to signal something. As if something unusual in the school day is about to happen (which, I hastily remind myself, is ludicrous because this is indeed a planned-for, timetabled weekly session). One child without wellies on is guided back to put some on by a teaching assistant: ‘See? We’re putting on our wellies. It’s time to go to the forest’. Alex later tells me that they also usually put on waterproofs or ‘puddlesuits’, but that it is too hot today. Once everyone is ready, we all walk ‘crocodile fashion’ across the playground.

The 'forest' is a small, wooded area at the far corner of the playground, on the edge of a playing field. The trees are mature beeches and pines, about 20 in number, interspersed with box bushes, a few nettles, and some large ferns. The dirt ground is carpeted in parts with bark chippings and segmented by large logs (arranged in a circle in the middle of the forest). Bark and logs are additions to the already existing wooded area, provided by two teachers who set up the forest after being FSA-trained.

When we get to the forest clearing, the class are guided by Alex to sit on the circle of logs. A song is sung by all (everyone knows the words but me and some children frown at me as I attempt to join in with the chorus). It's a song about welcoming each other to the forest. Alex explains that today, children might find some little doors around the base of trees and invites them to make use of them. He then adds that today children might want to do some whittling of wood into different objects if they wish. He briefly explains that whittling is something that people used to do a lot of in forests, to make sticks into tools, or spears for spearfishing, or to make toys. He shows how to hold the stick in one hand and what looks like a large vegetable peeler in the other, scraping bark off the stick away from his body and says that the class teaching assistant will be around in the whittling area (the circle of log-seats) to help if anyone chooses to have a go. He then invites children to explore the forest.

The class disperses amongst the trees. Some hunt down the little doors, a few children calling them 'fairy doors', which seems to have been passed along from another class in the same year group who have already been to the forest this week. A group of four children gather sticks and leaves and make a 'living room for the fairies'. One child counts the doors as they find them, opening and shutting each before moving on to the next. Others work together to draw doors in the sand: 'Mine's a portal', one says. Different stories take shape as children play, some leaving the doors behind, others centring around a chosen door. Another child makes a hole in a tree into her own 'fairy door' and walks a pinecone in and out of the hole, giving it a voice and actions in an impromptu story. Alex walks between them all, separate from their play-worlds, but occasionally asking children, 'Have you seen this?' or suggesting an addition to their game or exploration: 'Here's a magnifying glass to help you to look behind the doors. Have you found anything interesting?'.

Later, I will ask Alex about this approach, and he will tell me that, 'It's about giving them freedom to think. So, the forest means something different to each of them. It might mean something different next week too. I look for opportunities to join in or point something out'. He tells me that all the work of education is in what has gone into the design of the forest before the sessions. 'The forest speaks for itself, but we [teachers in the team] give the forest its voice. Every year group decides what's in it to spark thinking. Some make it more sciencey, some more about forest skills, some more about imaginative play, like us this week with all the story work we've done in class'. But, this doesn't seem a place totally in service of the curriculum (there are no written plans with specific curriculum links), nor completely outside of it. More like a harnessing of what children have experienced so far. Children make links of their own between the stuff of the forest and different life experiences at school and outside of school. Two children wander to a garden area with the beginnings of shoots poking up from a recently dug earth. 'They're growing! They're growing!' one child excitedly reports to their friend. Alex wanders over and chats to them, asking them why they think these plants have grown so quickly.

Later in the session, one child sits on the playing field grass at the edge of the wooded area, his back to the forest. Alex talks to him.

'What's up?' Alex asks.

The child shrugs and says, 'It's dirty in there, I got mucky'.

'You don't like the soil?'

The child shakes his head. 'It's not good to play in the dirt. I have to keep clean'.

Alex nods and pauses. 'You've got wellies on though. They protect your trousers. So, you could go and balance on the log you liked last time if you like and your clothes will stay clean'.

'Last time I had a puddlesuit on'.

Alex smiles. 'Shall we go and get you one on then?'

The child agrees. Alex helps him to don a puddlesuit and the child runs off into the forest, climbing and balancing on logs.

Towards the end of the session, six children sit around the log circle and whittle, quietly chatting about what their stick is going to be (a mast for a pirate ship, a jousting pole, a tent pole, a pencil). One giggles and squeaks, 'I'm not a stick! I'm Stickman!', dancing her stick in front of her and parroting Julia Donaldson's book 'Stickman'. Three children hop from shadow to shadow, cast by the high sun on waving trees. Two put their hands in and out of light patches: 'We're catching the sunshine', they tell me. I am longing to make this into a 'teachable moment' but resist and make notes instead. Unless it is in my imagination, the children look vaguely relieved. They continue their play and I my note-making until, after an hour and a half of forest fun, Alex claps his wellies together like Dorothy and declares it time to return to Kansas.

Discussion

The terms of veridiction of the educational mode of existence in this forest are organised around two simultaneous ideas: individual, open-ended connection to forest artefacts through imaginative exploration, and the introduction of historical/cultural uses of forest objects. The [MET-NET-EDU] plaiting is produced and sustained partly by the ways that teachers *enrol* various natural and man-made artefacts in their service (Callon, 1986).

The first way of relating to the forest – through open-ended imaginative exploration – is achieved through teachers' deliberate encouragement of individual playful communion with the materiality of the forest. Man-made and natural objects are left as discontinuous in what they signify; little doors, whittlesticks, shadows, leaves do not obviously relate to one other (or to education) and are introduced to children in a manner which leaves them largely unexplained. The stuff of the forest insists on articulation (children notice these and use them), but trees, light, shadows, teacher-made objects, are all left to work their own *mediation* of children's interactions (Latour, 1999). This discontinuity is vital in creating and continuing a certain way of relating to the forest – a continuity through discontinuity that Latour (2013) describes as one of the conditions of [PRE]. Objects may inspire different meanings in different children, producing an open-ended trajectory to children's place relationships. This challenges the felicity and infelicity conditions proliferating in current English education systems identified by Tummons (2021), which demand of the student the achievement of right or wrong answers to predetermined curricula. A way of being difficult to escape in an era of performativity and marketisation of education (Ball, 2008), this is often discussed as an outcome of accountability to pupil performance in high-stakes assessment systems

(Gregory and Clarke, 2003) and has been explored as reducing student autonomy: ‘the pressures and potential disadvantages that accountability can bring . . . Asking for help becomes the norm, rather than an approach which empowers students to take responsibility for their own learning’ (Edgington, 2016: 309). Echoing an educational movement towards social experience as educational (Biesta, 2022; Ingold, 2017), there is no goal of qualification in the forest. As is the trend in Forest School approaches, teachers do not use forest sessions strictly in the service of the national curriculum, rather as a ‘space set apart . . . removed from the physical constraints of the classroom and pedagogical constraints of the national curriculum’ (Harris, 2018: 222).

The discontinuous pedagogy of [EDU] in the forest is reliant upon teachers’ knowledge of the place of the forest in extended space-time form. From a social topological perspective of place, children’s connections to the forest are closely associated, not only with the ways in which materials and people are connected in situ, but with the ways in which forest materiality and meaning are curated in relation to extensions of actors through space and time (Decuypere et al., 2022). To create a place that children can connect with, teachers must select natural and manmade artefacts that they know will spark a connection from children’s life experiences so far. Relating to theoretical perspectives of critical pedagogies of place, the forest ‘place’ becomes educational through its reconstitution as spatial aspects of social experience (Gruenewald, 2003), constituted by a network of social actors which determine students’ engagement (Smyth et al., 2008). Employing a topological lens, we may see more clearly how the forest and its related [EDU-NET] are neither spatially nor temporally static, but rather caught up in flows, mobilities, connectivities (Lingard, 2022). In teachers’ pedagogical curation of the forest, the space and time of material and human actors extend in multiversal trajectories beyond the physical site of the Forest School: to storytime in class, to the curriculum, to local wooded areas, to playful times with sticks at home/on TV. The artefacts teachers employ in discontinuous representational roles, embody the pedagogy of ‘offering interesting things for the children to connect with, interesting possibilities’ (Charlie, fieldnote). The forest is a place whose educational mode of existence is rooted in imagination [EDU-FIC] and metamorphosis [EDU-MET], reliant on teachers’ topological awareness: in association with the embodied experiences and ideas of each child, a variety of subjective and changeable place-meanings are produced. Plurality and freedom of association become the habit [HAB] of the forest.

This is seen as so much of a contrast to the [EDU-NET] of the classroom that further artefacts – wellington boots (wellies) – are *enrolled* to signal a shift of mode of being from classroom to forest. Through the symbolic act of donning wellies, children ‘sign in’ to the ways of being of the forest (Plum, 2018). As for the nursery artefacts and actions in Plum’s study, wellies represent and remind children of a pedagogical transition: here, from the [EDU-HAB] of classroom to that of the forest. Teachers use wellies to establish continuity of previous connections to place which have been discontinued by time spent otherwise engaged in classroom and out-of-school activity. Again, topology is useful here in the sense of a folding together, a co-productivity, of space and time (Decuypere et al., 2022): wellies are artefacts which traverse time and produce space as continuous representations of what a change in physical space represents to the child in [EDU] terms. In Latourian terms, wellies are part of a *chain of reference* (also including puddlesuits, a repeated path to the forest, a circle of logs) that represents in *immutable mobility* a required change of mode to ways of being in the forest (Latour, 2013). This is in a similar manner to how pictures remind children of different ways of thinking about a problem (Nichols, 2006), or a hard hat mentally prepares a builder for a way of being on a construction site (Riemer, 1979). When resistance arises to being in the forest (a child who wants to stay clean), wellies and puddlesuits are used by teachers to counter resistance, drawing on the purpose of these artefacts in providing ‘protection’ from undesirable dirt in the forest and enabling child-forest connection to resume.

The second way of communing with the forest – the introduction of historical/cultural uses of forest objects – directly steers children towards selected forest skills (whittling, fire-building, plant identification, and so on). This direction offers something different in the conditions of [EDU] to the individualistic freedom of association between children and the artefacts of the forest. The introduction of socio-cultural historical traditions interweaves [EDU] with a further time-space folding, in the sense of what Ingold (2017) calls ‘longing’: bringing together past space-times (in the form of embodied/ discursal memory of tradition) and future (trajectories of thought/action), as part of a social explorative and educational endeavour. Regular integration of forest skills suggests teachers’ desire for artefacts present in the forest to continue sociocultural histories, echoing discourses advocating cultural nature-connection in an increasingly indoor and digital world (Hechter and Fife, 2019). However, the ways that these artefacts are taken up by children – in a variety of tangential integrations as part of the materiality of children’s forest explorations – signals individualisation in how these objects *mediate* children’s activity in the forest (Latour, 1999). This suggests that learning about history or culture is backgrounded in favour of bespoke subjective child-artefact connections as part of imagined, embodied worlds. The *alterity of being* offered to children in this forest is one steeped in personal place connection, in multiplicity of possibility.

A more present element of historical-cultural space-time extensions is that of children’s own embodied histories and attitudes to nature. A topological approach to an AIME perspective of existence as immanence (Latour, 2013) supports the idea of embodied actors which we might call ‘unboundaried’ – recursive entanglement of actors from multiple chronological times and physical spaces creates points of intensity in [EDU-NET] in which ‘new’ actors – network effects – are produced. The child comes to the forest having already passed through many associations with physical beings of nature, metaphysical ideas associated with nature and other people/social groups who have spoken of nature. It is through this embodied history that each child connects with the forest, readily accepting or actively (and with strong emotions) rejecting the experience, strengthening arguments to reconsider commercialised versions of education in forest places in ‘how Forest School as a form of outdoor education is culturally, socially and historically situated’ (Leather, 2018: 5).

Conclusion

Against a tide of globalisation and planiformity, the specificity of this forest (amongst myriad other Forest Schools) matters: ‘Place brings with it the very elements sheared off in the planiformity of site: identity, character, nuance, history’ (Casey, 1998: xiii). Materiality and (subjective, historical-cultural) meaning are key to the formation and sustainability of these characteristics. In a summary paper to the EERJ special issue by Decuyper et al. (2022), Lingard (2022) suggested potential in interrogating relationships between a social topological lens and other frameworks, including ANT. This paper has taken seriously this suggestion, contributing to consideration of how a social topological perspective may fruitfully work alongside an AIME approach to unravelling the secrets of (EDU), in this case to the end of reimagining child-place connection as part of complexly folded space-time network activity which has an educational tonality. Mining network relations which establish place-connection in a Forest School has produced a supporting case for Allen’s (2011) suggestion that the focus of social topology on a loosening of time and space extends Latour’s (ANT) focus on the manner and trajectories of social actor relations. This paper has extended Allen’s consideration of Latour and social topology in demonstrating how these sit within Latour’s later project: AIME. The pre-positional conditions of (EDU-PRE) are continuously produced through perceivable intensities in relationships between social actors who are variably physically

and temporally near/distant. Discerning children's connection to the forest 'place' relies on being about to account for metaphysical actors (MET) which are conglomerations of actor activity in complexly folded and diverse times and spaces, made present in trace form in the (EDU-NET) of the forest. It is hoped that this endeavour to grasp such complexity in children's connections to place provides an alternative approach to an already established field of thought around critical place based pedagogy and contributes to a 'mobile sociology of education': to grasp education 'as a genuinely fluid, networked and mobile process' (Landri and Neumann, 2014: 1), in this case as a mode of existence that requires continual unboundaried empirical and philosophical attention.

Ethics statement: Participants gave their informed consent for inclusion before they participated in the study. Participants have been anonymised using pseudonyms. The study was conducted in accordance with the ethics guidelines of Durham University (this research was part of a PhD project with Durham University) and has therefore been performed in a way that is consistent with the ethical standards articulated in the 1964 Declaration of Helsinki and its subsequent amendments and Section 12 ('Informed Consent') of the ASA's Code of Ethics.

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Note

1. Echoing notions of habitus (Bourdieu, 1978), this view suggests that human connections to physical environments represent and engender cultural ways of being.

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