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"Observers of children have long been aware of how children use make-believe play to cope with traumatic events in their lives" - Anne Robertson

A Method for Observing Young Children's Make-Believe Play

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ABSTRACT. The influence of toy "realisticness" on the make-believe play of 20- and 26-month old boys and girls was studied by recording their play behaviors when they were presented with specific toys and play suggestions. Results indicate that age changes in make-believe play with the less realistic toys reflect increased competence in symbolic transformation, whereas age changes in play with the more realistic toys reflect social learning, which may differ for boys and girls.

THE EXPERIMENTAL METHOD described in this paper was used in a study of the effect of age, sex, and toy type on the make-believe play of children 20 and 26 months old. The children were observed playing in their most familiar and natural setting—at home with their mothers watching. While this study focused on the early development of make-believe play, aspects of its experimental design and methodology might well be used in investigating the more general question of how different settings affect behavior. One could, for instance, examine which types of play and interaction were most characteristic of children using different areas of a camp or playground

The theoretical basis for this research comes largely from the work of Jean Piaget, the Swiss developmental psychologist. Piaget *(1951)* has long been concerned with the child's cognitive development and regards the varying types of play one observes in children of different ages as reflections of the increasing complexity of the child's intellectual ability. Piaget's developmental sequence of play included three types—practice play, symbolic play, and games with rules. Although these three types of play coexist in older children and adults, they first appear and predominate during particular stages of the child's cognitive growth. In the first 18 months of life a child engages primarily in practice play, in which pleasure is found in repeating and solidifying a skill which has already been mastered—for example, a baby playing pat-a-cake. Examples of this sort of play in adulthood would include playing a musical instrument or riding a bicycle for pleasure.

At about 18 months the child becomes capable of what Piaget calls symbolic thought. This development is reflected both in the growth of language and in the appearance of make-believe play. In make-believe play the child is able to shape the world to his fantasy temporarily, rather than having to shape his behavior and thought to the demands and constraints of the environment. With the development of make-believe play a child can use behaviors he has already mastered for his own purposes. A 1-year-old must concentrate on making a stack of blocks just stand up; a 3-year-old is able to use his building skill to create an imagined airport or house.

Games with rules are the third form of play described by Piaget. These games predominate from around 6 or 7 years of age into adulthood. This type of play includes sports and board games, in which the player accepts a set of arbitrary rules and shapes his behavior to them.

A number of researchers view make-believe play as significant both to a child's cognitive growth and his emotional growth. Studies done

by Sara Smilansky *(1968)* of Israel suggest that a complex form of make-believe play, which she calls "sociodramatic play", may be important for later success in school. Sociodramatic play is the sort of role-playing engaged in by 4- and 5-year-olds around a theme, such as playing house or cowboys and Indians. Since such play involves a degree of abstract thinking, and is directed by the child's imagination rather than by the demands of the environment, it may provide necessary training for the abstract, internal thought processes needed in reading and problem-solving.

Observers of children have long been aware of how children use make-believe play to cope with traumatic events in their lives. Often a child will take an active role in play that parallels a situation in which he was passive; for example, a child might play doctor and pretend to give her doll a shot the day after she had received a shot herself. Further, fantasy play is a primary tool in psychotherapy with young children. Through a child's play the therapist may come to understand conflicts that are interfering with the child's normal development. Resolutions may also be achieved through play.

My study investigated the effect of how realistic the toys were on the make-believe play of 20- and 26-month-olds. A brief description of early make-believe play will help clarify why this may be an important factor. Early in the development of make-believe play a child may pretend to drink from an empty cup. He tips head back to drain the last drops of the imagined liquid, then smacks his lips with pleasure. Sometime later he may pretend to drink from a shell or closed fist and perhaps offer a sip to his teddy bear. In these sequences of play, the child apparently disconnects a well-established motor activity (such as drinking) from its customary function (consumption) and context (with a full cup). Also, as the child matures, he has less and less need for realistic props to support his attempts at make-believe. At first he pretends to drink with an empty cup, but later with just a closed fist.

The relationship of the amount of structure or realisticness provided by an object to make-believe play has interested other researchers *(Markey 1935; Fein 1973, 1975)*. Although 4- and 5-year-olds are able to pretend with few or no props (pretending to be Batman just by claiming to be and running around), realistic props may be necessary to the make-believe play of younger children. For older children with well-developed imaginative capacities, very specific realistic props may even restrict play.

Piaget's view of the process of symbolic or make-believe play is useful in understanding the relationship of materials to it. Piaget speaks of "symbolic transformations"; he means by this that in pretending to drink from an empty cup a young child must symbolically transform the empty cup into a full one. In pretending to drink from a wooden block, though, an additional transformation is required: imagining the block to be a cup. So, more symbolic work seems to be required from the child by less structured objects. While this symbolic work may be easy and fun for an older child, it may be impossible for a younger child without the cues provided by realistic objects. The implication is that with cognitive growth, pretend play may become less dependent on the physical presence of highly realistic or prototypical objects such as cuplike cups, trucklike trucks and babylike dolls.

I studied whether the relation between the structuredness of materials and make-believe play varies as a function of age by presenting 20- and 26-month-old girls and boys with materials that differed in their similarity to real cups, trucks, and dolls. Sex differences in early make-believe play were also examined in this study, but those results will only be mentioned briefly.

METHOD

The subjects were 28 Caucasian boys and girls, chosen randomly from hospital birth records. Restrictions on the sample were that no child have more than one sibling and that the parents live together. Most of the children came from middle-class homes.

Each child was observed twice at home with his or her mother present. Each session consisted of three distinct segments—two play episodes of 10 minutes each (in which the procedure was identical but the toys were different), separated by approximately 40 minutes of intervening tasks which were the same for all children. Two visits were approximately 2 weeks apart and lasted about an hour. Since each child was observed twice with each of the two toy sets (toy sets A and B were presented at each visit but not in the same order), the experimental design was one of

repeated measures in which each child served as his own control. Using two visits also made it possible to assess the effect of the unfamiliarity of the experimental situation and the experimenters. Since play is one of the first behaviors to drop out when a child is anxious or uncomfortable, it is essential that the child become familiar with the experimenters and experimental procedures.

Materials. There were two toy sets, each containing 17 objects, 4 of which were identical in both sets. Examples of the object categories were: cup, spoon, bowl, doll, truck, crib, phone. The highly realistic or "highly prototypical" (HP) toy set contained 13 objects which were either familiar household things or toys (crib, telephone, truck). The doll was a detailed representation of a baby. The 13 objects in the "less prototypical" (LP) set were roughly matched by function (things for drinking, for eating, for sleeping) but lacked the detail of their highly prototypical counterparts; e.g., a bed and a truck were matched to two boxes of different sizes, the coffee mug was matched to a plastic container of roughly the same size, the toy telephone was matched by a toilet-paper tube balanced on two blocks, and the baby doll was matched to a stuffed cloth figure.

Experimenters. Two female experimenters visited the home. One experimenter (*E*1) presented the toys to the child and administered the intervening tasks, while the other (*E*2) recorded the child's behavior.

Warm-up The initial 5 to 10 minutes of each session were spent in helping the child feel at ease with the experimenters. Either *E*1 or the child's mother showed the child a picture book while the other adults chatted. By the end of 10 minutes *E*1 took the first set of toys from the suitcase, arranged them on the floor in a predetermined way and invited the child to play with them.

Play episodes. Each 10-minute play episode began with 2 minutes of free play during which *E*1 sat near the child but did not participate in his play. During the remaining 8 minutes of the episode *E*1 made five play suggestions at specified time intervals and in a fixed sequence.

When making a play suggestion, *E*1 indicated or brought into view the appropriate toys for that particular play theme; for example *E*1 indicated the toy truck while saying, "Dolly wants to go for a ride; please take dolly for a ride." If the child did not respond to the first verbal suggestion, it was repeated approximately 30 seconds later. Beyond this, however, the child was not coaxed into following *E*1's requests.

During each play episode, *E*2 continuously described the child's activities into a tape recorder. A signal was recorded on the tape every 10 seconds. Even though there was a lag between the occurrence of an activity and the oral description of it, the relative duration and sequence were preserved. The language used to record the child's behavior consisted of about 50 core verbs which described the child's use of objects (e.g., pushes truck, fingers doll, claps blocks) and his interactions with other people involving objects (e.g., gives mother doll, shows *E*1 bottle). All of the child's behavior during the play episodes was recorded and transcribed, but only those behaviors subsequently coded as "pretends" will be considered here.

Actions, but not verbal labels, were scored "pretends" if they contained an element of make-believe. For example, a child's going through the motions of drinking from an empty cup was scored "pretend", but his pointing to an empty cup and saying "coffee" was not. A child's behaviors were coded "pretend" if they: (a) involved treating something inanimate as though it were animate (feeding a doll); (b) resembled normal, functional activities but occurred in the absence of necessary materials (drinking from an empty bottle); (c) were not carried through to their usual outcome (putting on a hat, but not going outside; closing eyes, but not sleeping); or (d) were typically performed by someone else (brushing hair, dialing a telephone).

Observation reliabilities were determined from tape recorded observations of filmed play sequences. Observer agreement for object contact was 82 percent, for activity it was 80 percent and for coding a behavior "pretend" it was 87 percent.

Measures. The four taped play episodes for each child were transcribed, the "pretends" coded and the following measures compiled for each play episode:

1) Pretend Frequency was the sum of all those behaviors coded "pretend" within a 10-minute observation period.

2) Variation of Pretend was the number of pretend activities which were unique in action, objects, or relevant vocalizations. For example, stirring with a spoon in a red cup five times was

scored as one variation, and so was stirring once with a spoon in a yellow bowl. Also, pretending to drink from an empty cup with accompanying noises was scored separately from drinking "silently", and saying, "Hi, Daddy," on the toy telephone was scored differently from saying, "No, I can't."

3) Total Activity was the sum of all the child's actions, whether make-believe or not, during the 10-minute play episode. This score served as a baseline of activity level against which to assess a child's pretend activity.

RESULTS

Since preliminary analyses indicated no significant experimenter effect (t = .79, df = 110, p <.43), groups were collapsed across experimenter and subsequent analyses were performed on these pooled groups. A multifactor analysis of variance with repeated measures *(Winer 1962)* was performed on each of the dependent measures: Pretend Frequency, Variation of Pretend, and Total Activity. The between-subjects factors were age, sex, and intervisit order (LP/HP - HP/LP or HP/LP - LP/HP), and the repeated factors were type of toy and intravisit order (first or second).

The three dependent measures were significantly correlated ($p < .001$), with Pretend Frequency and Variation of Pretend scores being more highly correlated with each other than either was with the Total Activity score.

The Pretend Frequency and Variation Scores were intended to reflect two dimensions of make-believe play, amount and diversity. However, the analyses of variance and the internal analyses for the two scores were so closely parallel (differing only in the degree to which the findings were more significant than $p < .05$), that this discussion will be limited to the results of analyses of the frequency scores only.

Age, sex, and toy type effects

Repeated-measures analysis of variance for frequency scores showed that the main effects of age, sex, and toy type were all significant (in each case, $p < .01$). Significant interactions between sex and age (F (1,20) = 4.22, $p < .05$) and among age, sex, and toy type (F (1,20) = 12.82, $p < .002$) were also found.

In general 26-month-olds pretended more than 20-month-olds (F (1,20) = 8.05, $p < .01$), and girls pretended more than boys (F (1,20) = 9.46, $p < .01$). But the influence of a child's sex on his pretend play depended on his age. Twenty-six-month-old girls pretended significantly more than 20-month-old girls (t = 3.49 > t' = 2.85, $p < .01$), but the difference between older and younger boys was not significant. It was only at 26 months that the sexes differed in amount of pretending (t = 3.66 > t' = 2.85, $p < .01$); at 20 months there was no difference. Thus, it was between the ages of 20 months and 26 months that the two sexes began displaying different patterns of make-believe play.

The interactive effect of age and sex is modified by toy type. With all subjects combined, children pretended more with the highly prototypical toys than with the less prototypical toys (F (1,20) = 26.12, $p < .001$). Using the Newman-Keuls method for multiple comparisons, I found this to be true also of each separate age and sex group ($p < .01$). The existence of a significant age by sex by toy interaction, though, means that the precise effect of toy type depended on the child's age and sex.

As can be seen from figure 1, boys and girls followed strikingly different lines of development from 20 to 26 months with regard to the influence of toy type. At 20 months both boys and girls pretended more with highly prototypical than with less prototypical toys ($p < .01$), but the difference was greater for boys. By 26 months the situation was almost reversed, with girls pretending much more with highly prototypical than with less prototypical toys ($p < .01$), and toy type making no difference in older boys' pretend play. Thus, from 20 to 26 months boys went from having toy type affect their pretent play to having it make no difference, while with age the effect of toy type was simply intensified for girls.

Both sexes significantly increased their pretend play with the less prototypical toys from 20 to 26 months (boys, $p < .01$); girls, $p < .01$). Although the girls pretended more than the boys at each age level (20 months, $p < .01$; 26 months, $p < .05$), the lines of development were parallel for the two sexes. The situation was dramatically different with the highly prototypical toys: the boys' pretending significantly decreased ($p < .01$) from 20 to 26 months, whereas the girls nearly doubled the frequency of their pretend play (p < .01). At 20

months there was no difference in the amount boys and girls pretended with highly prototypical toys, but by 26 months girls pretended more than twice as much as boys ($p < .01$). Thus, with these toys boys and girls showed divergent lines of development.

In summary, the factors age, sex, and toy type significantly influenced the frequency of make-believe play in the following ways:

1. Twenty-six month-olds pretended more than 20-month-olds.
2. Girls pretended more than boys.
3. Highly prototypical toys elicited more pretending than less prototypical toys.
4. The Age x Sex interaction reflected a large, significant sex difference at 26 months and no sex difference at 20 months.
5. The significant Age x Sex x Toy Type interaction reflected the following pattern of results: (a) With less prototypical toys, a parallel increase in pretend play for both sexes,but (b) with highly prototypical toys, a large increase in pretend play for girls, and a slight decrease for boys.

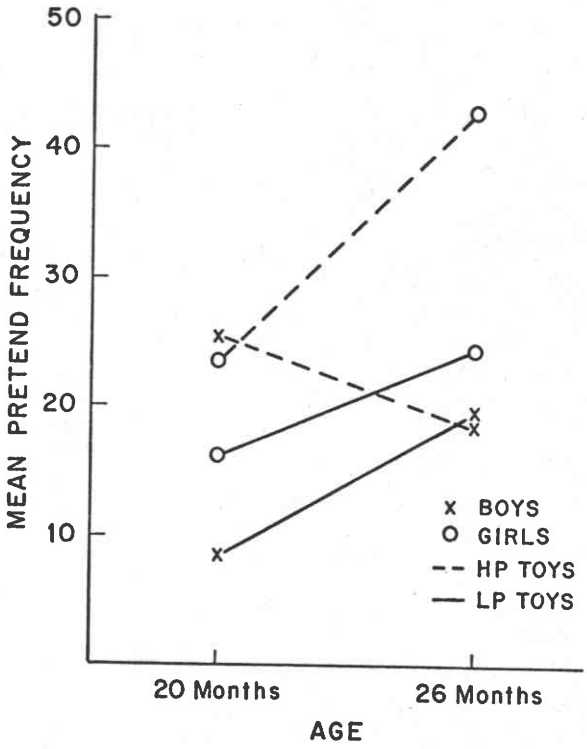

Figure 1.—Mean total pretend scores as a function of age, sex and toy type.

DISCUSSION

If one supposes that at about 2 years of age a child is beginning to acquire a sex-role identity and is being exposed to different sex-role behavior patterns and possibly to training in sex-appropriate play patterns, one would expect these to be revealed in his play, particularly with those objects most closely related to daily life experiences. It may, therefore, be useful to think of highly prototypical toys as those that receive the full impact of these socialization experiences. If one thinks of a generalization gradient along the dimension of prototypical similarity, it may be that play with less prototypical materials reflects developmental changes in the childs transformational competence, whereas play with highly prototypical toys reflects social learning. If so, then the parallel significant increase in pretend play with the less prototypical toys for both sexes was to have been expected. In contrast, the large sex difference in pretend play with highly prototypical toys (girls increasing dramatically and boys decreasing in amount of pretending) could be attributed to differences in the socialization experiences of boys and girls from 20 to 26 months.

The research design and methodology in this study could be used to study older children's behavior in various outdoor settings. The repeated measures technique allows the researcher to use each child as his own control and thus reduce error due to individual variation without increasing sample size. Also, taping could be adapted to record more complex behavior.

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