Children's Play in Natural Environments and Their Development of Microcultures: "We Were Born in the Wilderness"

Michelle E. E. Bauer
Department of Pediatrics, Faculty of Medicine, University of British Columbia

Mariana Brussoni
Department of Pediatrics, School of Population and Public Health, University of British Columbia, British Columbia Children's Hospital Research Institute

Christina Han
University of British Columbia and British Columbia Children's Hospital Research Institute

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Abstract
Amid a dearth of research exploring children's stories of their play in natural environments, we conducted go-along interviews with 105 children aged 10-13 years in Metro Vancouver, Canada. We used narrative inquiry to explore how natural environments shaped their experiences and influenced their development of microcultures. Our thematic narrative analysis resulted in two themes: (1) children played in natural environments to which they had sentimental attachments; and (2) children developed microcultures away from adults. We explored the sentimental and purposeful elements of natural environments that children actively use to develop their microcultures.

Keywords: natural play, outdoor play, play spaces, microcultures

Introduction

Play in natural environments (forests, shorelines, lakes, and fields) benefits children's development, offering novel stimuli and enticing engagement in physical activity (Kemple et al., 2016). Further, it affords children opportunities to learn to overcome obstacles encountered during play (Fjørtoft, 2004) and helps them develop connections to nature and pro-sociality (Dopko et al., 2019). Unlike play in manufactured environments (e.g., plastic playground equipment) that typically consists of adult-devised, rigid, and immovable parts, natural environments provide children with opportunities to engage in fluid exploratory sensorimotor experiences (e.g., splash in running water) that stimulate their curiosity and imagination (Gurholt & Sanderud, 2016). Further, research demonstrates 10- to 11-year-old children can enjoy self-directed, physically active play where there are opportunities to socialize with friends and stimulate their imagination (Stanley et al., 2011), while children aged 10-13 can enjoy engaging in play with friends away from adults (Brockman et al., 2011). In fact, play in natural environments is so valuable to children's mental, social, and physical growth that doctors in Canada prescribe it to children who experience concussions, anxiety, and depression (Nature Conservancy of Canada, 2019).

Despite this research-based evidence of the benefits of nature play, children's stories of their play in natural environments are rarely accounted for in play scholarship. Researching children's stories can help inform "the creation of more supportive and better places to live" (Owens, 2017, p. 65), including geographic and imaginary spaces in natural environments where children gather to connect and build relationships, and where middle-class children can escape their often over-scheduled lives (Holloway & Pimlott-Wilson, 2018). While the nature of play is contended and ambiguous (Sutton-Smith, 2009), play behaviors can involve engagement in activities that elicit joy and involve sensory interactions with physical environments (Brown & Patte, 2012). Researchers can use children's stories to design child-friendly spaces that accommodate children's need for adequate green space (Brown et al., 2019; Ward et al., 2016) and access to play in forests and areas with lots of trees (Janssen & Rosu, 2015). To this end, children's stories of play can illuminate the types of natural environments that are important to them (Christensen & James, 2008; Owens, 2017), and how they may develop attachments to specific environments. They can ascribe symbolic meanings to the physical and social environments they navigate, and can develop attachments to environments they positively associate with affording play opportunities (Min & Lee, 2006).

A further important consideration is the role of natural environments in shaping the development of microcultures during children's play (Whiten & Flynn, 2010). "Microcultures" describe small communities where traditions are created and upheld, and where members engage in knowledge exchange and have identities and beliefs that shape systems of shared expressions (Whiten & Flynn, 2010). Examining the development of children's microcultures during play can illustrate the connection they may have to their geographical spaces and to one another (Matthews et al., 1998), and can provide researchers with insight into organizations of play-specific behaviors (Spilková & Radová, 2011). Microcultures may derive

from peer-group interactions, such as through social learning in game-based play (Flynn & Whiten, 2010). Thus, children's stories of play can reveal their development of social structures (Corsaro & Eder, 1990; Whiten & Flynn, 2010).

In this study, we address the question "What are children's stories of their play in natural environments and how do these stories reflect their development of microcultures?" We use "natural environments" to describe outdoor physical spaces that are unstructured (e.g., fields compared to playgrounds), and where children can be physically active and close to greenery (e.g., forests, lakes). Further, we use the term "microcultures" in reference to children's stories of organized and frequently exercised behaviors around specific play-related activities, such as their expressions and/or subscriptions to peer-created rules and roles. Our study derives from a larger research project exploring parent and child perspectives on 10- to 13-year-old children's independent mobility, neighborhood safety, and play topics more broadly (Brussoni et al., 2020).

Theoretical Approach

We used social constructionism to inform our approach to this study. Social constructionists consider that people's experiences derive from their social interactions, are constructed through social processes, and are governed through social institutions (Crotty, 1998). Social constructionists can thus explore how social processes shape experiences with marginalization, and they conduct research to represent the voices of people who are commonly ignored in scholarship (Crotty, 1998). As children's voices are commonly marginalized in play scholarship, we use social constructionism to represent children's stories and experiences. Our approach was guided through the belief that the children's play-based behaviors and activities may be organized as a result of interactions with family and friends.

Specifically, we used narrative inquiry in our social constructionist approach. Researchers use narrative inquiry to examine how participants' stories reflect their experiences and emotions, and how specific events generate meaning in their lives (Riessman, 2008). Narrative inquiry is thus used to inform understandings of relational experiences at given time points, which are constructed through the previously lived and revisited telling of stories (Caine et al., 2013). Further, there is an acknowledgement that stories are never fully realized: they do not have a beginning, end, or objective truth to their expressions and are instead continually re-structured according to newer realizations and experiences (Caine et al., 2013). Central to an inquisition of narratives is thus an expedition into the subconsciousness and consciousness of the individuals who tell them, and the narrative that emerges is partially a result of research and participant interactions (Caine et al., 2013). In our study, we considered how children's social interactions may shape narratives of play in natural environments and development of microcultures. We considered "narratives" as stories that connect sequences of events to the meaningful, albeit continually changing, past and current (at the time of interview) experiences of the child (Riessman, 2008).

Methods

This study was part of a larger research project exploring children's perspectives on outdoor play and was approved by the University of British Columbia's ethics board [H15-02190]. For more information on methods used in the larger study, please see Han et al. (2018). Using social media channels (e.g., FaceBook Ads) and snowball sampling, we recruited participants in three areas in Metro Vancouver, Canada: a primarily urban area in close proximity to the city center, a suburban area with multi-family dwellings and abundant natural environments, and a primarily suburban area with cul-de-sacs and walking paths. We conducted go-along interviews with 105 children aged 10-13 years, with an equal distribution of boys and girls from each neighborhood. Roughly 65% of the children identified as Caucasian. For more information on participants' demographics please see Han et al. (2018).

We used go-along interviews as a tool to explore each child's navigations of their neighborhood (Carpiano, 2009; Pawlowski et al., 2016). The children guided a researcher through their neighborhood, to places that they wanted to show us. During the interviews, the researcher asked the children questions regarding the places and routes they preferred (e.g., "What do you like about this area?" "Did you discover this on your own?" "How do you feel when you're hanging out in [specific spot]?" "Who do you play out here with?"). All interviews were transcribed verbatim and anonymized to protect the children's privacy. In this study, children's pseudonyms are accompanied by a personal identification number (PID).

Narrative Analysis

We used a thematic model of narrative analysis, grounded through our social constructionist framework, as an analytic tool through which to illuminate children's experiences and centralize their stories and experiences playing in natural environments (Caine et al., 2013). We chose to employ Riessman's (2008) thematic model of narrative analysis that focuses on examining the content of the stories to better understand how themes may develop from participants' experiences. First, we read and re-read the transcripts to be able to order the children's experiences in relation to their play in natural environments. For example, if the children chose to play in natural environments such as rivers, we examined what they said they did before and after playing in the river in their narrative and how this was articulated in the interview transcript. Second, we compared the children's experiences to examine if there were similarities and/or differences between them. Third, we familiarized ourselves with the language the children used to describe their experiences with play in natural environments (e.g., when and why the children used the word "hidden" to describe their play). Fourth, we examined how the children's narratives related to sociocultural contexts, such as their potential motivations to gather away from adults due to perceived over-supervision.

It was important for us to understand how and why the natural environments in which the children played related to the children's experiences, emotions, and overall impressions of their environments. To this end, we explored the temporality (i.e., moments in time that relate to participants' perceived sequences of events that can be non-linear) of their stories (Esin, 2011). We examined the language

they used (e.g., did they seek natural environments that would help them experience enjoyment, or did they find enjoyment after engaging in a specific activity in their natural environment?). Further, we examined their anecdotes and epiphanies concerning their play in natural environments (e.g., sense of freedom when playing in natural environments) and development of microcultures, such as their desires to partake in rule- and role-based unsupervised games. This informed our understanding of the relationships the children had with various environments (e.g., rivers associated with positive memories of time spent with family and friends) and with one another, and what factors may have facilitated these relationships (e.g., social or imaginative play, adult supervision). We used principles of microcultures, such as the structure of social rules and roles, to understand children's development of games with their friends. Further, we sought to understand how games were expressed in children's narratives as relating to children's play in natural environments.

Results

Children's stories of their play in natural environments reflected two narratives: (1) children played in natural environments to which they had sentimental attachments; and (2) children developed microcultures away from adults.

Children Played in Natural Environments to which They Had Sentimental Attachments

The children provided extensive and animated detail regarding their play in natural environments when they felt the environment had sentimental value to them. They frequently described their desire to play in familiar ways and environments, such as those they associated with positive memories of time spent with friends and family. Timothy (PID #2027), an 11-year-old boy, told the researcher he enjoyed playing near a river on his commute through his neighborhood. He pointed at a chair next to the water and said,

> *That chair has memories... So [my friends and I] stood up here, with friends still in the water right, [and my friend] he's like "I want to get soaked, but I don't know how?"… and I just picked the chair and threw it into the water [laughs]. And it splashed... I'm like [to him] "Well pick it up and chug it back up." So he picked it up, chug it back out and just kept doing it.*

Deacon (PID #2015), a 13-year-old boy, similarly enjoyed participating in play he associated with a familiar location and activity. He described a specific berry-picking spot that was special to him and said,

> *So there's a, with the trailers in the forest, bit down there where there are some berries… And I, when I was younger I'd pick those a lot so I guess, I like that place a lot… I still go there sometimes in the summer to get berries… Some friends sometimes [join me], yeah, they like the berries too.*

Margaret (PID #3013), a 13-year-old girl, described her favorite place to play with her friends. She said this place was known by children in the neighborhood as

"Africa," and she used to play on a tire swing there that was taken down after someone was hurt playing on it. She said,

> *Well, there used to be a fort right there. We called it Africa… It's old, and someone got… pretty hurt, I think… There used to be a tree with a swing, and we would hang there… There used to be a lot more branches and you could hide or you could swing. There was a swing, a rope swing, a tire swing, and you could climb up the branches. You could climb up the tree and then just like, there's two branches are like that. And there's a swing there. And you could just swing across, it was kind of dangerous. But it was really fun. I think I went there with my friends and I think I played on the tire swing.*

Tom (PID #3003), an 11-year-old boy in the same neighborhood as Margaret, frequently played with his friends in the same place as Margaret and also called it "Africa." He associated it with a feeling of safety. When describing "Africa" to the researcher, he said,

> *[M]y friends in my class, I saw them going into it, and then my sister, she used to come to it and then right here, people cut off branches and then right here was the tire swing … I usually go on this and I would climb on those branches that were cut off and swing off the ropes and come back but it's gone now … [Playing in Africa makes me feel] safe because I'm like where trees are.*

"Africa" was frequented by other children in the study living in that neighborhood, and was used as a gathering ground for some of the children. Most of the children associated playing in it with positive emotional experiences, while acknowledging potential risks associated with it, which made their play experiences even more thrilling and enjoyable.

Children Developed Microcultures away from Adults

Children's development of microcultures was reflected in their stories of play in natural environments. For example, Pauline (PID #2001), an 11-year-old girl, created a game with her friends they called "Camouflage." When describing how she plays "Camouflage" by a creek, she said,

> *It's kind of like hide-and-go-seek… when we go hide there's one person that stays in like a certain box, kind of, and then he counts and then pretends, he looks like for five minutes and if he finds no one he just screams 'camouflage' and counts to, first time it's 25 and then its 20 and then it goes down and then you have to touch the person's hand and go back to your hiding spot. And the goal is to get everyone out of their hiding.*

The language the children used in their stories suggested the allure of developing microcultures away from adults with friends where they could use their imagination in a collaborative way to interact with their environment. Some children, such as Pauline and her friends, chose to develop and subscribe to game-based rules and roles for this purpose. Similarly, Emilie (PID #3020) described a game she

developed with friends called "We Were Born in the Wilderness" (also named "Peace Tree"). While the rules and roles for "Camouflage" were more structured around specific regulations of behaviors (e.g., counting to 25 seconds), Emilie's game consisted of role playing as a way to connect to environments and animals. She said,

> *I like to play "We Were Born in the Wilderness"… like, we're people but there's animals and stuff around here that are hurt and stuff, and I can speak to them and help them. I just love to play that, it's so fun… we build a hut in the trees… it just feels like a waterfall-ish kinda thing… you can climb up into the top branches… it's called the Peace Tree for us. 'Cause it's kinda like where nobody, no animals eat each other… there is a big lake here and this is all the waterfall but there's a tree in the middle… And if anybody's really injured or hurt and dying slowly, they come and they get put in the water… and they drift towards, and then green light comes at them, and they kinda float and kinda be well and then go back onto land… they just heal… this is the place where animals need to work together to keep away from the humans.*

Emilie recognized her positionality as a human who could compromise peace in nature, and the game she developed with her friends was based on engaging in rules (e.g., no animals are allowed to eat each other) and roles (e.g., animals working together) to mitigate imagined threats to the animals' safety. In addition, this type of play incorporated the magical element of imagination by having a lake that has a healing power for injured or hurt animals.

Central to children's stories of their play in natural environments was the development of microcultures with friends that were away from adult eyes. This was evident through the frequent absence of adults or other children who were not considered friends or family from the stories they shared with the researcher. For example, when Marianne (PID #3031), a 10-year-old girl, described her unsupervised play with her friends, she told the researcher,

> *[My friends and I] go to climb trees by the school… and play in [this] garden thing [next to buildings]… we kind of just make up stories about things. Like, we see a duck doing something weird, we try and think about why it's doing it.*

Similarly, Graham (PID #2006), an 11-year-old boy, described his play with his friends in an area of a creek that was fairly secluded near bushes. He said,

> *One of [my] friends lives like right around here… I go through [the creek] like to get him… my friend [and I] go Pokémon hunting [near the creek], because there's like little things you can put lures on and then, it's like a very good spot…. There's a nice little place up in [the creek], right at the start. There's a couple fences you can sit on. It's nice because the sun shines through the leaves and it's really cool.*

At times, the children described "secret" and "hidden" spots they enjoyed playing in with friends. When Emilie was walking with a researcher, she directed their attention to a narrow path through a garden and described it as a "secret path" she frequented with friends to walk and talk. In her description, the word "secret" was used to indicate it was a space away from others where she could play with friends unsupervised because outsiders (i.e., those not considered friends) did not know about it and thus could not join. Similarly, Jennifer (PID #3015), an 11-year-old girl, showed the researcher a tree she played on with her brothers. She said,

> *But [my friends' and my] best spot is through here. And it's pretty hidden because it doesn't seem that much like a hiding spot… it's a hole in the bushes. Over here, we usually like to hide in there because most people don't know about it and it's really useful because all the branches you put things on—and we usually hide here. And there's also quite a few entrances that we could crawl in and we could climb and jump off through there.*

Indeed, some children, such as Luke (PID #2002) and his friends, used natural environments to create hidden places away from adults. When Luke described a spot between two trees, he told the researcher, "This part, we usually put a sheet with some rope between it and make a little hammock, which is neat…. And we basically just spy on people, which is fun." The children thus developed microcultures as a means to engage with friend groups in unsupervised settings, where the natural environments with which they interacted afforded them opportunities to watch, listen to, and connect with their world.

Discussion

Our results illustrate that children can develop microcultures of play in natural environments through their construction and implementation of imagined game-based rules and roles away from adults. Their stories reflected their desire to create and organize games unsupervised, where they were free to use their imagination to create new worlds (such as through "Africa" or the "Peace Tree"), and where they regulated their behaviors in accordance with these games (e.g., "Camouflage"). Importantly, these results illustrate that children are actively seeking ways to develop and enact newly formed microcultures that they organize around specific play locations, activities, and social behaviors. This organization indicates children can be active participants in the creation of microcultures to which they subscribe, and they can behave in ways that disrupt discursive productions of childhood as being a time of following societal rules and passive roles as "adults in waiting" (Matthews et al., 1998, p. 193). Indeed, they may actively use natural environments because of the "secretive" and "hidden" properties the environments afford. Our results align with research indicating children enjoy participating in games in natural environments that afford dynamic interactions and stimulate their curiosity and imagination (Jones & Cunningham, 1999).

In Moore's (2015) exploration of the sociology of children's play, he stated that children feel "that secret places are constructed purposefully away from the adult gaze" (p. 22). Moore (2015) argued that children's desire to be unseen during their play can derive from their desire to engage in imaginative and unsupervised

activities that are not controlled by adults. Our research suggests that natural environments can provide children with these opportunities, and children can use them as spaces away from adults, where there are few, if any, adult-constructed rules they must follow. Instead, they can create microcultures of their own to engage in types of imaginative play that may garner a sense of belonging and independence in their world. In our study, the children's desire to engage in imaginative play reflected Singer and Singer's (2009) articulation of this play as "the realm of the possible" (p. 19), where children could create their own fantastical worlds. We found that hiding away from the world—particularly from adults who may be perceived as imposing restrictions and limitations—was an important part of this play, in which children would watch others as invisible by-standers (e.g., spying on others from a hammock) rather than being watched themselves.

Children's desire to engage in unsupervised play is unsurprising. In North America, children's play is typically mediated and supervised by adults in public spaces (Singer et al., 2009), and children may associate "play" with having their behaviors censured (Owens, 2017). Owens (2017) suggested that the seeking of play spaces beyond a specifically adult-supervised gaze can represent a type of liberation for children, where they are able to engage more freely with their world. Indeed, the children in our study developed microcultures with friends or siblings. Thus, our findings indicate children aged 10-13 may seek to develop microcultures that are specifically away from adults, and natural environments may afford them this type of liberation.

There is little known about children's construction of and subscriptions to rules and roles within their peer cultures (Hardecker et al., 2017). Our results suggest that natural environments afford children with opportunities to collaboratively develop game-based rules and roles and organize behaviors (e.g., "Camouflage," "We Were Born in the Wilderness"), and sense of place (e.g., "Africa"). In accordance with Whiten and Flynn (2010), we suggest that microcultures in children's play can facilitate social learning through children modelling other children's play behavior; however, we also believe that children's facilitation of social learning can occur through their adoption and setting of play roles; desires to connect to animals, friends, and family; and imaginative play in natural settings. Our findings suggest that children's desire to be unsupervised during this game-play may be inextricably linked to a desire to engage and socially learn with friends, and thus create microcultures of their own.

Conclusion

As explorations of the emotional properties of children's play in natural environments continue to develop (Procter, 2015), our findings contribute to enriching these conversations. Broadly, our results interrogate the ambiguous nature of conceptualizations of play (Sutton-Smith, 2009) by suggesting that play engagement in natural environments can be sentimental and purposeful for children aged 10-13, and they are active agents in the development of peer microcultures. In representing children's voices in play and illustrating the novel understandings that can emerge from this approach, our study highlights the importance of placing children's experiences at the center of scholarly work.

Michelle E. E. Bauer *is a SSHRC-funded post-doctoral fellow in the Department of Pediatrics in the Faculty of Medicine at the University of British Columbia. Her research in the BC Injury Research and Prevention Unit focuses on children's perspectives on play and safety topics, including risk-taking, playground use, and independent mobility. Her research is guided by sociological risk and feminist frameworks and she strives to make healthful play opportunities more accessible to and inclusive of a diversity of children.*

Mariana Brussoni *is Director of the Human Early Learning Partnership and Associate Professor in the Department of Pediatrics and the School of Population and Public Health at the University of British Columbia. She is an investigator with the BC Children's Hospital Research Institute and Academic Scientist with the BC Injury Research and Prevention Unit. She investigates child injury prevention and children's outdoor risky play, focusing on the effects of play, design of outdoor play-friendly environments, parent and caregiver perceptions of risk, and development of behavior change interventions to support outdoor play. Details are available at https://brussonilab.ca*

Christina Han *works with Dr. Mariana Brussoni as a research coordinator at the University of British Columbia. She has over 10 years of experience in qualitative and mixed-method research, and has published 20 peer-refereed articles. Currently, she is working on multiple qualitative analyses using children's interviews, photos and neighborhood map drawings.*

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