



Sense-making through Touch Interaction with a Picturebook App

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Abstract

Many picturebooks are published today as software applications (apps) for touch devices, presenting many opportunities for sensory experiences and interaction. A person's sense-making is embodied (or grounded) in sensory experiences and interactions, so these new technological opportunities will impact how they physically engage with and make sense of a picturebook app. However, few studies have examined touch and physical interaction with digital devices, a lacuna that is problematic in the digital age. This article poses the research question: How is touch interaction with a picturebook app facilitating or limiting sense-making? The conceptual framework for discussing this question embraces sensing, sense-making, and interaction. Two potential core paradoxes concerning digital touch devices and picturebook apps are introduced: a paradox of materiality and a paradox of interactivity. The award-winning picturebook app, Wuwu & Co., was studied through an in-depth explorative inquiry supported with diary questions. The inquiry identified several examples of how the picturebook app facilitated sense-making, including how its virtual materiality evoked past experiences of physical materials, how it evoked empathy in the researcher, and how the story could evoke particular reactions and emotions in the researcher. The inquiry identified limitations in the app related to possibilities of exploring, predetermined possibilities of acting, and how the device influenced sensory perception. The study indicates that the app provides rich opportunities for cooperation; however, this cooperation extends only to co-option, not to co-creation. These findings are useful for future users, facilitators, and those involved in future app development, because it suggests limitations in the medium and improvements that could enhance sense-making through active, co-creating, touch interaction.

Keywords:

Sense-making, picturebook apps, touch interaction, virtual materiality, emotions, embodied cognition, previous experiences.

Historically, picturebooks have been printed, telling stories through different kinds of interaction between images, words, and layouts. Today, many picturebooks are published as application software (apps) for touch devices, and some books are remediated as apps. A picturebook app can utilize technology to add living audio-visual effects to the storytelling and to facilitate interactions, such as virtual object manipulation, verbal commands, and physical movements of users. These new opportunities for physical interaction with picturebook apps can have a large impact on how a person physically engages with and makes sense of it, compared to a book. Physical interaction is key to a person's capacity to make sense of the world. Several studies in a range of areas, from art and craft science (Groth, 2017; Stenslie, 2010) to learning sciences (Sawyer, 2014, p. 24), have documented sense-making as one such grounded or embodied process, while neuroscientific knowledge has expanded and explained much of its biological basis (Bengtsson, 2013; Groh, 2014; Mason, 2011).

The role of touch and somatosensory perception for sense-making in new digital media has received less attention than studies in audio-visual cognition (Nicholas, 2010, p. 1). Some studies have explored literary experience, memory, and cognition while reading on screen as opposed to on paper (Mangen, 2016); others target the decreased material anchoring of memories on a screen as compared to the texture, size, and smell of a book page (Schilhab, Kuzmichova, & Balling, 2018, p. 2). However, knowing that cognition is embodied, this lacuna is problematic because our experience of things in our lifeworld is vitally dependent on and shaped by all our senses (Groh, 2014, p. 51ff). Touch may be a crucial part of this, as «more than any other modality, the sense of touch gives us the distinct feeling that reality — things, objects in the world — are, really, ‘out there’» (Mangen, 2016, pp. 464–465). Thus, more studies are needed

on how we make sense of virtual materiality, how touching digital interfaces limits or facilitates interaction, and which opportunities these devices give us to explore and make sense through touch. The aim in this article is to develop insider knowledge on this lacuna in order to generate a foundation for later studies involving children's sense-making with picturebook apps.

Conceptual Framework

Sense-making and Sensing

In this article, *sense-making* is understood as a person's active process of making sense of a situation or topic. It is a biological, socioculturally conditioned process of change whereby new and past experiences are combined (Sawyer, 2014, p. 11). This process of change is continuous: Humans are constantly experiencing and learning and thereby generating meaning in a physical, social, and cultural context. The individual's cognitive process is *embodied*, i.e., grounded in and shaped by the physical body's sensory experiences in an environment and their interpretation and assumptions of those experiences (Groh, 2014, pp. 205–216; Shapiro, 2017, pp. 1–6). Philosophically rooted in the perception phenomenology of Merleau-Ponty (1962), embodied cognition can explain why children engage in explorative actions—the purposeful, active seeking out of sensory input to enrich and support interpretation, to search for problems and find solutions (Fredriksen, 2011, p. 299).

The embodied basis of sense-making can be further explained by looking at the biological processes of sensing (Donoghue & Horvath, 2016, p. 2; Gulliksen, 2017). We receive *sensory information* through many types of sensory receptors located in our eyes, ears, and fingers, as well as through receptors, located throughout the body, that register pressure, texture, location, and position. This sensory information is unreachable for our consciousness until it is *perceived* as something. We perceive information as

vision, sound, smell, tactile perception, and haptic perception. Our vestibular sense of balance and equilibrium and our proprioceptive perception of our muscle length and force applied to a joint provide information about the body's orientation and position in the surrounding space (Groh, 2014, pp. 52–56). These sense modalities act together, making our sensory experiences multimodal: «We do not only see the environment with our eyes, but with the eyes on the head on the shoulders of a body that gets about» (Gibson, 1979, p. 279). For example, our visual stereo vision is created when light molecules, traveling in a straight line, trigger receptors in each eye's retina, which forms an image similar—in principle—to how an image is created in a pin-hole camera. This image is forwarded to the visual cortex as a brain map, a virtual representation of the outside world (Groh, 2014, p. 69f). Our somatosensory input is similarly mapped out: different areas in the brain make virtual representations of where our bodies are positioned and what sensory information they register.

However, if we were to become consciously aware of everything we hear, see, or taste, or of every light touch, hard touch, pain, or body position, we would be overwhelmed instantly. The same area in the brain that translates and transmits sensory input to the cortex, *the thalamus*, receives instructions on what to look for in the vast amount of sensory input, turning our attention toward one stimulus over another and biasing the sensory receptors to select one sensory stimulus and not another (Mason, 2011, p. 280). As such, we see only what we expect to see.

Such selective interpretation and attention to sensory input is a learned cognitive skill (Groh, 2014, p. 5) developed throughout the entire life span, through repeated interactions with the physical world, our emotional associations with them, and the memory of previous interactions: The way we feel toward something influences what

sensory information we seek out and interpret; our implicit memory evokes and utilizes emotions, coloring our sensory experiences and focusing our attention on certain aspects; and our declarative, episodic memories organizes the memories as stories, linking recollected instances and facts with associations of sensory experiences (Purves 2012, pp. 698–699). Linked to the brain maps of space, memory is indexed, or situated, in previous experiences—for example, we remember more when assuming similar bodily positions or returning to previously visited locations in which we first experienced or learned something (Groh 2014, p. 199). Closely linked to memory and emotions, imagination is also a key factor in the sense-making process, as «each case of perception involves someone imagining what it would feel like to touch an object, grasp it with the hands, turn it over, bite it, smell it, and so on» (Gibbs 2006, p. 64). Together, these learned cognitive skills are the foundation for our sense-making, paving the way for future experiences and imaginings. We imagine, for instance, what an object will feel like before even touching it, or how it would look from behind. As a consequence of this, we can explain the phenomenon described by Merleau-Ponty (1962) in which tools, such as a blind person's cane, and the sensory information received through their use can themselves be perceived as a part of our perceptual field.

Sensing, Sense-making, and Interaction with a Picturebook App

Digital touch devices function as interfaces between users and software constituted as, e.g., images, sounds, and interactive features in a virtual three-dimensional space. Their main features are a pressure-sensitive screen, a wide range of visual, auditory, and interactive elements, and how they allow for use while moving or in different bodily positions.

A touch screen is paradoxical in that the user can touch objects without actually

touching them, and see objects that are not actually there. We refer to this aspect of touch screen devices as *virtual materiality*. While *materials* are tangible, and physical objects are made of materials, *materiality* refers to our perception, our experience, the representation in our brain maps, of these objects (Ingold, 2007, p.7). Virtual materiality, therefore, is an illusion. It has no physical properties. However, software provides stimuli that we interpret in much the same way as we would physical objects. What the user sees are representations of objects made by two-dimensional visual cues, such as color, haze, linear perspective, and occlusion. What the user touches is the software's pre-programmed responses to, for example, movement of the finger across the screen. Because, as discussed above, sensory perception builds on previous bodily experiences, emotions, and implicit and explicit memories, the user can experience the light and colors presented by the software program on a two-dimensional screen as something else—as, for example, a forest in a picturebook app. However, due to limitations (e.g., limited auditory frequencies in the device, two-dimensional visual cues used to construct an illusion of objects or space), virtual materiality will always be less rich than the materiality we perceive in a physical world. Put another way, the manipulation of a digital object on a touch screen is both an illusion and a tangible act—both virtual and material. This could present a *core paradox* in the embodied sense-making process with picturebook apps: the *material paradox*. In Stenslie's words: «The material paradox of virtual realities is that it is very material indeed» (2010, p. 128). The world in a picturebook app is not physical, but it is experienced that way via some physical conditions. In addition, our experience of time and space (the spatiotemporal) and the semiotic signs in digital media provide a structure to sense perceptions, while interpretation and thinking about the semiotic signs create meaning from these experiences

(Elleström, 2011, p. 36). However, it then follows that we can only perceive virtual materiality in full if our previous experiences and brain maps are sufficient. Without relevant previous experiences, the two-dimensional illusion of a three-dimensional scene would lack information, leaving our perception open to errors or misrepresentations.

Interactivity has been emphasized as a key complement to the narrative flow of a story in a picturebook app (Nagel, 2017, pp. 2–13). In this article, interactivity refers to dialogue between users and audio and visual/spatial representations in an app. Examples include letting the user decide what or how something happens, features such as gyroscopes and accelerometers to respond to users' bodily movements, or, more indirectly, influencing users' perceptions by demanding specific time-consuming or procedural actions (Al-Yaqout & Nikolajeva, 2015, p. 5).

Interactions in picturebook apps can open for cooperation in a similar way to how computer game players interact with game storylines. Game-like elements are not a distraction, but are rather integrated as part of the total experience, and the «Increasing degree of interactivity leads into imaginative co-creation rather than merely making things jump, squeak, or shake on a screen» (Al-Yaqout & Nikolajeva, 2015, p. 7). However, this could present a *paradox of interactivity* between the app's pre-programmed features and narrative and the user's autonomy as «a co-creator of the narrative» (Nagel, 2017, p. 5). As noted above, sense-making requires future thinking, imagination, and action, and thus the co-creation aspect of a picturebook app is important, and potentially crucial.

In sum, digital touch devices and picturebook apps could present the user with two core paradoxes: the paradox of materiality, and the paradox of interactivity. These paradoxes likely influence the user's sense-making during interactions with the app.

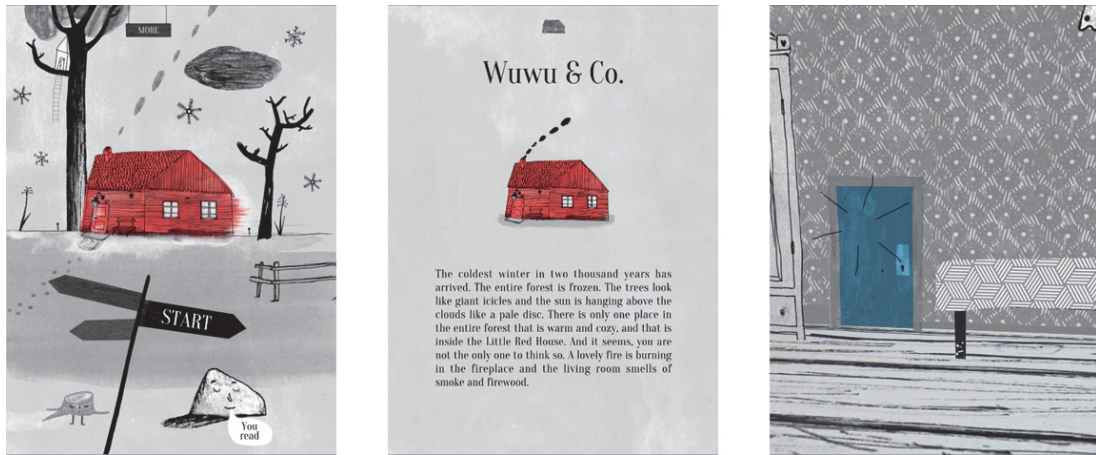


Figure 1. Illustrations from the Wuwu & Co. app
© Step In Books, 2014.

Below, we explore this by asking the research question: *How is touch interaction with a picturebook app facilitating or limiting sense-making?* We conducted an in-depth explorative inquiry on one case in particular—an award-winning picturebook originally published as an app, Wuwu & Co.

Method

Research Context

The picturebook app, Wuwu & Co. A magical picturebook (Figure 1), was developed as an original interactive virtual reality story

for children by Step In Books (Helle & Slocinska, 2014). Choosing a children’s picturebook as research context is useful, even though sense-making with picturebook apps is a general issue for both adults and children, because children are more avid readers of picturebooks. Wuwu & Co. is a fictional, illustrated world, complete with an integrated soundscape, narrator, and text. The narrative follows five creatures who need help during a cold winter. The narrative plays out in five different scenes, one for each character (Figure 2).



Figure 2. Five characters: Everett, Thit Maya, Wuwu, Pruney, and Storm.
© Step In Books, 2014.

These scenes are entered and explored through different types of interaction and game-like activities, many of them dependent on touch interaction—for example, *tapping* (to drive a basket), *shaking* (to make snow fall from a tree), and *gyroscopic movement* (to look up, down, and around in 360 degrees). When the device is horizontal, the app resembles a book. When it is held upright, it becomes a window into the world. Following the release, *Wuwu & Co.* won several awards for its innovative and immersive use of interaction. These qualities made the app a good context for addressing our research question.

Explorative Inquiry

The main method used for data generation was *explorative inquiry* (Dyrssen, 2010), which yields rich and complex data that can otherwise be difficult to obtain (Dyrssen, 2010, p. 230). Specific to this study, explorative inquiry yielded data on different types of action and expression, which were in turn used to infer knowledge of the sense-making process during the research. Integral to the method is its capacity to capture ongoing reflections and interpretations as they happen, as well as afterward. One such study, by Groth (2017), was used as a reference in developing our research design.

Author one, i.e., *the researcher*, generated the data. She completed the storyline in the app twice, from beginning to end. Author two completed the storyline as well, but did not participate in the explorative data generation. This two-author approach permitted both exploration from an insider perspective and a discussion of this exploration with an outsider to develop knowledge and mediate possible bias. Both authors contributed equally to the discussion and writing of the article.

Four types of data were generated:

- a. *Pre-exploration diary questions*, answered verbally to elicit and guide the researcher's focus. Documented with video footage.
- b. *Exploration* of the app. The researcher followed the app's storyline, making verbal, think-aloud accounts of experiences and interactions. No exploration guide was used. Documented with two video cameras: One headband camera to capture where the researcher looked, how she moved, etc., and one overview camera to capture the researcher's expressions and movements in the room. Both cameras also captured audio.
- c. *Post-exploration diary questions*, answered verbally to capture the researcher's immediate experiential reflections. Documented with video footage.
- d. *Data generated after the analysis: Thick descriptions* of selected instances were used to unpack thoughts, movements, and associations from the exploration and responses to the diary questions. Drawing on an art-based research methodology (Barone & Eisner, 2012), a poetic language was used.

The total amount of video/audio footage was four hours. Raw data from thick descriptions constituted approximately 5000 words. Diary questions and a full-text example of the thick descriptions can be found in the appendix.

Transcription and Analysis

All video/audio footage was transcribed, including facial expressions, gestures, movements, and verbal utterances, to document the richness and complexity of the experience. Bodily expressions were especially important to transcribe when the researcher was struggling to express her experience verbally.

A *first overview analysis* was made during the transcription phase, including the review of video and transcriptions, which was aimed at identifying instances of intense interaction by studying the researcher's actions and expressions. Cues included much activity/movement and/or surprise. The researcher

could use her insider understanding to identify these instances. Three scenes were selected for closer analysis. A *detail view analysis* of three selected scenes as written drafts was performed for thick descriptions through reflection during and after interaction. One scene was selected for further exploration and analysis, and was then developed into a finished poetic text, a thick description. A *second overview analysis* gave an overview of instances of interaction and experience.

The analysis concluded by identifying four main themes, each of which highlights important aspects: (1) material and materiality; (2) empathy and imagination; (3) interaction and relationships; and (4) boundaries for interaction. These themes are discussed below, with selected excerpts from the thick descriptions.

Analysis and Discussion

Material and Materiality

I look up and see animated snowflakes come toward me. The feeling of being outside on a dark and cold winter night comes over me. A dusting of snow. Quietly, it falls down. I know how this feels outside, in real life, what this physical material looks and feels like under my feet, when it hits my face. Snow against my skin. Soft and cold touch of snow. A forest swept in snow, the sound is like cotton, swept in, soft, muted. I am aware of my body in the physical room. I move my feet on the physical floor, like I do in the wintertime, checking if the surface is icy.

This excerpt from the thick descriptions is from one instance in which materials and materiality were prevalent: The researcher moves the device over her head and looks into a virtual sky with animated falling snow. This evokes her previous experience of cold and melting snow touching her face in the physical world. The researcher holds the device and moves her body around its own axis, tilting the device up and down, then moves around in the physical world to do so in the vir-

tual world. Thus, the researcher could, for example, follow a snowflake falling from the sky, which evoked somatosensory memories of stepping in physical snow and auditory memories of snow falling. This previously experienced materiality of physical snow even triggered the researcher to move carefully, checking whether the surface was slippery despite knowing it was a virtual, snow-covered forest. The scene evoked, through technological features, experiences of being immersed in a virtual forest by using virtual materiality and movement to evoke past experience of physical spaces. As such, virtual materiality affected the researcher through illusions that triggered previously generated somatosensory and visual representations in the researcher's brain map (Groh, 2014, p. 69f; Ingold, 2007, p. 7). This demonstrates the material paradox of virtual realities noted by Stenslie (2010, p. 128). Through the researcher's memories and imagination, the tactile feeling of snow was recalled, even when not in contact with it. The feeling of being surrounded substantiates how the sense of space is rooted in the combined interpretation of what we see and what we are doing (Groh, 2014, pp. 52–56). The experience of exploring the virtual forest demonstrates how touch, and the memory of touch, bridges the gap between the physical and the virtual. In a virtual context, many aspects rely on interactive features. Therefore, which past touch experiences the user carries are crucial to his or her experience with virtual materiality in an app such as *Wuwu & Co*. Virtual materiality is not tangible; however, it is still dependent on physical conditions, from which the device is made, the user's physical movements while interacting with the device, and the user's past experiences of interacting with and moving within the physical world.

Empathy and Imagination

I am standing in the living room in the WuWu house. Storm is standing in front of me. He is moving up and down trying to get my atten-

tion. He has a sad expression on his face and big, expressive eyes. I can hear melancholy music being played in the background. What catches my attention is that I can see right through him, he is transparent. It's like I understand his vulnerability.

This excerpt is from one instance in which a strong empathic connection with the characters in the story is prevalent: The researcher experiences herself as being inside the house, together with the character Storm. She can see the living room's interior by tilting the device, and she can hear music playing and wooden logs crackling in the fireplace. She experiences the atmosphere as nice, with time flowing slowly whilst snow quietly falls outside the window. Her imagination draws upon previous experiences of similar situations and reinforces an emphatic connection with Storm—their shared experience of being safe inside. Storm's transparency leads the researcher to imagine herself as fragile, and when he later becomes opaque, she feels herself more protected by the surrounding forest. Sadness is interpreted both by the characters' eyes and the melancholic music. In the scenes, a character moving up and down is interpreted as worried or seeking attention. The emphatic impressions of the characters are not physical, but their movements and responses still give the impression they are actually there: a virtual materiality evoking emotions through interaction.

The ability to look around the living room via gyroscopic movement, the animated snow, the sound, and the characters' visual expressions give the researcher an experience and conception of time and space—the spatio-temporal modality mentioned by Elleström (2011, p. 36). This excerpt exemplified how the virtual world could evoke past experiences and empathy in the researcher. This capacity can be explained in terms of how memories are situated, as well as by how past experiences, emotions, and memories influence perception (Groh, 2014, p. 199; Purves 2012, p. 698–699). That is, in order to experience a

virtual world on a two-dimensional screen as a three-dimensional space existing along a timeline, rich previous experiences are necessary. This is demonstrated in other examples from the researcher's exploration; for example, the timeless, in-depth, here-and-now experience of the muffled snowy landscape, similar to cases described by Al-Yaqout and Nikolajeva (2015). Further, this example demonstrates how the picturebook app can evoke imagination. This is problematic because sense-making requires the opportunity to imagine something not seen before, and to act on the basis of that imagining.

Interaction and Relationships

Storm invites me into his Snow Lantern Field. I am entering this world by touching him with my fingers.

This excerpt is an instance where the interaction between the researcher and the characters was prevalent. Touch and the sensorimotor activity of tapping the screen initiates a visual response in the character's movements: a virtual movement in a virtual world. The researcher is not actually touching the character, but the simultaneous response—the interactivity—gives the researcher a sense of connection. Even though the action of tapping in itself is seemingly mundane, touching is intimate. The immediate response of being invited into his world establishes a relationship through bodily memories of being in contact with persons. This relationship continues throughout the storyline, mixing Storm's story and the researcher's own experience and imagination. The researcher's role in the relationship varies from being a humble guest visiting «friends» in the virtual world, to experiencing it on her own within the app's limitations. This relationship and the invitation into Storm's world were experienced as meaningful.

The interactivity of touching Storm is a key example of how one can become immersed in his world (Nagel, 2017, p.13). In this way, the technology by which users

act in the world is important for their sense-making. The app is pre-programmed to tell one story and to evoke certain reactions and emotions. However, there is no *one* way to make sense of this story, and so it will be understood and experienced differently by each individual via their own pasts and new experiences gained through interactions, interactivity, and virtual materiality. The features in the app are thus active participants in guiding the user's attention, emphasizing what aspects to perceive while reducing others. The picturebook app's limitations lie in the predetermined number of possibilities to act, especially the ability to influence the technology and/or the narrative, as expanded upon below.

Boundaries for Interaction

I can see Storm's transparent relatives. They are standing closely together in a group. I touch them with my fingers, and they start shivering and call out for help, asking me to turn on the light. I find a lantern on the ground and by holding the iPad against the floor, I am collecting yellow colors and the light is turned on. The characters are no longer afraid of the dark and they become opaque.

This excerpt is from one instance where interaction was prevalent: The user touches the characters, and they react by shivering and asking for help, spurring the user to interact with and help them in the virtual world. The user can find a virtual lantern in the virtual forest to light it by collecting yellow colors in the physical world with the device's camera. When one lantern is lit, the other virtual lights in the scene instantly turn on as well. The scene evokes a sense of urgency in wanting to help, and it stimulates the user's imagination to find the yellow colors. This is an innovative technological feature of the app, facilitating interaction between users and characters in the narrative, and the researcher's experience of being immersed.

The excerpt also highlights specific limitations for interaction. The sensory experi-

ence and sensorimotor interaction with the characters are limited to a first prodding, activating their shivering and calls for help. Touching the cold device to gather light is all users can do: They cannot put their hands on the characters' virtual bodies to hug them, and there is no feeling of warmth. The software's program also limits what can be used as a light source: The user cannot, for example, choose to light a bonfire to help the characters. Interaction with the scene is as such akin to following someone else's path, without the possibility of finding one's own path and creating new solutions.

Accordingly, these limitations exemplify the *paradox of interactivity*. Interaction with the app has boundaries in evoking experience and empathy, in creating opportunities for imagination and action. Given that sense-making is tightly connected to such experiences (Groth, 2017, p. 58; Nagel, 2017, p. 5) as well as to co-creation aspects (Al-Yaqout & Nikolajeva, 2015, p. 7), sense-making in the picturebook app can be said to be limited by these features. Interaction with the app is not a co-creation because of the lack of possibilities to act, to influence the technology and the narrative (Nagel, 2017, p.5). Instead, when entering the app, outsiders are *co-opted*, a term that refers to the process of adding members to a group that is already established. The users are co-opted into a virtual world, one that is exciting to explore within the set rules, but they cannot choose to go their own way.

Closing Remarks

The conceptual framework of this article indicates that a picturebook app offers specific types of sensory information that impact our perceptions and influence how our memories, emotions, and imagination are evoked—what sense we make when interacting with them. The explorative inquiry with the picturebook app *Wuwu & Co.* documented empirical examples of this. The study highlighted how the material paradox and the interactive paradox influenced sense-

making in touch interaction with the picturebook app. The virtual materiality could evoke past experiences of physical materials, it could evoke empathy in the researcher, and it could tell one story and evoke certain reactions and emotions. As such, the picturebook app facilitated sense-making; however, to experience such a virtual world on a two-dimensional screen as a three-dimensional space existing along a timeline, rich previous experiences were necessary. The inquiry also identified limitations in the interactions with the picturebook app related to the possibilities to explore, predetermined possibilities to act, and how the technology influenced sensory perception. As such, the study indicates that the app provides rich opportunities for cooperation; however, this cooperation only extends to co-option, not co-creation. This observation is important, suggesting that future studies should discuss whether this is a problem inherent in the technology, in the app medium, or if it is this a problem that can be solved by app developers. Regardless, the knowledge of this paradox of interactivity is useful for future users, facilitators and those involved in future app development because it suggests limitations in the medium and improvements that could enhance sense-making through active, co-creating, touch interaction. In a future study of sense-making with *Wuwu & Co.* or similar apps, it would be relevant to include children as co-researchers. The picturebook app is aimed at young children, who experience the world differently than adults. Children also have other previous experiences, and as these were found to be crucial to sense-making in interaction with this app, studies including children would complement the current study. The analytic framework developed in this study presents both a theoretical framework and a methodological approach, which could be used to conduct such a future study.

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Appendix diary questions

Pre-exploration diary questions

- What are you going to do and how?
- What are the challenges of what you are going to do?
- What are you thinking right now?
- How do you feel right now?

Post-exploration diary questions

- Did you manage to do what you intended?
- Did your plans change? Why? How did you react?
- What were the critical points?
- What facilitated/hindered you in your process?
- How do you feel now?

Appendix example of thick description from the scene: Storm and Snow Lantern Field

I am standing in the living room in the WuWu house. Storm is standing in front of me. He is moving up and down trying to get my attention. He has a sad expression on his face and big, expressive eyes. I can hear melancholy music being played in the background. What catches my attention is that I can see right through him, he is transparent. It’s like I understand his vulnerability. I feel that I connect with him in a way, and he invites me into his Snow Lantern Field. I am entering this world by touching Storm with my fingers. I am standing out in the field surrounded by a magnificent dark forest. For several seconds, I am just standing there, looking into the forest, moving my body

weight from the left to the right foot, holding the iPad in front of me. While I am walking with small steps in the physical room, I say with a careful voice: ‘I can see into the dark in this forest. It’s like I am entering this world’. I am just sensing. ‘Oh, this is so beautiful’. I see the contrast of dark and light, black and white. I become aware of some of the trees in the dark and the way they are drawn. I can see traces from the drawing hand, from the sketching, it’s like a thick pencil. I do scribbling with big movements in the air with my hand while I say: ‘There is force in these lines’. I am moving carefully in the physical room, small steps, one at a time, I move the iPad in a circle around me, and this gives me the feeling of being surrounded by the forest, I stand out in the open field with the forest on all sides.

Storm is there with me, looking at me with his big eyes. I am holding the iPad over my head. I look up and see animated snowflakes come towards me. The feeling of being outside on a dark and cold winter night, looking up at the stars, comes over me. A dusting of snow. Quietly, it falls down. I know how this feels outside, in real life, what this physical material looks and feels like under my feet, when it hits my face. Snow against my skin. Soft and cold touch of snow. A forest swept in snow, the sound is like cotton, swept in, soft, muted. I sense this as a strong, embodied experience. I am aware of my body in the physical room. I move my feet on the physical floor, like I do in the wintertime, checking if the surface is icy. I feel a strong presence in the virtual cold and dark forest, standing in a warm and lit room inside a building.

The forest is like a room: It's protected and at the same time a bit scary. I want to be here in the fictional room, but it also gives me a kind of creepy feeling. I want to come closer to the forest. I am moving towards the trees, and I am moving my feet in the physical room at the same time as I move in the fictional room. I can see Storm's transparent relatives. They are standing closely together in a group. I touch them with my

fingers, and they start shivering and call out for help, asking me to turn on the light. I find a lantern on the ground and by holding the iPad against the floor, I am collecting yellow colors and the light is turned on. The characters are no longer afraid of the dark and they become opaque. The transparency gives me the feeling of being fragile in this dark forest, and the opaque evokes the feeling of being safe. My mood is changing from excitement to this rare, mysterious feeling of presence and being, and to happy and good feelings.

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