Preschoolers' possession-based disputes during indoor and outdoor play

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ABSTRACT

At present there is little evidence documenting children's possession-based behaviours during play within preschool settings. This ethnographic study observed the same group of 12 children over a four-month period during sustained bouts of indoor and outdoor play. An event sampling approach was employed in order to identify episodes of possession-based disputes and ways through which children with or without the involvement of the adult negotiate and resolve them. The results captured (1) the total amount of possession-based disputes, episodes where practitioners (2) were involved in the play during disputes, (3) were successful in supporting children's resolution of possession-based disputes, and finally, (4) disputes resolved through the first-possession heuristic. The findings show how children experience possession-based disputes in relation to the contextual factors of the environment and the role of the practitioner; underlying the broader socio-cultural implications of learning culturally relevant social skills and knowledge .

KEYWORDS: First-possession heuristic; dispute resolution; play; role of practitioner; preschoolers

1. Introduction

Play is at the core of early childhood education where pleasure, a sense of freedom, and the co-construction of shared meaning through the use of rules or rhythms are present (Singer, 2013). During play pre-schoolers experience early learning across physical, cognitive, communicative, social and emotional domains (Coplan &Arbeau, 2009; Hart & Nagel, 2017). In particular, the social nature of preschool play should provide experiences to develop key social skills. For example, Coelho, Torres, Fernandes, and Santos (2017) found that the positive and prosocial nature of children's play is related to greater levels of peer acceptance and friendship formation and maintenance. Moreover, they also demonstrate that children who are disruptive or disconnected from play experiences have lower social acceptance and fewer reciprocal friendships. Through such experiences they learn to engage with smooth and challenging situations where they begin to develop the competences allowing them to

negotiate, share and make sense of others' perspectives (Carpendale & Lewis, 2006).

The fluid and dynamic nature of preschoolers' play within early years settings can see children alternate focused engagement between adult-initiated and child-directed experiences. These experiences reflect the tensions between children's free choice, agency, self-regulation, ownership, and control of play and the constraints stemming from policy frameworks, space, time, practitioners' roles, parents' expectations and the pushdown effects from the primary curriculum (Wood, 2014**[Q7]**). Thus, when children actively engage and participate in any form of play, there is a contextual sphere underscored with meaning and purpose for them.

This sphere relates to each child's goals, interests, desires, and other motivational states, shared with or opposed to those of other children who occupy the same space and, who may potentially, compete for the same play resources and opportunities (Tomasello & Carpenter, 2007; Shantz, 1987; Hay, 2006). However, these conflicts are a natural phenomenon and a necessary component of social, cognitive, moral and psychological development. Research demonstrates that children's disputes are common during the preschool period and provide important challenges for children to negotiate, manage and overcome as they develop early social interactions with peers (Catrinel & Mircea, 2010; Chen et al., 2001; Theobald and Danby, 2009). Preschoolers have been found able to engage with both verbal communication (Blake, Ganea, & Harris, 2012) and emotional expressions (Pesowski & Friedman, 2016) in cases of ownership disputes. Effective peer dispute resolution requires children to be self-aware and expressive of their own needs and goals, while recognizing that their peers' needs and goals may differ from their own; thus this process enables a sense of self and the development of social skills (Church, Mashford-Scott, & Cohrssen, 2017; Mashford-Scott and Church, 2011).

In early years settings there is a common pool of play resources that belong not to each individual child, where possession and/or ownership could be more accurately inferred, but rather are neutral. Therefore, children's claims of possession become impermanent and, potentially open to contest. It could be argued that through these daily experiences children engage and practice, refine and further develop their emerging understanding of how to negotiate their social world (Carpendale & Lewis, 2006). In this direction, the current study aims to explore how children respond to disputes and conflicts during indoor and outdoor play, with and without the involvement of the adult.

1.1. Disputes and children

Conflicts, disputes and disagreements are ubiquitous features within human society. It is common-place to observe pre-schoolers, older children, adolescents and adults employing verbal or physical aggression to greater or lesser degrees in order to 'get their own way' within a given social situation. Historically, the theoretical consensus is that such behaviour is related to an incompatibility of goal-directed action between two or more parties (Maynard, 1985; Shantz, 1987). In young children this usually happens over matters of ownership of physical materials or spaces to play (Corsaro, 1985).

Early understandings of situations that generate conflict, and the ability to resolve conflict, are in a formative state during the preschool years. Hay et al (2006) provided longitudinal findings from a sample of infants between 18 and 36 months of age which support that early forms of communication about object possession begin to consolidate within the second year of life and are further developed across toddlerhood. The study also shows a link between toddlers' early use of possession pronouns within communication with peers with a greater proclivity to share items with others. By the age of four, there is an increase in incidents of more socially oriented conflicts involving claims to control as well as social order (Chen et al., 2001; Theobald and Danby, 2009). In another study, Hay, Hurst, Waters, and Chadwick (2011) demonstrated that from around two year-olds toddlers deploy physical force and verbal references in their goal-directed attempts to defend objects in their possession.

An insight into children's levels of social understanding during the preschool period might be seen through the 'happy victimizer expectancy' (Krettenauer, Malti, & Sokol, 2008; Nunner-Winkler & Sodian, 1988). According to this phenomenon, pre-schoolers readily attribute positive emotions in social situations where a protagonist has satisfied a material desire in an aggressive manner (e.g. pushes a child over to get access to a swing). Nevertheless, pre-young children can also correctly attribute negative emotions in a situation where a protagonist satisfied a wicked desire (e.g. pushes over a child who was disliked) (Smith & Warneken, 2014). Smith et al (2010) found that young children can reverse the happy victimizer expectancy, by feeling sad for a victim and less supportive of a transgressor, when a transgression is accompanied by an apology.

These findings go some way in accounting for how young children may make sense of situations within pre-school play sessions, where there are more than one person competing for a limited pool of common resources. Preschoolers tend to focus more attention towards the immediacy of obtaining a desired outcome but are in a key developmental period during which there is an emerging awareness of the parameters and rules which govern socially acceptable behaviours during object-related disputes with others (Smith & Warneken, 2014).

1.2. The contextual influences on children's dispute resolution

Contextual factors influencing children's conflict resolution in early childhood settings could be related to the role of the

practitioner and the role of the environment. DeVries and Zan (1994) suggested that the practitioner should intervene in children's conflicts by following the three principles: (1) hold a general attitude of calm towards the conflict, (2) recognize that the conflict belongs to the children and encourage them to take ownership and (3) believe in and facilitate children to solve their own conflicts. Church, Mashford-Scott, and Cohrssen (2018) demonstrated that imposing solutions upon children might be less time-intensive for the practitioner. However, this seems to be less beneficial compared to providing a collaborative approach within which children are scaffolded in modelling appropriate behaviours and developing conflict-resolution strategies during social play. They propose that the practitioner can play an effective role in supporting children to accept the outcome of the dispute and then continue to play together.

Maynard, Waters, and Clement (2013) found that when outdoors, and when compared with indoors, practitioners tend to plan activities that have a greater emphasis on children's collaboration and social skills. Importantly, collaboration has been shown to be linked to additional prosocial forms of behaviour such as sharing, helping and showing patience (Gräfenhain, Carpenter, & Tomasello, 2013). As such, practitioners take a less involved role when working with children outdoors. This is also captured by Leggett and Newman (2017) who found that Australian early years practitioners agreed that the outdoors produced a sense of freedom for children to explore without the 'invasion' of educators asking questions or getting in their way. In accordance, Little, Wyver, and Gibson (2011) found that practitioners felt less inclined to engage with children and more inclined to merely observe and supervise them during outdoor play. However, there are no studies to our knowledge that explore how practitioners in interplay with the indoor and outdoor environment might have an impact on children's dispute resolutions during play.

The arguments presented here also raise the question of how preschoolers resolve disputes either with or without adult support. A possible strategy that would allow successful resolution of possession-related disputes is the first possession heuristic. This heuristic is based on the simple rule that attributions of ownership are based around first possession of a given resource. In evolutionary biology, the first possession rule is used to support evolutionary stable strategies that provide a basis for genetic fitness (Maynard Smith, 1982). In his seminal work Maynard Smith (1982) articulates the 'Bourgois strategy' arguing that first possession provides an asymmetry between two competitors and that deference from a challenger to a first possessor allows for disputes to be settled in a manner that is conducive to the continued survival of certain species.

The first possession heuristic has been evidenced within children's communications during object use within early childhood (Cobb-Moore, Danby, & Farrell, 2008; Neary & Friedman, 2014). In addition, Kanngiesser, Gjersoe, and Hood (2010) found that children's ascriptions of ownership are based on creative labour, reflecting the role of labour as a means to claim property rights. Friedman, Van de Vondervoort, Defeyter, and Neary (2013) reached the conclusion that preschoolers are sensitive to the first-possession rule and use historical reasoning as a basis when making such inferences. However, the first possession heuristic follows different developmental trajectories based on the cross-cultural context, according to Kanngiesser, Rossano, and Tomasello (2015), who challenge the notion of the first possession heuristic as an early emerging innate bias.

1.3. Study aims

The current study adopts an ethnographic approach and is exploratory in nature with broad aims initially framed around gaining further insight into children's social interactions and disputes during indoor and outdoor play. Ethnography is a research approach within which research aims become more fully revealed only after the researchers have immersed themselves into the culture and lived experiences of others (Konstantoni & Kustatscher, 2015; Mukherji & Albon, 2018). Thus, the researchers adopted 'the role of student' (Spradley & McCurdy 2008 **[Q18]**). This involved the researchers visiting the setting several times before data collection began, in order to develop a deeper understanding of the underlying culture, philosophy and ethos within the setting and the daily experiences of both practitioners and children. During data collection, participatory observations, reflections and field notes were kept. The re-occurring themes and aims that emerged related to how children manage disputes amongst themselves and how contextual factors such as the difference within the environment impact on how these disputes are experienced and resolved. Therefore, through event sampling the study aims to get insight into: (a) the frequencies and nature of object-related disputes between children, (b) how these disputes were resolved, and (c) the role of the practitioner during such disputes within indoor and outdoor play.

2. Methodology

2.1. Design and tools

This small scale mixed-methods study uses ethnography in order to better understand preschoolers' everyday real-life experiences of object possession during bouts of social play. The key focus was how children negotiate, strategize and resolve disputes over the use and possession of objects, and how the environment (indoor and outdoor) and the practitioners contribute to these lived experiences. As part of this design the researchers used a participant observation approach (Denzin & Lincoln, 2000) which involved repeated recorded observations, note taking and iterative reflection (Rossman & Rallis, 2003) over a four-month period. Employing this approach allowed the researchers to more deeply understand a range of inter-related issues

around object possession from the perspective of the children attending this setting.

Despite the qualitative nature of ethnographic research, Dobbert and Kurth-Schai (1992) argue that such approaches adopt a more systematic stance as a means to understand regularities within human behaviour. Therefore, the present study is designed in a manner that allows the researchers to identify critical events within the observations and develop a way of organizing recorded data along these lines. Therefore, an event sampling approach was developed and focused on exploring how contextual factors were related to children's experiences of object possession (Cohen, Manion, & Morrison, 2018). Attention was also given to the practitioners' involvement in maintaining harmony during children's interactions and helping to resolve disputes as and when these arose.

The data analysis included both qualitative and quantitative data. This involved qualitative data emerging from the observations and allowing for a deeper understanding of how pre-schoolers experience these events and realities. Quantitative data identified how the contextual factors of indoor–outdoor environment and the role of the practitioner influenced children's experiences.

2.2. Setting and participants

The setting chosen for this study was a private day nursery on the outskirts of a working class large northern town in northwest England. The setting was a large modernized Victorian building which provided a variety of indoor spaces offering children different learning and play opportunities. The indoor room where the majority of our video recorded observations were obtained was approximately 12 × 6 m in size and provided children with a variety of common indoor play objects, such as Lego and wooden building blocks, plastic figure toys, paints and crayons, colouring books, and an interactive whiteboard. A second area where one of the indoor sessions was recoded provided children with small tables where they were able to engage in more messy play, such as making mermaid figures from flower and water.

The outdoor setting was a large garden area that adjoined the front and back sides of the main building. The front part offered a more natural space which had den building, mud pie and a fire pit areas. In these areas children were able to freely and creatively play with natural materials such as logs and branches, mud and water. Alongside these resources were man-made play resources such as a wooden pirate ship and smaller resources such as plastic plates and cutlery, golden treasure coins, spades and other miniature gardening equipment. This space was approximately 30 × 20 m in size. The back part of the building was paved and smaller in size, with flat wooden tables offering children opportunities to work on a more one-to one basis, allowing for more supervised activities, like using hammers.

The children who took part in the study were 12 pre-schoolers between three and four years of age. In the final weeks of data collection a new child, a three-year-old boy, began attending the sessions. In the majority of the sessions there were three girls and nine boys. All children, apart from one child, had been attending the setting for at least one year and appeared well integrated with other children and staff. During each of the recording sessions there was typically three, of four available staff members, who supervised either outdoor or indoor free play sessions. Two of the four staff members were Level 3 qualified forest school practitioners.

2.3. Ethical considerations

The study took place in 2017 and the researchers followed the most up to date ethical guidelines (BERA, 2011). Initially there was contact with the nursery and in particular the centre manager. During our initial conversations with the gatekeeper, and prior to any data collection, it became apparent that she, and members of her team were specialized, and had a key interest in outdoor preschool provision. Our initial conversations allowed us to work collaboratively with the manager, to articulate our aims and goals and then to co-construct the broad outline and aims of our research. These initial conversations also allowed us to identify the days and times to gather our data. The days chosen were Thursdays. This was considered suitable as there was a class of 12preschoolers who attended outdoor play sessions in the morning and indoor play sessions during the afternoon. These dates were also agreed upon as they were mutually beneficial to all parties. From the first meetings it was agreed that a courtesy call would be made prior to each visit in order to confirm whether it was possible to access the nursery. This was implemented in order to maintain a positive relationship with the staff and children. For example, on several occasions sessions were cancelled and re-arranged for the following week due to staff and children engaging in a variety of other commitments (e.g. staff absence). Therefore, access to the setting was an on-going iterative process.

Informed consent is considered to be crucial aspect of the early stages of early childhood ethnographic research (Konstantoni & Kustatscher, 2015). This was obtained from staff, parents and children prior to the commencement of the study. As part of these early visits both researchers were informally introduced to all children and staff members during circle time. During this time the broad aims of the study were explained to children in child-friendly terms. During this time children were encouraged to ask any questions to the researchers. One child asked if we would be playing with them and if we would be coming every day. In this dialogue, and during all subsequent interactions with children the researchers adopted what has been termed the ‘least adult’ role (Mandell, 1988). This role involves suspending the role of a child and adopting a more child-like position during any direct

interactions, especially during data collection. Therefore, we explained that we would ask the practitioners if we could come and visit and if they agreed then we would come back. We explained that we would try to attend on Thursdays every week. Alongside written, informed consent body language during these conversations indicated that all children were in agreement with both researchers proceeding with the study. This approach, which attempts to empower the child and allow them scope to dictate their level of engagement with the research or the researchers (Mukherji & Albon, 2018), remained evident during the data collection phase.

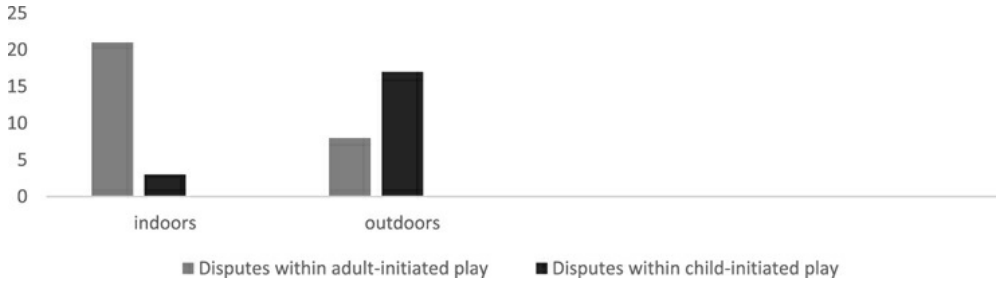
3. Results

The findings are structured around the four questions on the issue of possession and disputes within children's indoor and outdoor play. The results are coded and statistically analysed through a series of binomial analyses.

3.1. Practitioners' and environmental influences on possession-based disputes

The first question addresses whether disputes over possession of objects emerged more within child- or adult- initiated play during indoor and outdoor sessions (Figure 1).

Figure 1. Total amount of possession-based disputes occurring within adult- and child-initiated play during indoor and outdoor sessions.



These findings demonstrate that possession-based disputes were common in children's lived experiences, as supported by previous research (Catrinel & Mircea, 2010; Chen et al., 2001; Theobald and Danby, 2009). There was a nearly equal amount of disputes between children within indoor and outdoor play (24 indoor and 25 outdoor). The trends within these data demonstrate that when indoors, there were significantly more disputes between children within adult-initiated play (p = <.001). In contrast, during outdoor play, the greater amount of disputes occurred within child-initiated play. However, this trend failed to reach significance. In order to better understand these findings a second, related question was considered: regardless of type of play, was the practitioner involved in the play sequence during the time of the dispute?

These findings provide some initial insights into the inter-related role of practitioner, setting and management of preschoolers' possession-based disputes during play. The findings from the indoor sessions suggest that regardless of type of play (child- or adult-initiated) the closer proximity between the practitioner and preschoolers allowed them to have a greater opportunity to address any potential disputes that emerge during play with objects. The data from the outdoor sessions largely mirror the trends reported above (see Figure 1) in that disputes in play are seen significantly more often where the practitioner has less direct involvement in the immediate and developing direction of the play narrative and sequence (p = <.05). These findings add to previous research that highlight the less involved role of the adult within outdoor play (Leggett & Newman, 2017; Little et al., 2011; Maynard, Waters & Clement, 2013).

Having established differences in practitioner's levels of involvement during possession-based disputes within indoor and outdoor play we assessed whether there were differences in practitioners' ability to contribute in the resolution of disputes in a successful or unsuccessful way (Figure 3). Instances that 'enabled children to arrive at a workable compromise' (Church et al., 2018, p. 92) were deemed successful; instances which were not resolved to a mutually satisfactory workable compromise were deemed unsuccessful.

There was no difference between the number of successful and unsuccessful dispute resolutions within indoor play. In contrast, practitioners were significantly less successful in supporting the resolution of children's disputes during outdoor play (p = <.05). Importantly, it is also worth noting that practitioners' levels of involvement in play (Figure 2) and success in helping children resolve disputes (Figure 3) were less evident during bouts of outdoor play. This would suggest that while the outdoor setting offers unique learning opportunities, it may also provide pre-schoolers with additional social challenges to navigate. This finding raises a further key question about the role of the practitioner and the context in influencing how pre-schoolers experience and resolve possession-based disputes within indoor and outdoor play. In order to address this, the first possession heuristic was examined as a means to resolve possession-based disputes between children during indoor and outdoor play. It was found that pre-schoolers rely heavily on the first possession heuristic as a means to manage any disputes that emerge over possession of

items within both indoor (p = <.001) and outdoor (p = <.001) spaces (Figure 4).

Figure 2. Total amount of incidences of possession-based disputes within indoor and outdoor sessions where practitioners were either involved or uninvolved in pre-schoolers' play.

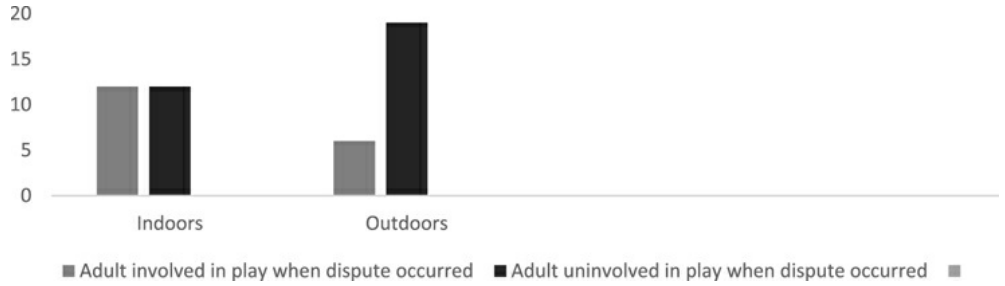


Figure 3. Total amount of incidences within indoor and outdoor play where practitioners were either successful or unsuccessful in supporting the resolution of possession-based disputes between pre-schoolers.

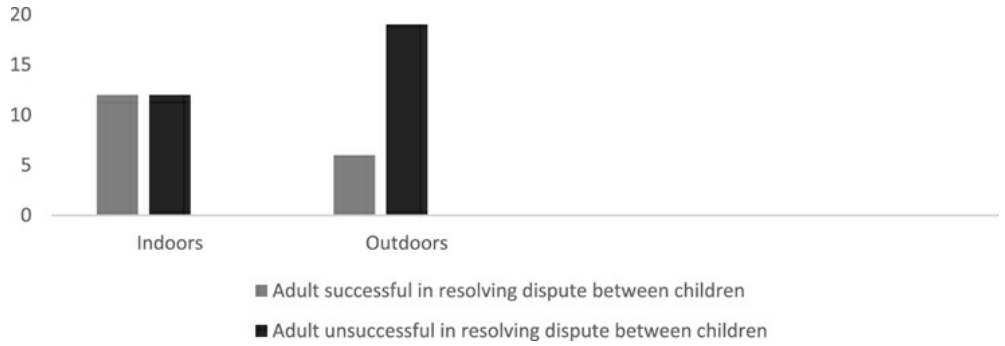
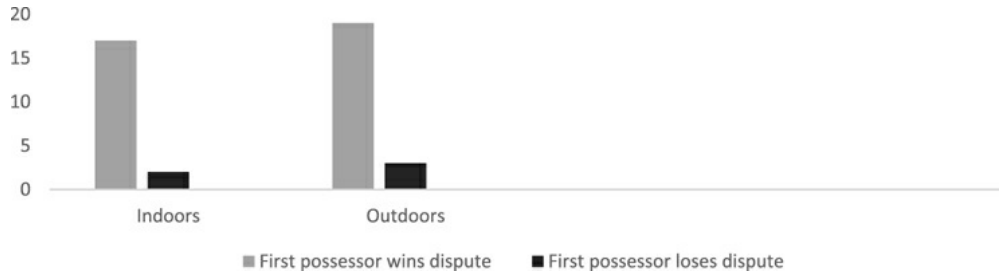


Figure 4. Total amount of incidences within indoor and outdoor session where the first possessing pre-schooler either wins or loses a dispute over play resources.



Reliance on the first possession heuristic was evident in both indoor and outdoor play. At a broader theoretical level these findings appear consistent with the evolutionary argument (Maynard Smith, 1982) and developmental findings (Cobb-Moore et al., 2008; Friedman et al., 2013; Kanngiesser et al., 2015). However, the findings do not provide the more detailed, nuanced insights of (a) how these disputes occurred, (b) how they were experienced by the relevant parties involved, (c) how they were managed to either successful or unsuccessful resolutions and (d) how the first possession heuristic was used by both pre-schoolers and/or practitioners within bouts of indoor and outdoor play.

In order to develop a deeper insight of these issues, examples obtained from the event sampling approach were revisited and qualitatively assessed. This approach focuses on, and outlines the verbal and non-verbal communication between pre-schoolers, and in some instances between preschoolers and practitioners, during relevant play sequences.

3.2 Qualitative data exploring children's experiences

3.2.1 The role of the practitioner in resolving a possession-based dispute within indoor play

The role of the practitioner in resolving possession-based disputes was evidenced during several pre-schoolers interactions with wooden blocks designed to fit together to resemble a pizza. In this instance a child who had been playing with these blocks assembled them into a pizza shape and then had moved away to a different area of the room. In his absence four other children sat nearby continued to play with these materials. These children had disassembled the child's pizza to make a new pizza of their own. The child returned and stated:

Child: 'I was making that pizza and they wrecked it'.

Practitioner: 'I know, but you have walked away haven't you'.

Child: 'But I am going back now'.

Practitioner: 'That's fine, you can go back'.

– The child then observes and looks upset.

Practitioner: 'Go and help because they are your friends aren't they?'

Child: 'I want to do it on my own'

Practitioner: 'But look, we have only got a few pieces haven't we'

Child: 'But I want to do it on my own' (he then seeks comfort by sitting on the practitioners knee)

Practitioner: So what can we do to make (child's name) happy?' … we have got to share so (another child's name) has got to have a turn now just like you have had a turn' … 'we could make something else … look, all of these different things … lots of different shapes … so what could we make?'

This play sequence demonstrates the fluid and temporary nature of object possession of freely available play resources within early years play in pre-school settings. It also demonstrates the on-task role that the practitioner plays in resolving possession-based disputes within indoor play. When practitioners are aware of disputes between children, they can play a central role in a successful resolution (DeVries & Zan, 1994). This example provides both an imposed solution ('we have got to share') and a problem-based approach ('so what can we do to make (child's name) happy?') to conflict resolution (Church et al., 2018). Shortly afterwards one of the children who took possession of the pizza pieces stated to the dispossessed child 'I want to make you a pizza'. Importantly, the final, pro-social act from one of the children now in possession of the pizza blocks demonstrates that possession-based disputes within pre-school play can be resolved by pre-schoolers through other-regarding behaviours. This final observation suggests that children, as well as practitioners are capable of generating and employing a problem-based approach to dispute resolution.

3.2.2 Limited possession-based disputes in adult-initiated and indoor group play

In this example an indoor group of four children were supported by a practitioner as they worked side-by-side for approximately 20 min making mermaids from playdough. These creations were made through children using a common pool of freely available resources and incorporated a mixture of adult-initiated collaboration and individual effort. The key focus of interest here was whether each child's desire to achieve individual and/or collective goals would result in possession-based disputes framed around access to, and use of the shared resources. Related questions here rest on the role of the practitioner in guiding and supporting these indoor activities and managing competing claims to object possession and use. Each of the four children were given a specific task for the preparation of the playdough; such as weighing the flour, getting the water, measuring the oil to bind help bind the ingredients, and pouring in the paint to personalize the colour. Having placed all ingredients into the bowl the children were then instructed by the practitioner to each take a turn to stir in the ingredients.

In preparing the materials for playdough in this manner it can be argued that the practitioner was facilitating collaboration and shared intentionality to an over-arching group goal (Tomasello & Carpenter, 2007). There are two initial observations that arise from the events highlighted within this play sequence. First, there was considerably less physical movement from children around the setting during this period with sustained periods of time spent, and attention given to the mermaid activities. A second observation rests on the relative lack of dispute that emerged during this activity despite each child having their own unique goals and intentions within the group. For example, it was not until around 12 and a half minutes into this activity, a period where three of the four children had already taken a turn to stir the materials, that the fourth child raised a question to the practitioner about having a greater input into the task.

Child: 'when is it my go?'.

Practitioner: 'Child A, B and C had all had a go and 'who is left? … You.

Child: 'and then you'.

Practitioner: 'can I have a go as well?

Child: 'Yes'

Practitioner: 'Thank you. That is very kind of you'

Shortly after this the practitioner asked the child if he would like to let the final child have a turn … 'to make sure everyone gets a turn'

Child: Yes.

At this point the mixing bowl is given to the fourth child who stirs it for approximately 90 s.

During periods of observation there was only one instance where a child promoted his own interests first (by asking if he could have his turn). Such positive forms of social engagement with other children can be argued to be the result of the practitioner intentionally engineering a collaborative approach to this activity. As outlined earlier, early experiences of collaboration with

others has been linked to a range of prosocical skills (Gräfenhain et al., 2013). Another important observation in this sequence is evident from around 15 min into this activity. Here, a child who had not been one of the original four children who had made the playdough asked if he could also make playdough. This seemingly trivial request is important as it provides the first instance during this session where a new child, who has no prior investment or sense of ownership of the materials, attempts to enter the group activity.

Child 5: 'I want to do some playdough now (Repeated)

Practitioner: 'OK (child's name).

Shortly after the practitioner asks if this child would like to knead the dough. The child agrees and does so.

Practitioner: 'we have all had a fair turn now'

Another child approaches shortly afterwards who also shows interest in the playdough.

Practitioner: 'shall we let (child's name) have a turn to finish it off?'

The children comply with this request and shortly afterwards the practitioner states: 'are we ready to divide this up to make some mermaid tails?'

The key observation from this sequence of play rests on the positive attitude exhibited by established members of this group to newly arriving children. These observations build on the quantitative findings provided earlier showing reduced incidences of possession-disputes within indoor play. More specifically, the practitioner was more involved during this activity and therefore more able to readily manage any disputes that emerged within the activity.

3.2.3 The issue of first possession and ownership in outdoor play

One clear instance of conflict over possession of play objects was evidenced during a sequence of interaction between two children in the mud pie/kitchen area outdoors. During this sequence of play child A was engaged in making mud pies and after a while child B approached this area and began to engage with the materials. Child B made no attempts to play with the first child, but rather was motivated by his own interests.

Child A (engaged in activity) experiences Child B approaching the play area and taking a spoon used by Child A. Then child B walks away with it and throws it on the grass. Child A then chases after Child B and states: 'I need a spoon!'. Child A then follows Child B and retrieves the spoon from the grass. During this time Child B returns to the main area and attempts to take possession of other resources. Child A hurries back and states: 'No, don't take all the spoons!' Both children remain side-by side for several seconds before Child B again scoops one of the spoons out of the water (in a bowl) and walks off again before throwing it on the grass. During this time Child A resumes her activities with the utensils and water. Child B then returns with a colander, fills it with muddy water and empties it nearby. On seeing this Child A states: 'not allowed'.

When this behaviour is repeated Child A states louder: 'not allowed! … it went right in my face'.

Child A again attempts to appeal to Child B by again stating: 'it went right in my face'.

Child B repeats this again and Child A mutters: 'No!'.

Child B then moves a few steps away and picks up a small shovel. During these few seconds

Child A is seen re-engaging in solitary play by putting plastic toppings on her mud pies. Child B then returns and puts the shovel into the bowl containing water, scoops some out and pours it over her mud pies before picking up one of the spoons Child A was using and turning his back. Child A again seen grimacing her face and states: 'No!'. Child B then moves around to the other side of Child A and uses the spoon to scoop more water out and pour it over the mud pies. Child A states: 'No, I don't want water … I don't need any water'.

At this point both children are attempting to assert some physical control over the direction of the activity. Child A reaches out to take back the spoon while Child B pays no attention to her and walks out of reach to the side of the mud pie area before again attempting to re-engage with the materials. Child A then further asserts her authority over the materials by turning her head in the direction of Child B and making an aggressive noise with her tongue near to the face, this is repeated and twice: BLLLLLGGGGHHHH … . BLLLLLGGGGHHHH. They then stand uncomfortably side by side for several seconds before Child B moves away from the area. At this point Child A can be seen lifting up one of the mud pies, placing a spoon in it and patting out down as if to make a smooth surface.

In this incident children's perception of the rule of first possession is apparent. Child A was seen to be making a concerted effort to protect the level of investment she had expended on mud pies. This type of behaviour is consistent with pre-schoolers' understanding of the rules that prior effort and investment with resources (Kanngiesser et al., 2010) and first possession (Cobb-Moore et al., 2008; Friedman et al., 2013) equate with greater claims of ownership over resources. Consistent with both interpretations Child A can be seen to be defending the direction of this play sequence and is only seen to move away from the

play area after Child B has lost interest. Importantly, these observations fit equally with the evolutionary model proposed by Maynard Smith (1982).

Evidence demonstrates that at around four years of age children are able to use both verbal information (Blake et al., 2012) and emotional expressions (Pesowski & Friedman, 2016) in order to make accurate inferences related to object ownership and perceived possession. It is also worthy to note that this incident occurred during Child B's first visit to the pre-school setting. Therefore, this new child's relative lack of experience around other children, and limited understanding of Child A's ownership claims, may be the result of a more basic understanding of another's feelings and thoughts (Carpendale & Lewis, 2006).

During this relative short exchange there was no interference from the practitioner and children reached a successful resolution. Therefore, the presence of the practitioner may not always be necessary in encouraging children to resolve their disputes. This, more direct approach to dispute resolution appears to be more evident outdoors and raises an important question about the additional challenges, and potential benefits that may be implicit within outdoor play.

3.2.4 Positive emotions to negative actions within outdoor play

In this example we see several children engaged in a pirate game where they are searching around the outdoor space to find hidden treasure (gold coloured plastic coins).

Practitioner: Oh dear, one of our friends is very upset. Does anybody know why?

Child A: Child B took the coins off me.

Practitioner: Look how sad your friend is … that's making me feel really, really sad. And how does that make you fell? … if your friend is really really sad and crying how does that make you feel?

Child B: Happy.

Practitioner: That's not very kind is it?

Child B then becomes distracted as he finds more coins on the floor.

Child C: Sees Child A upset and gives him some of his coins.

Practitioner: That is very kind. Does that make you feel happy.

Child A smiles and walks away.

This short example of a possession-based dispute during outdoor play is consistent with the happy victimizer phenomenon (Krettenauer et al., 2008; Nunner-Winkler & Sodian, 1988; Smith & Warneken, 2014). It demonstrates that preschoolers are still in a formative stage of emotional understanding and may have some difficultly in demonstrating an appropriate response (feeling sad or contrite) having just aggressively acquired a desired play-related resource.

4. Final conclusions

The present study explored the role of the practitioner and the environment in shaping preschoolers' exposure to possession-based disputes. The findings demonstrate how both practitioners and preschoolers experience and manage possession-based disputes differently during indoor and outdoor play sessions. These findings raise a number theoretical and practical implications. The disputes reported in the study tended to occur more frequently within adult-initiated play when indoors and child-initiated play when outdoors. These findings are not especially surprising when considering that the outdoor environment allows children more space to explore and play (Maynard, Waters & Clement, 2013; Leggett & Newman, 2017). Therefore practitioners were less involved on children's play when disputes arose outdoors, and consequently, less successful in supporting the resolution of the possession-based disputes that occurred amongst children.

In contrast, the findings from the indoor observations demonstrate that practitioners were equally involved and equally successful in supporting children to resolve disputes. The experience of preschoolers conflict over possessions, while 'inevitable' within busy preschool setting (Church et al., 2018) raises important questions about how early years settings manage the competing goals and interests of different children. Adopting, a more 'hands on' approach there is a clear example within indoor play where the practitioner fosters and supports a shared intentionality (Tomasello & Carpenter, 2007) between several children, with which each child has their own unique motivations and goals, but which is framed within a collaborative framework which emphasizes the broader motivations and goals of the group.

Within such sequences of play children's differences of opinion or feelings were largely absolved with greater emphasis placed on important prosocial behaviours such as patience (Gräfenhain et al., 2013) and sharing. It is important to note that the children and the practitioner were working toward a pre-established set of goals, set out before the activity began. Also, this was an activity that these children had engaged in several times previously. Therefore, it would appear that the familiarity and collaborative nature of this task fostered opportunities for preschoolers to not only observe more socially acceptable behaviours from the practitioner, but also embody them within their actions to other children (Section 3.2.2: Practitioner: 'Child A, B and C

had all had a go and 'who is left? … You; Child:' and then you'). Nevertheless, there were also examples during indoor and outdoor play where children's motivations and goals were not aligned, resulting in disputes. For example, in Section 3.2.3 both children engaged in a protracted dispute over the use of items within the mud pie/kitchen area of the outdoor space. The key observation here rested on the outcome of this dispute, which saw the first possessor of these resources, having engaged in prior labour with them (Kanngiesser et al., 2010), maintain possession, and only moving away from this area once the challenger to them had lost interest in them and moved away. Alongside this example, it is also important to note that there were instances where the individual child's emotions were misaligned and discrepant (see Section 3.3.4) resulting in an overt expression of happiness (having forcefully taken a desired object (gold coins) instead of feeling sadness and contrition (having upset another child)) (Smith et al, 2010).

The study followed an ethnographic approach aiming to unravel the lived experiences (Konstantoni & Kustatscher, 2015; Spradley & McCurdy 2008) of children's and practitioners' social interactions during indoor and outdoor play. The first general impression formed from the early observations was that children's behaviours, actions and routines, differed considerably across indoor and outdoor play settings. During outdoor sessions children appeared to engage in greater amounts of physical play over wider areas and engage in play routines that had more transient themes. A second broad observation focused on attempting to better understand specific cultural practices within the setting in regards to social relationships. It appeared that practitioners were adopting a more 'backseat' approach with less direct involvement in children's outdoor play and a more 'work-based' approach when indoors.

As part of the observations, reflections on the video-recordings and field notes it became apparent that children engaged in object-related disputes. Equally compelling was how these disputes were negotiated and resolved. The types of disputes observed within children's play were very real, fully experienced by each child and at times, emotionally charged. When reflecting on these observations it was considered that these struggles over possession of objects or resources in preschool play experiences appeared to reflect the types of social experiences and interactions we all encounter in our day-to day lives. The role of the environment and the practitioner seemed to be important contextual factors in framing how 3 and 4 year olds manage and negotiate possession-based disputes during interactions within bouts of indoor and outdoor play.

Thus, there are several limitations within this study. First, the sample size was relatively small. Future research with larger samples across different cultural backgrounds would provide deeper insight into children's dispute resolutions and negotiation skills during preschool. Another aspect that could be considered in future research is children's narratives, justifications and verbal expressions during conflicts and disputes. An investigation in children's strategies, besides the first-possession heuristic (Cobb-Moore et al., 2008; Kanngiesser et al., 2010; Neary & Friedman, 2014), could also be considered. The first possession rule appears to form part of a social constructivist philosophy within early years practice, which mirrors wider cultural practices emphasizing the need for turn-taking and fairness.

To sum up, the outdoor setting, while affording greater space, greater movement between areas of interest, and lesser emphasis on adult involvement and interfering, may also provide frictions and challenges for children to overcome. These offer children first-hand opportunities to develop and refine social skills in the realm of negotiation, argumentation and conflict resolution. The early years provision that offers a mix of child- and adult-initiated indoor and outdoor play experiences appears to provide children with optimal social contexts to cultivate their sense of fairness, justice, peace and other competences and attitudes towards their social worlds.

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