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ABSTRACT

What children do in play is simultaneously influenced by the properties of the play object and the skills of the child. Properties of objects lend themselves to re-engagement in investigative play or support for shared action. Repeated play with particular objects increases the number of actions possible with these objects. The process of perceiving and responding to possible actions involving objects leads to changes in play actions. Changes in play lead to changes in cognitive capabilities, and these influence the child's perception of possible actions with an object. This description of the organization of the object-child relation suggests that while adults can encourage, support, or suggest actions to children, learning ultimately emerges from the particular organization of each object-child relation. Teachers may facilitate learning, but they do not completely control the learning process. They may facilitate by structuring the child's environment; matching objects to children's interests or changing objects available for action; encouraging children in action with an object to work through frustration to a feeling of competence; helping children to recognize possibilities for action on objects with which they do not usually play; helping children draw parallels between action on an object of interest and another object; and by supporting their re-engagement with an activitiy which previously has been ignored or avoided. (RH)

Object-Child Relations: A Co-constructive Perspective of Learning Processes

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Peering into a nursery school playroom, you see busy children playing trains, house, playdough, blocks, etc. These objects allow us to identify the kinds of play in which children are engaged.[1] However, there are other ways to speak about play in addition to those which refer only to the objects children choose. In this paper I will be discussing children's play across classes, or groups, of objects and how differences in children's play with similar objects are attributed to what children bring to play from their previous experience with these objects. Differences in play actions will be described as reflecting differences in children's learning. Both what children do now in their play and what they will do in their future play are thought to influence the interaction of the interests of children and the physical and social properties of objects.

In previous work, Rob Wozniak and I have discussed the interest, defined as both the stored knowledge and value, which a child brings to action with play objects and the subsequent influence of interest on attention and memory among young children (Renninger & Wozniak, 1985). In that study, sixteen children (8M, 8F) of 3.9-to-4.2-years-of age were individually videotaped during six 40-minute sessions of naturally occurring free play. Children were coded as having interests in a particular class of play objects if they were judged to satisfy the following criteria: (a) they played with a particular object more frequently than they did with other objects, (b) they returned to play with that object over several observations, (c) they played with the object qualitatively differently than they did with other play objects, and (d) they could play with the object by themselves. According to these criteria, each child played in approximately two play areas with interest.

Thus, even though it may appear as though children are similarly "busy" with play objects, it is more the case that children tend to play with only a few play objects consistently and that their play with these objects varies from that with other objects.

In this paper, the implications of differences in children's play actions for their learning will be addressed through two questions: (a) What contributes to differences in children's play actions? and (b) What are some implications of differences in children's actions for understanding learning processes?

What contributes to differences in children's play actions?

What the child does in play is simultaneously influenced by at least two components within the object-child relation. These are: (a) the properties of the object and (b) the interest, or an individual's knowledge and value of an object, which children bring to action with a particular class of activities. What the children do in play is simultaneously influenced by both the properties of the play object and the skills of the individual child.

Object Properties

Variations in properties of play objects influence children's actions. There are at least two ways in which the properties of objects influence children's play. Properties of objects lend themselves to: (a) re-engagement in investigative play or (b) support for shared action.

Re-engagement in investigative play. Properties of play objects influence the extent to which children will re-engage in investigative play with a play object. Objects such as water, playdough, painting, and pasting

encourage investigative play because the physical properties of their medium are condusive to manipulation. For example, the child who uses paste to connect papers and make some product, is also likely to have hands covered with paste and may later squeeze the paste through her fingers. The child who is capable of a variety of actions with paste has learned paste's potential for making a product, but also continues exploration of the physical properties of paste.

In contrast, when children know how to put a train together, exploration of physical properties no longer creates new possibilities for action (unless they have just been presented with either a novel train or a train of novel material). As a result, the categories of play characteristic of objects such as blocks, cars, dolls, books, fire trucks, and dishes generally do not involve re-engagement with investigative play.

Shared action. The extent to which the properties of the play object promote talking and cooperative play influences children's ability to engage in shared action with other children. Specifically, children exhibit a range of co-action in play involving varying degrees of talk and cooperative play. Playdough, paste, painting, and water are all objects that allow for the possibility of talk but do not foster cooperative play. In playdough play, for example,it is possible for children to discuss topics unrelated to play, e.g. Oshkosh jeans, birthday parties, etc., and to simultaneously play with playdough. Playdough does not address the social dimension of their play, nor does it specify cooperation. Shared action in playdough is limited to the monitoring and borrowing of ideas which is facilitated by the children's close proximity when seated together at a playdough table. In contrast, puzzles

involve neither discussion, nor cooperative play. Shared action in puzzle play is not even facilitated by the children's close proximity when seated together at the puzzle table because children generally work on different puzzles independently.

A further contrast in co-action is found in playing house, movies, and travel. These are all objects in which discussion and cooperative play are supported by the culturally defined role structures that introduce relations between the participating children. Talk is fostered through the play object itself. House play, for example, defines roles that involve communication (ie. mommy, daddy, baby, etc.).

The properties of objects specify one component of the interaction between object and child. This component has been described as varying at least in the extent to which objects: involve re-engagement with investigative play or support shared action.

Interest

The other factor which contributes to differences in children's actions is interest. For example, a three-year old child interested in trains notices that a blue car is missing from the train shelf and goes to look for it.[2] Having located the car, the child carries it to the shelf and begins hooking cars together. Others around the child might be building forts, playing house, flying rockets, or doing puzzles. The child methodically connects the train and then drives it to a shelf across the room where there is a basket of small blocks. The blocks are loaded into the train's cars and the trip is continued. The video-camera tripod becomes a bridge, the table a tunnel, and the corner at the far end of the room the destination. This child knows:

which cars are available for train play, how cars get hooked together, that each car needs to be hooked on carefully, where the small blocks across the room are, how to maneuver a long cargo train, etc. The child has also made a choice to play train, rather than blocks, house, or rocket.

Why the child chooses to play train is a joint function of child and object. This child is playing train and passing up the opportunity to play rocket which enables equal opportunities for investigative play or shared action. Relative to other objects, this child: plays train more frequently, returns to play with train more often, plays train qualitatively differently, and is able to play train more independently. While the object itself influences the probability of particular play actions, the interests of the child influence the particular focus of play.

The child interested in train repeatedly returns to train play. This continued re-involvement with train enables the child to build on previous train playing skills. However, skill in train play is not a sufficient explanation for the child's repeated return to this object. Children's interests are also influenced by: knowledge of others' feelings about train play whether this information is explicit or not (Mead, 1934), train play of others in the nursery, and feelings of competence (White, 1959) in train play.

Repeated play with particular objects increases the number of actions possible with these objects. The process of perceiving and responding to possible actions involving objects leads to changes in play actions. Changes in play lead to changes in cognitive capabilities, and these, in turn, influence the child's perception of possible actions with an object. Thus the ability to perceive possibilities for action derives in part, from interest

and these, in turn, serve to maintain interest.

Object and interest as factors in action

Both objects and interest influence children's actions in play. While there are similarities in play objects, the differences in actions of children involving objects suggest that each object does not present the same possibilities to each child. Rather, there is an intricacy to the object-child relation which is always a function of the properties of a given object and the individual interest of the child. (For a more detailed discussion of organization in relationship, see Renninger & Winegar, 1985) The object with which a child plays influences the kinds of actions available to the child. The interests of the child influence the nature of these actions. Considered jointly, the content and form of play emerges from the interaction of object and child. The similarities and differences that exist in children's actions both with a particular object, and between classes of objects, offer insights about the nature of object-child relations and provide us with some information about what children are learning.

What are some implications of differences in children's actions for understanding learning processes?

The organization of the object-child relation, as a joint function of object properties and child interest, suggests that while a teacher, parent, or expert-other can encourage, support, or suggest actions to children, the learning that in fact takes place, ultimately emerges from the particular organization of each object-child relation. For example, a child can be given a train with which to play, but what the child does in play is not controlled by another person. Each child brings a repertoire of actions to action with

train. This repertoire of action, in turn, reflects previous relations with trains. Others may influence learning through directing the child's interest or by introducing objects to the child, but they do not set or control the child's learning.

This claim, ie. that teachers, for example, do not control children's learning, changes our conception of teachers from that of experts to that of facilitators. Teachers, by structuring the child's environment, may influence the range of actions possible, or, in interaction with the child, may influence the child's interest.

Teachers may influence the object-child relation by matching objects to children's interests or changing objects available to the child for action. The proclivities of children for particular ways of interacting with object properties can either be matched or changed by the teacher. Matching children's proclivities for play entails providing them with similar objects. Changing children's proclivities for play entails removing an object such as train and replacing it with an object which involves different object properties, properties which encourage different categories of play.

In addition, teachers may influence children's interest by: encouraging them in action with an object, to work through frustration to a feeling of competence; helping them to recognize possibilities for action on objects with which they do not usually play; helping them to draw parallels between action on an object of interest and another object; and supporting their re-engagement with an activity which previously has been ignored or avoided.

However, there is a dynamic tension which exists between children's perceptions of objects and children's interests such that the possible actions

which emerge for children are always in a process of redefinition. Our understanding of the actions of children requires recognition that we are only outsiders to the object-child relation and therefore can only be cued to a given child's learning through understanding the continuities in that child's actions. Thus while a teacher, parent, or expert-other can encourage, support, or suggest actions to children, learning ultimately emerges from the particular organization of each object-child relation.

Footnotes

[1]Object here is used to refer both to play labeled by object name and play labeled with a name denoting play with several objects, ie. house.

[2]The singular "train" is used to include both the physical object as well as actions which are meant to simulate train.

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