

Chapter 1

Outdoors and Nature in Pedagogical Practices and in Cultural Historical Theory



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Abstract Despite the increasing awareness of the outdoors as a beneficial site for young children’s education, the status of outdoor activities varies in and within different cultures. Aiming to broaden and challenge presupposed understandings of education and care in the outdoors, we consider the empirical findings from all the chapters in this volume in order to identify a range of conditions for cultural formation in outdoor practices both within and between different cultures. Building on Mariane Hedegaard’s approach to cultural historical theory and Ødegaard and Krüger’s approach to cultural formation, our analysis is performed by identifying conflicts and alignments between the values and motive orientations of the individual and those interpreted from the contextual conditions and demands of institutions and society, particularly in relation to the perception of nature. In doing so, we depict how culture and nature are interrelated from a socio-cultural perspective, and argue that perceptions of nature shaped by institutions and society play a significant role creating conditions for cultural formation. The opportunity for play, learning and cultural formation in nature appears rich within all the represented cultural spaces described in this volume, although whether these opportunities are supported consistently within wider mainstream culture is regarded as an area of tension in some chapters. Based upon our analysis, we suggest that both pedagogical practices

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and cultural historical theory need to take the outdoors and nature into consideration when emphasising pedagogical practices for children's play, learning and cultural formation.

Keywords Cultural formation · Cultural- historical theory · Early childhood education and care · Outdoors · Nature

1.1 Introduction

The status of outdoor activities in educational practices like Early Childhood Education and Care (ECEC) varies within and between cultures and countries; in some, outdoor activities are highly emphasised, whereas in others, outdoor activities have limited importance and/or fewer opportunities are provided. In Scandinavian countries, for example, outdoor activities are central to the everyday lives of young children and are promoted across the institutions of the home, ECEC and nature kindergartens as important for children's health, well-being, learning and development (Aasen, Grindheim, & Waters, 2009; Sandseter & Kennair, 2011; Sørensen, 2013). In countries such as China, however, which has high levels of pollution, children are not encouraged to be outdoors for lengthy periods (Birkeland & Sørensen, 2021). We aim to broaden and challenge existing understandings of outdoor provision by presenting this collection of research on the outdoor environment as an arena for cultural formation through outdoor and environmental education activities. The content of this chapter is, therefore, structured around the research question: *What conditions for cultural formation through outdoor and environmental education activities can be traced in practices both within and between different cultures?*

We build on a cultural historical approach, understanding children's activity as embedded in the culture of which children are a part; thus, play in outdoor spaces or activities using natural materials is also seen as cultivated. The elaborated knowledge from the chapters draws upon empirical examples from Australian, Chinese, Brazilian, Welsh, Norwegian and Polish cultures. The main aim is to identify a variety of possibilities or obstacles that the outdoor context represents as a condition of children's activity, thereby contributing to broadening the understanding of educational politics and educational practices in ECEC. Our analysis depicts that both possibilities and obstacles point to more than the outdoor environment itself. Individuals as well as institutions, presented here as teachers, parents or grandparents, ECEC settings as well as the institutional values embodied in the training of educators, are shaped by cultural values, expectations and demands. Thus, they have the potential to create possibilities and opportunities for children's development in outdoor spaces or to constrain possibilities. We, therefore, surface how cultural formation shapes perceptions of nature and subsequent opportunities for young children's development in the outdoors.

1.2 Theoretical Approach

Our theoretical and epistemic framework begins with Vygotsky's (2016) and Hedegaard's (2009, 2020) understandings of children as active agents at the core of learning and cultural formation. Children's learning and cultural formation is seen as contextualised, situated, mediated and embedded in their given cultural context. Children's development is seen as dynamic, in dialectical reciprocity with societal conditions (Hedegaard, 2009). Hedegaard (2020) argues that if researchers only study children's development by considering 'a fixed sequence of developmental stages', it is difficult to capture 'the diversity that is connected with cultural traditions in different societal institutions' (p. 2). Hedegaard and other researchers employing cultural historical perspectives have criticized research approaches that study child development without consideration of the individual as a participant in dialectical life contexts, thereby neglecting the cultural-historical conditions for children's development. Hedegaard (2009) argues that 'demands for a scientific approach have led to several one-dimensional conceptions of development, where the focus has been on the development of different psychological functions and competencies' (p. 64) with little regard for the participation of the child in activity settings shaped by cultural content. In line with sociologists and anthropologists (Corsaro, 1997; James, Jenks, & Prout, 1998; Rogoff, 2003), Hedegaard emphasizes the need to study children localized in time and space, and to take participants' values and motivations into consideration. Hedegaard (2020) asserts that it is the dialectical relationship between societal and institutional (cultural) values, expectations and demands and the child's developing motive orientation that contributes to the child's development within and across institutions in everyday activities and routines called *activity settings*.

Similarly, Ødegaard and Krüger's (2012) concept of cultural formation is understood to be an 'ever present and continuous process' (p. 21). Ødegaard and Krüger (2012) present cultural formation as a descriptive concept that portrays the acts of humans in relation to the conditions in their given culture. Both the process (act) and the result of being a part of the activity are embedded in the process of cultural formation. The individual appropriates, negotiates and challenges cultural formation, thus both shaping and being shaped by institutional values and demands. Employing a cultural historical perspective on children's development and cultural formation in activities, this anthology seeks to expand upon the cultural-historical tradition of studying children in classroom and home activities to consider children's cultural formation in outdoor spaces or in sustainability practices. In line with Vygotskian theory and Winther-Lindqvist (2019), the authors in this volume see children's development as the result of a complicated interplay between the agentic child and their environment, which, we argue, includes the socio-material affordances provided both in- and out-of-doors in early childhood provision (Rekers-Power, 2020).

The arena for cultural formation in this anthology is predominantly the outdoor environment, which ranges from urban spaces to woodlands to gardens outside the home. These areas vary in forms and conditions for cultural formation in and within cultures and countries. We, therefore, take into account that even if children have access to outdoor activities, how, where and in what forms this may be accessed, differs. In addition to cultural – and subcultural – differences, the situation, the artefacts involved, the relations among the participants and the institutional values and demands also influence children’s outdoor play. Thus, children’s activities are culturally and situationally constructed, and children are both co-constructors and re-constructors when exploring their social, cultural and material environments.

1.3 Methodological Approach

To trace conditions for cultural formation within and between different cultures presented in this volume, we present analysis of the activities and findings presented in each chapter to consider cultural formation as an always present, ongoing process, involving both non-human and human actors. We build our analysis on Hedegaard’s (2009) model for analysing the interconnection between children’s activities/routines (activity settings) and the values, expectations, demands and motive orientations at the personal, institutional and societal perspectives, as illustrated in Fig. 1.1. This interconnectivity provides the basis for cultural formation.

The natural world or outdoor environment is not an explicit part of Hedegaard’s model. Since the context for the activities in this book focus upon use of the outdoors or education about the outdoors, we elaborate her model by including the *perception of nature* as an overall contextual perspective in line with *culture*, as illustrated in Fig. 1.2.

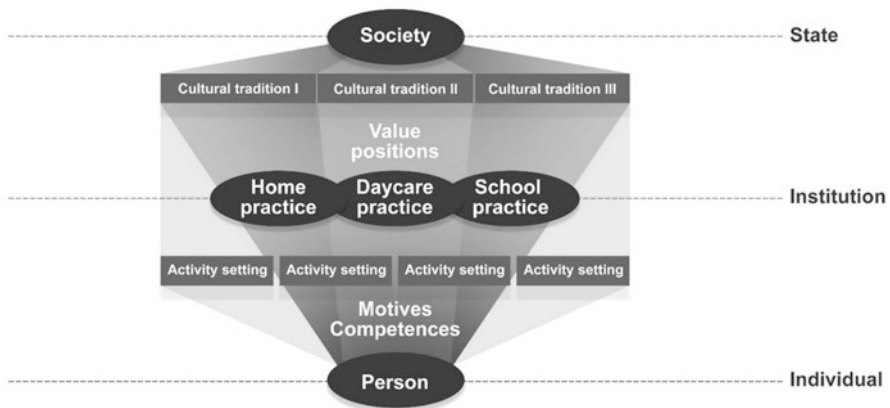


Fig. 1.1 Illustration of the relations between society-practice and persons with cultural traditions and activity settings as mediating links. (Redesigned from Hedegaard, 2009, p. 73)

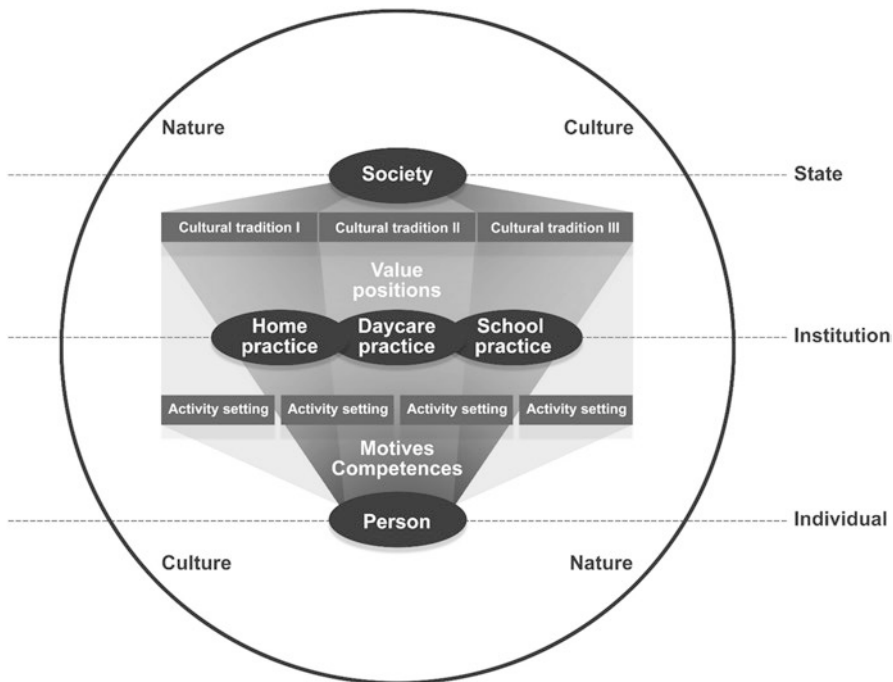


Fig. 1.2 Illustration of the relations between children as active agents and participants in different societies and institutions in dialectic relations with nature and culture

In line with cultural historical theory to date, Hedegaard does not formulate explicitly how non-human nature is perceived as part of her person-institution-society model (Fig. 1.1). Therefore, we see an opportunity for drawing out the socio-material interactions as well as the sociocultural intentions in early childhood practices that focus on nature or those that take place outdoors. In this chapter, we begin by surfacing conceptualisation of nature as embedded in all three perspectives of Hedegaard’s original model. From the individual perspective, we regard humans as biologically as well as culturally constructed. From the institutional perspective, valuing nature is in the pedagogical or family practices with traditions for and prioritizing of outdoor activities and environmental education. From a societal perspective, we consider values that assert the positive influence of nature and outdoor activities on children’s health, wellbeing, learning and development, as well as belief systems that regard nature as dangerous or dirty, not for girls, or not suitable for schoolchildren. These contradictions surface tensions and conflicts between the expectations for teachers to take children outdoors for play and demands about children’s safety, learning and development that are embedded in the given culture.

The elaborated model (Fig. 1.2) frames our analysis. We look for conflict and alignments between the values, motives and competences of the individuals and the contextual conditions and demands in *the perspectives of persons, institutions,*

society to include the *perception of nature* as a condition for cultural formation (Grindheim, 2020). These conflicts or alignments surface the conditions for cultural formation arising from the activities that are presented in each chapter in this book. Thus, assertions from all the chapters form a part of the analysis in this chapter. The ways the involved participants deal with these conflicts or alignments are understood as ways of exploring and interpreting the individual's motive orientations together with conditions and demands in their institutional, societal, cultural *and* natural context.

1.4 Analysis and the Depicted Conditions

We consider each chapter, in order to trace conditions for children's cultural formation through outdoor activities within and between different cultures. We commence with the chapters that focus on babies and toddlers and the chapters concerning children from 3 to 6 years old in early childhood education and care settings. We then discuss those chapters that focus on children involved in family activities, and end our analysis with the chapters that consider early childhood teacher training and education. These chapters highlight the dynamic interplay between individual, institutional and societal values, expectations and demands that shape children's play, learning and cultural formation in outdoor activities.

1.4.1 *Toddlers' Outdoor Play, Imagination and Cultural Formation*

In Chap. 2, Ridgway, Quiñones and Li investigate the activity of three toddlers engaging with the material and social affordances of the activity settings: playing hide and seek, imaginative engagements around a fairy door in a tree, finding and imitating a snail, and doing tai-chi. In this chapter, the children are viewed as explorers and active participants in their cultural formation, while exploring and engaging with their family relations and family heritages, their local cultural and natural spaces. The authors trace social and material conditions by discussing the adults' involvement and values, societal influences such as the parks and backyards themselves, and the human and non-human materials encountered by the children.

In the *personal perspective* there appears to be an alignment between the child's motives and competences and the conditions and demands of the activity setting, as each child appropriates the conditions created by the family activities in which they participate. The children's embodied motivations and participation are supported and valued by their parents' and their grandparents' warm understanding and positive attitude. In the *institutional perspective*, here represented by home/family, the support from parents and grandparents creates conditions in which the motives of

the children to be exploratory, playful, and imaginative co-collaborators may be seen as aligning with their parents and grandparents' motive orientation and ideas of what is important for their future life.

Similarly, in the *societal perspective* these motive orientations appear to be in alignment with those of the wider society in which they live, through which conditions for their participation has been shaped. For instance, the public parks encourage the practice of tai chi and also provide foliage for imaginative interactions and explorations around the fairy door in the tree. Also, the societal values may be seen in the neighborhoods in which the families live, enabling the children to explore the family garden and home renovation project in the semi-rural community. The *perception of nature*, as interpreted in the individual, institution and societal perspectives, is visible in the supportive social and material affordances of in the cultivated spaces of parks, and family- and community gardens. These spaces offer natural affordances of the grassy tussock, mulberries and insects, in addition to those opportunities that are more cultivated. In these outdoor activity settings, which are shaped by the natural, societal and familial conditions, the development of children's imaginative and exploratory play is encouraged.

1.4.2 Providing Outdoor Experiences for Infants and Toddlers: Pedagogical Possibilities and Challenges from a Brazilian Early Education Center Case Study

In Chap. 3, Costa, Rossetti-Ferreira and Mello investigate babies and toddlers' activities in an ECEC institution in Brazil, located on a former farm on the outskirts of a city in São Paulo. The authors discuss outdoor activity in both the outdoor spaces that are attached to the child-care complex, providing possibilities to move between the indoors and outdoors, and the wider outdoor areas a short distance from the building. The authors consider these spaces, some of which provide opportunity for the children to move autonomously from the indoors to the outdoors, in terms of socio-spatial practices (Rutanen, 2012). The empirical material and its analysis find few conflicts in the personal and institutional perspectives.

In the *personal perspective*, there appear to be alignments between children's motives and competences and the teacher's providing of conditions and demands, demonstrated by the teachers providing play materials and spatial access to outdoor spaces. Also, the staff were directing the infants' attention toward nature and the outdoor affordances for exploration in alignments to children's increasing walking onset and motor development, which provided an expanded range of opportunities for the children than the indoors on its own could provide. There also appear to be alignments between the parents' motives and competences for taking care and being involved with their child outdoors and the conditions and the demands represented by the daily routines and spaces for one-to one interactions between a parent and a child. As parents' use of the outdoors increased, so was their own relationship with nature enhanced.

In the *institutional perspective*, there appear to be alignments between motives among the staff and parents in this study that support access to embodied exploration and access to nature, demonstrated by the way the ECEC institution organises their daily practices involving children and parents to engage physically and sensory with the outdoors. This is presented as a contrast to many ECEC providers who are driven by demands for adult-centred provision with a focus on cognitive development, thus devaluing such outdoor provision.

Similarly, *the perspective of society* and *the perception of nature* as valued by the individuals and the institution are in conflict. The conditions and motivations traced from Brazil's intense industrial and urban sprawl, and the inequity in income that condition the upper class to colonize the few green areas available, form a conflicting contrast to motivations and conditions for young children's access to outdoor spaces. Although there is an expressed intention for outdoor activity in general, the lack of funding for infrastructure and maintenance limits the ability of ECEC institutions to provide quality outdoor experiences. Thus, young children's rights, motivations for bodily explorations and access to outdoor areas seem in conflict with political agendas.

Children are identified as active participants in their everyday life, through bodily interrelations with the staff, their parents, the artefacts, projects and nature that provide opportunities for a range of activities to emerge in alignment with their increasing skills. Thus, Costa, Rossetti-Ferreira and Mello point to how adults can be supportive of children's initiative and engagement in outdoor environments. From the alignments and conflicts presented above, the socio-material opportunities created by the childcare setting and staff provide crucial conditions for the outdoors as an arena for cultural formation in this example.

1.4.3 Princesses (Don't) Run in the Mud. Tracing Child's Perspectives in Parental Perception of Cultural Formation Through Outdoor Activities in Norwegian ECEC S

In Chap. 4, Sadownik investigates children's outdoor activities in ECEC¹ as a condition for children's cultural gender formation that may challenge parental values and cultural heteronormativity. The activity settings described in this chapter take place in a Norwegian ECEC and are discussed by Polish parents that are immigrants in Norway. In *personal perspectives*, the values and motives of the Polish parents represent both gender-traditional perspectives and gender-liberal perspectives, although their former *societal perspectives* are more closely aligned with a gender-traditional approach; these tensions are surfaced in the interviews. Thus, in considering the *institutional perspectives*, there seems to be a conflict between the values of

¹ECEC institutions in Norway are for children from 1 to 6 years old.

gender-traditional homes, and the values, motives, conditions and demands to promote equity among genders in Norwegian ECEC institutions. The values of the gender-traditional parents were, therefore, in conflict with the institutional values and expectations, as well as with their children's and the ECEC staff perspectives. So, too, did these parents consider cultural formation to be the sole responsibility for the adults, thus negating the motive orientation of the children themselves. This authoritarian view about upbringing presents a challenge to one of the fathers with gender-traditional expectations who eventually is able to consider the perspective of his daughter as a future companion on camping trips in the wilderness, something he himself enjoys. Subsequently, there is a conflict between the father's perception of his culture's gender-traditional demands and his personal motivations for spending more interesting time with his daughter: he admits he would rather go camping with her than go shopping. This surfaces a conflict between the father's motive orientations for his daughter's future and the daughter's own motive orientation for being a 'wild', nontraditional-gendered girl.

Sadownik suggests that looking at outdoor activities involving specific persons (the father and his daughter) in a specific activity (outdoor activities), brings the *personal perspectives* to the fore, and surfaces (perhaps conflicting) value positions. This impacts upon the individual's interpretation of institutional demands for outdoor activity involvement which is non-gendered, as well as coming closer the child's perspectives. This exemplify how children develop across institutions and that moments of conflict help us to interpret the child's perspective. We also interpret *the perception of nature* as a strong actor for challenging traditional understanding of gender. The outdoors is more accepted as arena for cultivating masculinity by the gender-traditional parents; yet, the outdoors is considered an arena for gender equity in the Norwegian contemporary approach. Thus, the use of the outdoors in ECEC informs the conditions for cultural formation that challenge heteronormativity.

Children's perspectives are considered as actively challenging their parent's heteronormative views; simultaneously, ECEC and cultural values and motivations are important conditions for children's subjectivity. Cultural formation is mapped as a process of intersubjectivity. Both personal perspectives and institutional perspectives relating to outdoor activities are highlighted as conditions for challenging heteronormativity in cooperation with parents in ECEC.

1.4.4 Children's Play and Social Relations in Nature and Kindergarten Playground: Examples from Norway

In Chap. 5, Sørensen investigates the conditions and demands for one 4-year-old child's interactions with peers, during outdoor play in the fenced playground and outdoor play in nature. In *personal perspectives*, the child's values and motives are to join in and play with peers in both the playground and the natural environment – a less cultivated space. In *institutional perspectives* the child's motivation is in line

with the condition that the teacher-child ratio is higher in nature compared to the playground, thus teachers are better able to observe and interact if a child is struggling to join in with peers. Although the teachers may be equally motivated and engaged whether they supervise a larger group/number of children on the playground or in a natural environment, the conditions in natural environment allowed the teachers to join into children's play and activity. Similarly, this chapter's findings demonstrated that the developmental goals for outdoor playtime on playground differ from the goals in nature. On the playground, the goals were geared towards independent play in larger groups and becoming accustomed to outdoor life, rather than experiencing risky play and teacher involvement in conversations with the children, as observed in the more natural setting.

In the *societal perspective*, the adult motivation and involvement with the children in the nature setting particularly align with the *societal* expectations for outdoor activities in nature that stimulate nature connection, since attachment to nature is considered a cultural phenomenon in Norway. This cultural phenomenon is in alignment with this ECEC's institutional profile that obligated them to spend the major part of their day outdoors, either in nature or in the playground. In the *perception of nature*, the conditions of the natural environment are shown to be more open, in terms of space, weather and the natural elements. These conditions are valued within the individual, institutional, societal perspectives; and, the *perception of nature* aligns with the child's motivations and competences.

Sørensen outlines how the conditions and demands in the nature setting formed the possibility for the involved child to create an imaginative play scenario that included more children who wanted to join in with his imaginative scenario. Children's involvement in imaginative, explorative play and adult engagement in children's play align with the teacher's motivations both in the playground and in the nature-setting, but this motivation faces more conflicts when confronted with the conditions and demands in the playground. The child's experiences in the playground and in nature are compared in order to demonstrate how the child's efforts to be involved in play on the playground fail; however, the conditions of the nature setting, which include more actively engaged teaching staff as well as natural materials, provided enhanced opportunities for the child to be more successful in his attempts to be an active agent in peer play, learning and cultural formation.

1.4.5 Utilisation and Design of Kindergarten Outdoor Spaces and Outdoor Activities

In Chap. 6, He and Meng outline and discuss children's outdoor activities using different terrains and materials situated in kindergartens, in Bergen, Norway and in Anji, China. This chapter points to terrain and material for play, as well as societal and cultural differences in relation to education for young children that form

conditions for children's cultural formation. These conditions are surfaced and discussed by comparing and contrasting the two kindergartens.

Contrasts are found in the *individual perspectives*. Teachers in Anji mainly observe and do not direct or interfere with children while they are in the outdoors. Instead, children's learning is emphasized by collective, teacher-initiated reflections after outdoor play, designed to build upon children's existing competencies and support further concept development; these reflections highlight alignments with children's motivations and competences. In Bergen, the teachers stress situated engagement with individual children while in the outdoors and in doing so, seem to focus on what the children 'already know', rather than trying to achieve further outcomes or objectives.

In the *institutional perspectives*, there are differences in terrain and materials in the Anji Play setting and the Bergen setting. The Anji Play setting's outdoor arena is artificially designed to represent the multiple features of less cultivated natural spaces, thus demonstrating a motive orientation to recreate the affordances of more wild spaces in less urban areas. Additionally, many objects have been introduced by the adults for play materials, more in line with adventure playgrounds, whereas in Bergen, natural elements like stones, hills and sticks are the most important resources for play. Therefore, there is the institutional condition in Bergen of using what is already in the outdoor environment and travelling from the setting to explore new outdoor spaces. However, in the Anji Play example, the adults in the setting are creating conditions for children's play outdoor by bringing in materials for exploration.

Another difference between the kindergartens in the *institutional perspective* is the ways in which teachers in Anji stresses social motives, reflections, learning and interaction in the collective, while the teachers in Bergen pursue individual competences and motivations. These differences reflect the *societal perspectives* in the two cultures. While *societal perspectives* in Bergen are shaped by a cultural heritage of individual competencies in outdoor spaces, these competencies are not necessarily valued by Chinese culture. Certainly, the authors assert that Anji Play is transforming the nature of children's outdoor experiences in society, enabling these independent competencies to flourish on a physical level. However, the societal motive orientation for collective pursuit still underlies Anji Play provision.

In *perception of nature* we might say that although the human influences on resources are less visible in the Norwegian kindergarten than the Anji Play setting, both settings support children's exploratory play outdoors with multiple features that invite exploration and risky play and support holistic development. Certainly, in the Norwegian kindergarten, *perceptions of nature* as a cultural value can be traced to valuing the terrain in its unmodified state, whether in urban areas or in the mountains that surround Bergen. In the Anji kindergarten, teaching staff 'recreate' natural features thus reinforcing the boundaries to remain inside the kindergarten grounds; in the Bergen kindergarten, children are taken beyond the kindergarten grounds to explore what terrain is available in the locality.

In both kindergartens, children are valued as active exploring participants in their cultural formation. Also, the outdoor environment as a site for children's play,

learning and cultural formations is valued in both kindergartens. The chapter exemplifies and maps the integration of culture, heritage, institutions and nature in children's outdoor play in ECEC.

1.4.6 Children's Outdoor Play Activities in Kindergartens in China and in Norway

In Chap. 7, Birkeland and Sørensen outline and discuss children's outdoor activities in early childhood education institutions (kindergartens) in China and Norway for children from 3 to 6 years old, with focus on time regulation as an institutional condition for cultural formation and outdoor exploration. In *personal perspectives* the authors outline how children and teachers in both kindergartens are motivated to spend time outside. The time regulations form conditions and demands for Norwegian children to learn to dress up independently and in accordance to the temperature and weather, in order to meet both teachers and children's motivation to stay outside for a longer time. For Chinese children, time regulations of two short periods for outdoor play, such as following music signals, form conditions and demands for a collectively and efficiency transition from inside to outside and vice versa. In *institutional perspectives* there seems to be alignments in institutional conditions and demands both in the tight schedule in the Chinese kindergarten and the more open time schedule in Norwegian kindergartens, and motives for spending time outside and competences for meeting these demands. In *societal perspectives* it is depicted that the time schedules in both countries are shaped due to cultural and societal values and traditions; in Norway, outdoor activity as an established tradition serves as a reason for the emphasis on more time spent outside, while valuing outdoor education is a more recent approach to education in China. The lack of conflicts may be explained as both children and the teachers in the study have developed alignment to the routines, conditions and demands in their institutions and their society. In contrast, *in the perception of nature* we trace conflicts between children's and teacher's motives for outdoor education and the natural conditions like many cold, rainy days in Norway and days with high degree of air pollution in China.

Children are identified as active participants in their socialization, adapting their institutional and cultural conditions and demands. Time regulating is depicted as an important condition *for* outdoor activities, as well as *being* conditioned in line with cultural heritage. By looking at two different cultures' approaches to regulating time – that can easily be taken for granted – time regulation is depicted as a major condition for shaping practices in both cultures. The perception of nature seems to be the perspective that disturbs well-prepared didactical practices. From this we suggest that nature can represent an opportunity for exploring unexpected ways of doing outdoor activities, such as bringing nature activities indoors.

1.4.7 Exploring and Discussing the Taken for Granted Advantage of Outdoor Play in Norway

In Chap. 8, Grindheim investigates how outdoor activities are taken for granted in Nordic contexts. Her analysis is based upon videotaped activities of children's outdoor play, interviews with teachers, political documents, and earlier research. In the *personal perspective*, there seems to be a conflict between the teacher's beliefs about all the benefits of outdoor play and their statements about the need for the present, educated, conscious and well-trained teacher in outdoor activities. In the *institutional perspective*, three conflicts occur. First, a conflict is highlighted between valuing educational activities in nature compared to the valuing of institutional activities undertaken indoors. Secondly, a conflict arises between the teachers' valuing of children as peer groups independent of adult interference, and an emphasis on the dependency between generations. Thirdly, a conflict is surfaced between teachers' 'taken for granted' values and motivations for outdoor activities and the demands for more administrative tasks. In the *societal perspective*, a conflict occurs between expectations of specific, measurable learning outcomes from parents and politicians and the 'taken-for-granted' cultural values for more unstructured outdoors activities. In the *perceptions of nature*, two conflicts occur. The first is a conflict between perceiving nature as inherently innocent or good and perceiving nature as dangerous. The second is a conflict between considering nature as valuable in itself as opposed to valuing nature as a tool for meeting human needs.

Children as active participants in outdoor activities seems to be valued in all perspectives. The traced conflicts depict conditions and demands impacting upon provision, such as the limited number of qualified teachers, the economic aspects of education asking for early interventions for structured, teacher-led learning activities with explicit academic aims, and increasing administrative tasks for teachers. Although all these conditions and demands are influencing teacher's choices for their didactical practices, the author points to the 'taken for granted' approach to nature as an important condition to challenge. Taken for granted approaches can neither be improved nor cultivated if not identified and conceptualised in relation to practice. This chapter, therefore, contributes to starting a process of improving and cultivating didactical practices for outdoor activities.

1.4.8 'All the Wild' in Wales

In Chap. 9, Rekers and Waters investigate children's playful activity in muddy puddles at Forest School, a programme for children's outdoor activity in the United Kingdom. Forest School is often delivered in addition to a more traditional, predominantly indoor approach to early childhood care and education, on setting premises or in local woodland spaces. In this chapter, Forest School is set within a local woodland away from the primary school setting of the reception year (ages 4–5)

class. The tensions Rekers and Waters surface are first highlighted by the conflicts in *personal perspectives* that seem to occur between the children and teacher. The children's motives and competencies for social, exploratory muddy play include wading, splashing and throwing; this conflicts with the classroom teacher's perception of their water play as 'too wild' and her interpretation of this play as lacking self-regulation and social competences. Rekers and Waters argue that these conflicts may be attributed to the teacher's lack of confidence in and understanding of play's capacity for learning skills, such as self-regulation. The teacher's perspective has also been shaped by societal demands for self-regulation as an indicator of school readiness.

Thus, a conflict in *institutional perspective* can be traced from the way children's explorative muddy play is met by their teacher's disapproval to the expectations and demands of the early years curriculum. This curriculum, the Foundation Phase Framework, is intended to shift pedagogical practice from one based on achievement of specific curriculum outcomes to one that requires a play-based approach, in which outdoor play is expressly valued. However, play, whether adult- or child-initiated, is still shaped by institutional expectations for measurable competences that are applied to children's activity, whether in- or out-of-doors.

In *societal perspective*, we trace the conflict in Wales between motives and values for children's rights to participation, well-being and meaningful achievement, and the demand for the Foundation Phase Framework to contribute to reducing the attainment gap between disadvantaged children and more advantaged children in Welsh society. In *the perception of nature*, we see that playing in nature, to a certain extent, appears as a shared value and a motivation for the children, Forest School and the Foundation Phase, and for society at large since nature is seen as a suitable arena for education for the involved children. On the other hand, the cultural demands and conditions for having a good life are closely connected to government policy for education to unify a diverse population towards communal goal of civic engagement, opportunity and responsibility; these conditions influence perceptions of learners' existing competences and future achievement. The 'wild' socio-material affordances of the muddy puddle, appropriated by the children, creates tensions in how adults perceive the formation of self-regulated children.

We suggest that playing in the muddy puddle involves children as active participants in their cultural formation, while exploring peer-relations, play, verbal and non-verbal communication, interactions with their teachers and the nature. We trace conditions of peer interactions, teachers' professional confidence and training opportunities in outdoor play, and the multifactorial and contradicting expectations of and for schools in relation to children's developmental outcomes. In addition, nature offers the combinations of mud, dirt and water that form conditions for 'wild' play in communities of peers. Being met with discontent of their teacher from school when playing in an explorative way during the 'forest school class' can be problematic for children's cultural formation, and, as we interpret it, not in accordance with the purpose of inviting the children into the forest in order that they may have exploratory, experiential education in nature, as an alternative or supplement to the classroom.

1.4.9 E-STEM in Everyday Life: How Families Develop a Caring Motive Orientation Towards the Environment

In Chap. 10, Almeida and Fler investigate children's participation in everyday routines in the home and across their outdoor communities in order to better understand how E-STEM (Environmental –Science, Technology, Engineering and Mathematics) learning in everyday practice positively contributes to the caring of the environment. Almeida and Fler point to everyday activities and routines like walks, cooking, Skype conversations and digital searches, and building and gardening with extended family. They also point to agentic practices like creating cloth bags at home to support children's interests in reducing use of plastic bags. In addition, they highlight organised and planned educational interventions such as experiments and educational visits off-site. In *personal perspectives* children's motivations are in alignment with involved family members with a demand for promoting sustainability by E-STEM learning. Almeida and Fler point to conditions in adult-child interaction to support learning of E-STEM concepts as performed both by direct and indirect adult-child instructions, implicit and explicit E-STEM experiences conceptualized both by everyday concepts and STEM concepts.

In *the institutional perspectives* represented by family as an institution, children's motivations for a range of different activities are conditioned very differently – by everyday routines, agentic practices and organised activities to support abstract learning. In *societal perspectives* children's motivation are met with conditions and demands for cultural formation toward caring for their environment. *The perception of nature* as an important arena to approach sustainability is traced from the emphasize of experiences in the outdoor environment during everyday walks and excursions where children are building experimental understanding of nature and E-STEM concepts, the local biodiversity, weather, the water cycle, rainbows, lava and volcanos. We suggest that nature is perceived as a condition for children's motivations that again are cultivated and in alignment with parents, siblings and the extended family motivations.

Children are identified as active participants in experiencing E-STEM related activities and concepts in intergenerational family practices. There are no conflicts to trace between children's motivations and competences and their family's conditions and demands. The conditions provided by families' everyday routines serve as experiences for further activities and investigations for supporting children's E-STEM learning. Thus, the understanding of cultural formation seems to be experiences embedded in familial everyday practices, and thereby form a complement to traditional understanding of teaching as classroom practice. Such everyday practices in the home, close to children's motivations and perspectives, demonstrate how an alignment in home and early childhood care settings forms conditions to children's cultural formation, in which sustainability is valued.

1.4.10 *Curious Curiosity – Reflections on How ECTE Lecturers Perceive Children’s Curiosity*

In Chap. 11, Heggen and Lynngård focus on the perspectives of higher education lecturers who deliver teacher training. They see the conditions of teacher training as important for pedagogical, outdoor practices in ECEC, since teachers gain their competences from their own education. This training and teachers’ competencies, therefore, impact on content and methods in ECEC. In *personal perspectives* all the interviewed lecturers valued both curiosity and wonder, although they did not make clear distinctions between the two. The lecturers were more likely to express an understanding of curiosity as bodily expression, rather than oral expressions like questions. All the lecturers agreed that children are born curious; however, they also agreed that ECEC teachers need to stimulate curiosity as an important condition and demand in ECEC. They argue that outdoor spaces provide enhanced teaching conditions for both sensory and intellectual exploration, as well as expanding the role of the teacher to also be curious and to be a conversation partner. Spaces for curiosity as conditions for children’s play, learning and cultural formation are described as rich, varied, and nature is described here as such an environment. Conditions for curiosity are also shaped by opportunities for children to exercise curiosity together with other children.

In *institutional perspective* the lecturers’ values and motivation for developing curiosity and wonder seemingly contrasts with conditions like the mandatory reading literature for ECEC teacher students, in which theories about curiosity are poorly covered. Lynngård and Heggen found that the ways in which curiosity is understood by the lecturers differs among the disciplines. Yet, the lecturers highlighted the importance of nurturing curiosity in the teacher training students themselves and finding ways of lecturing in order to stimulate the teacher trainees’ own curiosity. *The perception of nature* is traced from the authors concerns about teacher’s ability to recognize and support children’s curiosity, since curiosity is understood to be an important condition for children’s outdoor learning, play and cultural formation. The authors, therefore, investigate how curiosity is understood by lecturers from different disciplines.

This chapter highlights lecturers’ understanding of children as important contributors in outdoor play, learning and cultural formation. The authors assert that conditions for this to happen include education for trainee teachers that provides knowledge and theories about these phenomena, and understanding the didactical ways to stimulate children’s curiosity. Curiosity is understood to be both a value and a motivation, and as a condition and a demand in both ECEC institutions and in ECEC teacher education. However, Lynngård and Heggen demonstrate how there are tensions between the valuing of curiosity and the conditions for learning about or experiencing curiosity in ECEC teacher education.

1.4.11 Conditions for Cultural Formations in the Ten Chapters

From the analysis we trace conditions for cultural formation in outdoor activities *in personal perspectives* as children motivations, participation, exploration, curiosity in relation to the motive orientations of peers as well as teachers, parents and grandparents. Children's experiences in outdoor activities can form conditions for challenging adult expectations, such as parental heteronormativity in Chap. 4. We also find conditions for cultural formation in teacher's personal and professional motivations for curiosity and involvement, for collective or individual reflections and learning, and in their professional confidence and in professional development opportunities. Similarly, the motive orientations of parents, grandparents and extended family creates conditions for children's learning, play and cultural formation.

In *institutional perspectives* we trace the conditions whereby such personal motivations meet societal values and are expressed in material and symbolic artefacts, such as a fairy tale door in a tree, terrain and substances, loose parts and low structured materials, tai-chi, accessible areas where toddlers can move between indoor and outdoor spaces, diverse spatial arrangements and time regulations. In this perspective, however, lies the multifaceted and contradictory expectations for ECEC teachers to provide particular conditions for children's development. Expectations and demands on professionals in terms of achievement outcomes, qualifications, ratios, interventions for structured, teacher-led, learning activities with explicit academic aims and goals for 'school readiness', and increasing administrative tasks combined with financial strain shape the conditions for adult interactions with children and the children's development. In addition, early childhood teacher education and continuing professional development is an important condition for teachers' understanding of curiosity and exploration and how to scaffold these in their daily outdoor practices. Also, everyday life in families is asserted to be valuable as an institution for children's cultural formation and learning.

In *perspective of society* we trace the social and material conditions, such as public parks, local woodlands, foliage, family gardens, home renovations and living in a semi-rural community which provide access to nature, or the contradictions, such as conditions like politics forwarding intense industrial and urban sprawl that limit inclusive access to nature. Cultural values and motivations for concepts such as sustainability, children's democratic rights and gender equity are also important conditions for children's development and cultural formation in the outdoors, along with the intent and content of teacher training. In addition, societal value systems regarding outdoor education as good, necessary or not of interest, form cultural conditions for children's outdoor activities.

In *perceptions of nature* we trace conditions regarding embodied movement and play in conjunction with natural materials, elements, substances and creatures e.g., mud, dirt, water, stones and sticks, as well as snails, mulberries, grass, rain, wind, and pollution. Playing in nature is also asserted to be a formative condition for less gender-specific play, more involvement from teachers, more inclusive play between

peers and in the neighborhood, and increased opportunities for sustainability education.

1.5 Perceptions of Nature as an Arena for Cultural Formations

We see that the perception of nature as an arena for cultural formation differs within and between the presented cultures as depicted in the examples described in this volume. Individual, institutional and societal perceptions of nature, as well as the opportunities afforded by natural materials and spaces themselves, all contribute to children's cultural formation in outdoor activity. Different cultures place different value on children's outdoor exploration; these societal framings shape how children interact with nature with early childhood education and care.

The outdoor environment or nature in the activities presented from Australia in two of the chapters, demonstrates how these particular children's experiences are in alignment with family expectations. The children's motivations align with the family values and demands, regarding conditions for imaginative and explorative play and E-STEM experiences and learning. This lack of conflict creates a harmonious situation of development, which is also in alignment with practices at school. In Brazil, the perception of outdoor and nature as important for young children's cultural formation are pointed to, but rarely implemented, apart from in ECEC education. Babies and toddlers often have limited access to move both indoors, outdoors and in nature, in their domestic practices. The perception of nature as a gendered arena for cultural formation in conflict with their daughter's enjoyment of playing in nature, is depicted as a possibility for challenging Polish parent's gender-normative values and expectations in a Norwegian ECEC context.

The perception of nature in China as *polluted air*, and in Norway as *cold and wet*, seems to be a perspective that causes conflicts in both countries in relation to institutional practices of time regulation and cultural formation in outdoor activity. The perception of nature is also evident in how the terrain and material in kindergartens is viewed by practitioners. Although both Bergen and Anji kindergartens consider nature and outdoor play as important, their respective cultural understandings of nature impact on both outdoor materials for play and the outdoor terrain for play. In Wales, outdoor education is seen as arena with the potential to provide opportunities for disadvantaged urban children; yet, opportunities can be constrained by the demands for certain ways of behaving. Expectations for behaviour can be in conflict with the 'wildness' afforded by muddy puddles. This conflict demonstrates tensions for professionals in the Foundation Phase, in which understandings of play's potential for meeting learning and developmental outcomes is challenged by often conflicting demands on teachers. The perception of nature as an important arena for children's curiosity highlighted conflicts raised for lecturers in Norwegian ECEC

teacher education programs in relation to theorising and conceptualising curiosity and ways of performing curiosity in their teaching. Also, the often ‘taken for granted’ understanding of nature as an advantage for children’s cultural formation in Norway, on one hand, is a condition that can limit the quality of outdoor education and, on the other hand, provides valuable conditions for building social relations among children beyond the outdoor playground.

When categorizing the different perspectives, the societal perspective and the perception of nature often seems to be connected and overlapping. Natural influences on cultural formation are apparent in the activities that are undertaken in ECEC, in relation to in materials for creative activities, in literature, affordances for risky play and so on. In the same way, cultural influences are apparent in the outdoor environment; in parks, playgrounds and woodlands or the grounds of the education/care setting, children’s activities are shaped by cultural expectations. Therefore, the content and setting of the play are shaped by both cultural activities and the natural surroundings as indicated in Fig. 1.2.

Due to the overlapping and connecting parts of culture and nature in early childhood education, we conclude that *perceptions of nature* play a significant role in creating conditions for cultural formation. The opportunity for play, learning and cultural formation may be seen to be richer in nature in and within all the represented cultures in this volume. On the other hand, the societal and institutional emphasis on school readiness and defined aims for education highlight the problem of educators planning from the children’s perspective, leading to conflicts between intentions and practice. These overall findings indicate that politics and educational practices in ECEC should recognize the outdoor environment as an important arena for cultural formation, which is not necessarily out of alignment with societal demands and values. Indeed, in light of global climate crisis, the consideration of nature as a vital arena for cultural formation is essential. Widening cultural-historical and cultural formation theories to not only include, but focus upon, perceptions of nature as an everyday agent in children’s development is a vital step forward for research and pedagogical practice.

1.6 Summing Up

The analysis underlines how all the perspectives are intertwined; the activities undertaken in ECEC institutions can be traced to cultural heritage and traditions as well as to personal intent. These are identified in this volume by surfacing activities across and within cultural contexts. Additionally, in some chapters, researchers undertook their studies in cultural contexts different to their own, which also surfaces new understandings of cultural formation. For instance, Birkeland and Sørensen, both Scandinavian, considered how time regulations condition outdoor play in Norwegian and Chinese kindergarten. Similarly, in chapter four, He and Meng, both Chinese researchers, have studied the differences in performance and

material in outdoor play in China and Norway. Investigating more than a single cultural context reveals that the same aims can be obtained by different conditions.

Outdoor education is presented as a relevant arena for education in all the chapters. This supports the aim of the book to explore children's cultural formation in outdoor activity settings across different cultures. Although the use of the outdoors is considered by many theorists to be a Scandinavian approach, its importance for cultural formation specific to and across different cultures is demonstrated in these chapters.

By sampling and analysing all the chapters, we can also see that children are active participants in cultural formation. Due to our theoretical frame and epistemological approach, the children's active participation in their own and others' play, learning and cultural formation becomes evident. Children both align with the cultural heritage reified in educational institutions and families, and participate in ways that surface new or perhaps unexpected ways of meeting the affordances of both the natural and cultural spaces. Indeed, the elements of nature that are considered 'non-controllable', such as mud or weather, interrupt didactical practices, thus challenging that which is 'taken for granted'. In exploring these challenges and conflicts, practitioners and policymakers may be better able to understand how outdoor experiences provide cultural formation that allows for a decentralization of the relationships around the adult's proposal, and an integration of human and non-human nature.

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