

Bringing Mythical Forests to Life in Early Childhood Education

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Submitted April 30, 2020; accepted August 2, 2020

ABSTRACT

In this article, I have sought to develop an understanding of the contribution of imaginative and nature appreciation in early childhood environmental education dealing with old, cultural nature myths and beliefs. The argument rests on the belief that the basis of a child-environmental education is in imagination which resonates with play, aesthetics and storytelling as old, historical nature myths have a story-like power to transform human perception of the world and our relationship to it. The thinking of the old nature myths and development of early childhood environmental education is in this article relying on new materialism and posthumanist thinking of intra-action (Barad 2003; 2007). This article specifically considers the usage of material *Whisper of the Spirit*, which places educators in the position of examining their environmental education practices as relative, evolving and emergent situations in which the old nature myths and the existing material components could have their role and significance.

Keywords: nature myths, environmental education, Finnish education, early childhood education

The focus in this article is on considering education with nature myths in the early childhood environmental education setting. I was originally inspired by Farrelly's (2019) thought of exploring philosophical, psychological, and pedagogical domains to begin developing a holistic vision of what imagination could contribute for human-environmental flourishing. In his article, Farrelly considered the significance of myths for environmental education. The other inspiration, Engelmann's (2019) kindred spirits – learning to love nature the posthuman way – identified human beings as entities that engage with significant others. According to Engelmann, understanding of pedagogical love might become the key to form new practices of sustainable action.

In this article I am seeking to develop an understanding of the contribution of imaginative and mythic nature appreciation in early childhood environmental education. My purpose is to explore the educational potentials of developing and supporting a child-environmental imagination through actions considering old Finnish nature myths and beliefs. My argument rests on the belief that the basis of a child-environmental education is in imagination which resonates with play, aesthetics and storytelling as historical myths have a story-like power to transform human perception of the world and our relationship to it (cf. Farrelly 2019). Therefore, it is worth addressing questions of turning the old mythic way of being in the world to education of ecological interest, care and hope. As Farrelly (2019) states: "Developing a human-environmental imagination in ourselves and our students may prove intrinsically powerful and transformative, but may also help our students become all the more prepared to experience the natural world and the self-in-relationship-with-nature in a qualitatively richer way" (p. 139). This is highly relevant in the times of ecological crises and should also be the concern of early childhood education and future.

Farrelly (2019) leans on Martha Nussbaum in explaining how myths, as one kind of story, could be especially helpful in developing students' human-environmental imagination and support those striving to form bonds with nature by providing immersive experiences therein. Farrelly (2019) is asking what philosophical-anthropological visions could provide fresh illumination to develop students' sense of how they could live in relationship with nature and pondered how stories could shape civic engagement and human-environmental imaginations. He offered myths as a

pedagogical principle potentially serving in creating ideal conditions for students' richer, immersive experiences in nature. Engelmann (2019) is re-reading Bernhard Heinrich Blasche's *Naturbildung*, the German text from the 18th century. According to Engelmann, Blasche understood nature and interconnectedness of life-forms in a similar way to posthuman thinkers. In his article Engelmann grounded his thinking on Haraway's idea of 'response-ability' and 'multispecies storytelling' and remarked how knowledge is always situated locally and temporarily.

Early childhood environmental education is specifically considered in this article by relying on new materialism and posthuman intra-action (Barad 2003; 2007) in conjunction with the material turn that has been lately applied in the field of early childhood studies (e.g. Olsson, 2009; Lenz Taguchi, 2011; Kind, 2014). In thinking of subject and object, the focus is typically in the interaction and relationship, but the new materialist thinking shifts the focus to their entanglement; there is something resonating in between, in intra-action (Barad, 2007). As Kind (2014) explains, "materials are not immutable, passive or lifeless until the moment we do something to them: they participate in our early childhood projects. They live, speak, gesture and call to us." (p. 865). In this article, material entanglements are also considered from the imaginative point of view: there is a need to develop an understanding of the contribution of imaginative nature appreciation in early childhood education, because sustainable and equitable futures depend on education in relation to ecological and global factors. UNESCO (2008) pointed out over ten years ago that our societies urgently require new kinds of education that can help prevent further degradation of our planet and these new kinds of education must be available to all. According to them, new kinds of education will foster caring and responsible citizens genuinely concerned with and capable of contributing to a just and peaceful world, and this need to begin in early childhood.

From myths to materiality and intra-action in the posthuman era

Myths and beliefs are oral tradition that can easily cross the national boundaries and are reinterpreted in various social practices (e.g. Siikala 2002). Still, old myths and beliefs can tell us a lot about the distant, local past and immaterial worlds. In Finland, people in the past believed in the existence of non-human beings, such as trolls and spirits, and considered a variety of material things from artefacts to landscape elements to have special properties such as agency, consciousness, and personality. According to Herva and Ylimaunu (2009), folk beliefs in early modern northern Finland, and in other similar contexts, represent local perception and engagement with the material world. According to them, folk beliefs were embedded in the dynamics of everyday life and manifested in two-way relatedness between people and various constituents of the material world (Herva & Ylimaunu 2009).

According to Siikala (2002) myths continue to play an important role in social movements attempting to create group unity on national or ethnic grounds and they address both cultural and existential questions. She continued by explaining how myths carry mental models of the past; "they are one structural manifestation of *longue durée* of culture", because notions concerning the world and its phenomena are structured in different systems of knowledge and mental imagery (Siikala 2002, p. 15-16).

Siikala (2002) explains how the most fundamental areas of cultural consciousness are related to the community's world view and basic values; mythology is constructed as a representation of precisely such basic structures of consciousness. Similarly, new materialist thinking builds on the insight that "our material lives are always culturally mediated, but they are not only cultural" (Coole & Frost, 2010, p. 27), and it questions the primacy of language and social forms in constructing meanings, identities and even bodies. New materialisms have emerged as part of a material turn in the humanities. Stuff is not merely unruly, as Boscagli (2014) says in his *Stuff Theory*; it becomes the grounding of a new relationship between people and matter that might be built. The material turn is needed because constructions through language and culture leaves little room for understanding the materiality of either human and nonhuman beings or the world.

As mentioned above, in thinking of subject and object, the focus is typically on the relationship, but the new materialist thinking shifts the focus to their relationship and entanglement. New materialism relays matter as agential, indeterminate, constantly forming in unforeseen ways (e.g. Coole & Frost, 2010). Something resonates in between, in intra-action (Barad, 2007): an interdependent collaboration among material and human actors that constitutes play, design, and experimentation. Barad observed mutual relationality, that things are because they

influence each other. She (Barad 2003) notes: “If we follow disciplinary habits of tracing disciplinary-defined causes through to the corresponding disciplinary-defined effects, we will miss all the crucial intra-actions among these forces that fly in the face of any specific set of disciplinary concerns” (p. 810).

The concept of intra-action reframes materiality from designed affordance to a cycling interplay produced by the physicality, fluidity and messiness of entangled bodies, things and places (Wohlwend et al., 2017). “Matter is promiscuous and inventive in its agential wanderings: one might even dare say, imaginative”, as Barad (2015, p. 287) says. Barad (2007; 2015) emphasises mutual relationality: things are, because they are in relation to and influencing each other. Various material resources can inspire imagination (Alesina & Lupton, 2010) and the tangibility of material working can be engaging and stimulating (Clapp et al., 2016). For Barad (2007), agency emerges when things and bodies come together: humans and nonhuman entities become agents only by way of each other. “Agential intra-actions are specific causal material enactments that may or may not involve ‘humans.’” (Barad, 2003, p. 817.) Also, Garber (2019) notes that what new materialism brings to education is recognition that objects as materials have agency and affect us. Garber (2019) continues that the intra-actions are what we must take account of. “Objects and materials have effects on makers and viewers when they find the smooth spaces between making and materials, among objects, and within interactions between them”, emphasised Garber (2019, p. 12). As materials are in intra-action with the creator, further studies and deeper analysis are needed to research the role of materials as drivers of processes through which children learn. “Objects, materials, and the processes surrounding them have roles in the decisions and choices we make in our lives”, said Garber (2019, p. 3).

Through deepened understandings of their material articulations of the world, creators and learners construct new knowledge and thickened experiences, and they develop first-hand sensitivities to making that help them find the “causal structures” underlying what they do (Barad, 2007). This “knowing in being” can be transformative with regards to how a person interacts with and lives in the world (Garber, 2019). Following Barad’s (2015) thinking, if matter is promiscuous, inventive and imaginative in its agential wanderings, unforeseen smooth spaces will then be the key educational focus. In this article, old nature myths and beliefs are considered materials interacting and being with us, although they are not touchable or visible objects.

Why teach the mythical past to young children?

In Finland old nature myths and beliefs are a keen part of our cultural heritage and knowledge; myths resonate with our nature relationship and the way of perceiving the world. Mythic traditions “carry voices from the ancient past to the present today” as Siikala (2002, p. 18) puts it. The relationship with nature had been spiritual, aiming to find and maintain a balance between human and nature. The ancient Finns’ life survival was dependent on nature and its conditions and the balance between people and nature was very crucial. The ancient Finns lived in constant interaction with both the visible and invisible forces of nature and they believed in spirits: Maintaining the balance formed the basis on which people’s living, the way of life, religion and even language were developed (Hyrý et al., 1995; Alhonen, 2012).

For the ancient Finns, everything in nature had its own invisible soul which was somehow connected to the natural phenomenon perceived by the senses. The forest and other nature elements – trees, water, stones, fire, animals and plants – were all controlled by guardian spirits (*haltijat*). Respected and valued spirits could be distinct kinds of creatures such as trolls, elves or fairies. All things, whether animate or inanimate, human or nonhuman, had their own spirit: for example, houses and saunas had their own spirits, as did many objects and beings. The spirits’ duty was to protect and defend many things, and sometimes also to control them. Every human being also had a spirit as people inherited their spirits from their grandparents. People believed that a spirit could turn, for example, into a tree or stone. In order to secure luck and success in life one had to maintain a balance with the spirits. (Hyrý et al., 1995; Alhonen 2012.)

In modern times, myths are important as they establish a link to immutable principal events in the past. Myths also establish a social whole united by notions of common origin. Addressing both cultural and existential questions, myths also form a basis for self-definition and national identities. (Siikala 2002.) How should things from the past be connected for young children’s environmental education? How can children’s active intra-action with ancient nature

myths be advanced? Especially Finnish early childhood education stresses children's agency and the sociocultural nature of learning and development, with a focus on children's active interaction with peers, teachers, adults, community members, and the environment (e.g. Kumpulainen 2018). This also enables children to participate in planning, creating, and evaluating their own activities and learning environments (Kumpulainen 2018.) Still, when coming to teach old nature myths and beliefs, children are not capable of planning their own learning activities and environments (as they have not culturally experienced those things), but they will be able to plan the way through which they will make stories alive and gain more understanding about old nature myths and beliefs.

In Finnish early childhood education playful learning and self-initiated play have been seen as having an important role for children's holistic learning (see Pramling Samuelson & Asplund Carlson, 2008), and children's play is highly valued. In the Finnish national context teachers are given agency, autonomy and trust to design their teaching by following a non-prescriptive curriculum. Finnish teachers are not forced only to deliver the curriculum: on the contrary, the demand is to adapt the curriculum into the local context which contains a group of individual children with different interests and different backgrounds and cultures (see FNAE, 2018). Because of the teachers' own education and training, they are trusted to transform the curriculum and their chosen materials into activities in the local context. Teachers' autonomy and their freedom to innovate within teaching processes, and the opportunities teachers have to explore what works in their practice, stems from the accommodating and always evolving Finnish education system (Toom & Husu, 2016). However, despite the teachers' agency and the holistic nature of early childhood education, imaginative and mythic nature appreciation has not been the key interests of early childhood education practitioners. This is also in connection with teachers' general material relationship, which is typically rational. As Kind (2014) formulates:

“As educators, we tend to understand materials from a scientific, rational, or functional viewpoint and through predictable properties of colour, shape, density, mass, friction, and gravity. Further, our understandings of materials are shaped by deeply rooted cultural dichotomies – animate/inanimate, active/passive, self/other, to name a few. These binaries lead us, often unconsciously, to think of ourselves as animate agents who act on passive, inanimate materials. This conception then affects how we see materials, how we engage with them, and what we create with them” (p. 866-867).

The resource behind the idea of considering cultural myths and beliefs in early childhood education, *Whisper of the Spirit*¹ (Erfving et al., 2017; see also Nordström et al., 2019; Sairanen et al. 2019), has been created to encourage children to exercise their imagination and to take an interest in Finnish nature and ancient myths from a variety of perspectives and modalities. The freely available material *Whisper of the Spirit* has a playful educational aim of encouraging children to imagine, to observe, to collaborate, to participate, to reflect, to innovate, and to experiment in various ways and take an interest in Finnish nature and ancient myths. In the Finnish context, teachers have the autonomy to choose the learning resources and materials they have decided are the best for the group of children they are teaching. The environmental education's insight of this material can be understood in the way in which the teacher and student relate to one another and to nature – are in intra-action.

Turning the historical mythic way of being to the early childhood education

The Finnish early childhood education curriculum guides practitioners in teaching cultural traditions and values (see FNAE, 2018). As mentioned earlier, at the same time the Finnish early childhood education has a long tradition of child-centred pedagogy that emphasises children's initiatives and agency in and for pedagogical activities and consequent learning opportunities (Kumpulainen, 2018; see also Pramling Samuelsson & Asplund Carlsson, 2008). Children's agency is referred to as a dialogic process which develops in interactions between individuals and the environment, and agency can be defined through the interaction between a child and the context (Vygotsky, 1976). The pedagogical content and actions are based on the early childhood education centre's own plan of action which follows the municipality's and the national early childhood education and care curriculum (FNAE, 2018).

¹ <https://helda.helsinki.fi/handle/10138/222483>

A typical day at kindergarten includes pedagogical activities indoors and outdoors combining children-led activities and free play and adult-led activities. One of the key elements in the Finnish early childhood education weekly schedule is outdoor time, which is spent either in the kindergarten's own yard or in conducting trips to nearby resources (forests, play grounds, libraries, etc) as well as meals and rest times (Määttä et al. 2019). One of the targets in early childhood education is to learn to live in an affective, aesthetic intra-action with nature and foster human-environmental imaginations. This requires considering myths as a cultural resource which children can use to create, build and make meaning of the world and of themselves. Building a sustainable future could also include aesthetic perspectives within environmental issues, but education does not drive these issues in that direction. This is confusing, because the development of human morality (as deeper thinking) within aesthetic discourses could be fruitful when solving challenges of environment problems now and especially in the future (see Autio 2017).

The two following *Whisper of the Spirit* examples from Finnish early childhood education demonstrate applying myths to early years environmental education. The examples also show how the teachers' actions to strengthen children's human-environmental flourishing through intra-action (see also Sairanen et al. 2019). In these examples the material resonates in children's creations and intra-action with the local material nature resources and places:

"The talking rock": The early childhood education group from Eastern Finland was used to visiting the kindergarten's nearby forest several times per week and they children were allowed to play freely there. Children also had opportunities to take digital photos in places which they felt were interesting and of figures that aroused their attention. One particular rock was of interest to the children because its shape resembled a man's face. One day at the kindergarten, the teacher shared her own creation, a digital short video of a talking rock with the children. (She used an app to make a still photo of a rock appear to talk with a big mouth). The talking rock asked (with the teachers' lowered voice): "Would you like to hear my story?". This was a great inspiration to the group who started to look at other talking figures and their stories in the forest. Each child wanted to find her/his own spot and create videos with talking nature elements. The local, familiar forest suddenly came to life.

"The spirits' new home": The project began by reading an inspirational email (written by the early childhood education teacher, Southern Finland). The email was sent to children by a "good spirit" living in a familiar forest near the kindergarten, and the email contained an invitation to visit her. Children were very eager to go to the forest and they started spontaneously and gradually to create their own story world around the good spirit; they wanted to design a bigger home for her, build furniture, organise many actions and maintain a fairy's flying school for each other. Children made a large chandelier with branches and sticks. The group developed, lived and played the same story throughout the autumn semester.

The two examples resonate with the idea of intra-active pedagogy by Lenz Taguchi's (2010) saying that the force of learning comes from intertwined material-discursive and embodied reality. She highlighted how intra-active agentic engagements in-between multiple materials cannot be planned ahead, which means "delaying our [teacher's] movements in pedagogical space" (p. 128). In these examples, the early childhood education teachers were active motors at the beginning of the processes, but gradually allowed the children to continue the story and develop the process. The adults' role became one of co-player, with children and adults producing experiences together. The environmental connectedness, material intra-action, reinterpreting, re-telling and representing the myths from the past were based on being together in a local forest, having sensory, aesthetic experiences, free material producing, play and storytelling. The children "thought through making" (Ingold, 2013, p. 6) as a type of play, creation and inquiry. Following Ingold's (2013) thinking, human and non-human bodies affected each other as equal agents in emergent social, cultural, and material production.

As children typically are familiar with imaginative play and stories, they can use their toys and other material objects symbolically, creating narratives and making rules and roles they can act out (e.g. White, 2012), but also evoke emotions and retain information through those (Lawrence & Paige, 2016). Through shared play and storytelling,

connection will become stronger. In a live situation, stories are created in the presence of recipients. Storytelling is a social activity as well as a communal process; from a cultural perspective, stories are central to many cultures, as storytelling provides a platform and medium for retaining information that should be retained. Similarly, storytelling is important for children growing up in a culture insofar as it maintains a cultural continuum. As Brown (2009, p. 67) claimed, storytelling “occupies a central place in early development and learning about the world, oneself and one’s place in it”. As Lawrence and Paige (2016) beautifully illustrated it:

“The elements of a great story are imagination, believability and content. In terms of the content, it is all about the problem, resolution and moral of the story. Moreover, a well-told story of the distant past can illustrate the value and importance of the myths we invent and how they serve to hold cultures together and empower individuals to build their lives around these experiences” (p. 66).

Researchers have long identified imaginative play as a vital component in the normal development of a child (Bergen, 2002; Garvey, 1993; Vygotsky, 1976). Imagination differs from normal reality, the material environment and the social presence of others and, as such, can widen our experience of the world (Zittoun & Cerchia, 2013). Imagining creates a new space or form of thinking with which children can surpass their own level of understanding and create a zone of proximal development for themselves (Vygotsky, 1962). Zittoun and Gillespie (2016) defined imagination as “the process of creating experiences that escape the immediate setting, which allow exploring the past or future, present possibilities or even impossibilities” (p. 2). Imagination feeds on a wide range of experiences people have with or through the cultural world, through diverse senses, combined, organised, and integrated in new forms (Zittoun and Gillespie, 2016).

The students’ own actual and embodied feelings, thoughts and experiences of nature and environment are often ignored (see Pulkki et al., 2017) and this concerns young children as well. Environmental education considering the old nature myths and beliefs recognises children’s embodied thoughts and feelings and allures children to use them. Instead of loading their minds with the fear and feelings of guilt for the mistakes of previous generations, the aim is to strengthen children’s positive and imaginative interest towards shared history, old nature myths and beliefs – the affective bond between people and place. Then the familiar, local places start to become the carrier of emotionally charged, playful and meaningful events, which open the opportunities for deeper connections and relationships. Only in this way is the education really about attending to things, and to the world (cf. Ingold 2018).

Myths are “products” of human social imagination, cultural reflections of nature. Teaching and learning myths does not mean transferring cultural content or to socialising in a culture, but above all, it is a process through which every generation has the possibility to grow into their full human size and lead a good and a happy life. As Ingold (2018) phrases it: “Every life is tasked with bringing other lives into being and with sustaining them for however long it takes for the latter, in turn, to engender further life. The continuity of the life process is therefore not individual but social.” (p.17). Learning about myths in early childhood education means having a glimpse from the past. The possible connective element is the similar material and immaterial natural environment that the ancient people experienced, which modern education turns to re-lived, playful experience. This connection might lead to a stronger interest in environments and other living things and multispecies. Interest opens the way to change and hope. As Snaza (2019) puts it: “And given how knowledges sustain us, this means that mutations in knowing cannot be separated from mutations in being (Haraway would, rightly, instead say “becoming”). The hope of knowing is that someday we will come to know differently and to be otherwise than we are” (p. 5). This is related to Ingold’s (2013) concept of leaking, meaning “things can exist and persist only because they leak: that is, because of the interchange of materials across the surfaces by which they differentiate themselves from the surrounding medium” (p. 95). Both entanglements and leaking things are based on the understanding that objects, people, and things in general are constantly changing and acting on other things.

Conclusion

Myths and beliefs are cultural, shared stories about entities, material and immaterial events and places no one has seen or experienced but which are nonetheless held to be true in the past. Non-human beings and material things

were believed to have agency, consciousness and personality. The target of this article is to turn the mythic way of being in the world to early education of ecological and environmental interest enriched with imaginative play and stories. Education, especially in early years, needs the new grounding of an appreciative relationship between people and matter that might be built and enhance intra-action as such. Early years' environmental education considering old nature myths needs to address a wider scope of relevant educational questions: How to learn about sustainable and equitable futures? What imaginative and mythic nature appreciation could be brought to early childhood education?

In early childhood education imagination, play and creation can contribute to human-environmental flourishing, and strengthen children's experimental, immersive, richer experiences in nature (cf. Farrelly 2019; Engelmann, 2019). Through re-productive myths consideration, early childhood environmental education brings the affective, narrative bond between people and place, enabling the imaginative, aesthetic and mythic nature appreciation in early childhood education, and it understands the knowledge and wisdom being locally situated.

Tangible material working is engaging and stimulating in early childhood education and rich material resources can inspire imagination. Kind (2014) discovered how "children, like artists and makers, follow materials as they work with them" (p. 873). Children's imagination, play and stories emerge when things and bodies come together, and educators need to understand how objects, materials, and the processes surrounding them have roles in the decisions and choices we make in our lives. Things simply are, because they are in relation to and influence each other (Barad 2007; 2015) this material relativity has been exceptionally strong in the Finnish cultural history concerning the nature myths and beliefs. Early childhood environmental education and its pedagogy could benefit from that and a new relationship between people and matter that might be built. The reinforcement of a foundation which enriches experiences and imagination and which is connected to cultural, narrative and playful human and non-human experiences in and of nature is important in children's developing nature relationships. New materialist thinking offers an alternative to the objective approach (adopted from the technical fields, natural sciences and rational understanding), and new materialism places educators in the position of examining their practices as relative, evolving and emergent situations in which the material component has its role and significance. The material relationship also moves in time. In this consideration of the relationship with the world (which, from the growing child's perspective, is still developing), learning cultural myths related to the relationship with nature may help the child to engage with nature in an understanding and invigorating way.

References

- Autio, T. (2017). Reactivating templates for international curriculum Consciousness. Reconsidering intellectual legacies and policy practices between Chinese, Anglo-American and European curriculum studies. In K. Kennedy & Z. Li: *Theorizing Teaching and Learning in Asia and Europe*. New York: Routledge.
- Alesina, I., & Lupton, E. (2010). *Exploring materials: Creative design for everyday objects*. New York: Princeton Architectural Press.
- Alhonen, A. (2012). Notes on Finnish Tradition. Available on www.taivaannaula.org
- Barad, K. (2003) Posthumanist performativity. Toward an understanding of how matter comes to matter. *Signs*, 40(1), 801-831.
- Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham, NC: Duke University Press.
- Barad, K. (2015). Transmaterialities. *Trans*/Matter/Realities and Queer Political Imaginings. GLC: Journal of Lesbian and Gay Studies*, 21(2-3), 387-422.
- Bergen, D. (2002). The role of pretend play in children's cognitive development. *Early Childhood Research and Practice*, 4, 1-12.
- Boscagli, M. (2014). *Stuff Theory. Everyday Objects, Radical Materialism*. New York: Bloomsbury.
- Brown, S., with Vaughan, C. (2009) *Play: How it shapes the brain, opens the imagination, and invigorates the soul*. New York, NY: Avery.
- Clapp, E. P., Ross, J. O., Ryan, J., & Tushman, S. (2016). *Maker-centered learning. Empowering young people to shape their worlds*. San Francisco: Jossey-Bass.

- Coole, D. & Frost, S. (2010). Introducing the New Materialisms. In *New Materialisms: Ontology, Agency, and Politics* (eds.) Diana Coole & Samantha Frost. Durham: Duke University Press, 1–43.
- Engelmann, S. (2019). Kindred Spirits: Learning to Love Nature the Posthuman Way. *Journal of Philosophy of Education*, 53: 503-517. doi:[10.1111/1467-9752.12379](https://doi.org/10.1111/1467-9752.12379)
- Erfving, E., Hintsala, A., Sintonen, S., Sairanen, H. & Kumpulainen, K. (2017) *Whisper of the Spirit*, [Cited December 12, 2019] Retrieved from <https://helda.helsinki.fi/handle/10138/222483>
- Farrelly, M.R. (2019). The Significance of Myth for Environmental Education. *Journal of Philosophy of Education*, 53: 127-144. doi:[10.1111/1467-9752.12315](https://doi.org/10.1111/1467-9752.12315)
- FNAE. (2018). Varhaiskasvatussuunnitelman perusteet. Määräykset ja ohjeet 2018:3a. [*National Core Curriculum for Early Childhood Education and Care.*] Finnish National Agency for Education. https://www.oph.fi/sites/default/files/documents/varhaiskasvatussuunnitelman_perusteet.pdf.
- Garber, E. (2019). Objects and New Materialisms: A Journey Across Making and Living With Objects. *Studies in Art Education*, 60(1), 7-21, DOI: [10.1080/00393541.2018.1557454](https://doi.org/10.1080/00393541.2018.1557454)
- Garvey, C. (1993). Play. Cambridge, MA: Harvard University Press.
- Herva, V-P. & Ylimaunu, T. (2009). Folk beliefs, special deposits, and engagement with the environment in early modern northern Finland. *Journal of Anthropological Archaeology*, 28(2), 234-243.
- Hyry, K. & Pentikäinen, A. & Pentikäinen, J. (1995). Lumen ja valon kansa: Suomalainen kansanusko. Porvoo Helsinki Juva: WSOY.
- Ingold, T. (2013). *Making: Anthropology, archaeology, art, and architecture*. Oxon, England: Routledge.
- Kind, S. (2014). Material encounters. *International Journal of Child, Youth and Family Studies*, 5(4.2), 865–867.
- Kumpulainen, K. (2018). A principled, personalised, trusting and child-centric ECEC system in Finland. In *The Early Advantage 1: Early Childhood Systems That Lead by Example*, edited by Sharon Lynn Kagan, 72–98, New York: Teachers College Press.
- Lawrence, R. L., & Paige, D. S. (2016). What our ancestors knew: Teaching and learning through storytelling. *New Directions for Adult and Continuing Education*, 2016(149), 63-72.
- Lenz Taguchi, H. (2011). Investigating learning, participation and becoming in early childhood practices with a relational materialist approach. *Global Studies of Childhood*, 1(1). <https://doi.org/10.2304/gsch.2011.1.1.36>
- Määttä, S., Lehto, R., Konttinen, H., Ray, C., Sajaniemi, N., Erkkola, M. & Roos, E. (2019). Preschool group practices and preschool children’s sedentary time: a cross-sectional study in Finland. *BMJ Open* 2019:9. doi:[10.1136/bmjopen-2019-032210](https://doi.org/10.1136/bmjopen-2019-032210).
- Nordström, A., Kumpulainen, K. & Potter, J. (2019). Positive affect in young children's multiliteracies learning endeavours. In K. Kumpulainen and J. Sefton-Green (Eds.), *Multiliteracies and Early Years Innovation: Perspectives from Finland and Beyond*. Routledge Research in Early Childhood Education. London: Routledge.
- Olsson, L. M. (2009). *Movement and experimentation in young children's learning: Deleuze and Guattari in early childhood education*. Abingdon, England: Routledge.
- Pramling Samuelsson, I., and M. Asplund Carlsson. (2008). The playing learning child: Towards a pedagogy of early childhood. *Scandinavian Journal of Educational Research*, 52(6): 623–641. <https://doi.org/10.1080/00313830802497265>.
- Pulkki, J., Dahlin, B. and Värri, V.-M. (2017). Environmental Education as a Lived-Body Practice? A Contemplative Pedagogy Perspective. *Journal of Philosophy of Education*, 51: 214-229. doi:[10.1111/1467-9752.12209](https://doi.org/10.1111/1467-9752.12209)
- Sairanen, H. & Kangas, J. & Sintonen, S. (2019). Finnish Teachers Making Sense of and Promoting Multiliteracies in Early Years Education. In K. Kumpulainen & J. Shefton-Green (eds.) *Multiliteracies and Early Years Innovation: Perspectives from Finland and Beyond*. London: Routledge, 42-60.
- Siikala, A-L. (2002). What Myths Tell about Past Finno-Ugric Modea of Thinking. In A-L Siikala (edit.) *Myth and Mentality. Studies in Folklore and Popular Thought*. Helsinki: Finnish Literature Society. DOI: <http://dx.doi.org/10.21435/sff.8>
- Snaza, N. (2019). Ethologies of Education. *Cultural Studies <-> Critical Methodologies*. <https://doi.org/10.1177/1532708619873881>
- Toom, A. & Husu, J. (2016). Finnish teachers as ‘Makers of the many’: Balancing between broad pedagogical freedom and responsibility. In Niemi, H., Toom, A. & Kallioniemi, A. (Eds.) *Miracle of Education. The Principles and Practices of Teaching and Learning in Finnish Schools*. (pp. 41–55). Rotterdam: Sense Publishers.

- UNESCO. (2008). The Contribution of Early Childhood Education to Sustainable Future. [Cited December 12, 2019] Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000159355>
- White, R. (2012). *The power of play: A research summary on play and learning*. St. Paul, MN: Minnesota Children's Museum.
- Wohlwend, K. (2015) One Screen, Many Fingers: Young Children's Collaborative Literacy Play With Digital Puppetry Apps and Touchscreen Technologies. *Theory Into Practice*, 54(2), 154-162. DOI: [10.1080/00405841.2015.1010837](https://doi.org/10.1080/00405841.2015.1010837)
- Vygotsky, L. S. (1962). *Thought and language*. Cambridge: MIT Press.
- Vygotsky, L. S. (1976). Play and its role in the mental development of the child. In J. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution* (pp. 76-99). New York, NY: Basic Books.
- Zittoun, T., & Cerchia, F. (2013). Imagination as expansion of experience. *Integrative Psychological and Behavioral Science*, 47(3), 305-324. doi:10.1007/
- Zittoun, T., & Gillespie, A. (2016). *Imagination in human and cultural development*. London: Routledge.