DOCUMENT RESUME

ED 231 514 PS 013 596

AUTHOR Zukow, Patricia Goldring
TITLE The Role of the Caregiver in the Emergence of Play Activities during the One-Word Period: Social Variations in a Rural-Born Population in Central Mexico.
PUB DATE Apr 83
NOTE 22p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (50th, Detroit, MI, April 21-24, 1983).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Audiotape Recordings; *Child Caregivers; *Cultural Influences; Foreign Countries; *Individual Development; *Infants; *Play; Siblings; Socialization; Speech Communication; Videotape Recordings
IDENTIFIERS *Caregiver Role; Mexico; Social Interaction; *Toddlers

ABSTRACT

Universal and culture-specific aspects of caregiver contributions to children's emerging play activities during the one-word period were studied in research designed to meet criteria for ecological validity. The sample included seven Mexican caregiver/child pairs in a major urban setting and eight pairs in a rural setting. All caregivers came from the traditional Mexican rural culture; children between 11 and 30 months of age were included in the sample after observations confirmed that they had attained one of three levels of semantic development. Data were gathered through simultaneous audiotaping and videotaping of children's activities at 6-week intervals over a 9- to 12-month period. Each audiotape was transcribed by a native speaker familiar with the rural culture. Videotaped interactive and noninteractive play sequences were examined to assess the nature and sources of intracultural variation along a continuum of degree of cultural knowledge. Children's performance in nonguided, noninteractive play sequences was compared to caregiver-guided performance in interactive sequences; sibling-caregiver interactions were compared with children's interactions with their primary caregivers; and children's performance at three levels of semantic development was analyzed. Findings showed children's performance at each of three levels of semantic development to be more advanced during interactive sequences with their caregivers than in noninteractive sequences. (RH)

(Paper read at the Society for Research in Child Development Meeting, Detroit, 1983)

The Role of the Caregiver in the Emergence of Play Activities during the One-word Period: Social Variations in a Rural-born Population in Central Mexico

Patricia Goldring Zukow

Play was selected as a microcosm within which to study the role of the caregiver in cognitive development, since Vygotsky (1978) considered play to be the principal means of transmitting and acquiring knowledge of the world. To investigate the contribution of socializing agents to the development of children, consider Vygotsky's (1978) differentiation of the level of actual development from the zone of proximal development. The level of actual development refers to the mental functions the child has already acquired. The zone of proximal development is is the area between what the child can do alone and what the child can accomplish when guided by or in collabroation with a more competent person. Thus, functions in the process of maturation first appear in the zone of proximal development and only later on the level of actual development. The zone of proximal development that is created in interactive play is a major setting for the acquisition of cultural knowledge and the shift to abstract thought. Therefore, studying the role of the other interactant in the zone of proximal development appears to be crucial to understanding the child's transition to competent member and from elementary to higher processes.

Wertsch, McName, McLain, & Budwig (1980) have demonstrated that the caregiver guides or "other-regulates" the child by fitting the child's actions into the caregiver's interpretation of ongoing activities. Later the child internalizes the structure and is able to 'self-regulate' her/his doings. In the domain of play, an earlier U.S. study (Zukow, 1981) supported Vygotsky's position. Zukow (1981) demonstrated

that children's performance during interactive play sequences was more advanced than performance during non-interactive sequences at the one-word period. As an example, consider the following segment. During a non-interactive sequence (level of actual development) a child might absently pass the back of a hair brush over a doll's face and head, catching air rather than hair in the bristles. In contrast, during interactive play under the mother's guidance (zone of proximal development) the mother's, the child's, and several doll's heads will be combed in a more cohesive and competent manner.

Most accounts of play are based upon data collected from children from highly educated families in technological settings in Western nations. Relatively little is known about Third World children who reside in rural settings and/or are from families with little formal education. Such limited data give rise to theories that are explicitly or implicitly ethnocentric. Unfortunately the naive or unwary interpret these theories as describing a universal course of development rather than a specific one. This study, an intracultural comparison among the children of rural-born women in Central Mexico, was designed to provide a more representative data-base for investigating the universal and culture-specific aspects of the emergence of play during the one-word period.

In the present study measures were taken to effectively deal with several profound methodological problems besetting cross-cultural research, including the issue of ecological validity and the problem of stimulus (vs functional) equivalence as it is called in psychology (Mischel, 1977), or the emic-etic problem as it is called in anthropology (Malpas, 1977). To meet the criteria for ecologically valid

research (Bronfenbrenner, 1976; Cole, Hood, & McDermott, 1978) the data consist of videotapes of naturally occurring events, ordinary everyday activities in the home. Further, the analytic method depends upon and agrees with the coparticipants' interpretation of events. The problem of stimulus (vs functional) equivalence can be resolved by operationalizing abstract interactional concepts in a culturally meaningful way. In this case, to insist upon stimulus equivalence, mother as sole caregiver, would limit the collection of data up to and including the time when the child became a toddler. Further, persuading mothers to continue as sole caregiver would violate ecological validity. That is, when children walk competently during the one-word period in this population, caregiving is subtly shifted from the mother to other family members. Especially among the less-educated sample, mothers, siblings, cousins, aunts, and other more competent persons enact the functionally equivalent role of caregiver. The primary caregiver (mother) gradually distances herself in space from the child and directs her/his activities through intermediaties, usally older siblings. For these resons, participants whose function, caregiver, was equivalent were found in each setting.

This study was designed to examine the universal and culture-specific aspects of the contribution of the caregiver to the child's emerging play activities during the one-word period. First, to confirm the earlier US findings that children's performance during the one-word period was enhanced by caregiver input, children's performance in noninteractive play sequences during which the children were not guided by their caregivers (level of actual development) was compared to their performance in interactive sequences during which the children were guided by their caregivers (zone of proximal development). Second, to ascertain whether children's performance was also

enhanced by sibling interaction, sibling caregiver interactions were compared to primary caregiver interactions. Third, to reveal developmental differences, the performance of the children at three levels of semantic development (Greenfield & Smith, 1976 was analyzed. These levels have proven to be an effective means of displaying differences in caregiver practices as children develop (Zukow, Reilly, & Greenfield, 1982; Zukow, 1981, 1982; 1983). A gradual shift from 'other-regulation' to 'self-regulation' was found by comparing and contrasting interactions at these three levels.

Method

Selection of the child sample. The children were selected on the basis of observations that confirmed they had attained an appropriate level of semantic development as described in Greenfield & Smith (1976). The productive use of the following semantic functions served as criteria for classification within the three levels: Level I - performative (saying bye-bye while waving bye-bye), indicative object (pointing at a cookie while saying cookie), and volitional object (whining and reaching for milk while saying milk); Level II - agent, object, and action/state, such as saying down while coming down the stairs; and Level III - object associated with another object, object associated with and animate being, and location, such as saying chair while putting a ball on a chair. The children were from 11 to 30 months old.

Selection of caregiver sample. The caregiver population varied according to person enacting caregiver role (mother/ sibling), degree of urbanization (urban/rural), and level of education (professional training/ less than four years of primary schooling). To control for language, race, and culture, all caregivers came from the traditional rural culture. The sample included 7 caregiver-child pairs in a major urban setting (Group I: 5 with primary school; Group II: 2 with pro-

fessional training) plus 8 pairs in a rural setting (Group III: 7 with primary school; Group IV: 1 with semi-professional training). Group I's members lived in middle-lower class neighborhood, Colonias Populares, in the State of Mexico. Such suburbs house many of Mexico's millions of inhabitants, mostly in multi-family dwellings. The adult residents were, for the most part, semi-literates who were born in small villages or farming communities. They were often employed in temporary or seasonal jobs in occupations that provide goods and services (domestic work, construction, food sales, unskilled factory work) outside the technological culture (See Lomnitz, 1975). Group II's members lived in typical middle-middle class neighborhoods composed of single family dwellings: one in Mexico City and one in a suburb in the State of Mexico, 50 miles north of Mexico City. The adult residents were primarily under 40 and all were literate. They had full-time employment as professionals, semi-professionals, junior level administrators, civil servants, and business people. Group III's members all lived in Ejido de Santa Ana y Lobos, a farming community of 700 persons, in the State of Guanajuato about 175 miles northwest of Mexico City. Each family was composed of the parents, elderly paternal grandparents, married sons and their families, and unmarried children. All the residents were engaged in farming. Cash incomes were supplemented by providing goods and services to other villagers. Group IV's member was a nurse from Ejido de Santa Ana y Lobos.

Procedure. Caregivers selected ordinary, everyday activities representative of those in which the child was commonly engaged for videotaping sessions. Not surprisingly, these situations involved mealtime and play. The child's activities were simultaneously audiotaped and videotaped at six week intervals over a nine to twelve month period. Within that time period each child moved up at least

one level. The distribution of the 77 twenty-minute videotapes are summarized in Table 1.

Table 1 about here

Transcription. Each audiotape was transcribed by a native speaker familiar with the rural culture. Each transcript was checked by me and each target child's speech was transcribed phonetically (Ladefoged, 1975). At least one-half of all the videotapes for each child were reviewed by the caregiver and myself for accuracy. In cases of disagreement, the caregiver was always considered the expert.

Analysis. An interactional model of the organization of play was derived from the viewing and reviewing of the videotapes, since in negotiating the emergent meaning of events participants reveal to us as well as to each other the organization of everyday life. (For a full description and rationale for this methodology, see Zukow, 1980; Zukow et al., 1982). Interactive and non-interactive play sequences were examined to assess the nature and sources of intracultural variation along the continuum of degree of cultural knowledge. Interactive sequences were classifieid in terms of the persons enacting the caregiver role.

Degree of cultural knowledge. Since what has previously defined as play are the activities in which children display their culturally organized knowledge of the world (Veneziano, 1981; Zukow, in press), in this study play was considered in terms of the degree of cultural knowledge displayed rather than in terms of the level of symbolic conduct. Four levels were employed to reflect the increase in cultural knowledge displayed in play seq uences that occur during the one-word period. At first children are engaged in activities that

are predominantly focused on: non-specific sensory manipulation of the self or objects, e.g. vocalizing or sound play, mouthing, rubbing. Next children engaged in activities that focus on specific manipulation of intrinsic properties of objects, e.g., rolling a ball, nesting boxes, stacking toys. Then children display fragmentary/routinized conventional object-use in culturally recognizable activities (CRA-1). The child's actions are poor approximations of a fragment of some common cultural activity. These enactments are often truncated and/or awkward. In a non-interactive sequence that might be interpreted as rocking and singing to the 'baby' doll, Lucha held her doll with its head toward the floor in the crook or her arm, tottered back and forth briefly, and made a few humming noises. In interactive play she may imitate or reciprocate by producing an obligatory movement in a well-practiced routine such as covering her face and saying 'au:' in peek-a-boo. Finally, the child displays improvisational/coherent object-use in culturally recognizable activities (CRA-2). In these play sequences the child provided variations. For example, in a coherent non-interactive play sequence, Lucha picked up her doll, placed it in the crook of her arm with its face upward, arranged her reboza about herself and the doll, pulled down her blouse, and 'nursed.' In an interactive sequence, Lola's mother suggested that Lola comb her own hair, her mother's, and a baby's (doll's). Lola generalized the activity to yet another doll. Thus, this interactive sequence was categorized as improvisational/coherent object-use in a culturally recognizable activity, since Lola's actions were integrated and she innovated by combing another doll's hair.

Results

The results from the present study are similar to the major findings of the US study (Zukow, 1981) despite differences in degree

of urbanization, level of education, and person enacting the caregiver role. (Findings relating to levels of education and degree of urbanization will not be treated in this paper.) That is, the children's performance was more advanced during interactive sequences with the caregiver than in noninteractive sequences at each of three levels of semantic development (Table 2). For example, at Level I nearly 70% of the noninteractive sequences involved nonspecific sensory manipulations of self or objects while about 30% were found in interactive play sequences. In contrast, over 40% of the interactive play sequences were culturally recognizable activities-1 and not even 4% occurred during noninteractive play sequences. A concrete example from Level II will illustrate a similar finding. In this segment Lucha was walking about in a shaded area of the communal courtyard her family shared with other members of her extended family in Sta. Ana y Lobos. She was intently occupied taking off and putting on the top of a discarded spray deodorant can (specific manipulation). A few minutes later her mother, Nedi, demonstrated to Lucha that the spray can was to be placed near her tightly closed armpit (CRA-1). Lucha pulled the top off and put it back on again several times. Then she touched the can to her face. Amid much giggling Nedi raised Lucha's arm, pointed the spray tip toward her armpit, and pushed the button downward to better demonstrate the appropriate use of the deodorant can. Lucha still did not comprehend and Nedi poked her gently in the armpit saying, "¡Aquí! ¡Aquí!" ("Here! Here!"). In this segment the child spontaneously explored the physical properties of the object by taking off and putting on the top of the deodorant can (specific manipulation). However, in interaction with the caregiver the child was introduced to the appropriate cultural use of the object (CRA-1).

Tables 2, 3, and 4 about here.

In this study caregiver was more broadly defined than in the US study (Zukow, 1981). The role of the caregiver was enacted by other competent members of the household, usually sibs. Table 3 illustrates this shift to sibling caregiving. Note that the proportion of play activities at Level I included 2 primary caregiver sequences to every one with a sib. However at Level II this proportion was reversed and by Level III interactions with sibs occurred 6 times as often as those with the mother. Despite the shift in caregiving responsiblities, children's performance in interactive play sequences was more advanced than in noninteractive sequences. (Table 2 includes sequences in which both mothers and siblings served as caregiver.) Further, when adult and sibling interactions are compared, interactions with siblings weremore advanced on the average than those with adults (See Table 4).

The following segments highlight the shift to sibling caregiving at Level II and the richly textured play in which the children are immersed at Level III. When the child begins to walk steadily alone, the mother begins to leave the child in the company of older siblings She seats herself 5-10 feet away. From this vantage point the mother monitors the child and calls out directions which can be mediated by the sibling caregiver. In the following segment at Level II in a semi-rural area on the outskirts of Mexico City Marta, the mother, had set up some makeshift seats, basins of water, containers and toys for water play. Maximina, 3½, and Irene were seated filling containers with water (specific manipulation). Marta called out to Irene to wash the doll several times (¡Baña la muñeca! ¡Bañala!", "Bathe the doll! Bathe her!") from a mat upon which she was seated about 5 feet

away (CRA-1). Irene did not respond to this request. She kept pouring water from a cup into plastic bottle. Her mother approached the girls and repeated her suggestion several times while she rolled up Irene's sleeves. Since Irene couldn't and didn't respond, Maximina chimed in with "Yo lo hago!" (I'll do it!), as she stood the doll upright and poured water over it. Maximina demonstrated a culturally recognizable activity-1 to her younger sister and at the same time displayed her own competence (I'll do it!) plus, perhaps, her younger sister's incompetence. When Marta realeased Irene's sleeve, Irene also poured water over the doll.

By LevelIII caregivers are often occupied at some distance, perhaps, 50-100 feet away, from the children. In this segment, 6 siblings ranging in age from 2 to 10 were engaged in very elaborate imaginative play in the family courtyard in a small farming community. Juana, Level III, was seated next to her older sisters, Sonia and Chucha. Juana was busily engaged in pulling a plastic egg apart and putting it together again (specific manipulation). Meanwhile Sonia and Chucha had poured corn (dirt) into a corn grinder, mixed the masa (corn dough of dirt) with water brought in buckets from the storage area, formed balls, patted out tortillas on the palm of one hand with the fingers of the other and vice-versa, and placed them to cook on a comal (flat, round surface). Sonia called out to Juana to join in making tortillas (CRA-1) by saying "¡Haz una tortilla!" ("Make a tortilla!"). J looked up, watched her sisters, leaned over to take one of the prepared balls of masa, and began to pat her hands somwhat awkwardly together. In this case, Juana spontaneously engaged in specific manipulation (putting together and pulling apart a toy) and was invited to join her sisters in their ongoing imaginative play. That play

provided a demonstration of a culturally recognizable activity, tortilla making, to Juana who joined in, albeit not too competently. In these sequences we can see that older siblings provided younger siblings with instruction about more advanced play and were successful in urging them to participate in such activities.

Discussion

Evidence from this study strengthens Vygotsky's claim that children gain knowledge of the world through social interaction. Further, these results are consonant with findings of other researchers who have examined the importance of interaction with the caregiver during the second year of life (Carew, 1980; Dunn & Wooding, 1977; Sachs, 1980; Zukow, 1981, 1982; Zukow et al., 1982) In this study one condidate universal aspect of the emergence of play activities was revealed. Specifically, at each of three levels of semantic development children engaged in more advanced play sequences during interaction with the caregiver than in non-interactive sequences. The caregivers provided demonstrations of culturally recognizable activities, guided the children's participation in them, and interpreted ongoing activities as such. At first the children imitated the caregiver and/or produced fragments of well-practiced, highly structured culturally recognizable activities. Later the children were able to participate in the same or similar activities by themselves or were able, within interactive sequences, to supply variations and improvisations.

A culture-specific aspect of the emergence of play among this rural-born population was the sharing of caregiving responsibilities. As soon as children walk competently during the one-word period, caregiving is subtly shifted from the mother to other competent

family members, usually siblings. (This style is more typical of the less-educated families.)* Despite this shift in caregiving responsibilities, interactive play activities remained more advanced than noninteractive activities. Older siblings demonstrated they were important socializing agents by providing culturally appropriate knowledge of the world to their younger siblings. This finding implies that the positive contribution of siblings as socializing agents should be investigated in our culture as well.

*Preliminary analysis by group.

References

Bronfenbrenner, U. Ecological validity in research on human development. Paper presented at the American Psychological Association Meeting, Washington, D.C., 1976

Carew, J. V. Experience and the development of intelligence in young children at home and in day care. Monographs of the Society for Research in Child Development., 1980, 45, (6-7, Serial No. 187).

Cole, M, Hood, L., & McDermott, R. Concepts of ecological validity: Their differing implications for comparative cognitive research. The Quarterly Newsletter of the Institute for Comparative Human Development, 1978, 2, 34-37.

Dunn, J., & Wooding, C. Play in the Home and its implication for learning. In B. Tizard & T. Harvey (Eds.), Clinics of developmental medecine: The biology of play. London: Heinemann Medical Books, 1977.

Greenfield, P.M. & Smith, J.H. The structure of communication in early language development. New York: Academic Press, 1976.

Ladefoged, P. A course in phonetics. New York: Harcourt, Brace Jovanovich, 1975.

Lomnitz, Larrisa A. Como sobreviven los marginados. Mexico: Siglo Veintiuno Editores, 1975.

Malpas, R.S. Theory and method in cross-cultural psychology. American Psychologist, 1977, 32, 1069-1079.

Mischel, W. On the future of personality measurement. American Psychologist, 1977, 32, 246-254.

Piaget, J. Play, dreams, and imitation in childhood. New York: Norton, Library, 1962.

Sachs, J. The role of adult-child play in language development. In K.H. Rubin (Ed.), Children's Play. San Francisco: Jossey-Bass, 1980.

Veneziano, E. Early language and nonverbal representation: A reassess-

ment. Journal of Child Language, 1981, 8, 541-564.

Vygotsky, L. S. Play and its role in the mental development of the child. In M. Cole, V. John-Steiner, S. Scribener, & E. Souberman (Eds.), Mind in Society, Cambridge, Mass.: Harvard University Press, 1978.

Wertsch, J.V., McNamee, G.D., McLane, J.B. & Budwig, N. The adult-child dyad as a problem-solving system. Child Development, 1980, 51, 1215-1221.

Zukow, P.G. A microanalytic study of the role of the caregiver in the relationship between symbolic play and language acquisition during the one-word period. (Doctoral dissertation, University of California, Los Angeles, 1980) Dissertation Abstracts International, 1981, 42, 4-5B. (University Microfilm no. 8113894)

Zukow, P.G. Words on play: A microanalytic study of the role of the caregiver in the emergence of play activties during the one-word period. Quarterly Newsletter of the Laboratory of Human Cognition, 1981, 3, 69-71.

Zukow, P.G. The transition from gestural to linguistic communication: Social variations in a Mestiza population. Paper presented at the American Anthropological Association Meeting, Washington, D.C., 1982.

Zukow P. G. The relationship between interaction with the caregiver and the emergence of play activities during the one-word period. Submitted for publication, 1983.

Zukow, P. G. Criteria for the emergence of symbolic conduct: When words refer and play is symbolic. In L. Feagans, C. Garvey, & R. golinkoff (Eds.), The origins and growth of communication. New York: Ablex, in press.

Zukow, P. G., Reilly, J.S., & Greenfield, P. M. Making the absent present: Facilitating the transition from sensorimotor to linguistic communication. In K. Nelson (Ed.), Children's language (Vol. 3).

Hillsdale, New Jersey; Erlbaum, 1982.

Table 1

Distribution of Videotapes

Level of Education of caregiver	Urbanization					
	Urban			Rural		
Semantic Level of the Child	I	II	III	I	II	III
Primary Education	12[a]	9[a]	11[a]	12[c]	13[c]	7[c]
Professional		6[b]	3[b]	3[d]	1[d]	

[a]Group I
[b]Group II
[c]Group III
[d]Group IV

Table 2

Distribution of Non-interactive and Interactive Play Sequences by Content and Semantic Level

Level and Type of Interaction	Degree of Cultural Knowledge: Non-specific Sensory Manipulation	Specific Manipulation	Culturally Recognizable Activity-1	Culturally Recognizable Activity-2
I				
Non-interactive	69.7% (200)[a]	26.8% (77)	3.5% (10)	
Interactive	29.3% (43)	29.9% (44)	40.8% (60)	
II				
Non-interactive	33.3% (67)	57.7% (116)	9.0% (18)	
Interactive	8.2% (20)	23.0% (56)	68.4% (167)	0.4% (1)
III				
Non-interactive	31.5% (46)	52.7% (77)	13.7% (20)	2.1% (3)
Interactive	2.6% (5)	22.1% (43)	69.1% (134)	6.2% (12)

[a]Numbers in parentheses indicate the number of tokens of each type.

Table 3

Distribution of Interactive Play Sequences by Caregiver Role and Semantic Level

	Caregiver		
Level	Mother	Sibling	Total
I	66.7% (98)	33.3% (49)	147
II	37.7% (92)	62.3% (152)	244
III	13.4% (26)	86.6% (168)	194

Table 4

Distribution of Interactive Play Sequences by Degree of Cultural Knowledge, Semantic Level, and Caregive

Level and Caregiver	Degree of Cultural Knowledge: Non-specific Sensory Manipulation	Specific Manipulation	Culturally Recognizable Activity-1	Culturally Recognizable Activity-2
I				
Mother	88.8% (38)[a]	28.6% (28)	32.6% (32)	
Sibling	10.2% (5)	32.7% (16)	57.1% (28)	
II				
Mother	10.9% (10)	22.8% (21)	65.2% (60)	1.1% (1)
Sibling	6.6% (10)	23.0% (35)	70.4% (107)	
III				
Mother	7.7% (2)	27.0% (7)	53.8% (14)	11.5% (3)
Sibling	1.8% (3)	21.4% (36)	71.4% (120)	5.4% (9)

[a]Numbers in parentheses indicate the number of tokens of each type.