

The Nature Play Continuum: Areas, Scapes and Grounds.

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ABSTRACT *Nature play refers to unstructured, self-directed play in nature. Research shows that there are developmental benefits for children who engage in nature play. Planned and designed environments have emerged that ostensibly provide for nature play. However, planned and designed nature play environments go counter to some of the key aspects of nature play. The idea of providing nature play has gained popularity. As a result, a proliferation of nature play professionals, products, and environments have emerged. These offerings can be confusing especially in regards to how well they facilitate nature play. In this paper, benchmark questions and a continuum of various types of nature play environments are proposed to bring clarity to this situation*

INTRODUCTION

Imagine yourself as a child playing somewhere outdoors in a place where you felt free and happy; perhaps even a place of wonder. Like many adults, you might be thinking of places like the empty lot next door, a creek, a patch of woods. Is that place still there? What places and experiences will the children of today and tomorrow have to reflect on when they

are adults? These questions have been popularized in recent literature and a growing international movement (see Children & Nature Network and IUCN, 2012). Emerging from this mixture of concern and excitement is talk of a new kind of playground. This new environment is said to help today's children re-capture the special connection with nature that children of earlier generations took for granted, to get in touch with something at the very core of human nature. Known today as *natural playground*, *natural playscape* or similar titles, these are places where children can ostensibly connect with nature through play (see for example, Lester and Maudsley 2007).

The recent attention to play in nature, or nature play as it is commonly called, has been closely followed by commercial interest in providing related products and design services. Designers, landscape architects, play equipment manufacturers and distributors have greatly expanded the availability of play environments and equipment under the label of "natural." This proliferation has taken place so quickly and free-form that proponents are faced with a daunting variety of offerings, each of which relates differently to the basic goals and concepts of nature play.

These newly planned and designed environments sometimes look very different from the places children

themselves choose to play in nature. In addition, some aspects of designed natural play areas actually contradict important nature play concepts cited in research on the benefits of children's play.

To help clear up the confusion, we review the history of playgrounds and the current movement of providing nature play. We examined which natural settings children themselves choose. We then compared these environments with the range of planned and designated areas claiming rights to nature play. The culmination of this analysis is a *continuum of nature play environments*. The purpose of this *continuum* is to help anyone interested in nature play understand important differences between several categories of play environments and to make informed choices.

A BRIEF HISTORY

Playgrounds began to appear in the US towards the end of the 19th century in part as a response to overcrowded and industrialized cities (Frost, 2012). They arrived as an identifiable feature in the urban scene around the same time as the city parks and recreation movement, all of which emerged as a response to intense and unhealthy urban living conditions. Early playgrounds attempted to provide safe places to play as well as improve kids' health and fitness. To the later end equipment based on gymnastic training equipment was introduced. The equipment was typically placed on flat surfaces (Frost, 2012; Solomon, 2005). Contemporary playgrounds have not stepped far from this model, however they have improved their safety record dramatically. With the advent of tort law, injuries, deaths and resulting law suits eventually led to the development and

adoption of safety standards and guidelines by the Consumer Product Safety Commission (CPSC) and the American Society for Testing and Materials (ASTM). Almost all playground equipment manufactures incorporated these guidelines in the development of their products. This further increased demand for the already-popular "catalog" play structures because school districts and park departments could buy fun, attractive-looking products as well as legal peace of mind. (Frost, 2012; Solomon, 2005)

Following predecessors in Europe, designers, artists and psychologists from the United States began to see the stultifying effects of these trends in playgrounds during the 1950s up to the 1970s. The response was two-fold, on one hand designers created more imaginative and sculptural playgrounds and on the other hand play areas emerged that allowed kids greater involvement and free choice. These latter play areas, known at the time as "adventure play," offered hammers, nails, tires, rope, wood, water and all kinds of loose materials. While these themes persisted with more vigor overseas, in the US the legal environment eventually stifled the movement (Frost 2012; Solomon, 2005). Most playgrounds today remain collections of pre-manufactured equipment arranged on a flat, protective surface of rubber, sand or woodchips. This is the "default" playground. While some play equipment manufacturers strive to offer features that kids can manipulate, most play environments, though sometimes colorful, are rigorously static and designed to pass the "baseball bat test." Materials tend to be durable steel tube construction with molded plastic or stainless steel parts, chains and swivels. Surrounding environments are typically lawn or hard-surface, promoting easy maintenance and good observation by adults and law enforcement personnel.

NATURE PLAY EXAMINED

Given the state of affairs with playgrounds, it's no surprise that the message of nature play has stirred tremendous passion among its advocates. In 2005, the concept of nature play received a major boost in the US with the publication of *Last Child in the Woods* by Richard Louv. Since the publication of Louv's book, which has sold over seven million copies world-wide, mainstream media has picked up the theme. The attention has precipitated a global movement of diverse organizations, networks and coalitions all aimed at connecting kids with nature (see the Children & Nature Network).

In general, Louv's book and the movement surrounding it say that children enjoy less exposure to the natural world than previous generations, and that this trend is continuing. Louv describes the effects of this retreat from nature as "nature deficit disorder." While this is an admittedly non-scientific term, it has proven useful in capturing the essence of what is happening, and has resonated intuitively with parents, educators and other professionals. Among the effects of "nature deficit disorder" Louv (2008) mentions "diminished use of the senses, attention difficulties and higher rates of physical and emotional illnesses."

On the flip side of the ill effects of being removed from nature, research by educators, psychologists and child development specialists shows that *exposure* to nature provides numerous developmental benefits for kids (Louv, 2008). While some evidence is more tangible than others, Louv (2008) cites a host of research linking access to nature with physical, psychological, emotional and developmental benefits.

In addition, it has been established that children today enjoy less free, unstructured playtime. (Brussoni, 2012, citing Karsten, 2005; Hofferth, 2009; Valentine, 1997 and Clements, 2004); Burdette 2005). Research on "free, unstructured play" has been undertaken independently as well as in connection with the discussion on nature play. Free, unstructured play refers to play that is child-driven, spontaneous, and without direction from adults (whether verbally or implied, including implied by environmental design) (Brussoni, 2012; Chudacoff, 2007; Burdette 2005). Similarly, the "loose-parts theory" as proposed by Simon Nicholson in 1971 has regained popularity in the context of nature play (for example in Fjørtoft, 2001). This theory holds that, "In any environment, both the degree of inventiveness and creativity, and the possibility of discovery, are directly proportional to the number and kind of variables in it." (Nicholson, 1971). As Richard Louv likes to point out, nature continuously produces loose parts in the form of sticks, leaves, flowers, pine cones and other natural things (Louv lectures 2011, 2010). Loose parts that kids can manipulate and use to construct their own environments offer the greatest play value. The adventure playground, is a classic "loose parts" playground. A natural play area where kids can build dams with rocks, dig holes, and make tree forts from branches would be a natural version of the adventure playground.

As an emerging theory combining these three trains of thought – contact with nature, free unstructured play and play with loose materials – research indicates that nature play provides significant intellectual, social, emotional and physical benefits for children (numerous citations in Louv, 2008 and in Lester and Maudsley 2007). While further research will undoubtedly reveal more clues, these basic observations offer

some basic criteria for understanding and evaluating nature play environments. The overarching concept of nature play that brings all the associated benefits for children is that nature play is free, unstructured, child-initiated play in a natural environment with natural materials and elements.

CURRENT TRENDS

Part of the current movement to reconnect children to nature is aimed at providing areas that are specifically designed to allow for and promote the activity of nature play. Designers and landscape architects have been designing environments for play that incorporate natural settings and elements long before Louv's book was published. However, recent attention to natural play has brought a fresh wave of professional interest. Nature play projects are now featured in professional landscape architecture literature and trade magazines and professional design conferences regularly feature workshops focusing on the idea of nature play. Online professional networks have also emerged around the topic, the online information sharing site Linked-In hosts a natural playgrounds group with almost 2000 members, including many professional designers. The number of Google searches on the words natural playground(s), nature playground(s) and nature playscape(s) shows a sharp increase in 2005, the year *Last Child in the Woods* was first published. USA Today reported in 2010 that natural playgrounds are a growing national trend, citing several cities that had natural playgrounds underway that year (MacDonald, 2010).

Play equipment manufacturers have also noticed the rise in popularity of natural playgrounds and have developed

product lines to capture the market, including products labeled as natural or nature-inspired. Manufacturers have also begun to sponsor diverse conferences and events where themes of nature play, design, and similar services may arise. Sponsorship often including extravagant product exhibits featuring artificial "natural elements" such as rocks and tree trunks constructed of fiberglass and concrete. In fact, the market response to the nature play theme has been very effective, generating a great deal of attention. This is revealed by closer examination of Google keyword searches indicating that the largest growth in searches regarding nature play includes the words "natural playground equipment." This offers a useful insight not only into the commercial response to the trend, but also into the approach taken by institutions and service providers to fill the need.

Given the huge proliferation of nature play professionals and products, it is hard for schools, agencies and other entities interested in providing nature play to understand what they are getting. It is equally hard for designers to understand what exactly it is they are providing.

NATURE PLAY AREAS SELECTED BY CHILDREN

In the search for criteria, we discovered that research indicates a strong correlation between the type of areas selected by children for outdoor play and the type of play that seems most beneficial for a child's development. It is therefore important to understand the characteristics of natural environments that researchers claim children choose for themselves.

Children have a clear affinity and preference for natural systems (Nabhan and Trimble, 1996; Moore, 1986 (2); Moore R. and Donald Young, 1978). But nature is an ambiguous term and can mean many things. The writing of Robin Moore and co-authors (1986(1) (2),1978) seems to suggest that nature can be defined as streams, lakes, ponds, forests, fields, trees and shrubs but nowhere is nature – as it relates to children’s play – clearly defined, there are few attempts to describe the type of nature that is preferred by children. The Children and Nature Network offers a few clues, including ways to reconnect children with nature ranging from wilderness backpacking trips to picnics in the park or planting a vegetable garden. What constitutes nature seems to be personal and contextual. For an inner-city family, nature might include finding a bee resting on a flower in an ornamental garden; for a kid living in a rural area it might be a wild stream. Nature seems to be that aspect and those components of the environment that, according to one’s personal viewpoint, seemingly exists, grows, or sustains itself without or with minimal influence of humansⁱ

Any type of contact with any type of nature appears to hold some value for children. It can take very little to inspire a sense of wonder and delight, particularly in a highly developed and human-influenced landscape. In fact, researchers who mention the kind of nature environments that are favored by children, point to areas that are under-appreciated by adults. Kids benefit from direct contact with simple, green spaces such as vacant lots, interstitial spaces, hedgerows, overgrown ditches and other humble places. Contact with plants and animals – any other non-human living entities with which we share the planet – is important for a child’s intellectual and emotional development. In addition, research shows that the

more spontaneous, direct and unstructured (and unfiltered) these encounters with nature are, the better they are. For example, finding some bugs in a nearby vacant lot is of greater value than a guided tour around a nature preserve. Kids connect with familiar plants and animals that are part of their everyday lives, and they relate best to nearby nature when kids are left free to, in ecologist Robert Pyle’s words, “climb trees, muck about, catch things, and get wet.” (Kellert, 2005). Overall, it seems that areas that are most attractive to kids are relatively unmanaged and unstructured; they are the messy edges overlooked and often under-valued by adults (James et al 2010, Chudacoff,2007; Manual,2007;Ross, 2004; Kirkby, 1989).

These unstructured environments provide a place where kids can alter and manipulate the landscape themselves. They can build huts, dam up the stream, pick the weeds, throw rocks, and catch the critters. These activities correlate well with the idea of unstructured play and with the theory of loose parts. It might well be that kids’ preference to play in relatively unstructured green spaces comes from an innate drive for kids to find exactly those type of play opportunities.

Data from Hart (1979) shows that children in the town Inavale “spent a large amount of time building places for themselves and observed that many of the “houses” of children under eight were “found” places with scarcely any major physical modification.” Hart concluded “that the primary factor required to allow building operations was the availability of areas close to home, not dominated verbally by adults or subject to the manicured announcement of adult ownership. A second requirement of building activity was a “flexible landscape” to ensure a ready supply of “loose parts” for

construction, provided in Inavale by lush vegetation or snow, depending on the season.” In other words, kids prefer to play where they can make their own choices, manipulate their own environment, and have the opportunity to do so.

Research by Joy James et.al (2010) shows evidence of a correlation between unstructured, self-directed play in childhood and environmental concern later in life, including professional or volunteer involvement protecting the natural environment. The researchers note that it is critical that these childhood explorations were self-directed “with the only control being property boundaries....Nature playgrounds and structured programs for younger children may or may not provide similar outcomes.” This research also found, once again, that “interstitial areas such as overgrown drainage ditches provided meaningful experiences” and that these areas do not necessarily exhibit high ecological or habitat values. Furthermore, they note that seemingly destructive behavior towards the natural environment such as damming up creeks contributed to a strong love for nature later in life. This underscores the value of allowing children to manipulate the environment in self-determined ways.

Designers and landscape architects are trained and educated to manipulate, structure and control spaces and natural systems, typically for human use or natural restoration. Planning for unstructured spaces within a child’s daily living environment runs counter to what most professionals have learned, however critical these qualities may be for healthy child development. Planning for these spaces – preserving them, allowing them to exist, and refraining from controlling them – should be a top priority for any natural play environment.

Randy White and Vicki Stoecklin (1998) write, “It is unfortunate that children can’t design their outdoor play environments. Research on children’s preferences shows that if children had the design skills to do so, their creations would be completely different from the areas called playgrounds that most adults design for them. Outdoor spaces designed by children would not only be fully naturalized with plants, trees, flowers, water, dirt, sand, mud, animals and insects, but also would be rich with a wide variety of play opportunities of every imaginable type. If children could design their outdoor play spaces, they would be rich developmentally appropriate learning environments where children would want to stay all day.”

The truth is, children do create and locate their own play environments. As various researchers (for example Manual, 2007; Ross, 2004; Hart 1979) write, children turn nearby gullies, vacant lots and backyards into natural play areas when given the freedom to do so, and when these areas are available. Children find and alter “left over” areas to suit their imaginations and challenge themselves in truly unstructured, free play in nature.

In this sense, pre-planned natural play areas designed and managed by adults are always several steps removed from providing nature play. Yet designed and managed play areas can still offer many of the potential benefits that true nature play provides.

Today’s kids have limited access to the vacant lots, weedy edges, ravines, wood lots, streams and other green spaces uncontrolled by adults. There are typically two factors that limit access: lack of suitable places near the child’s home (The Nature Conservancy, 2011) and lack of freedom to venture there without adult supervision. In the latter case,

safety concerns weigh heavily in favor of adult-supervised activities for many parents (Brussoni, 2012 citing Valentine (1997), Clements (2004), Tandy (1999); Hofferth, 2009; Hillman 1992). Pre-planned, designated natural play areas can potentially address both of these challenges. First, natural play areas can be created in urban and sub-urban areas where there is little or no nature or left-over spaces. Second, some level of risk management and adult control can help give parents enough ease of mind to allow their kids to go play in designated areas. Young children are also spending more time in pre-school and day care settings, while older children have schedules overbooked with organized activities (Kernan, 2010; Hofferth, 2009). The ability to pre-plan and locate nature play areas where children spend much of their time – at school under adult supervision – can create opportunities where children are most likely to take them. For many children, the grounds of daycare facilities and schools, might be the only option for access to something reminiscent of free play in nature.

CRITERIA FOR EVALUATION

Play spaces that are currently labeled or marketed as nature play span the entire continuum between an unsupervised wood lot and a playground with plastic trees on a rubber surface. To bring clarity and sort these diverse environments, we identified some basic criteria for analyzing play spaces. These criteria relate as closely as possible to what we know about, the benefits of nature play, and the types of areas that we suspect (based on current research) provide those benefits most effectively. This type of evaluation, using

reasonably objective criteria or benchmarks, is critical to planning new play areas and retrofitting existing ones.

We start by acknowledging that a designated play area can *never* truly provide free, unstructured play in nature. The benchmark questions below provide the first step in evaluating to what extent a planned area is likely to provide aspects of nature play.

1. To what extent does the area exist within a child's daily living environment and provide opportunities for children to visit regularly and independently? *Nature play is initiated by children and takes place on nearby natural or left-over areas that children themselves claim.*
2. To what extent does the play area include elements and landscape components that are experienced as naturally occurring, such as sand, dirt, water, plants, trees, boulders, logs, hills and streams, and living plants and creatures? *Nature play occurs in areas with components and elements that are likely appreciated by children as naturally occurring, however they might not be valued as such by adults, i.e the elements might for example include weeds and discarded heaps of dirt.*
3. To what extent are the kids allowed to play with natural materials and elements, including deliberately and freely manipulating and altering them? *Nature play places no boundaries on how materials are manipulated.*
4. To what extent does the area promote unstructured play opportunities by appearing un-designed and un-scripted? *Nature play is completely un-modified by adult intentions about children's activities*

whether, verbally or implied by environmental design.

5. To what extent are activities regulated by adults?
Nature play has no prescribed rules by adults.
6. How clearly are the area's boundaries defined?
Nature play has no boundaries; children explore the larger landscape (whether build or natural) and self-select areas to play.
7. To what extent is the area professionally maintained or managed to preserve appearance, function or a particular state of order (e.g. irrigation, trimming, pruning, mulching, sweeping, raking, fertilizing, repair, replacement, etc.)? *Nature play occurs in areas that are (seemingly) outside the maintenance or management control or other adult intervention or expectation.*

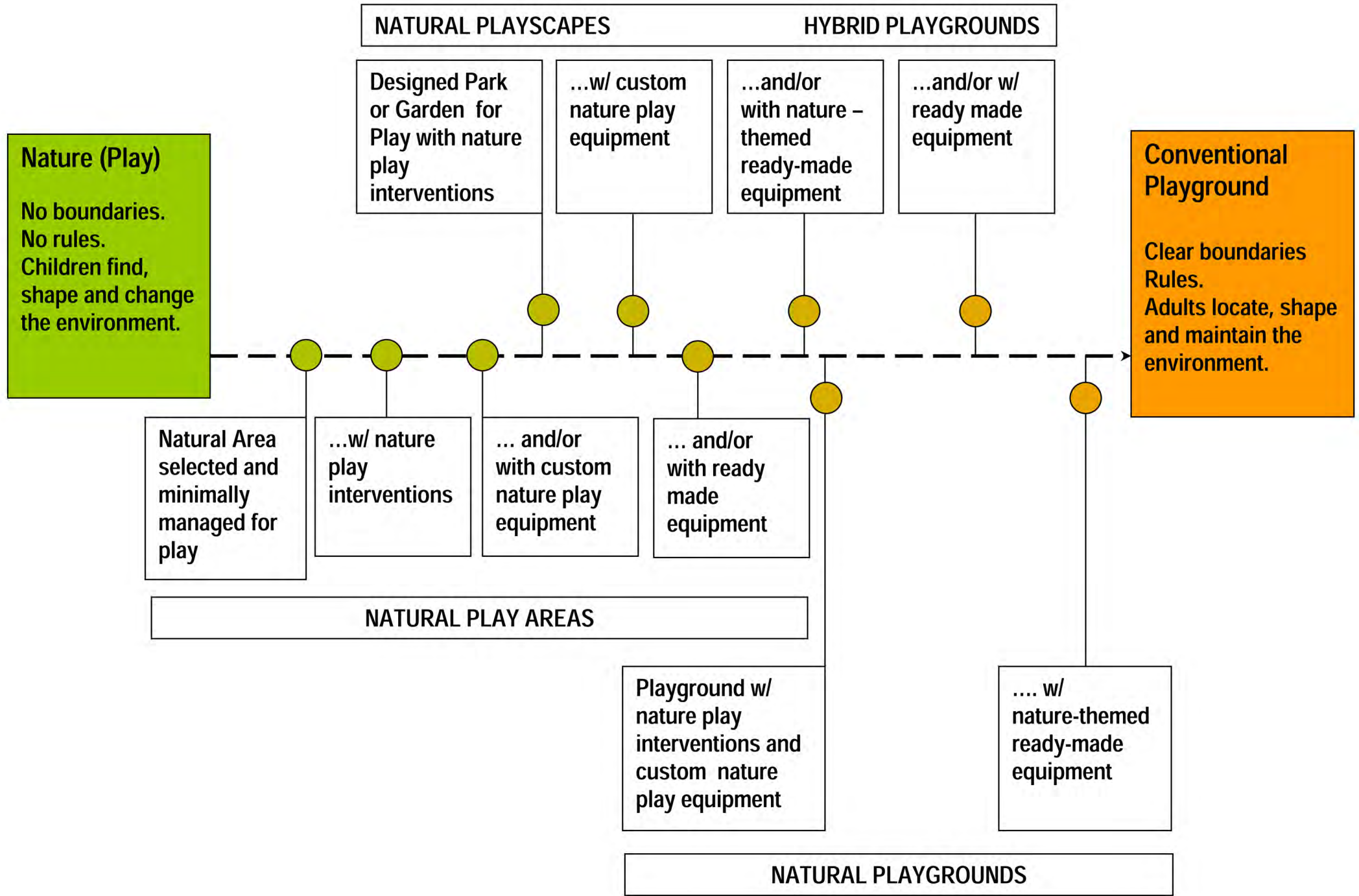
To better understand how these questions work in the real world and to gauge the utility of nature play environments, we applied these criteria to a variety of play areas bearing the “nature play” label. During the process of answering the benchmark questions for each of these real-world examples, a *continuum of natural play areas* began to emerge. This *continuum* ranges between true nature play on one end, and a conventional playground-characterized by prefabricated equipment over safety surfacing – on the other. We have used versions of this *continuum* in our landscape architecture practice to clarify choices for clients interested in natural play environments. In addition, we have shared the *continuum* publicly with other design professionals and park and recreation providers. This has given us the opportunity to test and refine our analysis.

Our analysis underscores the importance of location as a key criterion. Children's ability to frequently use the area, preferably independently, markedly supports the area's potential for nature play. As an example of why this is true, building a hut or a village from branches or bunches of grass is far more engaging and rewarding when this activity stretches out over a whole summer vacation. Note that this criterion applies equally to all types of play areas, and thus carries weight only in proportion to how well a particular play area meets the other criteria.

CATEGORIES

By systematically applying the benchmark criteria to a range of play areas, we were able to group play areas with similar characteristics into several different categories. These categories are useful for understanding the different approaches to providing nature play, each of which are driven by different goals and yield different outcomes. To further a shared understanding of the categories, we selected case studies, each of which are either typical to the category, relatively well-known, or both. (Figure 1)

Off-Trail Nature Play Areas These are sites within existing natural (park) areas that are selected to be suitable for play. The criteria used to determine suitability include locating the area away from hazards such as steep cliffs and avoiding sensitive ecological areas. From the outset, these areas meet many of the nature play benchmarks. At the far left of the continuum these nature play areas are left in a completely



natural state, or are minimally altered for play. They are simply designated with a sign; sometimes the areas are fenced. Further along the continuum, simple nature play interventions and custom designed nature play equipment are added to these “found” play areas.

Metro Parks in Central Ohio has designated several off-trail nature play areas, ranging in size from just under 10 to over 25 acres. Children are typically accompanied to the sites by adults. Even so, Metro Parks has found that parents are reluctant to either allow or encourage children to play in nature. To boost parents’ resolve, Metro Parks organizes special events hosted by naturalists who show children and parents how to interact with nature, for example how to build a ground hut from branches. This laudable and creative effort can in the context of the research also be seen as prescriptive and too much adult interference. As a service provider Metro Parks is at the cutting edge of grappling with the social challenges of re-habituating children and adult caregivers to the natural environment.

Also in Ohio, Five Rivers Metro Parks, has designated five nature play areas near residential neighborhoods. According to Park Manager Todd Catchpole (2012), these areas “range from ‘undeveloped,’ defined by minimal alterations such as the addition of rocks, sticks and logs to encourage open-ended play, to more ‘developed’ sites that are a mix of natural and artificial materials.” Hills & Dales Park is reportedly very suitable for active nature play. Here children have begun to claim their own special places and activities. According to Richard Dolesh (2012), the park is “just about ideal – a wooded finger of parkland that extends into a residential neighborhood which surrounds the parkland on three sides.” Catchpole (2013) feels that that the success of



Figure 2: Hills & Dales Park, Metro Parks Ohio, Photo: Todd Catchpole

the nature play area stems mostly from its location near the daily living environment of children. As of this writing, these findings remain anecdotal; however systematic observation and research are planned. The diverse sites at Five River Parks provide ideal opportunities to expand our understanding of nature play. (Figure 2)

It appears that the addition of topography, natural materials and elements in the spirit of interventions made at Five Rivers can be done in a manner that adds play value while leaving *nature play areas* looking as natural and un-designated as possible. However, there may be a fine line between adding play value (and interest) and introducing clues of adult intend and intervention. It is uncertain if play interventions alluding to adult intervention or a nature play workshop activity, decreased or adds to the natural play value for kids. Further research is needed to answer these questions.

Natural Playscapes This category of natural play environment takes much greater steps to enhance and shape the land for play, albeit in a naturalistic way. Here we see for example creating naturalistic features designed for play such as a hill, a rock scramble or a constructed creek bed. These areas are typically –although not necessarily- recognizable as being human-made, and often incorporate a variety of human-centric themes and objects.

Iowa's Jester Park, is referred to as a "natural playscape." The award-winning design by RDG Planning and Design features a wide array of specialized play elements with natural themes. These include native plantings, a sand-pit

with embedded fossils for kids to dig up, sculpted land forms, a water feature and simulated "wetland" designed for play access, a maze of living plants, an area with hollow tree trunks for crawling through and climbing, a miniature "Stonehenge," wood scramble steps, artwork depicting local wildlife, and a network of pathways. Although the stated intent of the playscape is to represent the local natural landscape, the area is clearly the product of human intervention involving a great deal of pre-planning and design. To illustrate this perception, students taking an intensive design course focused on natural playgrounds (University of Oregon, Landscape Architecture Studio Winter 2011) were presented with images of this playscape. Students viewed the images after completing an assignment asking them to recall their own childhood nature play experiences. Universally, the students were surprised that the park claimed to provide nature play; they felt the Jester Park was "cool" but surely not "natural."

Lewis Major (interview 2012), a naturalist with the Polk County Conservation Board, reports that most children follow the path system even though they are allowed off-trail. This is a curious triumph for landscape architects who strive to design circulation systems that people will actually use, however it raises doubts about how well the area meets the goals of nature play. From this aspect alone, the benchmarks for promoting unstructured play and appearing un-designated would not be met. Furthermore, the presence of multiple paths and the reported behavior of the children would appear to *suggest* a set of rules or expectations, whether or not they exist.

The designers of Jester Park refer to Richard Louv and free, unstructured play opportunities when explaining their

design intentions (RDG Planning & Design, 2010). Nonetheless, the highly-designed features clearly anticipate, and therefore prescribe, certain play behavior. For example, the “tangle maze” prescribes following a small path and anticipates the thrill of adventure and perhaps chase or hide-and-seek games; fossils in the sand pit prescribe digging in specific locations for pre-planned discoveries. Furthermore, in case the intentions were unclear, signs have been added to prompt kids even more towards behavior that was imagined at the drawing board. Even though kids are by no means *required* to behave in the prescribed manner, these interventions represent a significant digression from the benchmark for free, unstructured play.

Similarly, an abundant array of native vegetation at Jester Park provides opportunities to encounter local plants and animals, needs minimal care, and is available for the kids to manipulate. The existence of the plantings, as well as features like the wetland, reasonably earns points for these nature play benchmarks. However, kids generally leave the plants alone, just like they generally stick to the paths. The prescriptions and expectations inherent in the design compromise the park’s ability to fully meet the benchmarks.

Jester Park is located away from the daily living environment of children, requiring a special trip by car or bus for kids to access the park. Also, while the park is located in the context of a natural area, including woodlands, wetlands and meadows, the playground feels like a separate place carved out of this environment. Due to the level of intervention, a sense of defined boundaries is also implicit. These facts are typical for most *natural playscapes*, and necessarily place the area somewhat further along the continuum from the benchmarks for true nature play.

Nonetheless, both kids and adults reportedly love the park. The ability to engage kids in the context of nature, using natural elements in a landscape setting, surely acts as a bridge to nature, and is a welcome counter point to conventional playgrounds. It would be enlightening for designers of future natural play areas to understand the extent to which these highly-designed natural play areas provide the benefits of nature play versus those with less design or true nature play. (Figure 3)



Figure 3: Jester Park, Photo: Lewis Major

Michael Van Valkenburgh Associates was the primary landscape architect for another award-winning park design, Teardrop Park in New York City. The park was designed primarily as a landscape for children to explore. Robin Moore served on the design team specifically to ensure that this urban neighborhood park would be attractive and beneficial to children. The design reinterprets the native landscape and introduces naturalistic features. The park includes water and sand play areas, a marsh with tree trunk pathways, boulders and abundant native plantings. A long, metal slide integrated within a constructed boulder outcropping is the only obviously manufactured piece of play equipment. According to substantial documentation, the park has proven very popular (Moore, 2008).

Sand and water areas are clearly human-made but nonetheless offer unstructured play opportunities. In addition, kids are allowed to trample the thickly planted greenery, break of branches and build huts or dig holes. Within a larger area of taller shrubs, an informal dirt path invites children to explore. The insertion of this path, while seemingly prescriptive, is informal enough that it might also suggest to children that it is permissible to access other planted areas as well. Site observations revealed kids playing in this larger vegetated area, for example hanging from branches of larger shrubs. Other vegetated areas, however, are protected by low rails, clearly indicating a level of regulation.

Teardrop Park is designated for use by the residents of the surrounding neighborhood, and is frequented by children of all ages. Based on limited site observations, some older children who live nearby visit the park independently, while younger children are typically accompanied by an adult. Considering the population density of the surrounding

neighborhoods, the area is placed well within the daily living environment of thousands of children.

Given the intensely urban context, the park is necessarily limited in how well it can achieve a sense of being part of a broader landscape. The intention of re-creating the native landscape buried beneath the city, however, is an admirable and worthwhile effort to meet this criterion to the extent possible.

Overall, the park achieves an interesting and careful balance between freedom and control while providing places that appear wild enough to actually engage children. Under the circumstances, this balance appears to be a thriving success. (Figure 4)



Figure 4: Teardrop Park, New York, Photo : Anita Van Asperdt

Natural Playgrounds Play environments near this point along the Nature Play Continuum embrace a naturalistic mindset but lack many of the basic characteristics of nature play. *Natural playgrounds* look much like conventional playgrounds in terms of layout and design approach. These grounds are flat typically covered with either woodchips or sand as safety surfacing. Similar to conventional playgrounds, play objects are located on this flat surface in groups or separately. Many of the play objects take inspiration from typical play equipment. Occasionally, environments in this category utilize play equipment created from “natural materials” (most often rustic logs and dimensional wood) as an alternative to the plastic-and-steel features of conventional playgrounds.

However, further along the spectrum within this category, play equipment is constructed from artificial materials such as plastic or concrete with the intent of at least conceptually resembling natural materials. Although many of these objects resemble a log, tree, or boulder, despite the sometimes clever and ingenuous natural looking disguises, the basic intent and function of this play equipment is the same as conventional gymnastic-based equipment. For example, a fake log is designed to provide various interesting climbing opportunities, but does not allow children to experience the sensory aspects of a real log, its natural processes or the living critters in and around the log. A playground that exclusively consists of artificial play components that simulate natural elements is, in our opinion, the departure point along the spectrum from environments that can reasonably lay claim to the title “natural”. These

playgrounds might be nature-themed or nature-inspired and they might be a lot of fun for kids but they are not “natural”.

A much more true example of a *natural playground* can be found at Metro’s Blue Lake Regional Park, in Fairview, Oregon. This environment was built in the winter of 2011 by maintenance staff who became intrigued with the idea of nature play. The key difference between this playground and a conventional playground lies in the play elements themselves, namely the use of rocks, real tree trunks, and custom-built play equipment made of roughly-finished wood and peeled logs. In addition, park staff created a sand pit and introduced natural wood branches as loose materials for kids to play with.

Despite the absence of separating elements such as fences or walls, the similarity to a conventional playground tends to separate the area from its surroundings. In addition, its location in a more traditional lawn-and-trees recreation area, while pleasant and green, provides limited natural context. These basic characteristics move the playground further from several nature play benchmarks than previous categories, including lack of boundaries, appearing undesignated, wildness/lack of maintenance.

Parks staff reports that children like to move the branches around and create different compositions. While these activities are sanctioned, staff generally tries to keep the sand pit area clean, for example by removing any smaller branches, leaves, or branches carried in form elsewhere by the kids. One senses there may be a certain expected (perhaps romanticized) play behavior for this playground that falls within the range of what park staff find acceptable and will allow. Similarly, perhaps because of the formal resemblance to a conventional playground, park staff felt it

was important to strictly adhere to public playground safety standards when designing this area. Since this is a fairly new play area, there may still be a period of adjustment in how maintenance staff responds to kids play behavior and visa-versa. (Figure 5)



Figure 5: Blue Lake Regional Park, Natural Playground, Photo: Anita Van Asperdt

Hybrid Playgrounds This final category along the nature play continuum includes playgrounds exhibiting some aspects of the previously mentioned categories. The key difference is that Hybrid Playgrounds also introduce conventional catalogue play equipment (nature-themed or not).

Soon after the idea of providing nature play gained momentum, designers and play equipment manufacturers began to promote the idea of *hybrid playgrounds*. NatureGrounds®, for example, is a concept developed by the play equipment manufacturer PlayCore™ in collaboration with the Natural Learning Initiative, a design and assistance program of the College of Design at North Carolina State University. The aim of this initiative is to provide the physical benefits of play structures while capitalizing on the mental benefits of nature play. Additional benefits that the program aspires to, include “visual interest, shade and comfort—resulting in sustained repeat visits, a relaxed and playful social atmosphere, and growth of community social capital.” Quotes from *Last Child in the Woods* are used freely in promoting the natural features and elements, as are references to Robin Moore’s research into children’s play.

A brief evaluation of several NatureGrounds® reveals an emphasis on adding trees, plants and curving pathways, and on creating nooks and other spaces for gathering. A few NatureGrounds® include sand play areas, however there seems to be a limited focus on adding sand, soil, and water play, let alone other opportunities for kids to alter and physically interact with natural features. The capacity for hybrid play areas to offer nature play opportunities depends on two key factors: how much area is devoted to play equipment versus less conventional, and more natural, approaches and to what extent children are stimulated to interact with the natural objects and living things. For example, if trees and shrubs are fenced off from children’s access, and serve a purely aesthetic function, these hybrid playgrounds are likely to offer very limited nature play opportunities.

CONCLUSION

In a blog posting about a natural playground, a woman remarked that natural playgrounds seem contrived. (shearsensibility.blogspot.com). Indeed, planned and designed nature play areas – no matter what shape or form – are by definition contrived; they are not the same as the vacant lots, nearby creeks, or other natural places that kids have claimed for centuries as environments for play. Nonetheless, play at these grounds can be seen as stepping stones leading towards true nature play. By setting aside areas that are relatively safe where kids can play with natural materials or in natural settings, we provide kids with a chance to experience some of the pleasure and potentially some of the benefits that free play in nature provides.

The *continuum* and associated benchmarks are designed to help inform agencies, organizations and design practitioners in making decisions about planning a natural play area. The *continuum* brings the potentially confusing array of options into sharper focus and demonstrates that the extent of design and maintenance is not a foregone conclusion but an important choice. Indeed, there are strong indications that the best nature play environments are minimally designed and maintained, which could be welcome news to cash-strapped service providers. Furthermore, our analysis shows that the current wave of manufactured equipment marketed under the banner of “nature play” may not provide any more nature play benefits than otherwise themed catalogue equipment.

As our precedent study reveals, further research and evaluation is needed to better understand how well the diverse array of nature play areas are providing the benefits of nature play. Given the increasing number and creativity of

nature play environments built in recent years there is ample opportunity for observation and research.

We predict that the most effective – and beneficial – nature play environments will promote play activities most similar to true nature play. These areas will look and feel wild and unstructured (and by extension un-designed), provide for a high degree of unstructured play activities, and will be located within a child’s daily living environment.

Reading between the lines, our evaluation of nature play indicates a conspicuous shortage of the type of environments that most resemble true nature play. We have witnessed no shortage of presentations about nature play showing images of kids climbing trees, building huts with branches and damming up streams in those interstitial “wild” places that linger outside the realm of adult control. Clearly, talking about it and realizing it are two very different tasks. The challenge for all of us – designers, city planners, school officials, parents and anyone else who cares about children – will be to examine our own beliefs about security and control, and cede some ground to the great wild waiting to be discovered. We need to consider what design and maintenance aim to achieve, learn to see opportunity in the chaos, and growth in the challenge. In time, perhaps we can let our children find their own places to play, naturally.



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i The authors acknowledge the concept that humans are not separate from nature, however that philosophy is less useful in the context of re-connecting children to nature; the premise becomes self-referential and loses meaning.