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ABSTRACT

This annotated bibliography focuses on recent publications dealing with factors that influence child growth and development, rather than the developmental processes themselves. Topics include: general sources on child development; physical and perceptual-motor development; cognitive development; social and personality development; and play. Approximately 150 entries are drawn from journals, books, book chapters, and monographs. (ED)

CHILD DEVELOPMENT:

AN ANNOTATED BIBLIOGRAPHY

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In whatever context we study the child, we must be cognizant of his development in general. This bibliography aims to complement the Symposium-Fair, which focusses on one major aspect of the child's life, by providing an overview of child development.

Preparation of an annotated bibliography on child development is a large task covering a large field of literature. Obviously, in a project of this scope some constraints must be put on the work. Thus, the bibliography does not pretend to be all-inclusive. It is, however, representative of recent publications, especially publications dealing with the shapers of development (of which the natural environment is one), rather than the developmental processes themselves.

The bibliography is not cross-referenced, although many references could be included in more than one section. We have attempted to list each reference in the section where the major emphasis seems to be.

A special section is devoted to play, since today this is recognized as such a powerful influence on development. In addition to play, physical and perceptual/motor development, intellectual and cognitive development, and social and personality development are covered.

CONTENTS

CHILD DEVELOPMENT--GENERAL SOURCES

General references on child development are included in this section. Influences on development (such as the child's culture, his environment, malnutrition, and special programs) are covered by many of these references.

Al-Issa, Ihsan, and Dennis, Wayne, eds.
1970. Cross-cultural studies of behavior. N.Y.: Holt, Rinehart, and Winston.

Presents articles on cross-cultural studies of perception, intelligence, personality, child-rearing, child behavior, linguistics, and mental health.

Ausubel, David P., and Sullivan, Edmund V.
1970. Theory and problems of child development, 2nd ed. N.Y.: Grune and Stratton.

Investigates theories of child development, methods of research, prenatal development, early infant behavior, and child development--personality, language, cognitive, intellectual, and physical/motor.

Behrens, Herman D., and Maynard, Glenn, eds.
1972. The changing child: readings in child development. Glenview, Ill.: Scott, Foresman and Co.

Covers historical background; development of self-concept, morals, personality; emotional, social, physical, and motor development; conceptual development, language, learning; impact of family and culture.

Bernard, Harold W.
1973. Child development and learning. Boston: Allyn and Bacon.

This book covers all facets of child development, with a special section on gifted and handicapped children and children from other cultures.

Bernard, Harold W., and Huckins, Wesley C., eds.
1972. Exploring human development: interdisciplinary readings. Boston: Allyn and Bacon.

Writings by a number of theorists on psychological and physical development, stages of development (infancy to adolescence), and forces influencing development (family, peers, school.)

Bruner, Jerome S.
1973. Organization of early skilled action. Child Devel. 44(Mar.): 1-11.

Focusses on competencies acquired during 1st year, which he classifies as feeding, perceiving, manipulating the environment, locomoting, and interacting with others. Competencies are accomplished by intention, feedback, and "patterns of action that mediate between them."

Chess, Stella, and Thomas, Alexander, eds.
1974. Annual progress in child development: 1973. N.Y.: Brunner/Mazel.

Sixth volume in this annual series. Contains articles first published in professional journals in 1972, on: infancy studies, developmental issues, separation from parents, language and learning, childhood disorders, drug studies, adult outcome of childhood disorders, and effects of institutionalization.

Fein, Greta G., and Clarke-Stewart, Alison.
1973. Day care in context. N.Y.: John Wiley and Sons.

Presents historical perspectives and issues in day care; the changing needs of children and their families; the role of day care in today's society; and application of child development theory to setting up day care programs.

Foss, B. M., ed.
1963. Determinants of infant behavior II. London: Methuen and Company.

Cites both animal and human studies of maternal affection and social development. An in depth study of a family with a new infant is presented, along with discussions of exploratory behavior, attachment, critical periods, and imprinting.

Frost, Joe L., comp.
1973. Revisiting early childhood education: readings. N.Y.: Holt, Rinehart and Winston.

Covers a variety of aspects of education and development in early childhood, including impact of day care, child care, and Head Start; play; Montessorian and Piagetian methods; and the Open and Free Schools.

Gollin, Eugene S., and Moody, Mark.
1973. Developmental psychology. Ann. Rev. of Psychology 24: 1-52.

Review of literature written on child development in 1971. Areas reviewed include infancy, behavior disorders, research with animals, perception, learning, cross-cultural research, behavior modification, and Piaget.

Hart, Roger A.
1973. Review of theory and research on children's relationship to the physical environment. In Anne-Marie Pollowy, ed., Children in the residential setting: a discussion paper toward design guidelines. Université de Montréal: Centre de Recherche et d'Innovation Urbaines.

Surveys the literature in behavioral science to explore the relationship between the physical environment and child development. Growth and motor development, exploratory behavior, attachment, and emotional development are discussed in this context.

Kagan, Jerome.
1971. Understanding children: behavior, motives, and thought. N.Y.: Harcourt Brace Jovanovich.

Focusses on processes of behavior change, nature of motives, relationship between motives and behavior, components and processes of thought, with many practical suggestions for teachers.

Kessen, William, Haith, Marshall M., and Salapatek, Philip H.
1970. Human infancy: a bibliography and guide. In P.H. Mussen, ed., Carmichael's manual of child psychology, vol. 1, 3rd ed. N.Y.: John Wiley and Sons, 287-445.

Considerations in infant research, sources of information about infants, some research conclusions on sucking behavior, response to stimuli, and visual capacity of infants. 85 page bibliography.

Lefrancois, Guy R.
1973. An introduction to child development. Belmont, Cal.: Wadsworth Pub.

Discusses shapers of development (genetics, environment, learning), theories of development, and stages of development (prenatal--adolescence.)

Mattsson, Ake.
1972. Long-term physical illness in childhood: a challenge to psychosocial adaptation. Pediatrics 50(Nov.): 801-811.

Long-term disorders may significantly interfere with physical and emotional growth and development of children. Reasons for stress and types of coping are discussed, with successful adaptation hinging on continued support from doctor and parents.

Mussen, Paul H., ed.
1970. Carmichael's manual of child psychology, vol. 1, 3rd ed. N.Y.: John Wiley and Sons.

Comprehensive coverage of biological basis of development; infancy; social and cognitive development; mental retardation; behavior disorders; and psychosis, with extensive bibliographies on all subjects.

Provence, Sally, and Lipton, Rose C.
1962. Infants in institutions. N.Y.: International Universities Press.

Various developmental tests were administered to institutionalized and home-reared infants. Extensive findings include deprivation of feeding experience, lack of contact with others, little motor activity or play, and deficits in sensory stimulation by institutionalized infants. In general, their development was slower than home-reared.

Read, Marrill S.
1972. Malnutrition and learning. In Bernard and Huckins, eds., Exploring human development. Boston: Allyn and Bacon, 240-247.

Cites research findings which show how malnutrition of mother affects the fetus. Malnutrition in childhood was found to result in decreased rate of mental and motor development. Other studies are noted.

Sanoff, Henry, Sanoff, Joan, and Hensley, Anderson.
1972. Learning environments for children. Raleigh, N.C.: Learning Environments.

Collection of ideas and information for the use of architects, educators, and laymen interested in providing stimulating environments which meet needs of children. The emphasis is on integration of early childhood education with day care.

Smart, Mollie S., and Smart, Russell C.
1972. Children: development and relationships, 2nd ed. N.Y.: Macmillan Co.

Covers stages of development and the skills and achievements of each stage (infancy to adolescence.) Appendices on vaccinations, diseases, height-weight charts, and nutritional needs are supplied.

Weininger, Otto.
1972. Effects of parental deprivation: an overview of the literature and report on some current research. Psychol. Reports 30(Apr.): 591-612.

Reviews literature and reports several studies, which generally conclude that separation of child from parents for any length of time causes behavioral change.

Winick, Myron, ed.
1972. Nutrition and development. N.Y.: John Wiley and Sons.

Discusses relationship of nutrition in early life to subsequent development; what happens when child is deprived of various vital nutrients.

Wright, Thomas S., and Mann, Lester.
1967. Day camping: outdoor therapeutic education for emotionally disturbed children. Am. Journ. of Orthopsych. 37(Mar.): 222-223.

Summer day camp continues social-emotional training that emotionally disturbed receive in school and has other benefits due to varied peer contacts and relaxed atmosphere. Improvement of sensorimotor deficits, less hyperactivity, and improved body image were noted.

PHYSICAL AND PERCEPTUAL/MOTOR DEVELOPMENT

Interrelationships between physical/motor/perceptual development and language acquisition; cognition, and personality have been found, increasing the importance of studying this facet of the child's development. This section includes literature on differences between children of the same age, changes that occur over time in the same child, and influences on physical, motor, and perceptual development.

Babson, S. Gorham, and Phillips, David S.
1973. Growth and development of twins dissimilar in size at birth. New Eng. Journ. of Med. 289(Nov.): 937-940.

Pairs of 8-and 13-year-old twins dissimilar in size at birth were compared as to intelligence and growth. The smaller twins were found to still be inferior in height, weight, and intelligence.

Bayley, Nancy.
1965. Comparisons of mental and motor test scores for ages 1-15 months by sex, birth order, race, geographical location, and education of parents. Child Devel. 36: 379-411.

Mental and motor development of 1,400 1-15 month old infants were assessed. Results indicated that at these ages mental and motor development are primarily unrelated to sex, race, birth order, geographical location, or parents' educational level.

Chaney, Clara M., and Kephart, Newell C.
1968. Motoric aids to perceptual training. Columbus, Ohio: Charles E. Merrill.

Evaluation of perceptual-motor learning, and activities which will develop perceptual-motor abilities are described.

Clarke, H. Harrison, and Harrison, James C. E.
1962. Differences in physical and motor traits between boys of advanced, normal, and retarded maturity. Res. Q. 33(Mar.): 13-25.

Boys from 3 physical maturity levels were given physical and motor tests. Differences in structure and performance between the 3 groups were found, with weight, hip width, grip strength, sitting height, upper arm girth, and calf girth constituting the major differences.

Connolly, Kevin, and Kathleen Brown.
1968. Developmental changes in some components of a motor skill. Brit. Journ. of Psychol. 59(Aug.): 305-314.

6, 8, and 10 year old boys and girls were given a task and tested for speed and accuracy. Found that girls were faster than boys, speed increased with age, and practice had a positive effect on speed. Effect of practice differed with each age group.

Corbin, Charles B.
1973. A textbook of motor development. Dubuque, Iowa: William C. Brown.

Influences on and patterns of motor development from infancy through childhood are presented, with a section on evaluation of motor behavior.

Espenschade, Anna S., and Eckert, Helen M.
1967. Motor development. Columbus, Ohio: Charles E. Merrill.

Some factors which influence motor development are heredity and health of mother when pregnant. Separate chapters cover prenatal development and motor behavior from infancy to old age.

Glassow, Ruth B., and Kruse, Pauline.
1960. Motor performance of girls age 6 to 14 years. Res. Q. 31(Oct.): 426-433.

Obtained motor ability scores from 1st through 8th grade girls. Results were consistent with previous evidence that motor performance scores improve with age.

Govatos, Louis A.
1972. Relationships and age differences in growth measures and motor skills. In Behrens and Maynard, eds., The Changing Child. Glenview, Ill.: Scott, Foresman and Company, 239-245.

Motor abilities were tested and growth information obtained for 6-11 year old boys and girls. Boys were found to be superior in almost every way for each age group, and there was a high correlation between growth and motor skills.

Graffar, Marcel, and Corbier, Jacqueline.
1972. Contribution to the study of the influence of socio-economic conditions on the growth and development of the child. Early Ch. Devel. and Care 1(Mar.): 141-179.

Hanes, Michael I.
1973. The research on how children learn from pictures. Viewpoints 49(Mar.): 11-20.

Reviews literature dealing with children's ability to learn from pictures as opposed to words; differences in ability to learn from pictures according to characteristics of learner; relationship between perceptual development and reading success.

Harris, Lauren Jay.
1972. Discrimination of left and right, and development of the logic of relations. Merrill-Palmer Q. 18(Oct.): 307-320.

Boys in kindergarten and 2nd grade were investigated. Found that most Ss understood up-down and front-back, but there was a high failure rate on left-right.

Hellebrandt, F.A., Rarick, G. Lawrence, Glassow, Ruth, and Carns, Marie L.
1961. Physiological analysis of basic motor skills. Am. Journ. Phys. Med. 40(Feb.): 13-25.

Boys, 14 months-11 years old, were filmed jumping. Authors analyze components of jumping at various age levels and conclude that jumping is acquired gradually through development of necessary mechanisms.

Krogman, Wilton Marion.
1972. Child growth. Ann Arbor: University of Mich. Press.

Focusses on the physical growth of the child--intrinsic and extrinsic factors are considered and interpreted. Also covers motor functions and behavior as related to the growing body.

Landers, Daniel M., and Martens, Rainer.
1971. The influence of birth order and situational stress on motor performance. Psychonomic Sci. 24(Aug.): 165-167.

Junior high school boys were given the same tracking task under different stress conditions. First-borns in high stress conditions performed sig. more poorly than subjects in any other stress conditions.

Laycock, Frank, and Caylor, John S.
1972. Physiques of gifted children and their less gifted siblings. In Behrens and Maynard, eds., The changing child. Glenview, Ill.: Scott, Foresman, 226-234.

Body measurements were taken of siblings, 8-18 years old, with widely divergent IQ's. Results indicate that gifted children were not bigger than their "ordinary" siblings, conflicting with past findings.

Lipton, Edward David.
1969. The effect of a physical education program to develop directionality of movement on perceptual-motor development, visual perception, and reading readiness of first grade children. Disser. Abs. Internat., Dec., 30(6-A): 2362.

One group of 1st graders had a 12 week experimental physical education program, while another group attended the regular physical education classes. Experimental group's post-test scores showed they had made sig. gains in perceptual-motor development, visual perception, and reading readiness.

Malina, Robert M.
1969. Exercise as an influence upon growth; review and critique of current concepts. Clin. Pediat. 8(Jan.): 16-26.

Reviews literature on following subjects: bone growth, body chemistry, tensile and compressive forces, bone injuries, muscle growth, inactivity, protracted exercise programs, life span, and studies with human Ss. Sees need for long-term research with human Ss.

Modlin, Joan, Hawker, Anne, and Costello, A.J.
1973. An investigation into the effect of sleeping position on some aspects of early development. Devel. Med. and Ch. Neuro. 15(June): 287-292.

Supine and prone sleepers, 7 months old, were tested with various developmental tests. No differences in development were found.

Pikler, Emmi.
1972. Data on gross motor development of the infant. Early Ch. Devel. and Care 1(Aug.): 297-310.

Longitudinal data on 17 years of observations of 700 institutionalized children indicates that these children's motor development proceeded at the same rate as home-reared children but without adult help.

Rae, Gwenneth.
1973. The developmental correlates of infant babbling and motor behaviors. Diss. Abs. Int., Apr., 33(10-A): 5414-5415.

4-5 year old boys were given a variety of tests, and past performance was assessed. Found that past motor behavior and babbling related sig. to current language performance, esp. past motor behavior. Preschool intelligence was not predicted by infant behavior.

Rarick, G. Lawrence, ed.
1973. Physical activity: human growth and development. N.Y.: Academic Press.

Each of 14 chapters deals with one facet of relationship between physical activity and growth and development. Topics include: physical activity's impact on growth of muscle and bone, muscle strength, physique; age changes in motor skills; motor performance of retarded; role of play and sports in development.

Rice, James A..
1969. Confusion in laterality: a validity study with bright and dull children. Journ. of Learning Dis. 2(July): 368-373.

200 kindergarten-3rd grade children and 41 EMR children were given a battery of tests. Results indicate that laterality confusion was sig. related to age and intelligence; language and achievement scores were only slightly related to laterality confusion.

Segall, Marshall H., Campbell, Donald T., and Herskovits, Melville J.
1963. Cultural differences in the perception of geometric illusions. Science 139(Feb.): 769-771.

Results of 6 years of cross-cultural testing of children and adults are discussed. There were significant cultural differences in perception of illusions, which authors attribute to different visual stimuli in the environment.

Singer, Robert N.
1968. Interrelationship of physical, perceptual-motor, and academic achievement variables in elementary school children. Percept. and Motor Skills 27(Dec.): 1323-1332.

Physical and motor characteristics of 3rd and 6th graders (av. IQ - 116) were assessed. No physical or motor variables were found to correlate sig. with IQ or academic achievement.

Whitcraft, Carol Jones.
1972. Motoric engramming for sensory deprivation or disability. Except. Child. 38(Feb.): 475-478.

Discusses motoric involvement, perceptual-motor theories, and neurophysiological evidence which shows need for motoric engramming approach to learning (motoric orientation and spatial perception), especially for the sensory handicapped child.

White, Burton L., Castle, Peter, and Held, Richard.
1964. Observations on the development of visually-directed reaching. Ch. Devel. 35: 349-364.

The reactions of institution-reared infants to a brightly-colored object were assessed at ages 1-5 months. Detailed observations are given in the study, with infants grasping the object in one direct motion by 5 months.

The development of understanding and the development of language are influenced by a multitude of factors which the child himself cannot control. Many of the references cited in this section deal with these influences, such as family size, social environment, birth order, and environmental deprivation. Several supplementary or enrichment programs are suggested.

Belmont, Lillian, and Marolla, Francis A.
1973. Birth order, family size, and intelligence. Science 182(Dec.): 1096-1101.

Raven scores and data on family size and birth order were obtained from 400,000 19 year old men in the Netherlands. Found an inverse relation between family size and Raven score, and, as birth order increased, Raven score decreased.

Bing, Elizabeth.
1963. Effect of childrearing practices on development of differential cognitive abilities. Ch. Devel. 34(Sept.): 631-648.

Childrearing practices and relationship between mother and child were assessed in 5th grade children of high and low verbal ability. High verbal accomplishments were facilitated by close relationship with demanding mother; high non-verbal accomplishments were enhanced by allowing child more freedom.

Clarke-Stewart, K. Allison.
1973. Interactions between mothers and their young children: characteristics and consequences. Monogr. Soc. for Res. in Ch. Devel. 38(6-7, Serial No. 153).

This study of mother-infant interactions over time indicates that maternal behavior influences infant development, notably cognitive development and emotional behavior.

Deutsch, Martin.
1965. The role of social class in language development and cognition. Am. Journ. of Orthopsych. 35(Jan.): 78-88.

Four-year study of children from various backgrounds in 1st-5th grades. Lower language scores were found for minority group and lower class 1st graders, and these scores became even lower by 5th grade.

Estes, William Kaye.
1970. Learning theory and mental development. N.Y.: Academic Press.

Covers main concepts and principles of learning; reviews and interprets learning research; analyzes the influence of learning theory on learning research.

Freeberg, Norman E., and Payne, Donald T.
1967. Parental influences on cognitive development in early childhood: a review. Ch. Devel. 38(Mar.): 66-87.

Reviews literature relating to significance of early learning, influences of family and social environment, impact of environmental deprivation, and enhancement of cognitive skills. Cites needed research.

Gellert, Elizabeth, Girgus, Joan S., and Cohen, Jacob.
1971. Children's awareness of their bodily appearance: a developmental study of factors associated with the body percept. Gen. Psychol. Monogr. 84(Aug.): 109-174.

Girls and boys 5-12 years old were photographed in bathing suits and asked to identify their picture. When head portions of photos were visible, recognition was almost perfect; when head portions were covered, self-recognition was still accurate, improving with age.

Golden, Mark, and Birns, Beverly.
1968. Social class and cognitive development in infancy. Merrill-Palmer Q. 14(Apr.): 139-149.

Negro children, 12, 18, and 24 months old from 3 SES groups, were tested with Piaget Object Scale and Cattell Infant Intelligence Scale. Found no SES difference in intellectual performance.

Gregg, Lee W., ed.
1972. Cognition in learning and memory. N.Y.: John Wiley and Sons.

Eight articles from Proceedings of 5th Annual Symposium on Cognition (Apr. 1969) are included: mpdels of learning and memory, analysis of progress in learning, language comprehension experiments, visual imagery.

Haggerty, Arthur D.
1959. The effects of long-term hospitalization or institutionalization upon the language development of children. Journ. Genet. Psychol. 94 (June): 205-209.

12 year olds who had been institutionalized early in life were studied over 5 years. Battery of language and personality tests were given. Speech organization and personality characteristics were identified as more like schizophrenics than normal controls, suggesting that impaired communication may contribute to development of schizophrenia.

Honzik, Marjorie P.
1967. Environmental correlates of mental growth: prediction from the family setting at 21 months. Ch. Devel. 38(June): 337-364.

Intelligence of children, studied from 21 mos. to 30 years old, was measured periodically; family situation was evaluated. Certain family variables present before child was 2 years old predicted mental growth, such as mother-son or father-daughter relationship, father's occupational satisfaction, and parental compatability.

Hunt, J. McVicker.
1964. How children develop intellectually. Children 11(May-June): 83-91.

Discusses changing theories of intellectual development and motivation; the importance of early emotional and cognitive experience, motor behavior, and cultural deprivation.

Jensen, Arthur R.
1970. IQ's of identical twins reared apart. Behav. Genetics 1(May): 133-148.

Reviews data from the 4 major studies on intelligence of monozygous twins reared apart. New analysis of data leads author to conclude that differential environmental effects were unrelated to intelligence of twin pairs.

Kagan, Jerome.
1972. Do infants think? Sci. American 226(Mar.): 74-82.

Describes experiments conducted at Harvard U. which have led author to believe that certain cognitive processes are controlled by maturation rather than primarily influenced by experience. Author hypothesizes that cognitive development begins at 9 months of age.

Kaplan, Bonnie J.
1972. Malnutrition and mental deficiency. Psychol. Bull. 78(Nov.): 321-334.

Stresses importance of good nutrition during mother's childhood and pregnancy. Prematurity and birth weight are discussed as determinants of intellectual potential, and a model for research design with humans is suggested.

Kohn, Martin, and Rosman, Bernice L.
1973. Cognitive functioning in five-year-old boys as related to social-emotional and background-demographic variables. Devel. Psychol. 8(Mar.):277-294.

5 year old boys from 3 SES levels were given a variety of tests (see article for details). Results showed that cognitive level was a function of both child's background and social-emotional functioning.

Koocher, Gerald P.
1973. Childhood, death, and cognitive development. Devel. Psychol. 9 (Nov.): 369-375.

6-15 year olds were pre-tested to determine cognitive development level, then they were asked 4 questions about death. More realistic answers came from those with higher level of cognitive development (not necessarily those who were older.)

Levenstein, Phyllis.
1970. Cognitive growth in preschoolers through verbal interaction with mothers. Am.Journ. of Orthopsych. 40(Apr.): 426-432.

Experimental (Es) and control (Cs) groups of 2-3 year olds were given tests of cognitive development before and after a 7 month experimentation period. Es were given special Verbal Interaction Stimulus Materials (VISM) and mothers were encouraged to interact with them during play; Cs had non-VISM toys and mothers did not participate. Es showed sig. cognitive gains, but there was no difference between 2 and 3 yr. olds.

McCall, Robert B.
1970. Intelligence quotient pattern over age: comparisons among siblings and parent-child pairs. Science 170(Nov.): 644-648.

IQs of parent-child pairs and of sibling pairs matched to unrelated controls were compared. No relationship between parent and child IQs over time was found. IQs of sibling pairs were more similar to IQs of age-matched controls than to each other's over time.

McCall, Robert B., Hogarty, Pamela Savoy, and Hurlburt, Nancy.
1972. Transitions in infant sensorimotor development and prediction of childhood IQ. Am. Psychol. 27(Aug.): 728-748.

Discusses research which has attempted to find some correlation between infant developmental test scores and later intelligence test scores, with respect to reliability of instruments, sex differences, socio-economic status, and specific abilities.

McConnell, Freeman, Horton, Kathryn, and Smith, Bertha R.
1969. Language development and cultural disadvantagement. Except. Childr. 35(Apr.): 597-606.

A 2-year experimental program of language and perceptual training was given to 2 to 5 year olds enrolled in community day care centers. Testing at the end of the 1st and 2nd years revealed that, compared to children in traditional kindergartens, experimental children made sig. gains in IQ and visual perceptive abilities; language ability increased after 2nd year of program.

Mittler, Peter.
1970. Biological and social aspects of language development in twins. Devel. Med. and Ch. Neuro. 12(Dec.): 741-757.

Psycholinguistic skills of 4 year old twins and singletons from the same backgrounds were compared. Found twins were 6 months behind singletons in language development, with greater differences between middle-class twins and singletons than those from working class.

Moerk, Ernst.
1972. Principles of interaction in language learning. Merrill-Palmer Q. 18(July): 229-257.

Taped interactions between mothers and their 20 to 60 month old children were analyzed to determine influential factors in children's language development. Verbal and nonverbal teaching methods used by parents are discussed.

Moore, Terence.
1967. Language and intelligence: a longitudinal study of the first eight years. Part I. Patterns of development in boys and girls. Hum. Devel. 10: 88-106.

A sample of children was given several tests at 6 months, 18 months, 3 years, and 5 years to explore the part played by language in early mental development. Girls showed early verbal superiority, with early language positively related to later intelligence.

Moyles, E. William, and Wolins, Martin.
1971. Group care and intellectual development. Devel. Psychol. 4(May): 370-380.

Children from a variety of European institutions and an Israeli kibbutz and children living at home in the same countries were given Raven test. Cognitive development was found to be unaffected by institutional living.

Nagy, Maria.
1948. The child's theories concerning death. Journ. of Genet. Psychol. 73: 3-27.

3 to 10 year old Hungarian children from various backgrounds were given several tasks to determine their concepts of death. The concept of death developed in 3 stages: 3-5 yr. olds denied the finality, 5-9 yr. olds personified death, and 9 yr. olds recognized it as inevitable.

Neal, W. R., Jr.
1972. The effect of environmental deprivation on speech and language development: implications for child care workers. Ch. Care Q. 1(Spring): 157-172.

Explores the stages in the normal development of speech, from birth through preschool years. Studies of deprivation within and outside family setting indicate that various environmental factors can retard language development. Activities to stimulate speech are suggested.

Nelson, Katherine.
1973. Structure and strategy in learning to talk. Monogr. Soc. for Res. in Ch. Devel. 38(Serial No. 149): whole issue.

Strategies for acquiring words by 1 to 2 year olds are explored (comprehension, imitation, questioning). Factors which influence language acquisition, such as t.v. and other adults, are discussed.

Ogletree, Earl J.
1974. Intellectual growth in children and the theory of 'bioplasmic forces.' Phi Delta Kappan 55(Feb.): 407-412.

Energy (or "bioplasmic") forces are believed by theorists to be the basis for growth and development. When the child's energy is being used for growth or motor development, learning and cognition slow down. Thus, forcing the child to learn prematurely will take energy needed for growth, cause fatigue, and make learning more difficult.

Osser, Harry.
1973. Biological and social factors in language development. In C. David Mortensen and Kenneth K. Sereno, eds., Advances in communication research. N.Y.: Harper and Row, 1973, 376-387.

Discusses three positions on the development of language: Nativist, emphasizing maturation; Environmentalist, stressing the learning climate; and Sociolinguist, emphasizing social factors.

Palermo, David S., and Molfese, Dennis L.
1972. Language acquisition from age five onward. Psychol. Bull. 78 (Dec.): 409-428.

The acquisition of language from age 5 is examined, with authors concluding that phonology, syntax, and semantics are not completely developed by age 5. It seems apparent that language development is related to corresponding cognitive development.

Palmer, Francis H.
1969. Learning at two. Children 16(Mar.-Apr.): 55-57.

One group of 2 year olds was taught systematically to understand concepts; another group was given the same learning materials but no instruction; a control group did not participate. After 8 months the experimental groups performed better on a test of concepts than controls, with the instructed group performing best. They maintained their superiority one year later. Author concludes that what 2 year olds are taught is secondary to how they are taught.

Piaget, Jean.
1973. The child and reality: problems of genetic psychology. N.Y.: Grossman.

Describes developmental stages to illustrate why learning of concepts takes time. Also covers thought processes, the "cognitive unconscious," memory, coordination and reflexes, the relationship of language to intellectual operations, and research in genetic psychology.

Piaget, Jean.
1959. The language and thought of the child, 3rd. ed. London: Routledge and Kegan Paul.

Author uses the "clinical method" (observation and questioning) to study aspects of language, such as: function of language in 6 year olds, understanding between 4 and 7 year olds and 9 year olds, and egocentric language in adult-child and child-child communications.

Piaget, Jean.
1952. The origins of intelligence in children. N.Y.: International Universities Press.

Analyzes intelligence through examining sensori-motor adaptations (reflexes, hearing, vision, accomodation, experimentation.) Discusses "practical" intelligence (5 theories of intelligence)-- associationist empiricism, vitalistic intellectualism, apriority and psychology of form, theory of groping, and theory of assimilation.

Robinson, Halbert B., and Robinson, Nancy M.
1971. Longitudinal development of very young children in a comprehensive day care program: the first two years. Ch. Devel. 42(Dec.): 1673-1683.

Administered intelligence tests to infants and preschoolers who had received up to 2½ years of "stimulating" day care. They scored higher than a control group, and verbal scores were higher than sensorimotor. Scores indicate that culturally deprived children got more benefit from "stimulating" day care.

Saltz, Rosalyn.
1973. Effects of part-time 'mothering' on IQ and SQ of young institutionalized children. Ch. Devel. 44(Mar.): 166-170.

Half of a sample of institutionalized 16 month old-6 year old children participated in Foster Grandparent Program (FGP) for 4 months. One, two, and four years later the FGP participants had higher IQ scores, attributed by authors to increased quality of stimulation.

Taylor, Ann.
1968. Institutionalized infants' concept formation ability. Am. Journ. of Orthopsych. 38(Jan.): 110-115.

Formerly institutionalized children were given Rorschach and Binet IQ tests at 6 and 9 years. They were at a mature level of conceptual development at 6, regressing to an intermediate level by 9 years. Author feels regression was a means of adaptation to grasp fundamental concepts missed in infancy.

Thomas, Elizabeth C.
1971. Conceptual development in advantaged and disadvantaged kindergarten children. Percept. and Motor Skills 32(June): 711-717.

Disadvantaged and advantaged kindergarten children were given a picture vocabulary test and an object sorting test. The advantaged group performed better on both tests, with no sex differences found.

Vernon, McCay.
1972. Language development's relationship to cognition, affectivity, and intelligence. Canad. Psychologist 13(Oct.): 360-374.

Author regards congenital deafness as "an experiment of nature" providing a unique opportunity to study the role of verbal language in cognition. Studies cited have shown that cognitive processes are not dependent on verbal language. IQ of deaf population has approx.same mean and s.d. as IQ of general population, despite the deaf's environmental deprivation.

Wachs, Theodore D., Uzgiris, Ina C., and Hunt, J. McV.
1971. Cognitive development in infants of different age levels and from different environmental backgrounds: an explanatory investigation. Merrill-Palmer Q. 17(Oct.): 283-317.

Middle and lower class infants (7, 11, 15, 18, and 22 months old) were given developmental tests. Deficiencies in cognitive development of lower class infants were found to appear earlier (11 mos.) than other studies have shown. Analysis of home environments indicates this may be due to overstimulation rather than deprivation.

Weiner, G., Rider, R.V., Oppel, W.C., and Harper, P.A.
1968. Correlates of low birth weight. Psychological status at eight to ten years of age. Pediat. Res. 2(Jan.): 110-118.

Low birth weight (LBW) infants and full-term infants, first studied at 40 weeks old, were given a battery of tests at 8-10 years old. Verbal IQ, performance IQ, and full-scale IQ and Bender-Gestalt showed increasing deficit with decreasing birth weight. Twice as many LBWs as normals had IQ between 50-79.

SOCIAL AND PERSONALITY DEVELOPMENT

References in this section cover the development of behavior, traits, attitudes, roles, and self concept. How the personality and social behavior of the child develop over time, as well as the influences on this development, are explored by the various studies presented here.

Bandura, Albert.
1963. The role of imitation in personality development. Journ. of Nursery Educ. 18(Apr.): 207-215.

Studies described indicate that aggressive male role models, especially when rewarded, shape children's aggressive behavior; televised models, too, increase aggressive behavior. Author feels that encouraging hyperactive children to participate in aggressive activities as a catharsis only reinforces their behavior.

Bandura, Albert, and McDonald, Frederick J.
1972. Influence of social reinforcement and the behavior models in shaping children's moral judgments. In H. Behrens and G. Maynard, eds., The changing child: readings in child development. Glenview, Ill.: Scott, Foresman, 149-158.

5 to 11 year old boys and girls found decidedly subjective or decidedly objective in moral judgements (by previous testing) were studied to determine if an experimental role model could change their moral judgements. Found that subjective morality increased with age; role model did influence children's altering of moral judgements.

Biller, Henry B.
1971. The mother-child relationship and the father-absent boy's personality development. Merrill-Palmer Q. 17(July): 227-241.

Discusses current literature concerning the mother's influence on personality development of the boy without a father. Maternal attitudes toward the father, overprotection, socio-cultural factors, and the emotional relationship between mother and son are seen as influences on the male child.

Biller, Henry B., and Weiss, Stephan D.
1970. The father-daughter relationship and the personality development of the female. Journ. of Genet. Psychol. 116(Mar.): 79-93.

Reviews the literature on this subject, recommending additional studies and improved methodology.

Bledsoe, Joseph C.
1972. Self-concepts of children and their intelligence, achievement, interests, and anxiety. In H. Behrens and G. Maynard, eds., The changing child: readings in child development. Glenview, Ill: Scott, Foresman, 69-72.

Self-concept, intelligence, achievement, interests, and anxiety level of 4th and 6th grade boys and girls were measured. There was a positive correlation between intelligence and achievement and self-concept in boys; interests were pos. correlated to self esteem only in 4th grade girls; a negative relation was found between anxiety and self esteem for all boys and for 4th grade girls. Interpretations given.

Bowerman, Charles E., and Kinch, John W.
1959. Changes in family and peer orientation of children between the fourth and tenth grades. Soc. Forces 37(Mar.): 206-211.

Questionnaires were administered to middle class 4th-10th graders. Results indicate that family orientation and preference for association with family decreases by the 10th grade, but most 10th graders still identify more closely with family than peers. After 7th grade, girls and individuals from large families show the most peer-orientation.

Chapman, A. H., Loeb, Dorothy G., and Gibbons, Mary Jane.
1956. Psychiatric aspects of hospitalizing children. Arch. Pediatrics 73(Mar.): 77-88.

Discusses some studies and the authors' own observations on children's reactions to hospitalization: effects on personality and emotional development, personality problems which may occur. Suggestions are given on how to make hospitalization less traumatic.

Clausen, John A.
1966. Family structure, socialization, and personality. In L. Hoffman and M. Hoffman, eds., Review of child development research, vol. 2. N.Y.: Russell Sage Foundation, 1-53.

Lengthy investigation of variables in family structure which can influence child's developing personality: composition of family, children's birth order, parental control of child, relationship between parents, values and personalities of parents. Includes large bibliography.

Cohen, Donald J., Allen, Martin G., Pollin, William, Inoff, Gale, Werner, Martha, and Dibble, Eleanor.
1972. Personality development in twins: competence in the newborn and preschool periods. Journ. of Am. Acad. Ch. Psychia. 11: 625-644.

Dizygotic and monozygotic twins were given First Week Evaluation Scale (FES) in infancy and evaluated again in nursery school. The high FES group was found to be more adaptable, talkative, independent, and adjusted at ages 3½-4½ years. High FES had more to do with later competence than family environment.

Dewey, Evelyn.
1935. Behavior development in infants: a survey of the literature on prenatal and postnatal activity, 1920-1934. N.Y.: Columbia University Press.

Compilation of research findings from 1920 to 1934.

Eron, Leonard, Lefkowitz, Monroe M., Huesmann, L. Rowell, and Walder, Leopold O.
1972. Does television violence cause aggression? Am. Psychologist 27 (Apr.): 253-263.

Aggression of male and female 3rd graders was evaluated, and they were asked to name their favorite tv programs. 10 yrs. later the same information was obtained. 8-9 year old boys who watched violent tv programs were more aggressive then and through adolescence; preference for violent programs at 18 was unrelated to current aggressive behavior. Girls were unaffected by tv violence.

Escalona, Sibylle K.
1973. Basic modes of social interaction: their emergence and patterning during the first two years of life. Merrill-Palmer Q. 19(July): 205-232.

Longitudinal study of social development during the first 2 years of life was carried out by recording all social encounters between infants in study group and others. Basic similarities between the infants were found, although they came from varied backgrounds.

Faterson, Hanna F., and Witkin, Herman A.
1970. Longitudinal study of development of the body concept. Devel. Psychol. 2(May): 429-438.

Human figure drawings by one group of males and females were evaluated at ages 8 and 13 yrs., and drawings by another group were evaluated at 10, 14, 17, and 24 yrs. Articulation-of-body-concept scores increased between 8 and 14 yrs., remaining relatively stable thereafter.

Fisher, Seymour, and Cleveland, Sidney E.
1958. Body image and personality. Princeton, N.J.: D. Van Nostrand.

Discusses what is known about the body image, including boundaries of body image and behavior variations, development of body image (influences of family and culture), and body image boundaries and psychosomatic illnesses.

Friedrich, Lynette Kohn, and Stein, Aletha Huston.
1973. Aggressive and prosocial television programs and the natural behavior of preschool children. Monogr. Soc. for Res. in Ch. Devel. 38 (4, Serial No. 151).

Children in a nursery school were shown 3 types of tv programs (aggressive, prosocial, or neutral) each day for 4 wks. Children who watched aggressive programs showed less tolerance for delay, lower obedience of rules, and more aggressive behavior, compared to prosocial viewers.

Gecas, Viktor, Calonico, James M., and Thomas, Darwin L.
1974. The development of self-concept in the child: mirror theory versus model theory. Journ. of Soc. Psychol. 92(Feb.): 67-76.

219 families responded to questionnaires in which each family member rated himself and others. Found that relationship between parent's evaluation of child and child's evaluation of self was stronger than rel. between parent's self-evaluation and child's self-evaluation, lending support to mirror theory.

Gewirtz, Jacob L., ed.
1972. Attachment and dependency. Washington, D.C.: V. H. Winston and Sons.

Studies differences and similarities between attachment and dependency, their influence on social learning, and the place of attachment and dependency in child development. Research on this subject is discussed.

Goldfarb, William.
1949. Rorschach test differences between family-reared, institution-reared, and schizophrenic children. Am. Journ. of Orthopsych. 19(Oct.): 624-633.

Boys and girls (average age 12 yrs.) from foster homes (controls), institutions, and diagnosed as schizophrenic were given Rorschach. Sig. similarities were found between institutionalized and schizophrenic children; their perceptions were lower than controls, they were less effective in gaining recognition, exhibited more unconforming behavior, and were less emotionally mature.

Harth, Robert, ed.
1971. Issues in behavior disorders: a book of readings. Springfield, Ill.: Charles C. Thomas.

Contains articles about mental health of children--identification and classification of disorders, results of psychotherapy, the emotionally disturbed child in the schools, behavior modification, innovations in treatment, and the disturbed child as an adult.

Jenkins, Richard.
1972. Classification of behavior problems of children. In H. Bernard and W. Huckins, eds., Exploring human development: interdisciplinary readings. Boston: Allyn and Bacon, 611-621.

Labels various behavior problems and gives causes and methods of treatment for hyperkinetic, withdrawn, overanxious, runaway, unsocialized aggressive, and group delinquent children.

Laosa, Luis M., Swartz, Jon D., and Holtzman, Wayne H.
1973. Human figure drawings by normal children: a longitudinal study of perceptual-cognitive and personality development. Devel. Psychol. 8(May): 350-356.

Human figure drawings by children were obtained every year for 6 yrs.; original ages of children--6, 9, and 12 yrs. Girls scored higher than boys of the same age. Boys tended to draw male figures first, and this tendency increased with age; girls tended to draw female figures first, and this tendency decreased with age.

Lessing, Elise E., and Oberlander, Mark.
1967. Developmental study of ordinal position and personality adjustment of the child as evaluated by the California test of personality. Journ. of Personality 35: 487-497.

5th, 8th, and 11th graders were given California Test of Personality. First-borns had a healthier level of adjustment than later borns, higher adjustment being a function of higher IQ, higher social class, and smaller family size. Authors noted a negative developmental trend in the importance of ordinal position as a determinant of adjustment.

McCandless, Boyd R.
1972. Physical factors and personality. In D. E. Hamachek, ed., Human dynamics in psychology and education: selected readings. Boston: Allyn and Bacon.

Cites studies on the effects of early or retarded physical development on boys. A longitudinal study of boys at 14 and 30 years found significant personality and occupational differences between early and late maturers. Similar studies of girls and women are mentioned.

McClearn, Gerald E.
1970. Genetic influences on behavior and development. In P. H. Mussen, ed., Carmichael's manual of child psychology, vol. 1, 3rd ed. N.Y.: John Wiley and Sons, 39-76.

Discusses principles of genetics as they relate to development, and human research on genetic control of developmental processes. Stresses need for more research in the new field of developmental behavioral genetics.

Maccoby, Eleanor E., and Feldman, Shirley S.
1972. Mother-attachment and stranger-reactions in the third year of life. Monogr. Soc. for Res. in Ch. Devel. 37(1, Serial No. 146).

Reports longitudinal study of attachment and fear of strangers with 2 to 3 year old American children and children in an Israeli kibbutz. Found similar age changes in attachment behavior and fear of strangers by both American and Israeli children.

Madsen, Millard C., and Connor, Catherine.
1973. Cooperative and competitive behavior of retarded and nonretarded children at two ages. Ch. Devel. 44(Mar.): 175-178.

Retarded and nonretarded children 6-7 years and 11-12 years old were given tasks to measure cooperation and competitiveness. 11-12 year old retarded children scored highest in cooperation, followed by 6-7 year old retarded children. Nonretarded children were very competitive.

Payne, Barbara P., Platt, Larry A., and Branch, Roger G.
1974. Effect of rural recreation on attitudes of urban children. Growth and Change: A Journ. of Regional Devel. 5(Jan.): 32-35.

Black and white boys and girls, 8-12 years old, from low income and moderate-high income families attended a 2 week camp. A questionnaire was given at beginning and end of camp experience. Results suggest that some new attitudes emerged in both groups, with inner city (low income) children most strongly affected.

Phillips, Beeman N.
1963. Age changes in accuracy of self-perception. Ch. Devel. 34(Dec.): 1041-1046.

Self-ratings, teacher-ratings, and peer-ratings were obtained for 3rd and 6th graders, and a personality scale and psychomotor task were administered. 6th graders were more realistic in their self perceptions and ratings of others than 3rd graders.

Rappoport, Leon.
1972. Personality development: the chronology of experience. Glenview, Ill.: Scott, Foresman.

This book aims to provide a broad understanding of personality development. Defines personality, covers psychobiological, physiological, and biochemical considerations, and stages and theories of personality development. Stages of development are discussed in terms of skills acquired, critical factors, and distinctive features of each.

Rheingold, Harriet L., and Eckerman, Carol O.
1970. The infant separates himself from his mother. Science 168(Apr.): 78-83.

Discusses the biological and psychological implications of the infant's separation from the mother, when he is capable of locomotion. Attachment, the mother's role, and increased contact with and awareness of the environment are focussed upon. Primate studies on this subject are cited.

Richardson, Stephen A., and Friedman, Matthew J.
1973. Social factors related to children's accuracy in learning peer group values towards handicaps. Hum. Rel. 26(Feb.): 77-87.

6 to 13 year olds' values toward physical disabilities were used to investigate how children learn values. The peer group was found to influence values for boys in grades 4-6; younger boys were influenced more by best friend. Girls were influenced both by parents and peers, but further study is needed to clarify this.

Rubenstein, Judith.
1967. Maternal attentiveness and subsequent exploratory behavior in the infant. Ch. Devel. 38(Dec.): 1089-1100.

Home-reared 6 month old babies were divided into groups on the basis of attentiveness of mother, and exploratory behavior was tested. Found a positive relationship between high maternal attentiveness and infant development of exploratory behavior. Questions whether attentiveness is a function of maternal attitudes before birth.

Sayegh, Yvonne, and Dennis, Wayne.
1965. The effect of supplementary experiences upon the behavioral development of infants in institutions. Ch. Devel. 36(Mar.): 81-90.

7 month to 1 year old institutionalized infants with a developmental age (DA) of 4 months who could not sit unaided were given daily training sessions in object manipulation for 2 weeks. By the end of training sessions, the infants' DA was 1 month greater than a control groups' DA.

Scarr-Salapatek, Sandra, and Williams, Margaret L.
1973. The effects of early stimulation on low-birth-weight infants. Ch. Devel. 44(Mar.): 94-101.

One group of low-birth-weight disadvantaged infants (Es) was given early stimulation--talking, touching, visual stimuli; control group (Cs) received no such stimulation. At 4 weeks Es were superior to Cs on Brazelton Cambridge scale; at 1 year Es had higher Cattell infant intelligence scores, suggesting that early stimulation promoted behavior development.

Schell, Robert E., and Silber, Jean Waggoner.
1968. Sex-role discrimination among young children. Percept. and Mot. Skills 27(Oct.): 379-389.

The It Scale for Children was administered to 3 and 4 year old boys and girls. Findings suggest that by this age children have learned to make culturally expected sex-typed discriminations; girls seemed more aware of the discriminations between girl and boy objects and activities.

Simmons, Roberta G., Rosenberg, Florence, and Rosenberg, Morris.
1973. Disturbance in the self-image at adolescence. Am. Sociolog. Rev. 38(Oct.): 553-568.

3rd-12th graders were given various measures of self-image. Disturbed self-image was most prevalent in 12-14 year olds, with the largest increase in disturbance noted between 11-12 years old. After age 14 little further increase in disturbed self-image was seen.

Soares, Anthony T., and Soares, Louise M.
1972. Self-perceptions of culturally disadvantaged children. In H. Behrens and G. Maynard, eds., The changing child: readings in child development. Glenview, Ill.: Scott, Foresman, 46-54.

Advantaged and disadvantaged 4th-8th graders were studied. The disadvantaged group was found to have higher self-perceptions than the advantaged group; advantaged girls had higher self-concepts than advantaged boys, and disadvantaged boys had higher ratings than disadvantaged girls.

Tobach, Ethel, Aronson, Lester R., and Shaw, Evelyn, eds.
1971. The biopsychology of development. N.Y.: Academic Press.

Material was taken from a conference on the biopsychology of development. Contains information on: genetics and behavioral devel., neural devel., biochemical processes in behavioral devel., comparisons in the devel. of socialization, contemporary issues in the study of behavior, and implications for society of studying behavioral development.

Ward, William D.
1969. Process of sex-role development. Devel. Psychol. 1(Mar.): 163-168.

Kindergarten, 1st, and 2nd grade boys and girls were studied to ascertain sex-role preference, adoption, and identification. By age 5 sex role preferences were established for both sexes. Preference precedes adoption for both sexes; adoption and identification occur simultaneously for girls but sequentially for boys.

Wender, Paul H., Pedersen, Frank A., and Waldrop, Mary F.
1967. A longitudinal study of early social behavior and cognitive development. Am. Journ. of Orthopsych. 37(July): 691-696.

Differences in social behavior among boys was assessed at age 2½ years. At age 6, three cognitive tasks were given. Found that dependency behavior and autonomous play at 2½ years was positively related to nonverbal intelligence, categorization style, and (to a lesser extent) field dependence-independence at 6 years.

PLAY

Today play is becoming widely recognized as a powerful contributor to the child's development. Researchers have found that play enhances physical, motor, social, personality, and language development, and learning. Because of the importance of play, this section is devoted to a sampling of the literature on play and the play environment.

Abernethy, W. D.
1968. The importance of play. Town and Country Planning 36(Oct.-Nov.): 471-475.

Sees play as a process which encompasses physical and social development and education. Lists the elements of play as fantasy, imitation, adventure, physical development, and coordination, stressing the importance of designing playgrounds which further enhance development through play.

Allen, Audrianna, and Neterer, Elizabeth.
1963. Guide for selection of toys and games. In Margaret Rasmussen, Play--children's business. Washington, D. C.: Association for Childhood Education International.

This brief article is one of a series in a pamphlet which deals with play's contribution to child development. Authors describe developmental needs of children from infancy to 5 years, and how their development can be enhanced through toys.

Allen, Marjory (Lady Allen of Hurtwood).
1968. Planning for play. Cambridge, Mass.: The MIT Press.

Describes types of play, including incidental and group play, and play in adventure playgrounds, play parks, and neighborhood playgrounds. Equipment and design which facilitate play and, thus, enhance child development are discussed.

Baker, Katherine Read.
1966. Let's play outdoors. Washington, D.C.: National Association for the Education of Young Children.

Types of play areas and equipment are presented, with reference to the kind of behavior encouraged. Swings, punching bags, and sand allow for release of emotions and expression; trees and rope ladders are good for physical development.

Caplan, Frank, and Caplan, Theresa.
1973. The power of play. Garden City, N.Y.: Anchor Press/Doubleday.

Authors hypothesize that play affects all facets of living and developing. Play's influence on physical and social development, personality, learning, and creativity is discussed, in addition to activities, equipment, and play environments which facilitate child development. A chapter is devoted to contributors to this field.

Collard, Roberta R.
1971. Exploratory and play behavior of infants reared in an institution and in lower-and middle-class homes. Ch. Devel. 42(Oct.): 1003-1015.

Institution-reared and lower-and middle-class family-reared 8½ to 13 month old infants were given Gesell Cubes and Cup test. Institution babies explored less, showed less social play, and showed fewer varieties of play. Lower-and middle-class babies explored equally as much, but lower-class babies showed fewer varieties of play and less social play than middle-class.

Dattner, Richard.
1969. Design for play. N.Y.: Van Nostrand Reinhold.

Stresses the need to involve children, their parents, and other community members in planning playgrounds, so that design is based on needs rather than cheapest cost to the city. Author feels that playgrounds should provide education--through sensory and motor experiences, challenge, creativity, and choice of activity.

Friedberg, M. Paul, and Berkeley, Ellen Perry.
1970. Play and interplay. N.Y.: The MacMillan Co.

Child's play is cited as a vital contributor to development, and, more importantly, the play environment is discussed as a strong influence on development. Authors feel traditional playground equipment and design should be re-examined to make play more meaningful and enriching, and several successful and unsuccessful designs are presented. Recreational needs of other age groups are also covered.

Goldberg, Susan, and Lewis, Michael.
1969. Play behavior in the year-old infant: early sex differences. Child Devel. 40(Mar.): 21-31.

Male and female 13 month old infants were observed in a free play situation with their mothers. Sex differences in behavior toward mothers and in play were noted. Findings indicate that this might be due to mothers' reinforcing "sex-appropriate" behavior, even at this early age.

Humphrey, James H.
1966. An exploratory study of active games in learning of number concepts in first grade boys and girls. Percept. and Motor Skills 23: 341-342.

First grade boys and girls who had the same pre-test scores on number concepts were taught eight active games to enhance the development of number concepts. All scored significantly higher on the post-test, with boys receiving highest scores.

Humphrey, James H.
1965. Comparison of the use of active games and language workbook exercises as learning media in the development of language understandings with third grade children. Percept. and Motor Skills 21(Aug.): 23-26.

Third graders who had similar scores in language comprehension were divided into 2 groups: one was taught with a language workbook and one with active games. Post-test results indicate that the active game group had significantly greater gains in language understanding, although both groups showed gains.

Kawin, Ethel.
1934. The function of toys in relation to child development. Childhood Education 11(Dec.): 122-124, 132.

Suggests classifications for toys on the basis of their function in child development (such as toys for development of strength and skill, toys for dramatic and imitative play; play materials for artistic development, etc.) Examples of toys are given for each category.

Omwake, Eveline B.
1968. The child's estate. In Millie Almy, ed., Early childhood play: selected readings related to cognition and motivation. N.Y.: Simon and Schuster, 43-60.

Sees play as a means of developing and refining language, motor skills, memory, concept formation, reality orientation, and body perception. Discusses self-initiated (unstructured) and adult-prescribed (structured) play, focussing on the nursery school setting. Play as a diagnostic and remedial tool is suggested.

Quilitch, H. Robert, and Risley, Todd R.
1973. The effects of play materials on social play. Journ. of Applied Behav. Anal. 6(Winter): 573-578.

Seven year old boys and girls attending a recreation center were observed playing with both "social" and "isolate" toys in a free-play setting. Found that the type of toy used had a great effect on the type of play engaged in. Implications for creating play environments will be discussed in a future publication.

Sutton-Smith, Brian.
1971. The role of play in cognitive development. In R.E. Herron and B. Sutton-Smith, Child's play. N.Y.: John Wiley and Sons, 252-260.

Kindergarteners were asked to describe dolls, dishes, trucks, and blocks and tell what they were used for. Both boys and girls could describe all toys, but each gave more usages for toys they played with most frequently (trucks and blocks for boys and dolls and dishes for girls). Describes another study in which learning occurred as a result of game-playing, suggesting a loose relationship between play and cognitive development.

Updegraff, Ruth, and Herbst, Edithe K.
1933. An experimental study of the social behavior stimulated in young children by certain play materials. Pedagog. Seminary and Journ. of Genet. Psychol. 42(June): 372-391.

2 to 4 year old boys and girls were observed playing in pairs with either clay or blocks. Sociable and cooperative behavior was seen more often during play with clay; uncooperative behavior was seen more during block play. 3 to 4 year olds accepted and gave suggestions to their partners more readily and played more cooperatively.

Wells, Marian E.
1970. Preschool play activities and reading achievement. Journ. of Learning Disabil. 3(Apr.): 214-219.

3rd grade reading achievers and underachievers and their parents were interviewed to determine the children's play activities. Underachievers spent a significantly greater amount of time outdoors in the winter and spent more time with parents in outdoor activities. No differences in amount and kind of play activities were found, suggesting that factors other than play account for underachievement in reading.