

Children Drawing World-care in Denmark Early Care and Education (ECEC): Findings and Implications

Anne Maj Nielsen
Ditte Winther-Lindqvist
Aarhus University, Denmark

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ABSTRACT

This paper reports from a study exploring how 4–5-year-old children, who participated in World-care practices in ECEC in Denmark, experienced our common worlds and what to care for, as they articulate these experiences in drawing interviews. The World-care practices were developed in an 18-month participatory practice research project with early childhood educators in 11 ECEC facilities in Denmark. We apply an eco-feminist worldview considering common worlds and caring ethics as critical alternatives to learning about nature as if we are separate from ‘nature’. Analytically we integrate body-phenomenology conceptions of embodied inter- and intra-affectivity with cultural psychology conceptions of activity and symbolic tools, that guide attention to our common worlds in practice. In that lens we explore ideas of caring for our common worlds articulated by children participating in project World-care. 70 4–5 year-olds participated in drawing interviews and articulated more connectedness, diverse and specific experiences about who and what to care for in our common worlds after 18 months with World-care pedagogy practices than before. This finding we consider to document the children’s affectionate awareness and understanding of our common worlds to include a place-based sense of connectedness, potential self-awareness and caring agency. Early childhood educators’ approaches in practice are pivotal for such development; it is demanding work and there is still a long way to go toward more sustainable World-caring pedagogies.

Keywords: World-care pedagogies, Early Childhood Education, Children drawing experiences, Caring Ethics

Research has called for green transition and more sustainable ways of living, producing and consuming for years (Brundtland, 1987). Yet only recently sustainability and green transition have become part of the curriculum of Danish Early Childhood Education and Care (ECEC), and it still plays a peripheral role (IPCC, 2022/2023, Norðdahl et al. 2024). Children are constantly introduced to cultural understandings and symbolic worldviews, in ECEC and at home, in ways that form their sense of responsibility and kinship with other living organisms, animal-beings and their habitats. It is during early life that children first encounter the cultural distinction between nature and culture, humans and other animals, and form attitudes towards the natural environment, hierarchies between living creatures, practices and values of fairness, solidarity and justice.

According to Huggins & Evans (2018) the growing body of literature about early childhood education and sustainability from different theoretical and methodological perspectives has come to a new stage and identified areas that need further research. Among them are processes of children’s active learning and participation as co-researchers in more sustainable practices. The new stage of research is challenging the existing anthropocentric position in the western world by integrating alternative conceptualizations, among them post-humanist theories and indigenous worldviews. In this line of thought an increased awareness of the unsustainable current situation challenges romanticized ideas in ECEC of innocent children playing in a healthy nature (Elliott and Young, 2016). For ECEC professionals such increased awareness and the issue of climate change and eco-crises comes with a potential high price of anxiety and hopelessness (Wals, 2017). It is difficult to avoid anxiety and hopelessness for educators

who are mindful of the threats, and eager to help children and contribute to solving their problems (Macias & Ribera, 2020). Many adults – parents and educators alike – shut their eyes and avoid the problems of climate change and loss of biodiversity, rather than engage with them, as a response to the uncertainty and anxiousness connected to the issue (Scoffham & Rawlinson, 2022, Roepstorff 2022). We struggled with this explicitly in project World-care: a three-year long researcher- and ECEC practitioner collaborative project for developing a new sustainability pedagogy based on care ethics (Tronto 1993; Winther-Lindqvist et al., 2025). In this article we focus on how children 3-5 express World-care as they articulate their experiences in drawings and dialogues.

The World-care project is based on a life-philosophical, phenomenology and cultural psychological ontology, implying human needs as biologically based and socio-culturally produced in human communities reflecting changing norms and ideals (Fuchs, 2011; Løgstrup, 1993; Vygotsky, 1998). Those ideals become internalized and psychologically active as motives (Bozhovitz, 2009), and experienced and embodied as personal and individual (Fuchs, 2017; Vygotsky, 1998). Pedagogy for sustainability and green transition in ECEC is important as ‘it is in the early years that many fundamental attitudes towards the environment, towards consumption and waste and towards fairness and social justice are formed’ (Siraj-Blatchford, 2018, p. xv).

A key challenge for the adult educators (professionals, researchers and parents) in the participatory research project was: How can we embody more sustainable worldviews, choices, attitudes, and habits, and engage children in caring and protective ways on this agenda in a society and system which is inherently unsustainable? Behind this choice was a wish to avoid creating eco-anxiety and despair without romanticizing children and nature (Kelsey, 2014).

In other publications we have investigated how educators (professionals and parents) can work within a World-caring approach to enable a more sustainable ethics and practice as identification figures for children today (Winther-Lindqvist et al 2025, 2026a, Kousholt & Winther-Lindqvist, 2026b). We describe how becoming more caring involves identification of dilemmas, resources and barriers for practising green transition in early years education. Several psychological defences such as splitting (where climate disaster is either regarded as exaggerated or unavoidable), momentary denial, and a need for transforming the scope of worry and threat into something we can act upon, appear to be part of the process of adapting to our present situation (Winther-Lindqvist et al, in print). The professional ECEC-participants in the World-care project demonstrated various ways to transform habits and ideas about limiting use of resources into caring creative explorations of alternatives in practice (for example to reuse materials for drawing and playing, or to redefine what Christmas or Easter decorations could look like depending on resources available, changing the diet to local and seasonal fruits etc.). We have worked with the “educators’ own depth of environmental understandings and pedagogical repertoire in order to fully explore an ethic of partnership with nature through a sustainability lens” (Elliot and Young, 2016, p. 60). Elliot and Young suggest an eco-feminist-based worldview considering *Common worlds* to be a conceptual frame to promote reimagining of the pervasive hierarchies of human/nature dualism; it is about bringing together and re-entangling humans and nature within nature cultures that acknowledge the multiplicities of living, to not only blur the boundaries that categorize nature and culture, but to see, relate and act differently”. (Elliot & Young, 2016, p. 60). We chose this critical alternative to the ‘learning about nature’ approach, which presupposes that we are separate from ‘nature’, and that learning necessarily leads to caring and a changed perception of our co-dependency with the ecosystem. The history of the Western world shows clearly that the way we have ‘known’ about nature and natural phenomena have been used to exploit and destroy other forms of life and their habitats, because this way of knowing was not integrated with care (Care Collective, 2020). This is also empirically supported by research showing that more learning about nature has not resulted in more sustainable practices or lifestyles (Wals, 2017).

Project background

We applied different research methods to involve educators and children in the World-care project. The overall methodology is a collaborative research approach, and with educators we organised Research Circles (RC) (Holmstrand & Härnsten 1995; Holmstrand 1997). In our study RC included the manager and one or two educators from each facility in groups with 12-18 participants together with two researchers, who facilitated discussions, knowledge building, and reflections. Each of the seven RCs lasted three hours organised by researchers with a presentation round of practices from facilities, a 30 minute thematic presentation of knowledge about caring domains, our own relationship to the climate emergency, dilemmas etc. The practitioners provided insights from

practice and documentation such as photos and descriptions of World-caring practices with children in facilities (see more in Winther-Lindqvist et al 2026b, in print). This methodology of RC aim to study, develop, inspire and qualify practice and therefore emphasize participants' contributions to and reflections about their practice.

To investigate how young children in the World-care project perceive of our common world, including who and what they think is important to care about and take care of, we chose drawing interviews in groups of 3-5 children, as we anticipated this methodology would be un-intrusive and yet illustrative. We hypothesized that the RC's and a quite intensive collaborative research project among their educators would influence practice in the ECEC facility enough to show in the ways children articulate their relationship to natural phenomena and other living creatures in their ideas and drawings. This article reports on our positive findings on that question: the children indeed showed more differentiated understandings of our common worlds, in the form of local places and animals encountered in those, in the second round of drawing interviews, than in the first round of interviews at the onset of the project. Also, we found the drawing interview methodology helpful to explore children's perceptions and understandings of care and who to care for in unintrusive ways. This article thus presents selected findings on the analysis of children's drawings and discuss the methodology of drawing interviews as a way of engaging children in careful ways to the sustainability agenda in education.

Theory and design

We applied several theoretical resources in the World-care project and in the analysis of children's drawings. In the participating children's and adults' articulations of lived embodied experiences, ideas and understandings of various forms of life and what to care for and care about, we expected to identify "Common worlds" as conceptualized in the eco-feminist approach. The body-phenomenology tradition contributes with conceptions of lived embodied experiences and their meanings for a person's affections, values, emotions and understanding, not only as reflective knowledge, but also as pre-reflective unarticulated body-knowledge showing in habits and immediate responses (Merleau-Ponty 2014, Fuchs 2011, 2017). The cultural-historical tradition provides conceptions to analyze how children develop motives through pedagogical activities and relationships because of participating in pedagogical activity settings, communicating ideas, values and understandings mediated by shared symbolic systems such as language and procedures in practice (Leontjev 1994; Vygotsky 1986; Chaiklin 2001).

Even though these traditions differ in many aspects they also share basic ontological ideas such as body-material experiences and development intersecting with sociocultural and material structures, practices and mediating means (Køster & Winther-Lindqvist 2018, Hedegaard 2025). We consider it fruitful to integrate these conceptual frameworks to study how the ECEC practitioners in project World-care practiced seeing, relating and acting differently in our common world in everyday life, as Elliott & Young (2016, p. 60) asked for (Kolmos et al., 2025; Winther-Lindqvist et al, 2025). In this article we apply these conceptual frameworks in the study of children's ideas of what to care about and care for before and after they participated in the World-care practices in ECEC.

Drawing interviews with young children

Drawing as a research strategy with young children is a recognized methodology and in recent years more used in combination with interviews and storytelling to account for children's learning especially in the STEM area (Parkes 2025). In a recent literature review Parkes describes how children's drawings demonstrate the power of drawing as representation as well as documentation for assessing children's increased understanding of scientific concepts and phenomena. We wanted to study how children in the World-care project experienced care and what to care for in our world and we wondered if they would present an increased understanding of their connectedness and care for other animals and natural phenomena in their drawings after the World-care project. Children aged 4-5 years may not have clear verbal definitions of their experiences of 'care', but they have rich experiences and felt sensations of being cared for and taking care of and may be able to express this more vividly in the combination of a verbal and a graphic activity like the drawing interview. In a phenomenology lens, felt sensations and experiences of care are engrained in our pre-reflexive body memory as *"the totality of implicit dispositions of perception and behavior mediated by the body and sedimented in the course of earlier experiences."* (Fuchs, 2011, p. 86). To study 4–5-year-

old's lived experiences and implicit ideas of care, drawings can be viewed as a personal, symbolic, body-sensory and perceptual articulation of experience.

Research into young children's drawings

Research on children's drawings presents general characteristics that deserve attention when using drawings as part of research. Young children (2-3 years) mostly draw very simple visual graphics such as lines, arcs, zigzags and circles (Goodnow 1978; Havskov Jensen, 1986; Lowenfeld & Brittain, 1972). Based on an extensive literature review Stamatopoulou (2010) empirically studied scribbling in a 14-31 months old boy focusing on his emerging ability to symbolic coordination - for example the dynamic dual action of motor schema in scribbling and the "perceptual event" of perceiving form outlined in the scribbling trace. Gradually it will "stand" for a possible symbolic object" (Stamatopoulou 2010, p. 5 / l. 496-499). The study illustrated how scribbling as an interactive turn-taking with an attentive caregiver was foundational for the child's experiences of agential trace-making and *"facilitates the child's ability to form self-reflective intentionality, which is critical for the symbolic-imaginary transformation of objects in symbolic communication"* (Stamatopoulou 2010, p. 25). Scribbling and graphic trace-making in interactive turn-taking thus appears foundational for children's drawing abilities and graphic traces present children's situated affections and engagement.

Between 2 and 5 years of age huge developmental fertility in children's drawing abilities are described in the literature (Köhler & Pedersen, 1978). This was confirmed by the developmental art researcher Antonio Machón who characterized four distinctive forms of representation in a dataset of 2177 drawings (Machón, 2013): Beginning by the age of 2.03 children's drawings are 'Grapho-motor representation' similar to traces of moving drawing implements, by the age of 3 years 'Graphic-symbolic representation' begins, as children label their drawings to represent something else than the graphic lines. By the age of 3.09 years 'Idiographic representation' begins, as children use specific graphic forms to represent certain symbolic meaning even though there is little visual resemblance with the defined motif (from an adult perspective). Not until children are 4-5 years old is it common to find in their drawings what Machon labelled 'Figurative representations' that visually resemble the defined motifs and/or established symbols, icons and schemas to represent the defined motifs. In Machon's material boys appeared to begin any of the new forms of representation a couple of months later than girls.

The 4-5 year olds are also found to increasingly define what they will draw before they begin and be open to redefine the motif if the drawing turns out to differ from what they initially intended or it reminds the child of something else (Hansson et al. 1991). From this age onwards, it is common in children's drawings to find anthropomorphic representations, for example the sun or the house with a smiling face (Hansson et al. 1991). When children intend to draw something specific, the drawings tend to present the child's experience and/or knowledge in visual form, which can then be observed, be shared in verbal and give rise to reflections – by the drawing child as well as others (Köhler & Pedersen 1978). With age and increased experience children are found to draw more realistically (Eng, 1926, 1957, 1961). In our multimedia culture most children from a very young age have multiple experiences with the cultural representations of our world, and these representations strongly influence and inspire children's drawings (Köhler & Pedersen 1978, Nielsen, 2012). Drawing activity is characterized as visual articulation and communication, and from the youngest age, children observe and communicate with others when drawing, and the atmosphere and relationships strongly influence the drawing activity and development of the children (Braswell & Callanen 2003, Boyatsis & Albertini 2000, Köhler & Pedersen 1978). Combining drawing and interviews in groups of children who know each other has significant advantages: as they can verbalize and provide explanations to their drawings (Berti & Cigala). They also take inspiration from each other with regards to their choice of motif, color and overall theme (Cox 2005). Girls and boys appear to be mostly inspired by same gender peers and gender-specific cultural images, and cultural changes regarding gender are reflected in children's drawings across time (Longobardi et al., 2022; Nielsen 1993; Boyatsis & Albertini 2000). The 2-4 year olds often draw similar human figures, sun, sky, rain, their house, plants and diverse animals, whilst older children articulate more gendered differences in the form of cultural icons and clichés in their drawings (Nielsen 2012).

Integrating drawing research with the specific study on World-care

Based on this literature we expected the youngest participants in the World-care study to scribble graphic structures and potentially define emerging motifs and the older participants to define their intended motifs before and while drawing. We expected scribbled and other graphic structures to articulate situated embodied affectivity and emotional engagement of the drawing children, that needed triangulation with other articulations such as speech and body gestures to be understandable to us. We expected to see gender differences and to find common cultural symbols and icons presenting our 'natural' lifeworld such as soil, sky, sun, or rain in the drawings.

Knowledge about children's drawings support the phenomenology-based approach to embodied affectivity of trace-making, interaction in turn-taking, scribble and coloring (Fuchs 2017; Stamatopoulou 2010). According to cultural psychology Vygotsky (1997) argued that children's drawings should be considered as unique speech and as a graphic narration of their thinking (Parkes 2025). In this tradition the practical and symbolic tools are fundamental mediating means for the development of children's psychological functions, including their attention, perception, intentionality, and agency (Vygotsky & Luria, 1930). Drawing interviews invited the children to act with practical tools (crayons, marker pen and paper) and with symbolic tools (words in speech and representations/motifs in drawings). The drawing implements offered potentials for articulation in unity with children's direct experiences with their lifeworld, drawing, and their mediated experiences: images, narratives and other representations. Together, these units inspire and form the child's perception, drawing activity and related ideas (Köhler & Pedersen 1978).

The integrated phenomenology-based and cultural psychology-based approaches in the present study provided theory and terminology to describe and conceptualize how lived experiences and embodied inter- and intra-affectivity with 'care' were articulated in children's drawings and dialogues. Pre-reflexively the feeling body mediates and communicates affectivity as the affective affordances of the situation triggers a bodily resonance, influences the emotional perception of the situation and implies a corresponding expression and action readiness, in a continuing interactive cycle (Fuchs, 2017, p. 197).

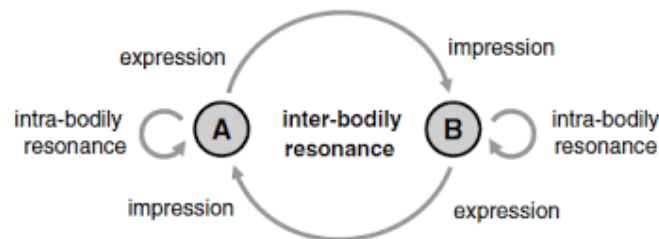


Fig. 1 – Inter-bodily resonance illustrated by Fuchs, 2017, p. 197.

Research Design and Data Material

The drawing interviews were conducted with 33 children in spring 2023 and with 37 children in autumn 2024 (70 children in total). To conduct research with young children requires a special sensitivity to create a safe situation and one where the child becomes confident enough to express and articulate her/his views and experiences. To feel safe in a familiar context and experience the privilege of choice to actively participate in articulation and narration of experiences to an interested listener is crucial for children in research settings (Honig og Nealis, 2012). We therefore organized the drawing interviews in groups of 3-4 children who were also friends or mates from the same unit in ECEC. Typically, the interviews lasted 45-50 minutes. Most groups were accompanied by an educator known to the children to the interview setting, who also assisted each child to find a seat and asked if they were comfortable before the educator left the room. On a few occasions the educator stayed, once because a child was very shy and only wanted to stay if she could sit right next to the teacher (who she also chose to draw in her drawing), twice because the teacher had the opportunity to be able to stay and was personally interested in drawing with children.

We asked open questions, such as ‘what weather do you know’ and ‘where do you like to play’ and followed up in line with what the children engaged with. If a child responded to know rainy weather, others often supplied and we would follow up asking how and where they liked to play in the sorts of weather. We invited for open dialogues and offered interested nonjudgmental comments such as: ‘You are using many colors’ – inviting responses from children after utterances such as: ‘Blue!’ or ‘I am drawing grass’. Our follow-up could be elaborating the theme introduced by the child: ‘What other plants do you know?’ Or mirroring such as ‘Grass?’ The children in groups typically elaborated on the themes introduced by each other in drawings as well as dialogue – see Fig 3 in Content analysis.

This open and wondering visual-interview-dialogue valued the children’s authentic ideas and voices as we did our best to abstain from evaluating and knowing better than the children. In all groups the children engaged in exploring and telling us about what they knew about our world – the weather, animals, plants, loved ones, what and who to care for and how to do it.

The first round of drawing interviews was conducted *before* the first RC were held in the 11 ECEC facilities, so prior to any World-care pedagogies. The second round of drawing interviews took place after the last RC rounding up the project with the educators in the facilities, thus at a point where they were well into experimenting and developing their World-care pedagogies (autumn 2024). We chose not to follow the same children, partly because we did not intend to evaluate specific children’s trajectory as outcomes of the study, but also because 1.5 years is too decisive a factor in drawing development for the comparisons between pre- and post-rounds to make sense because of the World-care pedagogies. Instead, we chose children, of the same age, prior to and at the end of the project period. The participating facilities display a socio-economically diverse population in the two areas, so we carefully chose facilities representing this diversity of both high- and low socio-economic status among the families in the municipality. What we intended to study was how children experienced their relations to the world and World-care, and as such how World-care pedagogies might impact children’s ideas of care and their potential caring agency. We therefore explored how 4–5-year-old children, from mixed socio-economic backgrounds, experienced our common world and what to care for, as they could articulate these experiences in drawings and dialogues in drawing interviews.

Procedure

In all facilities the sessions took place in a room separate from the other children, such as a meeting room or the craft-studio. Some children entered the room silently and appeared reluctant in the beginning, and as they engaged in experimenting with drawing implements and dialogues with the researchers and friends, they grew more confident. In other groups the children arrived after other activities and were in conversation when entering the room. The two female researchers introduced ourselves and the audio-recorder to the children at the onset of each interview and asked the children permission to record our meeting. All children accepted and the recorder was placed at the table beside the color boxes. The interview continued with the children presenting themselves with name and age followed by our invitation for them to explore the drawing implements. Each child received a piece of A3-size heavy high-quality water-color paper, and access to a box with 200 differently colored marker pens with a thin and thick end, and 25 oil pastels to choose from. The children reached out for the materials and appeared eager to start using them. We invited them to make a drawing about where they liked to play, what weather they would like to play in. Later we asked them who they care about and how we can care well for each other, and we asked them to draw someone they care about. Depending on what the children drew and brought into the conversation, we followed up and interviewed them around what appeared to be relevant: various favored activities, relationships, food, toys, creatures and places. We asked again what sort of animals and plants they knew of, what the animals they knew about would like to eat, and what they liked to eat themselves. Therefore, the interviews started out with roughly the same sort of questions, but ultimately the conversations and topics covered were very different. At first, we tried to direct the children towards weather phenomena, but as many of them without any verbal prompting would draw sky, sun, rain and clouds all by themselves, we decided on a very open-ended approach to get the children started and overcome shyness and reluctance to talk to strangers. We were more interested in creating a situation where the children felt inclined to express themselves in their drawings and speech in a good spirit, than directing them in the same direction.

Some children worked meticulously on a single drawing during the entire interview while others produced two, and some even three drawings. No children appeared to pay attention to the audio-recorder or to be affected by the recording, except when they had to move the recorder to get a specific color. The drawings were carefully photographed by the end of the session, one photo of the drawing and another photo with a post-it on it containing the name and age of the child and some hints about what the child told us it should depict. The photo session at the end also served as a good way of ending the drawing-interview with the children, as they appeared proud of having their drawings acknowledged in a photo.

Each session lasted 30-40 minutes and the audio-recording was later digitally transcribed and then listened through while reading by a researcher correcting text if not correct. The material then in total consists of 20 interview sessions, with 70 children who produced 99 drawings – 45 drawings in the first round (spring 2023) and 54 drawings in the second round (autumn 2024) – see fig. 2.

Ethics

The educators in the chosen facilities were gatekeepers for us in attaining informed consent by the parents to the children. The parents already knew about the World-care project, and most were giving their consent to our investigation. In addition to the formal informed consent obtained by the children's parents we also gained assent in the moment as the children entered the room, and we were mindful to make sure the children had good experiences with our encounter. The children were generally eager to use the materials and happy with the opportunity to draw in a calm atmosphere of a small group. And they were even happier with the attention they received from us on their drawings. The questions and comments we made to the children and their responses indicate to us that there is a big potential in taking children's drawings seriously as a pedagogical activity, and that children find it very motivating and stimulating with this attention. The children engaged with fidelity and openness in dialogues around their own drawings with us and became very happy with their drawings. Therefore, we decided that the children should be allowed to choose one of their drawings to bring home and keep it.

Analysis in numbers and overview

In 2023 most participants were 4 years old (16 girls and 13 boys), a few were 5 years old (two girls and one boy) and a single girl was 3 years. In 2024 this was almost reversed for participating girls with only five aged 4 and 13 aged 5 – and again a single aged 3. That year three boys were aged 3 years, nine were aged 4, and 6 aged 5 (see fig. 2).

Fig. 2: Drawing interviews	2023	2024	Total	Drawings (gender/age 3+4+5)
ECEC facilities / sessions	The Flower / 3 sess The Acre / 3 sess The Farm / 3 sess	The Valley / 3 sess The Fruit / 4 sess The Farm / 2 sess		
Sessions	9	11	20	
Participants	33	37	70	
Girls	19	19	38	52
3 years	1	1		2023: 1 + 18 + 4
4 years	16	5		2024: 4 + 8 + 17
5 years	2	13		
Boys	14	18	32	47
3 years	0	3		2023: 0 + 20 + 2
4 years	13	9		2024: 7 + 10 + 8
5 years	1	6		
Drawings				99

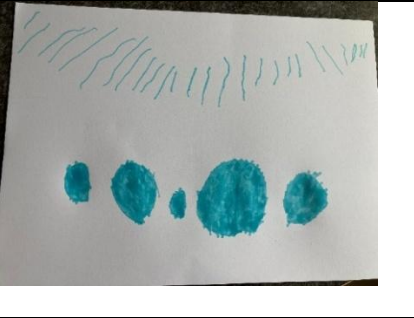
Content analysis

Children's drawings are not easy to interpret or understand in and of themselves, and the dialogues between the children and the researchers serve as important clues to what the images depict and what the child's intentions are in the drawings – similar to interpretations of other sorts of visual materials (Hansson 1991, Kleeberg-Niepage & Degen 2023; Nielsen 2013; Rose, 2007). We therefore relied on our post-its from the photo-sessions, and listened to the recorded dialogues to support our observations in the interview situation and our interpretation of the drawings focusing on the following steps:

- I. What can we describe in the drawings?
- II. What can we identify as representing something?
- III. What can we identify as the thematic experiences articulated in drawing interviews?
- IV. What is the context for the drawing including the dialogues and atmosphere in the group setting at the time of the drawing?

This strategy for analysis is inspired by prior research that analyzed drawings (Kleeberg-Niepage & Degen 2023, Nielsen 2012, 2014, 2018), and could play out as illustrated in Fig. 3:

Fig. 3 – A drawing interview in 2023		
		
Drawing A	Drawing B	Drawing C
I. What can we describe in the drawings? - Blue lines on top of paper /Yellow circles with rays/Blue, green and brown circles/ Mixed colors – engaged embodied affectivity		
II. What can we identify as representing something? - Blue lines: sky, rain, yellow circles and rays: sun, blue, green and brown circles: blue eyes and green/brown footprints of my dog (The children defined it this way and if one child in group had identified these signs/symbols, other children often began to use the same drawing procedure as described in the 'context' step of analysis).		
III. What can we identify as the thematic experiences articulated in drawing interviews? - In these examples we identified lived experiences of activities and their world: playing in rainy and sunny weather, walking my dog.		
IV. What is the context for the drawing? In this group of three 4-year-olds there was a calm, listening atmosphere of interest. We began asking about what weather they knew, and it had been raining - outside the window the sky was grey. The drawing dialogues emerged as follows:		
Ina declared she would draw 'sun' and she drew a yellow circle with rays and then rapidly colored a blue 'sky' – and looked astonished at the then greeny sun.		

Carlo declared he would draw thunder and he drew a couple of blue lines on top of paper, defined it as 'sky'	
Rose declared she would draw rain and began to draw blue lines on top of her paper.	
Carlo drew a circle beneath the lines, said: I will draw a man – this is his eye! He drew another eye and a mouth – and green and brown circles, he defined them to be 'footprints of my dog.' The dog is scared by thunder. A little conversation about what weather they liked, sunny was the best, Ina said she was drawing grass. Asked about other plants they might know Rose said 'flowers'. Ina drew flowers in the grass (Drawing A)	
Rose looked at Inas 'sun' and she drew one beneath the 'rain-lines' – and she looked at Carlos 'mouth' and she rapidly drew a mouthshape and meticulously colored it mixing red and white. She said with astonishment: 'it turns pink!!!' We asked Rose about the mouthshape – what is it? Rose explained it was the sandbox-meeting where everyone in facility gather together to plan who will tidy up what at the playground by the end of the day. The arcs on the sides are tree stumps to sit on:	
Ina asked for a new papersheet and rapidly colored blue lines at top and then mixed black and white to grey: 'It is smoke from a bonfire!'	
Carlo asked for a new paper sheet and colored blue lines for rain and blue circles: 'rain poodles to play in at the playground' Conversation about animals they knew beside Carlo's dog, they mentioned cats, rabbits, sheep, sharks and cows, they eat grass – and flowers. Sharks eat human flesh.	
Carlo asked for a new paper sheet and he drew a large yellow circle and many lines from it: the sun! The contextual process analysis adds knowledge about <i>how the children enter the drawing interview, how they acknowledge their own and peers' articulation and ideas</i> as they become inspired and continue to draw vividly engaged and tell us and each other about their ideas. This part of analysis adds knowledge about <i>how they experience rainy and sunny weather to play in</i> – in the sandbox with	

peers and adults who want them to join boring activities of tidying up. Also experiences with bonfire in the meadow and walking my dog appear as important for these children in this drawing interview before the World-care pedagogy, and tell us something they care about: dog, play, peers, sandbox, rain-poodles, and the adults organizing 'our life-world in facility'. These children mention very few plants, and they mention animals of which some are common pets in DK (dog, cat, rabbit), others are domestic (cow, sheep) and the shark is exotic. All these animals are common in literature, cartoons etc. for children.	
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Describing articulations

Like in the drawing development literature: age, gender, experiences with spoken language and prior drawing experience influenced the children's styles of participation and articulation. The youngest (3-4-year-olds) immersed in coloring the surface of their paper sheets, some of them hardly spoke and seemed absorbed in coloring. Their answers to our questions were largely just single words, such as from this excerpt:

Researcher A looks Carl (4) in the eyes and asks: *And you are using?*

Carl: *Blue.*

Researcher D: *What is your favorite color?*

Carl: *Green.*

Researcher A: *And yours, Ash?*

Ash (4): *Green.*

Bea (3): *Me too!*

Researcher A to Bea: *Oh, how interesting - what is appearing there?*

Bea: *Blue!*

Some of the 4-year-olds and 5-year-olds entered the drawing interviews with more confidence and explained to us that they knew the kind of drawing implements we supplied from their home or other places, such as Granny's place. In those situations, we used the information to enter conversations about how they felt about drawing with these implements at these places. This way, the drawing implements opened for conversations about important relations in the children's everyday lives. In other groups the children, in response to our questions could tell us about what we should care for and draw it for us, initializing conversation about how to draw something the questions brought to their minds.

The youngest participants engaged in drawing before defining their motives in contrast to the older participants who declared the motive to come and then wondered about how to articulate it. Often the motif changed through the drawing process no matter the age of the child, and these changes appeared to be inspired by the drawings of the other children as well as the conversation. The youngest participants engaged in scribbling and often it was not obvious how the drawing represented something else than colors, lines and graphic structures like circles, squares etc. The older children exhibited combinations of various graphic schemas to represent for example a human figure or a plant with a circle on top, some lines for body or trunk etc. The drawing interviews confirmed the age-related drawing styles and processes we could expect based on the literature and provided spoken and drawn articulations by the participating children as they in groups related to us researchers, to the questions we asked; to the drawing implements and to the situation and relationships with peers involved in each session.

Identifying representations

To identify representations articulated in the drawing interviews we translated the children's visual and spoken articulations to descriptive categories such as 'Natural phenomena', 'Plants' etc. These categories are our best attempts to identify and compare what is represented in the drawing interviews in 2023 and 2024. In addition, this method offers potential to compare with other studies using similar methods (Eraktas et al. 2025). The identified representations are listed in Fig. 3.

Fig. 3: Motifs / gender	Natural phenomena - Girls
Spring 2023	Sky – Sun – Rain – Snow – Rainbow - Vulcano
Fall 2024	Sky – Sun – Clouds - Stars - Rainbow – The Sea
	Natural phenomena - Boys
Spring 2023	Sky – Sun – Rain – Snow – Stars - Thunder – Lightning
Fall 2024	Sky – Sun – Rainbow - The Sea – Lake - Rain
	Plants - Girls
2023	Flowers (for bees and butterflies) – Grass (for cows)
2024	Nettles – Flowers / Heart-shaped flowers / Flower-friend – Grass – Tree -
	Plants - Boys
2023	Trees – Fruit-plants – Greenhouse
2024	Green leaves – Tree
	Family/Other Persons - Girls
2023	Babies - Siblings – MOM – Parents
2024	Siblings – MOM – Mom and me – My Family - Girl at 12 going to party -
	Family/Other Persons - Boys
2023	Babies - Siblings – DAD – Parents
2024	Siblings – DAD – Parents – Big brother with band-aid on knee and yoyo - Rabbit-killing man – Woman with rock-hair and pink ears -
	Animals - Girls
2023	Lion, Giraffe, Elephant, Ladybird, Cat, Spider, Slug with house, Centipede, Horse, Unicorn
2024	Butterfly - Lemonbutterfly – Ladybird – Bird – Dog – Rabbit - Cat – Hamster-kitten - Fox – Slug – Woodlouse – Pillbug – Grasshopper -Frog/Meat-eating Frog – Shark - Octopus – Owl-teddy – Ostrich/Stork –Baby-Worm/Mom-Worm – Crocodile – Wolf with big belly
	Animals - Boys
2023	Dog - Crocodile - Shark - Parrot – Crab – Slug with house and naked / mucus
2024	Slug – Tentacles - Worm – long tongue/many eyes – Rabbit - Turtle – Blue-whale-head – Octopus – Killer-slug
	Places - Girls
2023	Playground – Bonfire
2024	My House/Home – My Room – My Farm – My terraced house – path to my house
	Places - Boys
2023	Playground
2024	My house – My room – Jail – Lazer-Jail – Path – Scout-cabin
	Things - Girls
2023	Cellphone for mom – Barbie-house
2024	Furniture – Diamond-lamp – Pearls – Shoes – Airplane - Balloon – Lollipop – Popcorn -
	Things - Boys
2023	Guns – Knives – Racetrack – Rollercoaster
2024	My Teddy – Teddy-frog - Me and family in Boat – in Car – jumping Trampoline – yoyo played by big brother – Spike-table – Knives – Gun – Coffee-brewer – Cranes – Submarine - Statue
	Fantasy - Girls
2023	Hearts – Aliens
2024	Hearts - One-eyed Monster –
	Fantasy - Boys
2023	Monsters – Monster with heart in mouth – Submarine-race
2024	Monster

The identified motifs and the relational and socio-cultural interplays related to age and gender in the World-care drawing interviews and contexts are similar to what we would expect based on the literature (see section: Drawing interviews with young children) and described in section Content analysis and Describing articulations. Therefore, we don't explore age and gender variations or relational and contextual interactions further in this article. Instead, we focus on characteristics in the thematic experiences articulating common worlds in drawing interviews in spring 2023, when project World-care began, compared to fall 2024 following 18 months of more World-caring pedagogies. Our analysis is based on phenomenology conceptions including embodied lived experience, pre-reflexive intra- and inter-embodied affectivity, and on cultural-psychological conceptions.

Results

Thematic experiences articulated in the drawing interviews 2023 and 2024

Both girls and boys drew weather and other natural phenomena motifs: including sun, blue sky, stars, rain and rainbows. Also, children's chosen images were inspired by recent experiences, so in spring 2023, not long after a cold winter with snow, snow was a theme, and in fall 2024 not long after a warm summer with swimming in the sea and lakes, these appeared in drawings and dialogues. Only boys focused on thunder and lightning in dialogues and drawings. One girl said she had seen a volcano on vacation abroad.

Gendered differences appeared as girls included more flowers and grass as food for bees, butterflies and cows in spring 2023 while boys included trees, plants with fruits and a greenhouse. In fall 2024 the girls specified nettles which they encountered as food for the butterflies they bred in several facilities and symbols for friendship and love with flowers, and boys specified leaves from trees.

Articulations of family and important people to care for included babies, small children, all siblings, parents, the entire family and friends in articulations in 2023 and 2024 by both genders, the main difference occurred to be girls focusing on MOM while boys were focusing on DAD. In 2024 both genders included more specification of persons with specific characters, such as 'Mom in blue dress', 'Girl aged 12 dressed up for party' (Girls), and 'Big brother with band-aid on knee and yoyo', 'Rabbit-killer-man', and 'Woman with rock-hair and pink ears' (Boys). The specifications in 2024 may relate to the project activities focusing on care and including dialogues with children about how we care for ourselves and each other, and who they care about and trusted to care for them. Overall, the children talked about their parents and siblings, selected early childhood educators and that we as humans should care for small animals.

Both girls and boys included animals, and in the first round (2023) several exotic animals were mentioned: Lion, Giraffe, Elephant were mentioned by girls, and Crocodile, Shark, Parrot by boys. Also, animals experienced in their everyday lives were mentioned: Cat, Spider, Slug with house, Centipede, Horse, Unicorn by girls, and Dog, Crab and Slug with house or naked with mucus by boys. In 2024 especially the girls articulated a much more specified knowledge about animals as they included Butterfly, Lemon-butterfly, Ladybird, Bird, Dog, Rabbit, Cat, Hamster-kitten, Fox, Slug, Woodlouse, Pillbug, Grasshopper, Frog/Meat-eating Frog, Shark, Octopus, Owl-teddy, Ostrich/Stork, Baby-Worm/Mom-Worm, Crocodile and Wolf with big belly. The boys also mentioned more specific animals, but not as varied: Slug, Tentacles, Worm, long tongue/many eyes, Rabbit, Turtle, Blue-whale-head, Octopus, Killer-slug (illustration in Fig. 4).

Places mentioned become more diverse and specified after the project: In 2023 several children mention the playground as they talk about activities and places in their everyday and where they experience being cared for or caring for others. One girl mentions a bonfire. In 2024 many children mention and draw their homes and specify in detail the kind of housing and how their rooms are organized, sometimes with a pet. Only boys in 2024 also mention and draw 'a jail' or 'lazer-jail'.

Things mentioned in 2023 are relatively sparse: a 'Cellphone for mom' and 'Barbie-house' by girls and 'Guns, Knives, Racetrack and a Rollercoaster' by boys. In 2024 the variation is larger: Girls mention and draw 'Furniture – Diamond-

lamp, Pearls, Shoes, Airplane, Balloon, Lollipop, and Popcorn’, and boys mention and draw ‘My Teddy – Teddy-frog - Me and family in *Boat*, in *Car*, jumping *Trampoline*, *yoyo* played by big brother, Spike-table, Knives, Gun, Coffee-brewer, Cranes, Submarine, and Statue’.

The category Fantasy could be very large as many of the visual articulations are defined by the drawing children as different things during the drawing process. When a drawing presents an animal that transforms to become another animal, the figure is categorized as ‘animal’ and the different animal definitions appear in that category. Similar for mix of symbols such as ‘heart’ with ‘plant’ – a ‘heart-plant’ is categorized as a plant. That leaves quite few figures for the category ‘fantasy’ in which we include a symbol like ‘the heart’. In the fantasy category for 2023 the girls mentioned and drew Hearts and Aliens, while the boys included Monsters, a Monster with heart in mouth, and a Submarine-race. In 2024 it was quite similar, the girls included Hearts, and a One-eyed Monster, and the boys included Monsters.

Differences articulated in the category ‘Nature phenomena’ may relate to the children’s lived experiences in their everyday lives in the preceding weeks before the drawing interviews. While sky, sun, rain and stars reoccur all year; experiencing snow only happens in Denmark during the winter, sometimes as late as March. Snow appeared in spring 2023 as well as many drawings of rainy weather after a few months with many rainy days. Going to the beach or lake to swim is a summer experience, and the sea and lake were mentioned in fall 2024. In addition, both genders mention these phenomena in respectively 2023/2024.

Differences in the children’s drawings between 2023 and 2024 are characterized by larger diversity and specification in the second round within especially the categories of Animals and Places; therefore, we dive deeper into these in the following selected results.

Selected Results: Animals

The Animal category in the pre and post sample shows most significant changes. In 2023 children present exotic animals such as Lion, Elephant, Crocodile, that they are introduced to through symbolic resources like books, movies, posters, TV programs, toys and clothing (Kolmos, Nielsen, Skyggebjerg, 2025; Cole & Stewart 2016). The category also includes animals with which children have lived experiences, such as Dog, Cat, Spider, and Slug. In the second round (2024) the children draw and specified many more animals they have encountered in their everyday lives: Rabbit, Woodlouse, Pill-bug, Frog etc. We take this addition as a result of the World-care project, since it very clearly reflects the transformation described by the educators as their way of approaching more World-caring practices (Winther-Lindqvist et al. 2025, Winther-Lindqvist et al. 2026, forthcoming). Gender differences still appeared clearly as girls and boys respectively use sociocultural mediating means in speech and drawing to emphasize specific characteristics or interpretations of animals such as power, strength, action and potential danger in boys’ drawings and cute, nice, pretty and friendliness in girls’ drawings (Nielsen, 1994).

Fig. 4 Animals and gender	
‘Girl-motifs’: Cute, friendly and nice – such as small/cute creatures including butterflies, baby siblings, grasshopper, fox, nice flowers and rainbows, bright sun and hearts/heart-flower	‘Boy-motifs’: Power, action and strength – such as weapons, knives, forceful color-traces, spike-table, killer-slug, and ‘myself’ with hands and fingers and larger than twin-brother on slug-with-house
2023 Girls	2023 Boys
2023 Girl, 4 years: A blue butterfly, flowers, a rainbow, sunshine and rain:	2023 Boy, 4 years: Black weapons and knives:

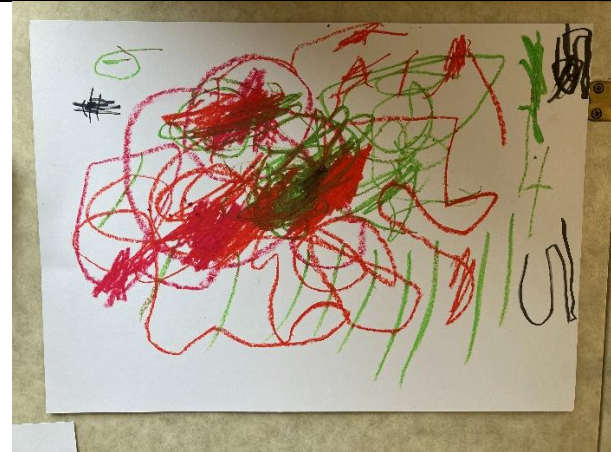


2023 Girl, 5 years:
A lion, a parrot, a zebra, a giraffe (jeg skal lige lytte for at identificere de to sidste)

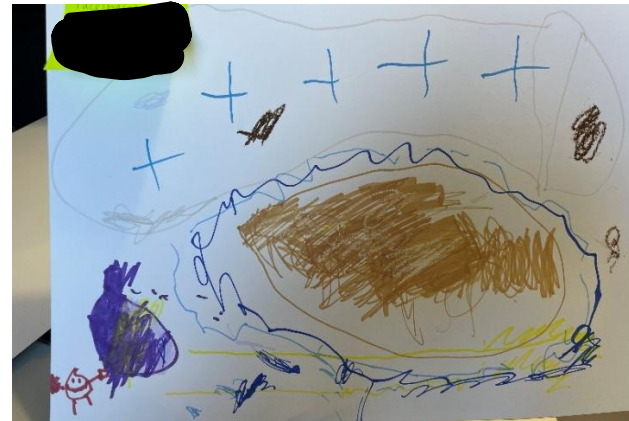


2024 Girls

2024 Girl, 4 years:
My baby sister (in center), a grasshopper, grass, flowers, the sun, a heart-flower and a blue fox.



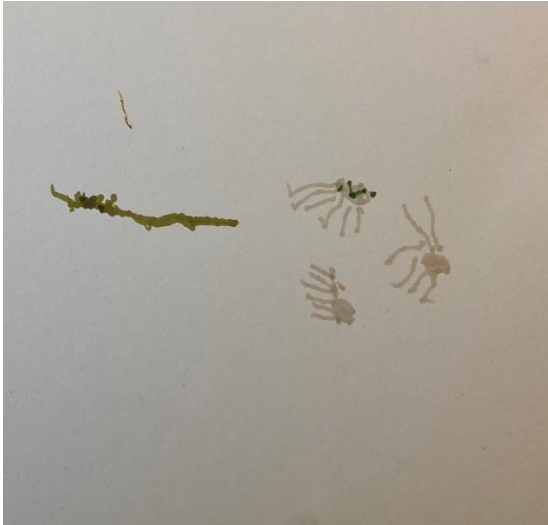
2023 Boy, 5 years:
A red crab, flowers, water, stars in grey sky, a racetrack and submarine-race



2024 Boys

2024 Boy, 4 years:
Myself (in center), a killer-slug, a blue spike-table, a slug with house and my younger twin-brother on top of it.



2024 Girl, 4 years: An earthworm and three pill-bugs with six legs each (even real pill-bugs have 14 legs). 	2024 Boy, 4 years: My teddybear (center), green leaves and trees. 
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Selected Results: creatures to care for

We consider the specifications of diverse creatures to care for (siblings, cuddling toys, animals and plants) related to World-care pedagogy and activities, as they focused on animals and their habitats, in the ECEC facilities playgrounds and natural environment in the neighborhood. These activities included for example to sow and water plants, breeding and caring for butterfly caterpillars and finding a good environment for setting the grown butterflies free, constructing insect-hotels at the playground and placing drinking water for bees and ponds for frogs. Caring for peers and oneself was part of the activities and included asking for comfort and sharing experiences with comforting cuddling toys such as 'teddys'. These activities were reflected in the children's drawings, articulating their lived experiences, and mediating means to label and specify the animals and how to care for them in more nuanced and differentiated ways in 2024 than in the first round of drawing interviews.

To care for each other, for friends, siblings, parents, and to need caring oneself was presented by the children in their drawings and stories about their families, homes, and favorite cuddling toy (my teddy-frog, my owl-teddy, my kitten, my rabbit). The World-care Pedagogies included activities with the 'Teddy-friend' from the national Danish anti-bully-program and provided a shared vocabulary for caring friendliness as everybody's need, shared motivation to care and to share strategies for care such as favorite cuddling toys.

Selected results: place

The Place category exhibit detailed specifications in 2024 presenting the children's homes including their ideas of caring for family members, pets and animals in the garden/the farm. Only boys represented jails, and one included a scout cabin. In 2023 the places were not specified – illustrations in Fig. 5

Fig. 5: Places and gender	
2023, Girls	2023, Boys
Girl, 4 years: Mom and me, a pink crab, flowers, stars and the sun	Boy, 4 years: A dad who turns into a waterfall (the blue), a tree with a ladder to a cabin in the tree and a tower, and a parrot



2024, Girls

Girl, 4 years: My hamsterkitten and flowerfriend in my room at home.



Girl 4 years: Mom in blue dress and our house



2024, Boys

Boy 4 years: My family at home with older brother with plaster on his knee playing yoyo beside dad, and my sister beside om in a nice dress, and me beside my brother.



Boy 4 years: Little brother and dad and mom and me on the ship to holiday.



We interpret these results as an indication of the World-care project, as activities included local group-walks in the nearby community and visits to the children's homes. Dialogues with people from the local community (librarians, workers etc.) engaged the children in reflections around their local area and town. These explorations we assume to have affected the children as embodied beings, supporting their awareness of potential other experiences than their own; including imagination about what it is like to live in another place, in another family situation and as another species.

The World-care activities provided richer sensuous lived experiences for children dealing with other forms of life, such as exploring the life of insects, spiders and pill bugs in caring approaches. The ECEC educators did their best to curiously and caringly inviting the children to explore these forms of life and thus – in a phenomenology lens - demonstrate inter-embodied affectivity in calm, confident and caring being-with other forms of life. Such inter-embodied resonance supports intra-affective conditions resonating with a calm, confident and caring being-with as lived experience in and of the participating children. Such lived experiences were supported by mediating means in language and activities, such as exploring what may be good life conditions for our butterflies.

In a cultural-psychological lens, specifications and details articulated in drawing interviews in 2024 present the children's acquired motivation to care for other forms of life and related new fields of attention to characteristics and to their own experiences of caring and being cared for. This way their lived pre-reflexive experiences and personal development of motives and fields of attention integrated with mediating means in activities and spoken language to certain approaches and potential agency relating to themselves, other people and other forms of life.

Discussion

We studied the conception "Common worlds" as children in drawing interviews articulated embodied experiences, ideas and understandings of various forms of life and what to care for. To describe and conceptualize how sensory-based experiences transform to significant ideas we applied the body-phenomenology conceptions of embodied inter- and intra-affectivity. We integrated the cultural psychology conceptions of activity and symbolic tools uniting to mediating means, that provide mental tools for attention and intentional orientation guided by significant meaning. In that lens we looked for significant meaning as ideas of caring for our common worlds articulated by the participants in project World-care. The articulated ideas about for what and whom to care and how implicitly presented the participants' framing of what they considered our "common worlds."

The children articulated more diverse and specific experiences and ideas about who and what to care for after 18 months with World-care pedagogy practices than before. In line with the cultural-psychological theory of development and the body-phenomenology theory of lived experiences we consider the more diverse and specific articulations in drawing interviews to document the children's affectionate awareness and understanding of our common worlds to include a place-based sense of connectedness and caring agency. To act caringly implies a sense of ability, being able to act as a subject encountering some-body and creating a certain change, a self-awareness of intentionality (Stamatopoulou 2010). They articulated the place-based sense of care in descriptions and drawings of 'my home,' 'our playground' and other places they like and/or have experienced as significant for themselves or animals. Similar place-based sense of connectedness appeared in their articulations of specific human beings. For examples, relations to family members and professional caretakers appeared frequently in the drawing interviews in both 2023 and 2024, however, they were presented with greater detail in 2024. Considering articulations of animals, pets and images of animals such as 'teddy' or other toys for comfort there were considerable differences. In 2023, drawing interview articulations of animals had many similarities with cultural images of animals in illustrated books, cartoons, movies and toys – mass-media images without variances coinciding with those in the children's drawings from 2023 to 2024. In 2024, the children's articulations of animals appeared more diverse and to a larger extent based on direct sensory lived experiences with specific animals. The 2024 articulations appeared to include place-based affection for these animals, such as the frog or woodlouse inhabiting certain parts of our shared playground and being somebody we care for by providing water. We consider such place-based experiences of connectedness to depend on children's opportunities to encounter and experience diversity in the natural environment as well as guiding caring approaches in the communities of practice in ECEC, in the family and larger community.

Young children's experiences and sensitivity to nature were found to relate to variations in the natural environment, the children's access to it and the guided understanding provided by educators (Eraktas et al., 2025). Eraktas et al. found that 89 5-6-year-olds in drawings and verbal explanations presented both universal developmental patterns and contextual variations shaped by the curriculum and the specific places and environments in which they lived. In the World-care study the 70 children participating were 1-2 years younger than in the study by Eraktas and colleagues.

Caring approaches and developmental implications

In early life, children learn by experiencing and imitating both parents and professional caregivers in activities and routines that form a basic habitual enculturation reflecting value positions often in pre-reflective, embodied and unarticulated ways (Nielsen, 2017; Køster & Winther-Lindqvist 2018). They see us when we step on the spider or the snail, or jump over it in order not to harm it - just as they see us when we provide drinking water to the butterflies on a hot summers day, which was one of the many World-care activities that participating facilities took up during the project. Animals and natural phenomena are everywhere around children in ECEC and found to evoke more empathic identification than plants (Mortari 2004). Yet the way animal images are presented to children in ECEC is mostly as exotic creatures (children in Denmark have hardly any real-life experiences with giraffes, crocodiles or polar bears). Quite bizarrely, the corner with animals contains a variety of animals mixed with imaginary figurines. It is common to have a basket full of life-stock figurines (sheep, pigs and cows), exotic animals (gorillas, bears, crocodiles), and fantasy or extinct animals (unicorns and dinosaurs) laying side by side. The exotic animals serve as iconic symbols and identification figures, where children are encouraged to dress up like a tiger or a bat and costumes are provided. Often different animals are connected to human personality traits and virtues: like the brave lion, the wise owl, the strong bear, and cute ladybird (Cassirer, 1999; Grønkjær 2005, Vedfelt 2012). Animals are often protagonists in children's books, paradoxically representing the human world of care, friendship, kindness, family life and other civilizing forces (Bryld & Lykke 2000, Gilliam & Gulløv 2012, Kolmos et al 2025). In short, the place for real animals, with real needs and lifeforms, and our own animality as humans (rather than animals' humanness) is less frequently addressed and stressed in cultural representation of animals to children in ECEC pedagogy, and clearly from the literature, this is a general issue in the western world (Cole & Stewart 2016).

We claim that the way images of nature and animals are presented to and introduced to children in Danish ECEC facilities, seems disconnected from issues of ethics or sustainability education in general. This may reflect a current situation where sustainability, green transition and human-nature relationships have not become an integrated topic or area of focus in pedagogy. This partly changed during the World-care project, due to the World-care pedagogy advocating caring for and with nature, rather than 'just' learning about it. The educators operationalized the World-care concept into a place-based and more sensitive attention to the animal and plant life surrounding them in the immediateness of their facility: the playground (especially), but also in the meadows, little creek, and small forest. Interestingly, this transformation of focus is also evident in the children's drawings of more places with importance to them, and places as homes or habitats for animals. Maybe testifying to a more reality-based, experienced relationship with the local animals present in their lives (their pets, local creatures and birds). This resembles a change in discourse we also detected among the educators. At the project onset, they talked about the playground as *their* playground where other creatures may cross it and visit, whereas at the end of the project a more cyclical and shared sense of ownership showed in utterances like: as soon as we have closed the facility in the evening, the playground becomes alive with its other inhabitants like the fox, the frogs.

Yet, despite these positive outcomes of the participatory action research project we find there is still a long way to go for ECEC pedagogy to become more world-caring and sustainable, especially in the ways that animals and nature are presented to children in ECEC-context as well as in mass-media images, that offer stereotypic schemes, ideas and discourses (Köhler & Pedersen, 1978). When it comes to animals as the exotic and distant "other" and the image of human cultural virtues is represented by animals acting like humans, the hyper-separation between humans and the rest of the natural world is reinforced rather than transgressed. Presenting animals only 'in our own image' and not in their own right, indirectly legitimizes an exploitative and ultimately colonial position towards other living creatures and nature (Plumwood 1993, 2002). The results of the World-care project show most clearly in pointing

towards becoming more aware of our own dependency on others and our shared places (Casey 2018). With this place-based awareness human life also reveals itself as dependent on the qualities of particular habitats and their conditions. This underlines our “animality” and shortens the distance between us and other animals, which is a first step in a less human-centred ethics (Dufourck 2022).

Summing up

The reflected practices, mediating means and intentions by which early childhood educators embody the ethics of connectedness with nature appear to lay the ground for children’s potential experiences of connectedness and caring agency in ECEC. It is demanding as usual habits and orientations, including romanticizing children in nature, need to be critically reflected in the communities of ECEC practitioners (Winther-Lindqvist et al. 2025). However, we found it possible to critically explore potential sustainable world-caring pedagogies by transcending the ordinary (mass-media-communicated) images of care and ‘other living beings’ and to begin exploring what it can be like to share our places with each other, including other living beings in our common worlds, together with children (Elliott & Young 2016; Kolmos et al. 2025).

In the drawing interviews children articulated their experiences and ideas about care and connectedness with others in common worlds. The World-care pedagogy offered participatory activities with potential for children to experience being worth caring for and being able to care for others and for our common worlds. The activities offered lived engagement and embodied inter- and intra-affectivity, mediated by the early childhood educators’ intentions and embodied actions and interactions with children, with each other and with other forms of life in their lived places such as the playground. It is demanding work and there is still a long way to go toward more sustainable world-caring pedagogies.

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References

- Berti S and Cigala A (2022) DRAW.IN.G.: A tool to explore children’s representation of the preschool environment. *Front. Psychol.* 13:1051406. doi: 10.3389/fpsyg.2022.1051406
- Bastrup-Madsen, L. (2001). “En dreng, der ikke må leve”. I P. Skogemann (red.), *Symbol, analyse, virkelighed*. København: Lindhardt & Ringhof.
- Boyatzis, C.J. og G. Albertini (2000). A Naturalistic Observation of Children Drawing: Peer Collaboration Processes and Influences in Children’s Art. *New Directions for Child and Adolescent Development*, nr. 90, vinter 2000. Jossey-Bass, a Wiley Company.
- Bozhovitz, L.I. (2009). The Social Situation of Child Development. *Journal of Russian and East European Psychology* (47), 59–86. DOI 10.2753/RPO1061-0405470403
- Braswell, G.S., K.S. Rosengren og S.L. Pierrousakos (2007). Task Constraints on Preschool Children’s Grip Configurations during Drawing. *Developmental Psychobiology*, DOI, 10.1002/ Wiley InterScience: www.interscience.com.
- Braswell, G. S. (2006). Sociocultural contexts for the early development of semiotic production. *Psychological Bulletin*, 132(6), 877–894. <https://doi.org/10.1037/0033-2909.132.6.877>
- Braswell, G.S. and Callanen, M.A. (2003). Learning to Draw Recognizable Graphic Representations during Mother-Child Interactions. *Merrill-Palmer Quarterly*, vol. 49, nr. 4, oktober 2003: 471-494. Wayne State University Press.
- Brundtland, G.H. (1987). *Our Common Future Report*. United Nations World Commission on Environment and Development.

- Bryld, M., & Lykke, N. (2000). *Cosmodolphins: Feminist Cultural Studies of Technology, Animals and the Sacred*. Zed Books.
- Casey, E. (2018). Place and Situation. In Schlitte, A. & Hünefeldt, T. (eds.). *Situatedness and Place: Multidisciplinary Perspectives on the Spatio-Temporal Contingency of Human Life*. Springer Verlag. Pp. 19-25.
- Cassirer, E. (1999). *Et essay om mennesket*. Hans Reitzels Forlag. (*An Essay on Man*, 1944, Yale University Press).
- Chaiklin, S. (2001). The institutionalisation of cultural–historical psychology as a multinational practice. In S. Chaiklin (Ed.), *The theory and practice of cultural– historical psychology* (pp. 15-34). Aarhus, Denmark: Aarhus University Press.
- Care Collective: Chatzidakis, A., Hakim, J., Littler, J., Rottenberg, C., & Segal, L. (2020). *The Care Manifesto*. Verso.
- Cole, M. & Stewart, K. (2016). *Our children and other Animals. The cultural construction of human-animal relations in childhood*. Routledge.
- Cox, S. (2005). Intention and meaning in young children's drawing. *International Journal of Art & Design Education*, 24(2), 115–125
- DMI – Danish Institute of Meteorology (2026)
- Dufourcq, A. (2022). *The imaginary of animals*. Routledge.
- Elliott, S. & Young, T. (2016). Nature by Default in Early Childhood Education for Sustainability. *Australian Journal of Environmental Education*, vol. 32(1), 57–64. doi 10.1017/ae.2015.44
- Eng, H. (1961). *Barne- og ungdomstegningens psykologi*. Oslo: Cappelen.
- Eraktaş, C.C., Güney, F., Cengiz, G.S.T. & Erol, D. (2025): The Colors of Nature and the Child's Mind: Representations of Nature in Preschool Children's Drawings, *Journal of Research in Childhood Education*, DOI: 10.1080/02568543.2025.2595100: <https://doi.org/10.1080/02568543.2025.2595100>
- Fisher, B. & Tronto, J. C. (1990). Toward a feminist theory of caring, in E.K. Abel and M. Nelson (Eds.). *Circles of care*, Albany, NY: SUNY Press
- Fuchs, T. (2011). Body Memory and the Unconscious. In D. Lohmar, D., J. Brudzinska (eds) (2011) *Founding Psychoanalysis. Phenomenological Theory of Subjectivity and the Psychoanalytical Experience*, pp. 69-82. Kluwer, Dordrecht.
- Fuchs, T. (2017). Intercorporeality and interaffectivity. *Phenomenology and Mind*, 11, 194–209. https://doi.org/10.13128/Phe_Mi-20119
- Goodnow, J. (1978) *Børn tegner*. Hans Reitzel.
- Gulløv, E., & Gilliam, L. (2012). *Civiliserende institutioner: Om idealer og distinktioner i opdragelse*. Aarhus University Press.
- Grønkjær, P. (2005). *Politikens bog om drømme*. Gyldendals Bogklubber.
- Hansson, H., Nordström, G.Z., Pedersen, K. & Stafseng, O. (1991). *Barns Bildspråk – Children's Pictorial Language*, Carlsson.
- Havskov Jensen, B. (1986) *Børns billeder*. Borgen.
- Hedegaard, M. (2019). Children's Perspectives and Institutional Practices as Keys in a Wholeness Approach to Children's Social Situations of Development. In A. Edwards, M. Fleer and L. Bøttcher (Eds.), *Cultural-historical approaches to studying learning and development: Societal, institutional and personal perspectives* (pp.23-41). Springer.
- Hedegaard, M. (2025). Taking Children Seriously: Their Emotional Experience, Imagination and Cognition—A Methodological Approach. In: Bøttcher, L., Winther-Lindqvist, D., Hedegaard, M., Fleer, M. (eds) *Sustainability, Care, Play and the Zone of Proximal Development. Perspectives in Cultural-Historical Research*, vol 15. Springer, Cham. https://doi.org/10.1007/978-3-031-92131-5_17
- Holmstrand, L. & Härnsten, G. (1995). How to bridge the gap between the school world and the world of university research. I T. Tydén (Red.) *When school meets science* (pp.122–145). Stockholm: HLS Förlag..
- Holmstrand, L. (1997). *Forskningscirklar som en plats för kunskapsmöten*. Vest, 10(3-4), 97–109. (in Swedish)
- Honig, A.S. & Nealis, A.L. (2012) What do young children dream about? *Early Child Development and Care*, 182:6, 771-795, DOI: 10.1080/03004430.2011.579797
- Huggins, V. & Evans, D. (Eds.) (2018) *Early Childhood Education and Care for Sustainability - International Perspectives*. Routledge. (Online).
- IPCC (2022) Sixth Report on [Climate Change 2022: Impacts, Adaptation and Vulnerability](https://www.ipcc.ch). ([ipcc.ch](https://www.ipcc.ch))
- IPCC (2023) *Climate Change 2023 Synthesis Report*. [IPCC AR6 SYR LongerReport.pdf](https://www.ipcc.ch)

- Jensen, L.M. (2012). Triangulær terapi. Kunst og kærlig resonans i et triangulært felt. *Psyke & Logos*, 33/2: 361-384. København: Dansk Psykologisk Forlag.
- Jones, P. (2005) *The Arts Therapies* Brunner-Routledge.
- Kelsey, E. (2014). *Beyond Doom and Gloom*. Rachel Carson Center.
- Kleeberg-Niepage, A. & Degen, J.L. (2023) Children's Drawings as Data in Psychology. In: Tseliou, E., [Demuth](#), C., [Georgaca](#), E., & [Gough](#), B. (eds.) *The Routledge International Handbook of Innovative Qualitative Psychological Research*. Taylor & Francis Group.
- Kolmos, M., Skyggebjerg, A. K., & Nielsen, A. M. (2025). Children's literature as coupling point between global sustainability concerns and children's local agency. *Nordisk barnehageforskning*, 22(1), 86–105. <https://doi.org/10.23865/nbf.v22.594>
- Kousholt, D. & Winther-Lindqvist, D. (Submitted). We need to give our children tools – not fear. Parents' perspectives on World-care and upbringing for sustainability. *Contemporary Issues in Early Childhood*.
- Kragh-Müller, G. og R. Isbell (2011). Children's Perspectives on their Everyday Lives in Child Care in Two Cultures: Denmark and United States. *Early Childhood Education Journal*, vol. 39, nr.1. New York: Springer.
- Köhler, R. & Pedersen, K. (1978). *Børns billedproduktion i en billedkultur*. Ulrika.
- Køster, A., & Winther-Lindqvist, D. (2018). Personal history and historical selfhood: The embodied and pre-reflective dimension. In A. Rosa & J. Valsiner (Eds.), *The Cambridge handbook of sociocultural psychology* (2nd ed., pp. 538–555). Cambridge University Press. <https://doi.org/10.1017/9781316662229.029>
- Leont'ev, A. (1994). The development of voluntary attention in the child. In: R. van der Veer, & J. Valsiner (Eds.), *The Vygotsky Reader* (pp. 289-312). Oxford, UK: Blackwell Publishers.
- Lowenfeld, V. og W.L. Brittain (1972). *Kreativitet og vækst*. København: Gjellerup.
- Løgstrup, K. E. (1993). *Norm og spontanitet*. Gyldendal. (Danish language)
- Machón, A. (2013) *Children's Drawings – The Genesis and Nature of Graphic Representations. A Developmental Study*. Fibulas Publishers.
- Macias, G. & Ribera, D. (2020) School intervention – how to facilitate classroom meetings. In: Gerrard, B., Carter, M. & Ribera, D. *School-Based Family Counseling An Interdisciplinary Practitioner's Guide*. Routledge. 204-226
- Merleau-Ponty, M. (2014) *Phenomenology of Perception*, New York.
- Mortari, L. (2004). Educating to care. [EJ881766.pdf](#)
- Nielsen, A.M. (1994). *Køn og symbollag i børns billeder*. Ph.d.-afhandling. København: Danmarks Lærerhøjskole.
- [Nielsen, A. M.](#) (2012) *Børnetegninger som orienteringsspor og forskningsdata*, *Psyke & Logos*, 33, 2.
- [Nielsen, A. M.](#) (2013) Børnetegninger som forskningsmateriale. In Rasmussen, K. (Ed.) *Visuelle tilgange og metoder i tværfaglige pædagogiske studier*. Roskilde Universitetsforlag. Pp 115-146.
- [Nielsen, A. M.](#) (2014) How the researcher's experience of visual images can contribute to qualitative research. *Akademisk Kvarter/Academic Quarter*, 9, 175-187.
- [Nielsen, A. M.](#), (2017) *Børnetegning som æstetisk objekt I: Passepartout*, 20, 38, pp 205-233.
- [Nielsen, A. M.](#) (2018) *Artikulationsanalyse i fænomenologisk perspektiv*. I Bøttcher, L., Kousholt, D. & Winther-Lindqvist, D. (red.) *Kvalitative analyseprocesser: med eksempler fra det pædagogisk psykologiske felt*. [Samfundslitteratur](#).
- Nielsen, A. M., & Petersen, F. F. (2021). Affectivity and relational awareness in pedagogy and education. *International Review of Theoretical Psychologies*, 1(2), 135–153. <https://doi.org/10.7146/irtp.v1i2.128018>
- Nielsen, A. M., Winther-Lindqvist, D. & Kousholt, D. (2024) World-caring attitudes and practices for green transition and children's wellbeing in daycare in times of climate crisis. In N. Toren & C. Korzeniowski (Eds.). *Proceedings of the 2023 Oxford Symposium in School-Based Family Counseling*.
- Norðdahl, K., et al. (2024). Early childhood education for sustainable development in the Nordic national curricula: Status and content. *Environmental Education Research*, 31(3), 648–660. <https://doi.org/10.1080/13504622.2024.2389945>
- Parkes, M. (2025) *A Cultural-Historical Study of Fleer's Conceptual PlayWorld, Drawings and a Diorama: Creating Motivating Conditions for Preschoolers' Scientific Thinking*. PhD-thesis, Monash University, Faculty of Education.
- Pedersen, K. (1991): "Bo's billeder". I: Hansson, Nordström, Pedersen & Stafseng (eds.): *Barns Bildspråk – Children's Pictorial Language*, Carlsson.
- Pedersen, K. (1999). *Bo's Billedbog – en drengs billedmæssige socialisation*. København: Dansk Psykologisk Forlag.

- Plumwood, V. (1993). *Feminism and the mastery of nature*. Routledge.
- Plumwood, V. (2002). *Environmental culture: The ecological crisis of reason*. Routledge.
- Rose, G. (2007) *Visual Methodologies*. Sage.
- Roepstorff, S. (2022). *Klimapsykologi*. Peoples Press.
- Scoffham, S., & Rawlinson, S. (2022). *Sustainability education: A classroom guide*. Bloomsbury Publishing Plc.
- Siraj-Blatchford, J. (2018). Preface In V. Huggins & D. Evans (Eds.), *Early Childhood Education and Care for Sustainability. International Perspectives*. Routledge.
- Stamatopolou, D. (2010) "Symbol formation and the embodied self: A microgenetic case-study examination of the transition to symbolic communication in scribbling activities from 14 to 31 months of age", *New Ideas in Psychology* (2010), doi:10.1016/j.newideapsych.2010.09.001
- Tronto, J. (1993). *Moral boundaries – a political argument for an ethics of care*. Routledge
- Tronto, J. (1998). *An ethic of care*. *Generations*, 22(3), 15–20.
- Vedfelt, O. (2017). *A guide to the world of dreams*. Routledge.
- Vygotsky, L. S. (1986) *Thought and Language*. Cambridge.
- Vygotsky & Luria, 1930, UP, in Lev Vygotsky and Alexander Luria 1930: Tool and symbol in child development. Source: *The Vygotsky Reader*, edited by Jaan Valsiner and Rene van der Veer. [Tool and symbol in child development by Lev Vygotsky 1930](#))
- Wals, A. (2017). Sustainability by default: Co-creating care and relationality through early childhood education. *International Journal of Early Childhood*, 49, 155–164.
- Winther-Lindqvist, D. (2013). Playing with Social Identities: Play in the Everyday Life of a Peer Group in Day Care. In Schousboe & Winther-Lindqvist (eds.) *Children's Play and Development*, Springer, 29-54.
- Winther-Lindqvist, D.A. (2018). Personperspektiviske skift. I: Bøttcher, L.; Kousholt, D. & Winther-Lindqvist, D. (Eds.). *Kvalitative analyseprocesser* (pp. 41-62). Samfundslitteratur.
- Winther-Lindqvist, D. (2021). Caring well for children in ECEC from a wholeness approach – The role of moral imagination. *Learning, Culture and Social Interaction*, 30. <https://doi.org/10.1016/j.lcsi.2020.100452>
- Winther-Lindqvist, D. Kousholt, D. Kolmos, M. Nielsen, A.M. (2025) World-care Pedagogy: Sustainability in Early Years Education, in Bøttcher, L., Winther-Lindqvist, D., Hedegaard, M. & Fler, M. (eds.). *Sustainability, Care, Play and the Zone of Proximal Development: A developmental perspective on childhood and children's education*. Cham: [Springer](#), p. 117-141 24 p. (Perspectives in Cultural-Historical Research, Vol. 15).
- Winther-Lindqvist, D Nielsen, A.M. Kolmos, M. Kousholt, D. (2026a, forthcoming). A World-care pedagogy: How do care-takers face the challenge of inspiring, guiding and caring for children toward a more sustainable world? In, Tateo, L. Chimirri, N. & Bacigalupe, G. (eds.). *Cambridge Handbook of Psychology and the Planet: Environment, Climate Sustainability and Nature*. Cambridge University Press.
- Winther-Lindqvist, D. Josiasen, S. Kolmos, M. Nielsen, A. M. & Kousholt, D. (2026b, forthcoming) Research Circles on World-care in early years education – a participatory research approach, in *Qualitative Studies*.
- Ødegaard, E. (2021) Reimagining "Collaborative Exploration"—A Signature Pedagogy for Sustainability in Early Childhood Education and Care. *Sustainability* 2021, 13, 5139. <https://doi.org/10.3390/su13095139>

Anne Maj Nielsen is associate professor emerita at Danish School of Education, Aarhus University, Denmark. She can be reached at amn@edu.au.dk.

Ditte Winther-Lindqvist is professor at Danish School of Education, Aarhus University, Denmark. She can be reached at diwi@edu.au.dk.