CRITERIA USED TO CATEGORIZE CHILDREN'S PLAY: PRELIMINARY FINDINGS

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This preliminary study was aimed at investigating and assessing the reliability of criteria generated by participants themselves to categorize children's play. 12 participants who were experienced in observing children's play, were shown 8 video excerpts of children's play and asked questions to elicit (a) the criteria they used to categorize play, and (b) the features of each play episode that were salient to the participants. Results showed that participants categorized play according to a mixture of *Behavioral* (Positive Affect; Nonliterality; Unrestrained/Unrestricted); *Motivational* (Practice; Communication and Cooperation) and *Contextual* (Presence of toys and props) criteria. These criteria were mostly comparable with existing criteria used to categorize play. Results are discussed in terms of the multidimensional nature of children's play and its characteristic and reliably identifiable features.

Keywords: play, criteria, behavior, motivation, context.

The ubiquity of play and its typical childish disposition has meant that play can be distinguished reliably from other childhood behaviors (e.g. Smith & Vollstedt, 1985). Despite its distinctiveness, a consensus definition of play does not yet exist. The lack of a consensus definition is attributed to its multidimensional nature, and Pellegrini and Smith (1998) among others, argue that no single definition of play could account for its myriad forms and their potentially differential roles in children's development. Nevertheless, debate persists about the defining features of play and its role in children's development.

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CATEGORIZING PLAY

Existing research has focused less on the component actions of play and more on children's approach to the activity, the *dispositional characteristics* of play. Krasnor and Pepler (1980) characterized play according to both behavioral criteria *Flexibility, Positive Affect,* and *Nonliterality*, and a motivational criterion *Intrinsic Motivation* and noted that the more of the four criteria that were present, the more likely it was that an activity would be defined as play. Rubin, Fein, and Vandenberg (1983) also proposed a multifaceted approach to defining play in terms of (a) the inferred disposition of the player, (b) the actions that make up the activity, and (c) the context in which the behavior takes place. The criteria of Rubin et al. refer to both behavioral features, *Nonliterality* and *Positive affect*, and motivational features, *Intrinsic motivation, Voluntariness,and Process-prevails-over-product.* Consistent with this latter criterion, Pellegrini and Smith (1998) also remarked upon the apparent purposelessness of play.

In one of the few studies that has attempted to assess the definitional utility of existing play criteria, Smith and Vollstedt (1985) had both experienced participants (e.g., trainee teachers) and participants inexperienced in observing children's play, rate video excerpts of preschool children's behavior as either play or not play. Ratings were made against five criteria, four from Krasnor and Pepler's (1980) definition, *Flexibility, Positive Affect, Nonliterality* and *Intrinsic motivation* plus the criterion of Rubin et al. (1983), *Process-prevails-over-product,* labeled *Means/Ends* by Smith and Vollstedt. Results demonstrated the utility of Krasnor and Pepler's Nonliterality, Positive Affect, and Flexibility criteria and Rubin et al.'s Means/Ends criterion to distinguish play from nonplay but not Krasnor and Pepler's Intrinsic Motivation criterion. When multiple criteria were attributed to a play episode, it was designated "play" more consistently thereby supporting Krasnor and Pepler's additive hypothesis, and pointing to the multidimensional nature of play. These findings, however, offer little understanding of what criteria participants themselves might identify in the absence of criteria against which they could rate video excerpts. Additionally, all play excerpts in Smith and Vollstedt's (1985) study were of young children (3-4 yrs) in preschool settings. There is a need still to present participants with examples of typical play of children of different ages and across different play contexts.

Other approaches to categorizing children's play involve the identification of different subtypes of play. Pellegrini and Smith (1998) identified two subtypes: firstly, *Activity play*, more common in boys, and exemplified by games during middle childhood, and rough-and-tumble play (R&T) in middle childhood and early adolescence, and secondly, *Pretend play*, more common in girls and occurring most frequently between 3-5 years. Preschoolers engage in nonliteral behavior, generating pretend roles and scenarios, either alone (solitary pretence) or in mutual pretence, occurring in groups of two or more children. Classifications of

subtypes of play imply (a) common play criteria, and (b) additional behavioral criteria unique to each play type and demonstrate both age and sex differences in different play types.

PLAY AND NONPLAY

Yet another way of categorizing play has been to distinguish play from non-play. Play is not, for example, school work or organized children's activities (e.g., sporting teams) (Wachs, 1985). When children themselves are asked to review videos of excerpts of their own and others' play in order to distinguish a form of play (e.g., Activity play, R&T) from nonplay (e.g., aggression), they do so on the basis of (a) *Behavioral* cues (Positive affect for play vs. Negative affect for nonplay); (b) the *Physical proximity* between players (closeness play vs. distance aggression); (c) *Outcome of activity* (remaining together after play vs. separating after an aggression); and (d) attributing *Motives* to the players (friendly to R&T play vs. hostile to aggression) (Costabile et al., 1991).

CONTEXTUAL INFLUENCES ON PLAY

Different social (e.g., play partners) and physical (e.g., toys) contexts either promote or inhibit play. Shared pretence occurs more frequently among friends (Howes, Unger & Matheson, 1992), as does R&T play (Pellegrini & Smith, 1998) and familiarity promotes child-child play and child-adult play while different toy types foster different types of play (Wachs, 1985).

In summary, attempts to develop a definitive set of play criteria include categorizing play on the basis of its composite actions, dispositions and motivations; differentiating subtypes of play; distinguishing play from nonplay activities in childhood; and identifying social and physical contexts that might promote or inhibit play. Despite these varied attempts to identify criteria by which play might be categorized, a definitional stalemate persists, and there have been few empirical studies to assess the reliability or validity of existing play criteria.

THE PRESENT STUDY

The present study was aimed at identifying criteria by which knowledgeable adults categorize children's play. Apart from the study by Costabile et al. (1991), this research differs from previous research, because adult participants' own responses to video examples of different forms of 5-12-year-old children's play were used as the basis to develop criteria of acceptable interrater agreement. Criteria thus developed will be used in future research as a basis for comparison with children's and other adults' responses to video excerpts of play.

The following questions were addressed in the present research.
1. When asked to characterize children's play according to their own criteria, do adults knowledgeable about children's behavior use the same criteria as those

identified in existing categorizations of play?

2. What aspects of the observed behavior do they attend to when they report the criteria upon which they themselves categorize the children's play?

METHOD

PARTICIPANTS

Six final-year high school psychology students (three males and three females; $M = 17$ years and 10 months), practiced in observing and coding children's play and other behaviors, and six primary school teachers (three males and three females; $M = 42$ years 8 months).

MATERIALS

Eight video excerpts of children's play, judged independently by four experienced researchers as typical play activities of 5-11-year-old girls and boys.

Table 1 describes the eight play episodes.

TABLE 1
DESCRIPTION AND DURATION OF PLAY EPISODES SHOWN TO PARTICIPANTS

Episode 1 (80 sec): 2F/2M (9-10 yrs) dressed in pirate costumes, play near pirate ship. Laugh, talk in distorted voices, use exaggerated gestures. Take turns to be captured and walk the plank.

Episode 2 (62 sec): 2F/2M (5-6 yrs) sitting in a group, don't interact. Boys use set of Lego™ blocks, building and rebuilding towers. Girls share dolls' clothes and dress two teddies. No interaction among any of the children.

Episode 3 (24 sec): 4M (M1-M4) (5-6 yrs) play with blocks. M1 moves a block around, touches other three, says "I'm a stingray!". M2 responds "sting, sting, sting me". M3 says "ouch, ouch!" and grimaces. M4 says "that doesn't hurt!"

Episode 4 (86 sec): 2F/2M (7-8 yrs) play hide-and-seek with a teddy. In turn, one child is blind-folded, and the other three hide teddy. There are two rotations in excerpt.

Episode 5 (20 sec): 1F/3M (7-8 yrs) laugh; chase, restrain. Swap roles (chaser / chased).

Episode 6 (76 sec): 2F (5-6-yrs) playing hand-clapping games, in tune to risqué rhyme.

Episode 7 (60 sec): 2F/2M (7-8 yrs) play "cops & robbers" with toy guns, have distorted faces, voices and gestures. Interchange of roles (killer/ being killed).

Episode 8 (43 sec): 2F/2M (7-8 yrs) roll and stack blocks. Do not build anything identifiable. Much conversation among the four, laughing, teasing, friendly banter.

EQUIPMENT

A SONY VCR (Model SLV-X327) and one Panasonic television monitor (Model TC-29SU61A) were used to show video excerpts to participants.

PROCEDURE

Four participants were assigned to one of three different randomized orders of presentation of eight play episodes. After viewing each of the eight play episodes, they were instructed to write, on response sheets, their responses to two questions: (a) Can you tell me, in your own words, why this activity was described as play?; and (b) What was it that you paid attention to that led you to categorize the behavior as play? Two independent raters derived seven different criteria from the participants' written responses, and original criteria were then grouped into three broader clusters of criteria: (a) *Behavioral* criteria; (b) *Motivational* criteria; and (c) *Contextual* criterion. Table 2 shows three categories, theoretical origins, and examples of seven original criteria.

TABLE 2

CODED CATEGORIES OF PARTICIPANTS' RESPONSES, DERIVATION OF CODES AND SAMPLE RESPONSES

Behavioral criteria

1. *Positive affect* (Krasnor & Pepler, 1980; Rubin et al., 1983)
"smiling; laughing" (Episode 1); "got a happy look on their faces" (Episode 5)
2. *Nonliterality* (Krasnor & Pepler, 1980)
"talking in funny voices, over-acting" (Ep. 3); "they're only hitting softly" (Ep.5)
3. *Unrestrained/Unrestricted* (Pellegrini & Smith, 1998; Rubin et al., 1983)
"girls just playing with different teddies and clothes, boys just enjoying different ways to stack Lego, not bothering to build anything" (Episode 2)
"it's a bit kill-die, no obvious game"(Episode 7)

Motivational criteria

4. *Practice* (Piaget, 1951)
 "just getting used to what looks like toys they're not familiar with" (Episode 2) "just practicing different songs and hand clapping games" (Episode 6)
5. *Communication / Intimacy* (Howes, Unger, & Matheson, 1992)
"know each other well to play like that, so just a look will let the other one know he's gone too far" (Episode 5)
 "because they seem like friends, both know the song off by heart" (Episode 6)
6. *Cooperation* (Pellegrini & Smith, 1998)
 "they take turns to hide the bear" (Episode 4); "they're taking turns to die, cooperating well with each other" (Episode 7)

Contextual criterion

7. *Use of toys and props* (Wachs, 1985)
 "each one's got different costume, all got different props, and these determine what each will do in that character" (Episode 1) "because they've got the toy weapons"(Episode 7)

INTERRATER AGREEMENT FOR CRITERIA DEVELOPED

Overall criteria κ = .69; Behavioral criteria, κ = .64; Motivational criteria, κ = .61; and Contextual criterion, κ = .82. According to Fleiss (1980) there is good

interrater agreement for Behavioral and Motivational categories, where $\kappa > .60$, and excellent interrater agreement for Contextual criterion, where $\kappa > .75$.

RESULTS

TABLE 3
FREQUENCY AND DISTRIBUTION OF EACH CRITERION ACROSS THE EIGHT PLAY EPISODES

Criteria	Ep1	Ep2	Ep3	Ep4	Ep5	Ep6	Ep7	Ep8	Total
Behavioral									
Positive Affect	4	3	2	4	8	4	7	4	36
Nonliteral	3	0	0	0	4	0	6	0	13
Unrestrain/Unrestrict	5	1	2	3	3	2	1	0	17
Motivational									
Practice		2	1	0	0	0	1	0	0
Communication	1	0	1	4	0	10	1	6	33
Co-operation	3	0	1	3	1	1	0	0	9
Contextual									
Manipulation of toys	7	11	6	2	0	0	3	6	35
Criteria per Episode	7/7	4/7	5/7	5/7	4/7	5/7	4/7	3/7	

Table 3 shows the frequency of occurrence of the different criteria identified by participants for each of eight play episodes, together with the total number of attributions of each of the seven criteria. In all eight episodes, at least 3/7 criteria, including one Behavioral and one Motivational criterion were identified by participants. In 6/8 Episodes, participants identified all three Behavioral, Motivational, and Contextual criteria. Additionally, different combinations of Behavioral, Motivational, and Contextual criteria were attributed to different forms of play, ranging from 3/7 (Episode 8) to 7/7 (Episode 1). In order of frequency, Behavioral criteria identified were: Positive affect (36); Unrestrained /Unrestricted (17); and Nonliteral (13). In order of frequency, Motivational criteria were: Communication (33); Cooperation (9); and Practice (4). The single Contextual criterion was also identified frequently (35 references).

DISCUSSION

Play criteria derived from the participants' own responses to the video episodes were mainly consistent with findings from previous research. Behavioral criteria of Positive Affect and Nonliterality are similar to criteria proposed by Krasnor and Pepler (1980) and Rubin et al. (1983). The Behavioral criterion of Unrestrained/Unrestricted is comparable with the Process-prevails-over-product criterion in the categorization of Rubin et al. and Smith and

Vollstedt's (1985) Means/Ends criterion. These findings reconfirm the reliability of all three criteria to categorize play. Methodological differences notwithstanding, results of the present study thus offer limited validity to 3/4 criteria, Positive Affect, Nonliterality and Means/Ends identified by Krasnor and Pepler and Smith and Vollstedt. Findings of the present study also support the contention of Rubin et al. that play is best categorized by attending to the disposition of the player. Participants in the present study referred frequently to the children's *approach* to the activity. For example, "got a happy look on their face" (Positive Affect/Episode 5) and "[the children were] only hitting softly" (Nonliterality/ Episode 5). Consistent also with the findings of Rubin et al. and Pellegrini and Smith (1998), participants remarked upon the apparent purposelessness of activities. For example, "it's a bit kill-die, no obvious game" (Unrestrained/Unrestricted/ Episode 7). *Communication* was the most commonly attributed motive of the players, and it is noteworthy that participants attributed effective communication between players to children's apparent familiarity with each other. For example, "seem like friends, both know the song off by heart" (Episode 6). Howes et al. (1992) and Wachs (1985) have noted that familiarity and friendship are most likely to promote play. Children themselves also report that activities that occur between friends are more likely to be play (e.g. R&T) than not play (e.g. aggression) (Costabile et al., 1991). *Practice* was another motive attributed often to players in the video episodes, and this is consistent with Piaget's (1951) assertion that play is an assimilative behavior that allows children to consolidate existing mental representations (schemata). *Cooperation*, a motive attributed less frequently, has also been discussed as a potential developmental function of play by Pellegrini and Smith (1992), who consider whether or not shared pretence might aid in the development of social skillfulness and cohesion among children.

The presence of toys or props, exemplified by the response, "each child's got a different costume, all got different props, and these determine what each do with the character" (Contextual/Episode 7), was identified often in this study yet is not included in existing categorizations of play. Rubin et al. (1983) and Wachs (1985), however, have stressed the importance of the physical context, including toys and props, when categorizing an activity as play.

Participants identified different clusters of criteria when characterizing different play episodes and such categorization offers support for subtypes of play. For example, Episode 1, an example of mutual pretence was characterized by positive affect, nonliterality, lack of restraint, practicing, communicating, cooperating and using toys and props whereas Episode 5, an example of R&T play, was characterized by positive affect, nonliterality, lack of restraint, and cooperation.

Limitations of the present study include its small sample size and the fact that all video excerpts were of indoor group play. For future research, there is still a

need to include even more diverse examples of children's play such as solitary play, outdoor play, and play without toys and props.

CONCLUSION

Experienced adult observers of children's play categorized play according to criteria that referred to behavioral dispositions, inferred motives of the players, and contextual aspects of play settings. Criteria were mostly similar to criteria identified in existing play categorizations, and lend further support to the notion that play is most reliably categorized by multiple criteria, reflecting its multidimensional nature.

REFERENCES

Costabile, A., Smith, P. K., Matheson, L., Aston, J., Hunter, T., & Boulton, M. (1991). Cross-national comparison of how children distinguish serious and playful fighting. *Developmental Psychology,* **5,** 881-87.

Fleiss, J. L. (1981). Statistical methods for rates and proportions. New York: Wiley.

Howes, C., Unger, O., & Matheson, C. C. (1992). *The collaborative construction of pretend*. New York, NY: SUNY Press.

Krasnor, L. R., & Pepler, D. J. (1980). The study of children's play: Some suggested future directions. In K. H. Rubin (Ed.). *New directions for child development: Children's play* (pp.85-95). San Francisco: Jossey-Bass.

Pellegrini, A. D., & Smith, P. K. (1998). The development of play during childhood: Forms and possible functions. *Child Psychology and Psychiatry Review,* **3**(2), 51-57.

Piaget, J. (1951). *Play, dreams and imitation in childhood.* London: Routledge and Kegan Paul.

Rubin, K. H., Fein, G. G., & Vandenberg, B. (1983). Play. In E. M. Hetherington (Ed.). *Handbook of child psychology: Socialization, personality and social development, Vol. IV* (pp.693-774). New York: Wiley.

Smith, P. K., & Vollstedt, R. (1985). On defining play: An empirical study of the relationship between play and various play criteria. *Child Development,* **56,** 1042-50.

Wachs, T. D. (1985). Toys as an aspect of the physical environment. *Topics in Early Childhood Special Education,* **5**(3), 1-9.