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## Ritualization in the human infant–mother bond

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My purpose is to point up the significance of some of the very earliest forms of ritual behaviour manifested in human ontogeny. These occur within the context of the early mother–infant relationship and, because in fact any aspect of the interactions between mother and infant may become ritualized, I must first distinguish between two broad kinds of ritual behaviour in this context. Both may be said to be patterns of behaviour which occur with great regularity and little deviation in specific kinds of situation.

The first kind are essentially culturally prescribed and consist of maternal care-taking practices that show a rigidity and conformity in both form and repetitiveness that may far exceed the requirements for mutual personal adjustment between the infant and his mother. These ritualized practices, in both primitive and modern societies, are all methods of coping with the young infant's helplessness, fragility and susceptibility to illness, and their prime function has to do with promoting the infant's immediate survival. Among primitive societies, for example, one of the commonest sources of ritual practice by mothers is 'evil-eye' (e.g. Romney & Romney 1963). This arises from the infant being stared at by witches or by other women who may be jealous of the infant. Its symptoms may be vomiting or fever, and death may ensue. Various protective practices are adopted by mothers in different societies: for example, putting a black dot on the baby's temple or foot, putting scissors or crossed sticks at the head or foot of the crib to cut any evil powers, or putting a string of nuts around the baby's waist to ward off any evil. In our own society, one of the most widespread care-taking rituals is scheduled feeding according to the clock, which is still often maintained with the strictest regularity and rigidity.

In contrast to such care-taking rituals is a second class of ritual behaviours that appear at first sight to have little to do with the immediate survival of the infant. These are the behaviour patterns of smiling, kissing and hugging in the mother, and smiling in the infant, which occur with great regularity and fixity of form in certain specific situations. It is these behaviours that I shall concentrate on, with the aim of exploring the kind of biological function served by them.

The specific situation in which both mother and infant characteristically smile at each other is when the two of them come together for some purpose other than the mother's ministering to his physical needs. If the infant is hungry, or in pain or discomfort, he does not smile but cries and, on the mother's arrival in response to his crying, he does not then smile at her but either goes on crying, or feeds, until his physical need has been met. At that point, however, the infant then commonly smiles at his mother and this is commonly followed by the mother smiling back, kissing, hugging and cooing at him. Thus mutual smiling occurs characteristically as a greeting response between the two of them when they come together for social interaction *per se*, whether or not this has been preceded by physical care-taking interaction (Ambrose 1960).

Smiling by the mother also occurs characteristically in another kind of situation, namely when she departs from her infant for some period of time; and the longer the time she is going to be away from him, the more likely is she also to kiss and hug him when saying 'goodbye'.

Although the descriptive evidence for this kind of phenomenon is not yet adequate, psychologists who have studied infant smiling in various countries and racial groups (e.g. Spitz & Wolf 1946), as well as anthropologists (E. Spillius, personal communication), when asked about the subject, all give grounds for believing that smiling in both infant and mother, as well as kissing and hugging of her infant by the mother, are species-characteristic in humans. The virtual inevitability, or the obligatory nature, of their occurrence is due, I believe, not to their being culturally prescribed, but to their being what are nowadays called innate behaviour patterns. This does not mean that their detailed form cannot be modified by cultural influences. It does mean that their general form, and the stimulus situations that elicit them, are determined primarily by organismic characteristics.

Now what biological function is served by early greeting and parting ritual behaviour between mother and infant? I believe this is to be understood in terms of the role the behaviour plays in maintaining a strongly cohesive bond between infant and mother.

That such a bond should rapidly develop in the earliest months of life, and be maintained for at least the first four years, is biologically essential for two basic reasons. First, especially apparent in primitive and prehistoric society, the infant's continued survival is conditional upon it, through the mother's provision, not only of food, but also of protection from predators. However, mere survival through infancy and childhood is not enough to ensure that the individual will later contribute to species-survival by reproduction and rearing of young. For this, as well as for continuity of cultural development through tradition, he must also have developed a capacity for social relations. This is the second main function of the infant-mother bond, to establish just this basic social capacity. Although there are no studies in humans that demonstrate this with the clarity of some of the imprinting studies in animals (e.g. Moltz 1960), there is a consensus in both clinical (e.g. Winnicott 1960) and research (e.g. Bowlby 1951) findings that points strongly in this direction. When in the early months of life the infant normally first learns to recognize, and interact with, his own species via his mother, if he does not receive a sufficient amount of those stimulations that we call 'mother-love' that is, being held, caressed, smiled at, talked to and played with, then he emerges with a deep-seated anxiety and insecurity that interferes with all later attempts to adapt socially. This was particularly apparent in studies (Provence & Lipton 1962; Goldfarb 1947) of infants who had been institutionalized from soon after birth, and in earlier times it quite commonly led to early death. Even if the infant-mother bond is well established in early infancy, however, if the infant is then separated from his mother at some time during the second to the fourth year, for any prolonged period, we know that this also has a severely damaging effect on the further development of his social capacity (Ainsworth 1962). Not only is he overwhelmed with grief and depression at the loss he has sustained, but with no secure base from which to explore and learn about the world, he remains detached from people and things.

In humans the development and maintenance of a strongly cohesive bond between

infant and mother raises special problems, especially over the first year of life. Unlike other primates the human infant goes through a long period in which he is quite unable, by his own unaided activity, to achieve close proximity or contact with his mother. With no locomotory capacity, he cannot follow her; and because she has no fur he cannot cling to her. This state of affairs has two important implications. It means that there will be an increased frequency of occasions when there is reduced proximity or contact between them. It also means that the achievement of consistent and regular proximity and contact is dependent essentially upon adequate motivation of the mother to keep near to her infant and to provide all those kinds of loving stimulation that are so essential for the development of his social capacity. Correspondingly, the prime dangers to maintenance of the bond between them are excessive absence of the mother from her infant, and inadequacy of maternal motivation. I believe it is precisely in counteracting these dangers that the greeting and parting rituals I have described have their function.

When a mother parts from her infant for any length of time, including at bed-time, we find that characteristically she smiles at him and kisses and hugs him. While we do not yet know enough about the effects of this behaviour, my hypothesis is that it acts to provide extra loving stimulation which tends both to make up for the lack of it during her absence and also to reduce his anxiety-level while he is on his own. We also find similar behaviour by the mother on her return to him, as a greeting response, and it then acts to reduce the anxiety and even aggression that often builds up in a young infant who has been left on his own.

Smiling by the infant at his mother, as a greeting response that prefaces their purely social interactions, is a behaviour that has important effects on her motivation. Certainly maternal motivation has a powerful instinctive basis both in the mother's physiology and in the morphological characteristics of the infant that act as releasers. There are, however, two additional requirements if the mother's maternal capacities are to be effectively applied to her infant. One concerns their timing, according to the infant's need-states. It is necessary for the infant to communicate to his mother what kind of interaction he is ready for at any given time. While his crying predominantly communicates a need for physical satisfaction of one kind or another, his smiling communicates his readiness for social interplay. My own studies (Ambrose 1960) indicate that, far from being just a response indicating satisfaction over needs already fulfilled as many people think, infant smiling is a response with a strongly appetitive element. It increases the chances that the infant will receive, at the right time and in the right amount, all those loving stimulations I have described as being so necessary for him over and above the minimum essentials of physical care-taking.

The other requirement for effective application of maternal capacity is that incompatible drives be suppressed. While it is commonly recognized that maternal capacity sometimes becomes ineffective when the mother becomes fatigued, it is less appreciated how much aggression in the mother, due to what may be heavy demands from the infant, can also result in some degree of deprivation, if not actual damage, to the infant. My studies have convinced me that, under such conditions, smiling by the infant usually has an immediate and unmistakable effect in appeasing the mother.

In both these ways, then, infant smiling, as a greeting response, serves to increase the



chances that the interactions between mother and infant will be so co-ordinated as to maintain the bond between them and enable the optimal social development of the infant.

Finally, a word about the origins of the ritual behaviours I have described. As regards smiling, kissing and hugging in the mother, the problem is complicated by the fact that these behaviour patterns occur in sexual relations as well as in maternal activity. I have mentioned the role of cultural factors in shaping such behaviour. Nevertheless, in some other primates there are behaviour-patterns (J. Goodall, personal communication) with which both kissing and hugging may possibly be homologous and I do not rule out the possibility that the human forms may have evolved from these.

As to greeting-smiling in both infant and mother, my studies (Ambrose 1960) have led me to be rather more confident that the communication function of this response has been facilitated or emphasized as a direct result of ritualization and emancipation in the ethological sense. In infancy, as in adulthood, the same motor pattern we call smiling occurs as part of two different responses, namely the greeting response of smiling, and the ambivalent response we call laughing. In its low intensity form the behaviour-pattern of laughing is identical with that of greeting-smiling. The two responses differ, however, in their eliciting stimuli, intensity range, motivation and mode of early development. This all points to the probability that the autonomous greeting response of smiling had its origin in a low intensity ambivalent movement that is homologous with the laughing response.

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