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Review of recent research on the development of infant social behavior

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A REVIEW OF RECENT RESEARCH
ON THE
DEVELOPMENT OF INFANT SOCIAL BEHAVIOR

by

Rohini R. Souza-Cordeiro

A RESEARCH PAPER
SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN EDUCATION
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This research paper has been
approved for the Graduate Committee
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CHAPTER I

THE PROBLEM

Introduction

Psychology has been dominated too long by a belief in the inheritance of fixed intelligence. After his survey of research on the influence of experience on intelligence, for Hunt the implications were clear: "Society should pay greater attention to what takes place in the lives of very young children and should stop leaving things to chance during this period."¹ He stated that in the light of his research findings, it appeared that the advice from experts on child rearing to ". . . let children be while they grow and to avoid excessive stimulation, was highly unfortunate The problem for the management of child development is to find out how to govern the encounters that children have with their environments to foster both an optimally rapid rate of intellectual development and a satisfying life."²

¹J. Hunt cited in Bettye M. Caldwell, "The Rationale For Early Intervention," Exceptional Children (Summer 1970): 720.

²J. Hunt, Intelligence and Experience (New York: Ronald Press, 1961), pp. 362-363.

He further observed that in the light of theoretical considerations and the evidence concerning the effects of early experience on adult problem solving in animals, it no longer seemed unreasonable to consider, especially during the early years of development, that it might be feasible to discover ways to govern the encounters that children have with their environments that they might achieve a substantially higher adult level of intellectual capacity.³

In support of this theory, Bloom suggested that "in terms of intelligence measured at age seventeen, about fifty per cent of the development takes place between conception and age four, about thirty per cent between ages four and eight, and about twenty per cent between ages eight and seventeen."⁴

The works of Piaget,⁵ Hunt,⁶ and Bruner⁷ likewise indicate the vital importance of the preschool years in the

³Ibid.

⁴B. S. Bloom, Stability and Change in Human Characteristics (New York: John Wiley and Sons, 1964).

⁵J. Piaget, The Origins of Intelligence in Children translated by Margaret Cook (New York: International University Press, 1952).

⁶Hunt, Intelligence and Experience.

⁷J. S. Bruner, The Process of Education (Cambridge: Harvard University Press, 1960).

development of cognitive, emotional and social skills in all children. The writing of Kephart,⁸ Kirk,⁹ and others indicate the special need to assist the early development of such skills in the child with exceptional needs.

Early childhood education is emerging as a major force stressing the importance of early identification and assessment early in a child's life in order to begin intervention and remedial programs at a time when such programs are most beneficial.

Professional training in Early Childhood Development and Education could and is proving to be an effective strategy in preventing handicapping and potentially handicapping conditions.

The concern over the development of a young handicapped child does not extend only to the cognitive, language and motor facets of development, but also includes the development of social skills in the infant.

In their article on "Curriculum and Methods in Early Childhood Special Education: One Approach," Karnes and Zehrbach wrote that studies on the handicapped revealed data that indicated that the handicapped most frequently

⁸N. Kephart, Psychopathology and Education of the Brain-Injured Child (New York: Grune and Stratton, 1947).

⁹S. A. Kirk, Educating Exceptional Children, 2nd ed. (Boston: Houghton-Mifflin, 1971).

failed to be successful on the job because of inadequate social skills rather than lack of competency to perform the task.¹⁰

Justification

It is the opinion of this author that the development of social skills should not be taken for granted; rather, parents and teachers should, as in every other aspect of development, manipulate the infant's environment in order to ensure the maximum amount of encounters wherein the infant would be stimulated to use and develop his social skills.

Statement of the Problem

The purpose of this paper was (1) to review the literature which relates to the identification of the earliest signs of social awareness in an infant; (2) to establish the importance of stimulation to develop early social awareness and social behavior in an infant.

Limitations

In the main, though a few earlier sources have been researched, this paper surveys the literature from 1970-1975 as it refers to the development of children from birth to three years of age.

¹⁰M. B. Karnes and R. R. Lehrbach, "Curriculum and Methods in Early Childhood Special Education: One Approach," Focus on Exceptional Children 5 (April 1973).

Definitions

Social behavior--has been defined by Adams as behavior which either is influenced by the behavior or presence of other persons or is aimed at influencing them, or behavior which is associated with an individual's membership in groups or broader social institutions.¹¹

Summary

This chapter was concerned with the rationale behind the importance of stimulation to develop social skills in an infant especially in the handicapped child. The purpose, scope and limitations of this paper were also discussed and some definitions stated.

¹¹D. K. Adams, "The Development of Social Behavior," in Y. Brakbill (ed.) Infancy and Early Childhood (New York: Free Press, 1967), pp. 397-426.

CHAPTER II

REVIEW OF LITERATURE

An equally defensible set of assumptions is: man has evolved as a social species : infants are genetically biased toward certain social behaviors; they are pre-adapted to an ordinary expectable social environment (a social environment similar in essential respects to that in which the species evolved); and, thus, children are social from the beginning. Furthermore, adults, especially mother--despite great cultural and individual variations-- are also biased toward responding to infants' signals. Thus, the ordinary expectable social environment for a young child is both responsive and protective. These assumptions imply a fundamental compatibility between man and society, and that societal living has, in general, facilitated the evolution of the human species rather than distorted it.¹

The literature on the social development of infants and young children has dealt more with the ages at which important new social skills are first shown and with developmental landmarks that usher in levels of behavior organization than with the manner in which social skills are put to use in everyday life. Once a child learns to recognize strangers and familiars; once he knows how to communicate wishes as well as his aversions; once reciprocity is established through gesture or through words, how do these new acquisitions affect the totality of his functioning in social contexts? By the same token, relatively little is so far known about the variety and range of social contacts that occur day by day and month by month between an infant and other people in the family environment. As has been pointed

¹D. J. Stayton; R. Hogan; Mary D. S. Ainsworth, "Infant Obedience and Maternal Behavior: The Origins of Socialization Reconsidered," Child Development 42 (1971): 1057-1069.

out with increasing frequency in the literature, what we lack is a comprehensive view of the totality of events and circumstances that form the matrix of normal development. In short, a behavioral ecology of infant life guided by a development and psychological orientation is desirable.²

Escalona did a study which investigated the effects of early experience upon the course and outcome of development during the first two years of life. In this study as an important part of the plan to record and systematically deal with all observable behavioral events that constitute an infant's waking life, the author recorded all social encounters between the baby and other persons that occurred during weekly observations of the infant in his every day milieu.³

In this study, the infant's responses were classified into two categories: (1) Social Input--when the baby responded to an alteration in the perceptual field initiated by the other person; (2) Social Output--which focused on the infant's transmissive role both as he initiated social interactions and as, in the course of responding to mother or anybody else, he addressed himself to another person in a focused and sustained manner.

²S. K. Escalona, "Basic Modes of Social Interaction Their Emergency and Patterning During the First Two Years of Life," Merrill-Palmer Quarterly (July 1973):205-232.

³Ibid.

The results of this study follow. Social input-- a fairly sharp increase during the first seven or eight months was followed by a period during which dips and increases in social inputs was noticed. This lasted until 12.3 months of age. Between 12.3 and 15.0 months, the number of social inputs decreased (parallel with the predominance of one locomotor urge) and beginning at 16.4 months, a slow but definite increase in the number of social inputs occurred through the twenty-second months (coinciding with the increasing importance of conventional language as a mediator of social interaction). Both subjects responded to human beings in their environment most frequently during the interval between 20.6 and 21.9 months. The author found that all social inputs observed up to the age of twenty-four months could be reliably distinguished and could be classified into seventeen kinds, or as the authors termed them "modalities of social inputs". They begin with the simplest encounters in which acknowledgment of another's presence is the sole content. Gazing, smiling and vocalizing at the sight, sound and touch of another person are nonspecific as is, at a later age, the recognition of the many casual "hi", waves and other forms of greeting that convey no request, no message, no information beyond, so to speak, "I see you and I'm here." Once one becomes attentive to the nonspecific nature of many infant

adult contacts, one cannot help but become aware of the fact that in adult life, nonspecific contacts remain extremely frequent. It appears that at all ages, they provide the oil that is required to assure smooth operation of the complex machinery as social interaction. It was noteworthy that most basic social inputs had emerged by the age of six to seven months, though the forms which they occur change massively with advancing age, seemingly for instance "being restrained".

The main aim in a study done by Ainsworth et al, was to disprove the general assumption that if socialization has been successful, the natural behavioral dispositions of a child will have been dramatically altered.⁴

This study found that the earliest manifestations of obedience in an infant appeared in the final quarter of the first year of life. It consisted of conforming to such simple material commands and prohibitions as "No, no" and "Come here". In addition, some infants may have occasionally shown a self-imposed compliance to previous commands by stopping themselves while approaching a previously prohibited area or reaching for a forbidden object. These findings were also similar to those in the study done by Escalona. This author attributed the show of resistance or

⁴M. D. Ainsworth; D. J. Stayton and D. Hogan, "Infant Obedience and Maternal Behavior: The Origins of Socialization Reconsidered," Child Development 42 (1971):1057-1069.

compliance of the infant to the stage of physical development wherein independent locomotion was first being exhibited in the form of creeping or early walking, and hence, became one of their prime interests, so that they moved into dangerous or forbidden territories and tended to dislike any interference. The author also felt that this behavior occurred when oppositional behavior became important in its own right.

Although infant obedience is a simple behavioral phenomenon, Ainsworth et al felt it bore on one of the most fundamental problems in social and development psychology, e.g., the origination of socialization--those processes which dispose a child to act in accordance with the rules, values, and prescriptions of his society.

Reviews by Goslin,⁵ Mussen,⁶ Zigler and Child,⁷ which recently appeared, suggested that two processes broadly labeled "learning" and "identification" can account for these phenomena. On the other hand, social learning theory

⁵D. A. Goslin, (ed) Handbook of Socialization Theory and Research (Chicago: Rand-McNally, 1969).

⁶P. Mussen, "Early Socialization: Learning and Identification" in New Directions in Psychology Vol. 3 (New York: Holt, Rinehart and Winston, 1967). pp. 51-110.

⁷E. Zigler and I. L. Child, "Socialization," in A. Lindzey and E. Aronson (eds). The Handbook of Social Psychology Vol. 3 (Reading, Mass.: Addison-Wesley, 1968), pp. 450-589.

features the learning process and the psychoanalytic tradition identification. These two view points, Ainsworth et al felt, although distinct in many details, share important assumptions about socialization.⁸

The first assumption was that a child, in the process of being socialized acquired a set of specific roles, attitudes and responses that typically conformed with the social pressure. Regardless of the process involved, it was implied that a child acquired a willingness to comply with specific rules, roles and response patterns at the same time that he acquired the behaviors themselves. Thus, no distinction was maintained between the process of learning the values and prescription of society and the disposition to comply with them.

A second assumption concerns recognition of the central problem of socialization. The conventional formulation is "What must be done to a child in order that he act in accordance with the rules of his society?" Such a formulation, the authors felt, implied that children who are normally socialized become so only as a result of specific intervention tactics designed to foster social learning or identification. It further implied to them that the small minority of deviant or unsocialized children had become so because socialization procedures were inadequately applied.

⁸ Ainsworth, "Infant Obedience and Maternal Behaviors: The Origins of Socialization Reconsidered."

The authors suggested an alternatively formulated question-- "What must be done to a child to estrange him from his society?" Such a shift in perspective suggested to the author that socialization is the predictable outcome of development in the "ordinary expectable", the major practical problem becoming one of preventing or correcting asocial or antisocial behavior in a deviant minority.

The findings suggested that a disposition toward obedience emerges in a responsive, accommodating, social environment with extensive training, discriptive or other massive attempts to shape the infant's course of development. These findings assumed that an infant is initially inclined to be social and ready to obey those persons who are most significant in his social environment. The results emphasized the importance of early maternal responsiveness to infant signals and the necessity to avoid frequent commands or forcible interventions. These results somewhat differ from those found in Escalona's study, which stated:

The relative frequency of related social inputs seems to determine the relative frequency of related social outputs. For instance, the more the baby is shown things and given information the more will he himself show things and offer information to others. . . . Yet it is not at all the case that the more the baby is complied with the more will he himself comply. Instead, the frequency of compliance largely depends upon the frequency of with which requests are made.⁹

⁹Escalona, "Modes of Social Interaction: Their Emergence and Patterning During the First Two Years of Life."

Another finding from the results of the Ainsworth study indicated that a few of the brighter babies who had freedom to explore also displayed evidence of "internalized control" (refers to self-inhibiting self-controlling behaviors), even at this early age, and this too was related to the quality of maternal responsiveness.¹⁰ The findings were considered in the context of an ethological evolutionary model of early social development.

Returning to the Escalona study on the basic models of social interaction on the second category--social output was found to be very similar in development to the social inputs.¹¹ In fact, the mean frequency of social inputs and social outputs covaried to a high degree.

Of the thirteen social output modalities that could be distinguished, twelve emerged in the same sequence up to five and one-half months. Only avoidance and resistance were observed, in addition to the ubiquitous "nonspecific". Thereafter, more positive approaches to another person entered the behavior repertoire in the form of showing things to another person, initiating well practiced reciprocal games, or expressing a wish or a demand. Giving and/or offering things to another person also came in at about this

¹⁰ Ainsworth, "Infant Obedience and Maternal Behavior: The Origins of Socialization Reconsidered."

¹¹ Escalona, "Modes of Social Interaction: Their Emergence and Patterning During the First Two Years of Life."

time, e.g., towards the end of the first year. Complying with a request and/or answering a question appeared in the eleventh month, compelling emerged at about the same time. Showing affection by conventional means and inflicting hurt in a clearly intentional manner were the last outputs to emerge for the subjects.

The study selected for separate scoring a third social transaction between child and other people which they termed as "sustained reciprocal" interactions--"more prolonged exchanges in which both partners play a transmissive as well as a recipient role and which, by definitions, cannot take place at all unless each partner does his share." In the most primitive form such interaction consists of sustained mutual gazing or reciprocal vocalizing. In more mature forms, the score applies to games with rules, such as peek-a-boo, or sending a ball back and forth between child and adult at least three times. Still later it refers to verbal communications that go beyond the sending of a single message and returning one. Sustained reciprocal interactions of this sort have seemed to the author of special interest in that they require a maximum of mutual adaptation. It was found that even in these highly sociable infants, interaction of the required duration and complexity are a fairly rare event.

Adult social stimulation and infant social behavior are related! The studies reported in the paper "Social Conditioning and Its Proper Control Procedures"¹², were conducted to determine whether in fact, operant associative learning accounted for changes in the infant vocalization rate. The author also wanted to verify the Weisberg¹³ conclusion that vocalization rates increased from baseline to response contingent periods, but did not increase from baseline to response-independent stimulation periods. In others words, response-reinforcer correlation was the factor in facilitating the social vocalizations of young infants.

The results of Bloom and Esposito's¹⁴ study failed to support Weisberg.¹⁵ The author felt that this difference in the results of the two studies may have been due to the many differences in procedures used in the studies and the differences in the vocalization rates of the infants. However, the results in this study did indicate that social stimulation increased vocalization rates and rate of

¹²K. Bloom and A. Esposito, "Social Conditioning and Its Proper Control Procedures," Journal of Experimental Child Psychology 19 (1975):209-222.

¹³P. Weisberg, "Social and Nonsocial Conditioning of Infant Vocalization," Child Development 34 (1963):377-388.

¹⁴Bloom, "Social Conditioning and Its Proper Control Procedures."

¹⁵Weisberg, "Social and Nonsocial Conditioning of Infant Vocalization."

responding was insensitive to programmed contingency. There were, however, fewer "bursts" of responses with the negative and positive contingencies compared with response independent stimulation.

Another factor which infant vocalization might be dependent upon was found in experiments designed by Bloom to demonstrate the role of the adult as a releaser of infant vocal sounds.¹⁶ It was found that both response-independent and response-dependent social stimulation were effective in producing increased rates of vocalizations, only when each of the infants could see the eyes of the adult who delivered the social stimulus. Thus, these experiments Bloom felt, empirically supported the importance of adult-infant eye contact in early social development and its psychopathological and ethological significance¹⁷ as suggested by Robson¹⁸ and Eibl-Eibesfeldt¹⁹ in their studies.

¹⁶K. Bloom, "Social Elicitation of Infant Vocal Behavior" 20 (August 1975):51-58.

¹⁷Ibid.

¹⁸K. S. Robson, "The Role of Eye-Eye Contact on Maternal Infant Attachment," Journal of Child Psychology and Psychiatry and Allied Disciplines 8 (1967):13-25.

¹⁹Eibl-Eibesfeldt, Ethology: The Biology of Behavior (New York: Holt, Rinehart and Winston, 1970).

Jones and Moss²⁰ came to an opposing point of view in the results of the study they did on maternal behavior associated with infant vocalizations. The focus of this study was to examine infant state and maternal behavior in a naturalistic setting in order to explicate the context and circumstances in which organismic and environmental factors relate to the amount an infant vocalized during the first three months of life. The results indicated that infants vocalized more at three months than at two weeks. At two weeks the amount of vocalization was positively related to the amount of maternal speech, while at three months the amount of vocalizations was positively related to the amount of the mother's speech that followed the infant's vocalizations. The relationship between maternal presence and vocalization depended upon the infant's state. When the infant was in the active awake state, he vocalized less in the presence of the mother than when alone, thus indicating that the majority of early vocalizations are associated with a non-social situation.

A possible explanation for these findings offered by the authors is as follows. The failure to find a relationship between the amount of maternal speech and infant vocalization at three months may be related to the change with age

²⁰S. J. Jones and H. A. Moss, "Age, State, and Maternal Behavior Associated with Infant Vocalizations," Child Development 42 (1971):1039-1051.

in the frequency at vocalizing. At two weeks, when vocalization was a low frequency response, the occurrence of a vocalization was more novel and this may have easily elicited a response from the mother. Thus, the more the infant talked, the more the mother talked. Also, it may have been that the mother's speech served as an elicitor of a low frequency response so that the more the mother talked the more her infant vocalized. At three months, however, since all infants vocalized more frequently, the novelty factor may not have been present as an elicitor of maternal speech.

While it is true that maternal speech as well as vocalizations increases by three months, it might have been that maternal speech is elicited more at the older age by the increasing occurrence of other interesting infant behaviors such as smiling, visual attention and attempts at hand-to-eye coordination. Furthermore, infants of this age can probably discriminate different types of speech. Thus, other factors, such as the temporal patterning of maternal speech, may be of greater importance than the amount of speech per se. This reasoning was supported by the positive relation Jones and Moss²¹ found at three months

²¹Jones, "Age, State, and Maternal Behavior Associated With Infant Vocalizations."

between the amount of contiguous maternal speech and the amount of vocalizations while they failed to find such a relation at two weeks. In terms of maternal speech serving as an elicitor of vocalizations at three months, since most infants are already vocalizing at a high rate by this time, the amount of maternal speech may not have any effect in further increasing this rate.

Other contradictory implications drawn from the results of this study are that not all vocalizations in the first three months of life can be classified as social responses as opposed to Bowlby's²² conclusion derived from the studies done by Rheingold et al,²³ in which the infants were three months and older, that early vocalizations occur most frequently in a social situation. However, in this study, the majority of vocalizations occurred when the infants were alone. Jones and Moss²⁴ feel that, since the older infants did vocalize more when they were awake, it is likely that more their vocalizations would be available

²²J. Bowlby, Attachment and Loss, Vol. 1 (Basic Books, 1969).

²³H. L. Rheingold, J. L. Aewirtz, H. W. Ross, "Social Conditioning of Vocalizations in the Infant," Journal of Comparative and Physiological Psychology 52 (1959):68-73.

²⁴Jones, "Age, State, and Maternal Behavior Associated With Infant Vocalizations."

for a social situation than would the vocalizations of the younger infants.

Another implication for the social aspects of vocalizations is that the most interesting object or the most social qualities do not consistently elicit the most overt response from an infant. This finding is again opposed to that of Rheingold's²⁵ that it is the more interesting objects (that most interesting of which she assumed to be the human being) that bring about responses other than visual regard, that is facial, vocal, and bodily responses. The findings in this study (Jones and Moss) have shown that one interesting social object, the mother, does not always elicit the most overt responses from her infant. As suggested previously by the authors, it appears that the infant spends time "taking in" an interesting object (the mother) and consequently spends less time in making overt responses.

Still another possible reason suggested why the object with the most social qualities does not consistently elicit the most overt responses from an infant may be that home-reared infants have so much contact with their mother that her mere presence is not unique and, hence, not highly interesting. This supposition was supported by Rheingold.²⁶

²⁵H. L. Rheingold, "The Effect of Environmental Stimulation Upon Social and Exploratory Behavior in the Human Infant," in B.M. Foss (ed), Determinants of Infant Behavior Vol. 1 (London: Methuen, 1961), pp. 143-171.

²⁶Ibid.

Watson's hypothesis of "The Game", proposes that when an infant perceives the occurrence of a neutral or positive stimulus, a process termed "contingency analysis" begins.²⁷ If across successive exposures of the stimulus, this analysis confirms the existence of a contingency between stimulus and a response, then this contingent stimulus and eventually the stimuli which mark this contingency situation gain new meaning for the infant. The new meaning is that the stimuli become the releasing stimuli for vigorous smiling and cooing. In essence the stimuli begin functioning as "social stimuli". This hypothesis is again quite similar to the hypothesis about the origin of social responsiveness, the most notable and the recent proposals being those of Rheingold,²⁸ Ainsworth and Wittig,²⁹ and Bowlby.³⁰ Also relevant are writings by Schaffer and Emerson,³¹ Walters and Park,³² and Bettelheim.³³ These theorists have emphasized to a greater

²⁷J. S. Watson, "Smiling, Cooing and 'The Game,'" Merrill Palmer Quarterly, 18 (October 1972): 323-329.

²⁸Rheingold, "The Effect of Environmental Stimulation Upon Social and Exploratory Behavior in the Human Infant."

²⁹M. Ainsworth and B. Wittig, "Attachment and Exploratory Behavior of One-Year Olds in a Strange Situation' in Determinants Of Infant Behavior (New York: Barnes and Noble, 1969).

³⁰Bowlby, Attachment and Loss.

³¹A. Schaffer and P. Emerson, "The Development of Social Attachment in Infancy," Monograph of the Society for Research in Child Development Vol. 29 (1964).

³²R. Walters and R. Park, "The Role of the Distance Receptors in the Development of Social Responsiveness in Advances in Child Development and Behaviors, Lipsitt and Spiker (eds.) (New York: Academic Press, 1965).

³³B. Bettelheim, The Empty Fortress: Infantile Autism and the Birth of the Self (New York: Free Press, 1967).

or lesser extent that a significant aspect of the infant's caretaker, which makes him an arousing stimulus and a candidate for attachment, is his responsiveness to the social behavior initiated by the infant. Watson³⁴ feels that clearly then, these theorists have noted that the infant need to sense a contingency between his behavior and resulting stimulus events exists. However, Watson stated:

. . . it is my belief that all these proposals have centered their attention on the social nature of the infant behavior or on the social nature of a contingent stimulation from the caretaker. That is, these previous hypotheses appear to have implicitly, and at times explicitly, assigned special significance to the type of response an infant normally makes when interacting with a caretaker and likewise special significance to the type of stimulation normally provided by caretakers when interacting with infants. If these previous proposals are correct then one could state in summary that "The Game" is important to the infant because, people play it. On the other hand, if "The Game" hypothesis does something new to the speculations of early social responsiveness, it does so in denying special significance to one type of stimulation as opposed to another or one type of response as opposed to another. The hypothesis states that what is important in the perception of the relationship of contingency between a specific stimulus and a specific response. With this proposal, in contrast to previous proposals, an infant can be expected to release smiling and cooing and perhaps even begin the initial stages of attachment with innumerable artificial or even mechanical situations if they should happen to be correctly arranged. Thus, if "The Game" hypothesis adds anything, it is that it states "The Game" is not important to the infant because people play it, but rather people become important to the infant because they play "The Game."³⁵

³⁴Watson, "Smiling, Cooing and 'The Game'".

³⁵Ibid.

"The smile of an infant is a behavior pattern that cannot be overlooked. It occurs in all healthy infants during a relatively limited period of their lives and is in general one of the first signs of emotional and social behavior."³⁶

Tautermanova³⁷ studied the development of a smile's duration in the first six months of life. The results indicated that the length of smiling depended on the age of infants and on the social interaction between the adult and the infant--a smiling child is much more likely to provoke intensive maternal feelings and to become a good partner in the relation between him and his mother or caretakers. There were significant individual differences in the length of smiling that even increased with age. There were also individual differences in infants as to their reaction to the social interaction between the adult and the child. According to Tautermanova', the earliest phase of smiling has been termed "spontaneous" or "reflex" smiling or "pleased expression". It is a special facial movement limited to the area around the mouth consisting of a short, often asymmetrical, elongation of the mouth outward and upward without affecting the rest of the face.³⁸

³⁶M. Tautermanova', "Smiling in Infants," Child Development 44 (Summer 1973):701-704.

³⁷Ibid.

³⁸Ibid.

The smile occurs spontaneously in irregular sleep and drowsiness, and it was even noticed on the first day of life. This facial reaction can also be evoked by gentle stimulation, for example, tactual or acoustic. Wolff³⁹ assumed that the early smiling is a precursor a functional antecedent of the later social smiling. On the other hand, Dargasies⁴⁰ considered it a conditioned reflex to auditory or visual stimuli having nothing in common with the social smile. Yet again, Ambrose⁴¹ saw in the early smile a precursor of laughter rather than of a social smile. The social smile proper begins to occur between the fourth and the eighth week of life. Its occurrence according to Tautermanová⁴² is a sign of a certain maturity of the central nervous system; in premature infants their presence is delayed by the period of their prematurity.

³⁹P. H. Wolff, "Observations on Early Development of Smiling," in B. M. Foss (ed) Determinants of Infant Behavior Vol. 2 (New York: Wiley, 1963).

⁴⁰S. Dargasies, "The First Smile," Development Medicine and Child Neurology 4 (1962):531-533.

⁴¹J. A. Ambrose, "The Smiling and Related Responses in Early Human Infancy: An Experimental and Theoretical Study of Their Course and Significance, unpublished doctoral dissertation, University of London, 1960.

⁴²Tautermanová, "Smiling in Infants."

Piaget⁴³ had postulated that smiling reflects recognitory assimilation. This recognition hypothesis of infant smiling was supported by data gathered from studies done by Zelazo and Komer,⁴⁴ and Shultz and Zigler.⁴⁵ From this, Zelazo and Komer concluded that if the recognitory assimilation hypothesis was correct, then the infant smile was considerably more than an irresistible social-emotional response. Although it has an important social function, the smile may also be an open window through which we may view one aspect of cognitive functioning in infants.

Summary

This chapter reviewed the literature that dealt with three forms of social behavior--gazing, vocalization, and smiling; their development and their influence on later adult social behavior.

⁴³J. Piaget, The Origins of Intelligence in Children (New York: International Universities Press, 1952).

⁴⁴P. Zelazo and M. Komer, "Infant Smiling to Non-social Stimuli and the Recognition Hypothesis," Child Development 42 (1971):1327-1339.

⁴⁵T. Shultz and E. Zigler, "Emotional Concomitants of Visual Mastery in Infants: The Effects of Stimulus Movement on Smiling and Vocalizing," Journal of Experimental Child Psychology 10 (1970):390-402.

CHAPTER III

SUMMARY AND CONCLUSION

The author reviewed the literature that dealt with the earliest and most basic manifestations of social behavior in a human being as a study in the development of an infant and his relation to some adult social behavior.

In general it was found that most of the early social behavior seen in an infant was the foundation on which many adult social behaviors were built. Gazing, smiling and vocalizing at the sight, sound, and touch of another person are, although nonspecific, the key to the complex structure of social interaction.

Infant obedience although a very simple behavioral phenomenon was highly correlated to those processes which dispose a child to act in accordance with the rules, values, and prescriptions of society. The frequency of commands of forcible interventions varied from study to study. One study stated that frequency of commands did not positively influence a response in an infant. On the other hand, another study found that the more the infant was shown things and given information, the more he showed things and offered information.

It was also found that sustained mutual gazing or reciprocal vocalizing, the most primitive form of interaction, is the basis for later verbal communication.

The smile was found to be not only the first signs of emotional and social behavior, but could also be viewed as another facet of cognitive functioning in the infant.

Important factors that influenced the elicitation of infant social behavior were: (1) a mother's or caretaker's sensitivity to an infant's signals; (2) adult-infant eye contact; (3) the acquisition and development of new motor skills.

Although most of the literature on social development in infants did not emphasize the need for specific intervention and stimulation techniques to assure the development of social skills, they did, however, stress the need to provide the best possible optimal environment for the initiation and growth of social behavior in the infant.

BIBLIOGRAPHY

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Books

- Adams, D. K. "The Development of Social Behavior" in Brakbill, Y. (ed.) Infancy and Early Childhood. New York: Free Press, 1967.
- Ainsworth, M. and Wittig, B. "Attachment and Exploratory Behavior of One-Year-Olds in a Strange Situation" in Foss, B. (ed) Determinants of Infant Behavior. Vol. 4 New York: Barnes and Noble, 1969.
- Bettelheim, B. The Empty Fortress: Infantile Autism and the Birth of the Self. New York: The Free Press, 1967.
- Bloom, B. S. Stability and Change in Human Characteristics. New York: John Wiley and Sons, 1964.
- Bower, T. A. R. Development in Infancy. San Francisco: W. H. Freeman and Company, 1974.
- Bowlby, J. Attachment and Loss. Vol. 1. Basic Books, 1969.
- Bruner, J. S. The Process of Education. Cambridge: Harvard University Press, 1960.
- Eibl-Eibesfeldt, Ethology: The Biology of Behavior. New York: Holt, Rinehart and Winston, 1970.
- Gesell, A. The First Five Years of Life: The Preschool Years. New York: Harper and Row, 1940.
- _____, and Frances L. Child Development: An Introduction to the Study of Human Growth. New York: Harper and Brothers, 1949.
- Goslin, D. A. (ed.) Handbook of Socialization Theory and Research. Chicago: Rand McNally, 1969.
- Hebb, D. O. The Organization of Behavior. New York: John Wiley, 1949.
- Hunt, J. McV. Intelligence and Experience, New York: Ronald Press, 1961.

- Kephart, Newell and Strauss, Alfred. Psychopathology and Education of the Brain-Injured Child. New York: Grune and Stratton, 1947.
- Kirk, S. A. Educating Exceptional Children. 2nd ed. Boston: Houghton-Mifflin, 1971.
- Mussen, P. "Early Socialization: Learning and Identification." in New Directions in Psychology. Vol. 3 New York: Holt, Rinehart and Winston, 1957.
- Piaget, J. The Origins of Intelligence in Children. Translated by Margaret Cook. New York: International University Press, 1952.
- Rheingold, H. L. "The Effect of Environmental Stimulation Upon Social and Exploratory Behavior in the Human Infant." in Foss, B. M. (ed) Determinants of Infant Behavior. Vol. 1. London: Methuen, 1961.
- Tautermanová, M. Smiling in Infants. Child Development, Summer, 1973.
- Waller, R. and Parke, R. "The Role of the Distance Receptors in the Development of Social Responsiveness. In L. Lipsitt and C. Spiker (eds) Advances in Child Development and Behaviors. Vol. 2 New York: Academic Press, 1965.
- White, B. L. Human Infants: Experience and Psychological Development. Englewood Cliffs, N. J. : Prentice Hall.
- Wolff, P. H. "Observations on Early Development of Smiling." in Foss, B. M. (ed) Determinants of Infant Behavior. New York: Wiley and Sons, 1963.
- Zigler, E. and Child, I. L. "Socialization." in A. Lindzey and Aronson (Eds.) The Handbook of Social Psychology.

Journals

- Ainsworth, M. D., Stayton, D. J. and Hogan D. "Infant Obedience and Maternal Behavior: The Origins of Socialization Reconsidered." Child Development 42 (1971):1057-1069.
- Bell, S. M. "The Development of the Concept of Object as Related to Infant-Mother Attachment." Child Development 41 (1970):291-311.

- Bloom, K. "Social Elicitation of Infant Vocal Behavior." 20 (August 1975):51-58.
- _____, and Esposito, A. "Social Conditioning and Its Proper Control Procedures." Journal of Experimental Child Psychology 19 (1975):209-222.
- Caldwell, Bettye M. "The Rationale for Early Intervention." Exceptional Children (Summer 1970):720.
- Dargasies, S. "The First Smile" Development Medicine and Child Neurology 4 (1962):531-533.
- Denenberg, V. H. "Critical Periods, Stimulus Input and Emotional Reactivity: A Theory of Infantile-Stimulation." American Psychological Association Vol 71 (September 1964).
- Escalona, S. K. "Basic Modes of Social Interaction: Their Emergence and Patterning During the First Two Years of Life." Merrill-Palmer Quarterly (July 1973): 205-232.
- Ferguson, L. R. "Origins of Social Development in Infancy." Merrill-Palmer Quarterly 17 (1970):119-137.
- Jones, S. J. and Moss, H. A. "Age, State and Maternal Behavior Associated with Infant Vocalizations." Child Development 42 (1971):1039-1051.
- Karnes, M. B., Teska, J. A. Hodgins, A. S. and Badger, E. D. "Educational Intervention at Home by Mothers of Disadvantaged Infants." Child Development 41 (1970): 925-935.
- _____, and Lehrbach, R. R. "Curriculum and Methods in Early Childhood Special Education: One Approach." Focus on Exceptional Children 5 (April 1973).
- Rheingold, H. L. Aewirtz, J. L. and Ross, H. W. "Social Conditioning of Vocalizations in the Infant." Journal of Comparative and Physiological Psychology 52 (1959): 68-73.
- Robson, K. S. "The Role of Eye-Eye Contact on Maternal Infant Attachment." Journal of Child Psychology and Psychiatry and Allied Disciplines 8 (1967):13-25.

- Shultz, T., and Zigler, E. "Emotional Concomitants of Visual Mastery in Infants: The Effects of Stimulus Movement on Smiling and Vocalizing." Journal of Experimental Child Psychology 10 (1970):390-402.
- Stayton, D. J., Hogan, R., and Ainsworth, Mary D. S. "Infant Obedience and Maternal Behavior: The Origins of Socialization Reconsidered." Child Development 42 (1971):1057-1069.
- Watson, J. S., "Smiling, Cooing and 'The Game'." Merrill-Palmer Quarterly. Berkeley, California: Department of Psychology 18 (1972):323-339.
- Weisberg, P. "Social and Nonsocial Conditioning of Infant Vocalization." Child Development 34 (1963): 377-388.
- Willerman, L. and Broman, S. H., and Fiedler, H. "Infant Development, Preschool, I.Q. and Social Class." Child Development 41 (March 1970):70-77.
- Zelazo, P. R. "Smiling and Vocalizing: A Cognitive Emphasis." Merrill-Palmer Quarterly 18 (December 1972):349-365.
- _____, and Komer, M. "Infant Smiling to Nonsocial Stimuli and the Recognition Hypothesis." Child Development 42 (1971):1327-1339.

Other Sources

- Ambrose, J. A. "The Smiling and Related Responses in Early Human Infanc An Experimental and Theoretical Study of Their Course and Significance." Unpublished doctoral dissertation. University of London, 1960.
- Schaffer, A. and Emerson, P. "The Development of Social Attachment in Infance." Monograph of the Society for Research in Child Development. Vol. 29 (1964).