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Factors influencing children's perceptions of choice within their free play activity: the impact of functional, structural and social affordances

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Abstract

Wales, Northern Ireland, Scotland and the Republic of Ireland currently have play policies based on a definition of play being freely-chosen by the child. These are based on adult generated definitions about children having free choice during play rather than a child's perception as to whether and in what ways, choice is important. When coupled with other aims for learning and development, play being defined as freely chosen within policy documentation can lead to challenges for practitioners. For example in early years classroom environments, ensuring learning outcomes are met can cause a dichotomy between free play and play which is engineered to meet curricula demands. There is the potential for similar tension to arise in other professional contexts such as playwork, if an adult generated definition of play as being freely chosen is retained. It is important that we understand how important choice is for children in their play and what factors might influence this choice. Perceptions of choice in children's self-defined play scenarios were gathered from 48 children using pictorial stimuli and interview methods. Children were firstly asked how much choice they had in the play activity they had described. Hypothetical changes were then made to the play activity based on functional (types of activity), structural (space and materials) and social (introducing known and unknown children or adults) affordances. Findings revealed that children did not need to have complete free choice for an activity to be defined as play and there was no significant difference in the amount of choice children described as having in their play across home, school playground and out-of-school club contexts. Making functional or structural changes to children's play always led to a significantly lower level of perceived choice. Manipulation of the social affordances had a more varied effect where perceived choice varies both within and across contexts depending if unknown or known people were involved in the play. Findings are discussed in relation to practice, policy development and planning for play across contexts.

Key Words: Play; Playwork; Children's Rights; Policy; Practice;

Introduction

Research consistently demonstrates that children show higher levels of enthusiasm and motivation, more purposeful problem solving and increased signs of emotional wellbeing when they are engaged in activities they themselves perceive to be play (McInnes et al., 2009; 2011, Howard & McInnes, 2012, Whitebread, 2010). It is therefore important that we understand what characteristics are important to children's definition of play from a child's perceptive.

Each country within the United Kingdom and the Republic of Ireland has published a play policy or strategy (WAG, 2002; NCO, 2004; OFMDFM, 2011; SG, 2013), although the English Play Strategy (DCFS/DCMS, 2009) has now been abandoned due to austerity measures brought in by the coalition Government. Each policy is based on a definition of play being freely-chosen by the child. Policy construction and policy implementation however, do not always go hand in hand. In early years education, Wood (2004, 2007) points out the conflict between policy and practice in relation play in the classroom where a dichotomy exists between children having free choice in their play in contrast to adult engineered play experiences designed to support their learning. Freely chosen play is an adult construct based on rhetoric, and to date there has been no research from a child's perspective to support the notion that play must always be entirely freely chosen. This has been highlighted by Dympna (2000, p24) who states "there is a general absence of children's voice in policy development". By continuing to base policy on a definition of play as being freely chosen by the child, there is a risk that, as with early years education, conflict between policy and practice in other professional contexts such as playwork, hospital play or play therapy, could arise.

Coalter and Taylor (2001) identify three characteristics within definitions of play; freedom of choice; spontaneity and; an absence of extrinsically imposed rules. Lester and Russell (2008) also identify personal choice as a key component of play, however as they clearly state, "… freedom of choice, may not always apply absolutely" (Lester and Russell, 2008: p38). What

affects choice will depend on many factors. Busby's (1994) ethnographic study of free play in a children's pre-school playground highlighted the importance of choice in relation to the how, what and whom to play with, however the specific factors affecting choice were not considered in any detail. SkillsActive (2006) undertook a consultation with 4-16 year olds in 9 supervised play settings. The most important factor identified by children was that they "wanted freedom and choice and ultimately to play and have fun" (2006, p6). Interestingly when children were asked what they liked about their adult supervisors (playworkers) their response was that they gave them freedom and choice. This suggests choice is a key element of play for children and that adults play a crucial role in facilitating this. As well as playing inside of the classroom, in school, children play during their supervised break and lunchtimes. Children may also play in an out-of-school club staffed by playworkers. Once home, children will play in the presence of their parents. For play to be effectively facilitated across this 'institutional triangle' (King and Howard, 2014), it is important that we understand, from a child's perspective, how important choice is to children's definition of play and what kinds of factors influence this choice across contexts.

Else (2009, p31) states that choice is important in play but that crucially, although, "free choice is best ……. often choice between alternatives is sometimes all that is needed". It is likely that children will experience different levels of choice according to where their play occurs and how policy is interpreted by the various professionals involved in its implementation (Powell and Wellard, 2008; Lester and Russell, 2008). In an exploratory study on children's perceptions of choice in their play, King and Howard (2012) identified that children's perceived choice varied across contexts (according to whether children were playing at home, in the school playground and the out-of-school club) and according to who was involved in their play (the number of children playing and whether or not adults were present). In addition to these factors, King and Howard (2012) identified the need to explore the relationship between the structural, functional and social cues in the environment that may or may not impact the levels of choice perceived by children in their play, an issue also identified by Smith's (2010) study of children's participation in out-of-school provision.

This paper describes a detailed investigation into factors influencing children's perception of choice using an experimental pictorial procedure (the Manipulation of Affordance Scenario Task - MAST). It focuses on children's perception of choice in activities they themselves have defined as play and the factors that influence this choice when hypothetical changes are

made. Results are discussed in relation to both policy construction and policy implementation.

The MAST and Affordances

The MAST procedure was developed in relation to the concept of affordances (Gibson, 1986; Heft, 1998; Kyttä, 2002; 2003; 2004; Hyvönen and Juujärvi, 2005). Affordances are defined by Gibson (1986) as the interaction between the environment and the organism and between the abilities of the organism and the features of the environment (Chemero, 2003).   The different affordances used in the MAST procedure were structural affordances that related to the play space and fixtures within it, functional affordances which related to the different types of play activity available and social affordances which related to known and unknown children and adults being introduced to the play.

Research on affordances has been undertaken in children's home environments focusing on preferred play spaces (Castonguay and Jutras , 2009), children and young people's needs (Clark and Uzzell, 2002) and the use of urban and rural space (Suhaizan et al, 2008). Studies undertaken in the outdoor school environment include children's use of space (Ozdemir and Yilmaz, 2008), the properties of the environment (Fjørtoft , 2001; Kasal and Dogan 2010) and activities undertaken (Fjørtoft and Sageie, 2000). Although there has been no specific research on affordances in out-of-school provision, the importance of affordances particularly in relation to outdoor play, has been linked to playwork practice (Lester and Maudsley 2006).

This study considered the impact of structural, functional and social affordances on children's perceptions of choice across three environments; the home, the school playground and the out-of-school club.

Method

A mixed method study was undertaken where quantitative and qualitative data were collected. Children were asked to score on a scale of 0-10, the level of choice they thought they had in an activity they had defined as play, prior to and following the manipulation of structural, functional and social affordances (the Manipulation of Scenario Task (MAST)

procedure). Prior to any data collection, ethical approval was gained from the University Ethics Committee.

The research was carried out in three different holiday playschemes in West Wales between August 2010 and February 2011. The use of the holiday playscheme facilitated interviews with children across a wide time frame as the sessions ran from 8am until 6pm. Each holiday playscheme was visited on three occasions, resulting in a total of 9 site visits overall. In total 48 children participated in the study. The age range of the children was six years at the lower end and twelve years at the upper end with most children being aged between 7 and 8 years. The gender composition of the sample was 24 males and 24 females.

Age	Number Male	Number Female	Total
6	3	3	6
7	5	6	11
8	6	8	14
9	5	3	8
10	3	2	5
11	1	1	2
12	1	1	2
Total	24	24	48

Table 1: Sample age and gender

No specific parameters were determined in relation to the demographic background of children asked to participate in the study. Children who attended the playschemes came from addresses throughout West Wales although the majority attended the holiday playscheme as their parents or carers were working.

Manipulation of Affordance Scenario Task (MAST) Procedure

The MAST procedure began by asking children to outline a play activity, tell us how much choice they had during this play and why. Then we hypothetically changed this play by introducing or removing cues and asked children again how much choice they had during the play and why. We were interested in firstly, how much choice children reported in their original self-chosen play activities and secondly, whether structural, functional or social affordances influenced this level of choice. The MAST process involved children looking at a stock set of photographs to represent the three environments of home, school and playground. For each photograph children were asked what their favourite play activity was and whereabouts they would play. Children were given a sliding choice scale to determine their perceived level of choice. It was explained that the scale was set up as 0 for no choice and 10 as having all the choice. Children were asked why they did not have all the choice if their score was less than 10.

For each environment (home, school playground and out-of-school club), the children's play was manipulated *structurally, functionally* and *socially. Structural* manipulations involved firstly moving the play to a different space and secondly reducing the original space to play in. The *functional* affordance was manipulated by involving other children playing their own

other games in the place space. This was manipulated further by the other children leaving the play space but leaving their equipment behind. The *social* manipulation involved the introduction of known and unknown people into the child's chosen play activity. Both known and unknown people were introduced; a single child, a group of children and then an adult. Children were asked to re-score their level of choice after each manipulation. One disadvantage of using repeated measures is the potential impact of children's participation in one element of the study on the next. Each participant firstly manipulated the structural affordances, followed by the functional affordances and finally the social affordances. On reflection, the potential for order effects could have been minimised by rotating the different types of affordance manipulations through the sample.

The results from the MAST procedure were analysed using ANOVA comparing children's initial perceived level of choice and the score after each affordance manipulation. This was undertaken both within and between each context.   For any significant change in perceived choice, effect size was calculated based on Cohen (1988) where for a small effect $r = 0.1$, a medium effect $r = 0.3$ and a large effect $r = 0.5$. According to Sauro (2014) however, effect sizes must be interpreted with reference to the number of participants in the study population. Following the guidelines provided by Sauro (2014) in relation to the sample of 48 children reported here, there is the statistical power to detect large effects (where n must exceed 28). However, any small or medium effects could be a function of sample size (which would need to exceed n72 for medium effects and n452 for small effects).

Interviews with Children

Children were simultaneously interviewed to obtain reasons for any change in perceived choice when play was manipulated were analysed using a thematic Grounded Theory approach (Glaser and Strauss, 1967).   Grounded theory requires analysis directed towards theory development (Holloway & Todres, 2003), however as Braun and Clarke (2006) point out, grounded theory uses thematic analysis where themes capture something important about the data in relation to the research. The emergence of themes using grounded theory can "identify unfamiliar and concealed meanings, attitudes, values, beliefs and knowledge" (Hyvonen, 2011: p69). The research undertaken questioned whether children perceive their play as being freely-chosen so a grounded theory approach was used, with a strong focus on thematic analysis.

All interviews were recorded on an Edimol MP3 Player and later transcribed line by line using the NVivo computer package for thematic analysis. This involved the coding of all data into open codes, which breaks down the data analytically to form categories and axial codes to form sub-categories (Corbin & Strauss, 1990). Hyvonen (2011) used this approach to analyse Finnish teachers' perceptions of the use of play in the classroom. To begin with, no limits were placed on the number of themes that emerged for either the initial perceived level of choice or following the affordance manipulations. Once each interview had been transcribed, analysed and responses placed into an open code theme, the content of all codes were re-read and where similar themes were identified, they were merged.

Results

Initial Perception Level of Choice

Children were asked their favourite type of play and where this would take place. The average perceived level of choice was 7.45 indicating that even when describing their own favourite play activities, children did not necessarily need to have complete free choice (i.e. a score of 10). This was consistent across contexts. Table 2 shows the average perceived level of choice for the children's play activities in each of the three contexts, prior to any affordance manipulations. ANOVA showed no significant difference in the initial level of perceived choice children described in their favourite play activity across contexts f (1.95, 7.389) 0 .486, p=0.623.

Play Environment	Average Score for Choice	Std. Deviation
Home	7.77	2.50
Playground	7.27	3.27
Out-of-school Club	7.31	3.11

Table 2: Average initial perceived level of choice score for choice reported by 48 children in their play activity

The Impact of the Different Affordances on Initial Level of Perceived Choice across Contexts

The difference between initial perceived level of choice and the level of choice reported following the structural, functional and social affordance manipulations is shown in Table 2. Scores which have a minus (-) value indicate that the level of choice is lower than the initial perceived level of choice, whereas scores with a plus (+) value indicate a score higher than the initial perceived level of choice score.

Affordance Type	Cues manipulated	Difference between initial perceived level of choice and choice levels following manipulations		
		Home	School	Out-of-school Club
Structural Affordances	Change Space	-1.97	-1.81	-1.87
	Reduced Area	-1.96	-1.52	-2.35
Functional Affordances	Proximal Activities	-1.58	-2.08	-1.61
	Equipment Left	-1.06	-1.19	-1.18
Social Affordances	Unknown Child	-1.48	-0.81	-0.35
	Unknown Group	-2.25	-1.29	-1.61
	Unknown Adult	-2.48	-2.06	-0.74
	Known Child	+1.06	-0.42	+0.65
	Known Group	+0.19	-1.62	-0.95
	Known Adult	-0.29	-1.31	-0.08

Table 3:   Difference between perceived levels of choice following affordance manipulation

Table 3 shows, when compared to the initial perception of choice prior to any manipulation of the structural, functional and social affordances, children's perception of choice changes. The manipulation of all of the affordances led to a significant change in the amount of choice children perceived $f_{(6.90, 317.385)} = 11.829$, p=0.000 (Wilks Lambda p=0.000) compared to the initial perception of choice. The effect size was small (r = 0.02). .

There was no significant difference between settings in changed level of choice after each affordance manipulation $f_{(1.829, 116.017)}$ 1.843, p=0.168, however there was a significant interaction between manipulation and setting $f_{(11.307, 520.125)} = 2.320$, p=0.008 (Wilks Lambda p=0.008). The effect size was small (r = 0.05).

The manipulation of structural affordances, (for both a change in space and for reduced area) resulted in a reduction in perceived choice across each context.   A similar pattern was found with the manipulation of functional affordances. The manipulation of functional affordances

(other children playing in the same space, proximal activities and equipment change) led to a reduction in the level of perceived of choice across each context. This may reflect children having to accept change and adapt their play to the play space available and having to share the space with other. Often the structural aspect of the environment does not give the scope for children to be able to change the play space (e.g. fixed play equipment, concrete surfaces) or have any say how many children can be in the play space (school playground, public park). Where there is little negotiation, choice will be perceived to be limited.

In relation to social manipulations, data were more varied. When playing with unknown people there was a reduction in perceived choice; when an unknown child joins in with the play; an unknown group of children and; unknown adult resulted across context a decrease in perceived choice across all contexts.

When playing with known people there was there was a decrease in perceived choice when playing in the school playground, however the results were more complex at home and in the out-of-school club.   When playing with a known child at home and in the out-of-school club, the perceived levels of choice increased. This also was the case when playing with a known group of children at home (but not so in the out-of-school club). The manipulation of social affordances led to more varied effects compared to the manipulation of either the structural or functional affordances and the statistical significance of these differences are will now be considered.

The Impact of Perceived levels of choice and Manipulation of Social Affordances
The data from the manipulation of social affordances was further analysed by collapsing the data firstly into all unknown people and all known people and secondly comparing unknown and known individual people within each context. ANOVA showed a significant difference in the perceived level of choice children reported according to whether they were playing with known or unknown people within each play environment f (1, 297.877) = 19.350, p=0.000 (Wilks' Lambda p=0.001). The effect size was small (r = 0.2). ANOVA for perceived level of choice when playing with known or unknown people between the three play environments was significant f (1.941, 173.024) 13.239, p= 0.000 (Wilks' Lambda p=0.002). The effect size was small (r = 0.19). There was also a significant difference between known and unknown children, known and unknown groups of children and known

and unknown adults within each play environment f (1.763, 158.102) = 9.550, p= 0.000 (Wilks' Lambda p=0.000), with a small effect size (r = 0.15).

When playing with unknown or unknown people in the school playground, the perception of choice was reduced. This may reflect that at lunchtimes, a great number of children congregate in a relatively small space for a limited time. The increased numbers might result in children having less choice, irrespective of whether the child they are playing with is known or unknown to them. At home and in the out-of-school club, playing with known children increased the perception of choice. This increase in choice also was perceived at home when playing with known groups of children. This may be a result of children enjoying having friends over to play as otherwise, their only playmates might be siblings. In the out-of-school club, there are fewer numbers of children compared to the school playground, and instead of being at home; the club offers this chance to play with friends.
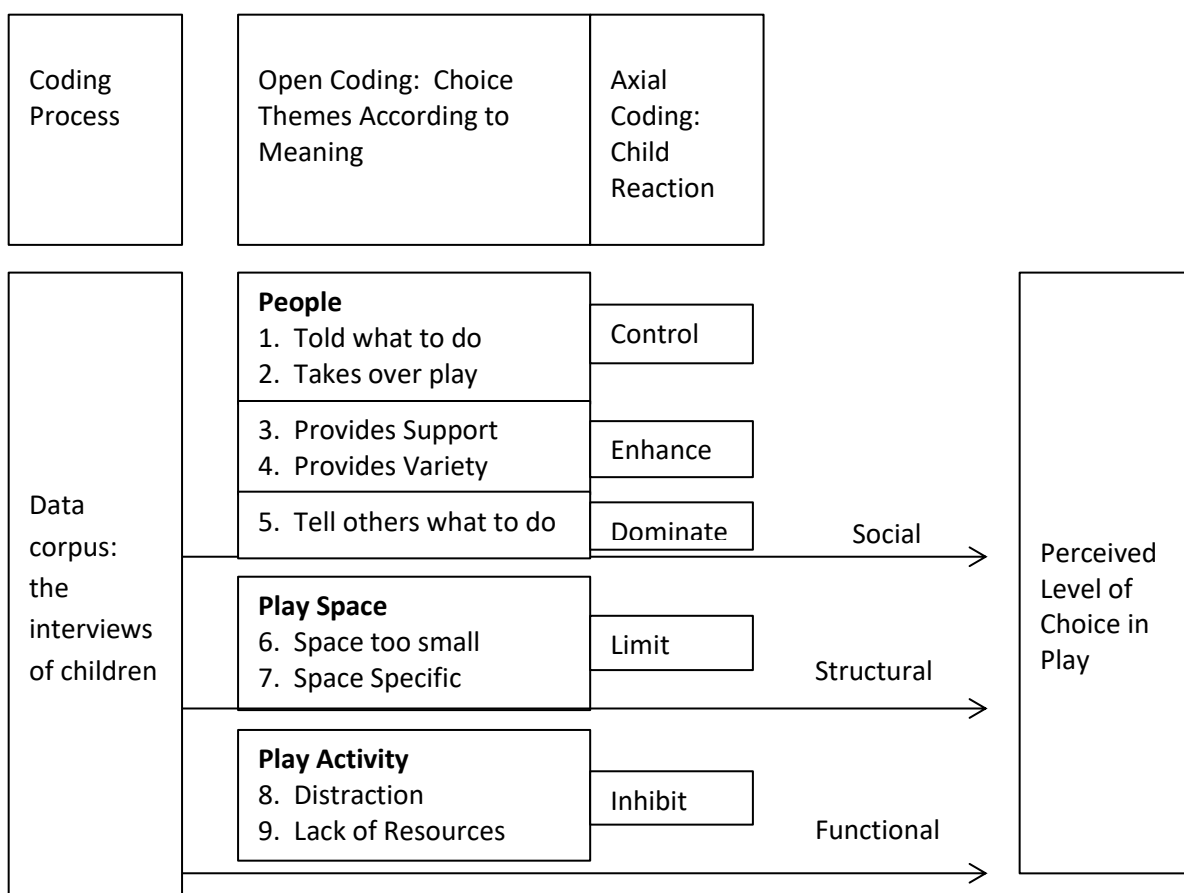
In the out-of-school club, it is noticeable when playing with a known adult (playworker), there was only a difference of 0.08 between initial perceived level and manipulated level. There is very little difference between initial perception of choice and when the playworker is involved in the play. With other people being involved in the play there may be less potential for negotiation. Playworkers are specifically paid to support children's play, and this often takes the form of negotiation. The training they have received in relation to play theory and practice is likely to differ from the role requirements and training received by lunchtime supervisors.

A summary of the results has shown that in the school playground, the manipulation of structural, functional and social affordances resulted in a decrease in perceived choice in their play. At home and in the school playground, the manipulation of the structural and functional affordances saw a decrease in perceived choice. The manipulation of social affordances when playing with unknown people also had a decrease in choice. When playing with known children and known groups of children at home or known children in the out-of-school club, there was an increase in perceived choice. Playing with known adults did result in a decrease in choice, but this was very small when compared to playing with known adults in the school playground. The reasons children provided for the change in perceived choice are now discussed.

Reasons for a Change in Perceived Choice

Using Hyvonen's (2011) grounded theory coding process template, the thematic analysis from the interviews developed 9 open coding themes under four headings. The three headings were people, activity and space.   This is shown in the coding diagram in Figure 1:

Figure 1: Coding Process Model for Perceived Change in Choice (Based on Hyvonen, 2011)

Coding Process	Open Coding: Choice Themes According to Meaning	Axial Coding: Child Reaction		
Data corpus: the interviews of children	**People** 1. Told what to do 2. Takes over play	Control		Perceived Level of Choice in Play
	3. Provides Support 4. Provides Variety	Enhance		
	5. Tell others what to do	Dominate	Social	
	Play Space 6. Space too small 7. Space Specific	Limit	Structural	
	Play Activity 8. Distraction 9. Lack of Resources	Inhibit	Functional	

Six open coding themes from the manipulation of all the affordances (social, structural and functional) that emerged resulted in a reduction in perceived choice. These were: being told what to do and takes over play (which had a controlling effect on choice); space too small and space specific, (which had a limiting effect on choice) and distraction and lack of resources, (which had an inhibiting effect). Three open coding themes from the manipulation of social affordances resulted in an increase in perceived choice. These were that the social change; provided support and variety (which enhanced choice) and; enabled the child to tell others what to do (which enabled dominance over the choice).

Reduction in Choice

Control from other people

In the home, school playground and out-of-school club, when asked why they did not have all the choice in their play (at initial perceived level of choice), children's responses indicated that play was being controlled, grouped mainly in the theme of being told what to do. In the home, parents were too controlling and in the out-of-school club rules were set out by the playworkers.

> "*Because I don't get to choose who I play with my mum says sometimes have you're little sister have a go when I'm in the middle of doing something*" (Six year old boy playing with the DS® in his bedroom at home)
>
> "*Sometimes you have to go outside after lunch and breaks you can't go on it*" (Nine year old boy playing on the computer in the out-of-school club)

In the school playground it was other children who were the controlling factor telling others what to do:

> "*No, not a lot because we have quite a few people to play football and say if there is about eight of us playing then everyone is going to have their own ideas so who goes in goal, who goes in defence because other people usually tell you boss you about a bit and I'm not the kind of person who bosses people around really*" (Twelve year old boy playing football on the concrete in the school playground)

In the school playground, children also felt they did not have all the choice in their play as their play was being distracted due to safety reasons, noise levels or as indicated in the example below, other children getting in the way:

> "*Because really, if some people are playing here they are getting in the way of the pitch*" (Ten year old boy playing football on the grass in the school playground)

Limiting factors in the play space

When the structural affordances were manipulated children stated that across all three environments, the main reason for a reduction in choice was the play space becoming too small, as indicated in the children's comments below:

> "*My dad would have most the space I would have for building*" (Nine year old boy playing on the trampoline in the front garden at home when play space is reduced)
> "*Only half the space and can't run that far*" (Seven year old girl playing stuck in the mud on the grass in the school playground when play space is reduced)
> "*Well if we only have half the space and the other half is for the little ones maybe if someone hits them I'll be very worried if I hit them*" (Ten year old boy playing football on the grass in the out-of-school club when the play space was reduced)

In the out-of-school club, children also felt their choice was reduced because of interruptions or distractions, as shown in the example below:

> "*Oh, I don't think it would change any choice unless there were little kids over here they might interrupt and put out the sockets and stuff so possibly if there were little kids not other kids*" (Twelve year old boy playing on the playstation® at the side of the room when the play space was changed)

Inhibiting factors of play activities
Functional affordances across all three environments were described as leading to distraction. This was due to the play space becoming noisy, the annoyance of other people playing in the same playspace, safety factors and equipment getting in the way. This is shown in the children's comments below:

> "*Because one, they make a lot of noise and you lose your concentration and two they could nudge you*" (Seven year old boy distracted by noise when playing on the Nintendo DS® in the lounge at home when other children play in the same play space)
> "*Because it would be a bit annoying and I would keep getting headaches*" (Eight year old girl playing on the climbing frame when other children are playing in the same play space in the school playground)

> "*Because it would be a bit harder to do anything when you've got really noisy children*" (Nine year old girl drawing on the table in the out-of-school club when other children are playing in the play space)

For social affordances, the main theme leading to reduced choice that emerged for both home and club environments was that children felt their play was taken over by others. In the school playground, children felt their play would be distracted.

> "*They wouldn't play the games I want to play and she have more choice because she's the guest*" (Ten year old girl playing on the computer in her bedroom at home when an unknown group joins in with their play)
>
> "*They might not know how to play it and be slow and if they were a baddy they might not be able to catch you*" (Seven year old girl playing a chasing game on the grass in the school playground when an unknown group joins in with the play)
>
> "*They all would want to have a turn*" (Nine year old boy playing on the computer at the side of the room in the out-of-school club when an unknown group join in)

Prior to and subsequent to the manipulation of the structural, functional and social affordances children did not always have complete choice in their play. However, when the level of choice decreased, children perceive they had stopped playing, even when clearly they did not have all the choice in their play. The reduction of choice as a result of the play space may often be a result that is out of the child's control, as often children are unable to change the physical environment. When other children are playing in the same play space, or having to share resources, this may involve negotiation to take place. This again will have an impact on the level of children's choice. The reduction of choice down to structural and functional affordances was evident across the three play environments as reflected in both the children's comments and lower score for choice compared to the initial perceived level of choice value.

The reduction in choice when the social affordances were manipulated were down to playing with unknown people across all the play environments and when playing with all known people in the school playground. At home, the level of choice decreased on when playing with a known adult and in the out-of-school club with a known group and known adult. However, the reduction of choice was less than 1. When playing with known children both at home and in the out-of-school club, and with a group of children at home, the level of perceived choice increased.

Reasons for an increase in choice

The only increases in choice were recorded in the home and out of school club setting and involved social changes. At home there was a significant increase in choice when playing with known children (singularly and as a group); whilst in the out-of-school club playing with known children increased choice. When playing with known children, it was felt that levels of choice improved due to increased variety, support during the play or that the child could dominate others:

> "*Because it they're my best friends we can do lots of things together and play on the computer and do lots of other things as well*" (Seven year old girl playing on the computer in the living room when a known child joins in)
> "*Because they know how to play it and they will sit down with you and talk to you*" (Seven year old girl playing 'dares' on the seat when a known child joins in

Even though choice did not increase from the initial perceived level of choice value, children clearly felt when a known adult plays with them at home and in the out-of-school club their choice in play was more supported compared to known adults in the school playground. In the out-of-school club, the level of choice was very close to the initial perceived level of choice value (only 0.08 difference), which indicates that the adult (playworker) is being far less intrusive on children's choice of play compared to the home and the school playground.

Discussion

Wood (2004; 2007) stated that in early years education policy, practitioners found implementing play policy within teaching learning outcomes was controlling. This was due to different interpretations of play between policy-makers and practitioners. Practitioners found the assessment of early learning outcomes in children's free play (where children are perceived to have more choice) contravened the notion of choice during this time period in the school or playgroup. There was a belief that educational policy provided a unidirectional relationship between the use of play and teaching and learning. This unidirectional relationship went against early years practitioners own professional position, their own knowledge and their own skills.

Current policy on play, although having no specific outcome, is that play may have a unidirectional relationship between play having to be freely chosen. The development of play policies and strategies will face the same dilemma as with educational policies with the tension between contemporary socio-cultural theory and practitioner's perceived role as a facilitator. This conflict found within early years education can relate across different professional practices working with children in their play, particularly with the growing profession of playwork. Is there a risk that adult definitions of freely-chosen play can straight-jacket professional practice?

When children were asked for their initial perceived level of choice, their responses showed that across each of the three play environments children did not have all the choice but a value of 7.45. Children do not need to have all the choice on what, how, who, when and where they play. When children were initially asked for reasons why they did not have all the choice in their favourite play activity at home, in the school playground or the out-of-school club, it was evident that other people were controlling where children were allowed to play or on the way the play was undertaken. This controlling factor of play has also been recognised in other studies undertaken in the home (Jeffers and Lore, 1979; Nucci and Smetana, 1996) and the school playground (Slukin, 1981). As children get older, they often have to apply different strategies, still often adult influenced, to placate the needs of other children in order to meet family conventions imposed by the parents (Nucci and Smetana,1996), such as not upsetting guests, or adhere to peer pressure in the playground (Slukin, 1981; Pellegrino et al., 2004).

The manipulation of both the structural and functional affordances across each of the three environments saw a reduction in choice compared to the initial perceived level of choice. The reason may be down to the fact children are often unable to change the structure of the play space (home, playground, out-of-school club) or control who is allowed to also play in the same play space. For example, although the play space in both the school playground and the out of school club is generally bigger when compared to the space available at home, the more space is compensated by more children wanting to use the space. This would reflect the levels of choice between the three environments where the home would have the least children using the space and the school playground at lunchtime having the most number of children playing at the same time. In the out-of-school club, the use of indoor space is often a

single room, and thus space can be an issue with regards to the number of children attending the club.

The manipulation of the social affordances provided the most complex results, particularly when playing with known people at home and in the out of school club. Children showed that when playing with a known child at home or in the out-of-school club, or known groups of children at home the level of perceived choice increased. When two or more children are involved in the play, the concept of freely-chosen is harder to achieve for each individual child (Lester and Russell, 2008). What is evident is that in play, choice has to be negotiated. This negation may result in less choice hence, children feeling their play is being controlled (told what to do or being taken over) their play is being limited to space or inhibited by other children playing or a lack of resources.   On the other hand, children may perceive more choice as it offers more support and variety, and in some cases the child dominates the play. The aspect of support and variety may provide the basis of playwork practice, when the social affordances were manipulated with known adults (playworkers) in the out-of-school club, the level of choice was very close to the initial perceived level of choice.

The rhetoric of play being freely chosen provides a paradigm that children should have the freedom to decide who, where, how and when they want to play, based on their own free will. Children should thus have total freedom on all aspects their play. Children's perception of their level of choice from the initial value and after each affordance demonstrated children did not have total freedom. Children provided reasons for a change in choice where a reduction in choice was a result of their play being controlled, inhibited or limited. Lester and Russell's (2008) review of play indicated total free choice is not always possible when children are engaged in social play, a point also highlighted by Vygotsky (1978) and Mead (1934). Vygotsky (1978) believed that play creates demands for children to act against impulses (free will) that creates a "*conflict between the rules of the game (play) and what he would do if he could suddenly act spontaneously*" (p99), particularly when children need to adapt to certain customs and cultures (Mead,1934). Children's responses to any change in their perceived level of choice reflected the customs and cultures in existence when they were playing at home, in the school playground or the out of school club. Even when perceived levels of choice were increased when the social affordances were manipulated, children still did not have total freedom on their play.

Playwork practice, under the Playwork Principles (PPSG, 2005) has a clear focus on supporting children's freely-chosen play by supporting the play process (Sturrock and Else 1998), by responding to children's play cues. The playworker, in supporting the play process, supports children's choice, however the child appears to recognize there are limitations to the choice, as children often concede their play is regulated by adults (Eckert, 2004; Manwaring, 2006) and can range from being supportive to controlling. Manwaring's (2006) research of children's views of playworkers found across the different settings where children were interviewed (out-of-school club, holiday playscheme and adventure playground) the children agreed they "wanted freedom and choice and ultimately to play and have fun" (p6). Children felt, with respect to the role of the playworker, they liked them joining in with their play, providing help when needed and offering more variety. This supportive role and providing variety was also identified in this research. Manwaring (2006) summary found children wanted playworkers who would: "allow children freedom and control of what they do", and this aspect of allow denotes some kind of permission and again questions freely-chosen play in lived space, compared to conceived and perceived space. This may be a clue to the unique environment of playwork environments because although they are adult run and have rules and regulations, children are able to negotiate and this negotiation is based on the adaptability around choice, not just on what is available to play with, but who wants to play, where it is played and who may be in charge.

The powerful connection with adults and other children, through play, could be for both children and adults to adjust their levels of choice. Being able to adapt their choice enables the child to fit in with the social norms and customs of different environments which may either act as a barrier or support their play. Rather than focusing on freely-chosen, more focus on the adaptability of choice, where children have to negotiate how much choice they may have in a given play situation has important implications for them developing their social skills in the diverse society we live. This has implications for both policy construction and policy implementation. The adaptability of choice allows children to have a trade-off where a reduction in the amount of choice they have when playing may be compensate for by peer acceptance or being able to acquire new skills. Adaptable choice is very different from freely-chosen. Play, unless playing in a solitary game, is also a social construction that is also based around participation, decision making and children being active agents in the process. This is clearly illustrated within the Play Strategy for Scotland (SG, 2013, p15) which states:

> "What is important is that children and young people have the freedom to choose how and when they play. From the earliest days and months play helps children learn to move, share, negotiate, take on board others' points of view and cultivate many more skills".

This negotiation of choice, takes place in what Russell (2012) refers to lived space. Lived space, according to Russell (2012) cannot related strictly to policy (play policy or playwork principles) and thus where policy and principles refer to freely-chosen play (conceived and perceived), the reality (lived) will always be in conflict. However playworkers have the scope to negotiate choice with children, and hence children feel their choice is being supported. In this perceived space the play polices and Playwork Principles (PPSG 2005) are challenged, by both the children and the playworkers, a luxury that is often not permitted in the school playground with the interaction of children and lunchtime supervisors, and sometimes not at home with parents. As Else (2007) stated, sometimes only having an alternative is necessary in choice, it is how choice is negotiated is important, and for some children this may mean giving up some aspects of choice. This aspect of negotiating choice, which takes place in lived space (classroom, home, out-of-school club) is important with respect to professional practice planning structured play or supporting free play in educational environments, or supporting children in their play environments.

An adult's practice, whether they are perceived to be controlling or supportive, is influenced by six factors: health and safety; risk taking; ethical practice; boundary setting; working with parents and referral and safeguarding (Howard and McInnes, 2013). Children clearly had a perception of choice that was affected by controlling or supporting factors and this was influenced whether children knew or not other people in the play space. It appears children may have different expectations in different environments. This is what Berger and Luckmann (1966) termed habitualization, which may result in a decrease in choice, and can take place in both social and non-social environments. This implies children's choices can be at different intensities depending on how familiar the social and non-social environment is to the child

Conclusion

The results from both the MAST experiment and interviews with the children showed:

- Children do not necessarily need to perceive complete free choice when they play

- Manipulation of the structural affordances (Changing the play space or reducing the play space) and functional affordances (proximal activities and equipment left) resulted in a lower level of choice across contexts

- Manipulation of the social affordances with unknown people results in a lower level of perceived choice across contexts

- Manipulation of social affordances with known people is more complex; a lower level of perceived choice with all known people in the school playground occurred, whilst at home the level of choice increased with a known child or group of children and in the out-of-school club, playing with a known child increased levels of choice. However, playing with a known adult in the out-of-school made very little difference to the initial perception of choice

- Reasons children give for a perceived reduction in choice include the child's play being controlled, limited or inhibited. An increase in choice was explained by the children as being because there was more support, variety or the child could dominate the play

The investigation of choice in children's play has shown that children perceived levels of choice vary in relation to context and who is involved in their play. Children do not need to have all the choice on what, how, who, when and where they play. The focus is how children negotiate choice, and how this negotiation takes place. This may result in a reduction in choice with their play being controlled, restricted or inhibited or an increase in choice with their play being supported, have more variety or exercise dominance. Children have to exercise and negotiate choice in their play, and this aspect is important with respect to both policy and professional practice planning structured play or supporting free play in educational environments, or supporting children in their play environments.

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