On Describing Relationships*

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INTRODUCTION

THE THESIS of this paper is a simple one— namely that the first stage in the scientific study of interpersonal relationships should be one of description and classification. Such a view seems natural to biologists, since the bases of their science were laid by the painstaking work of generations of taxonomists and systematists. Indeed biologists who study behaviour have placed great emphasis on description, often producing "ethograms" which catalogue the behavioural repertoire of the species they are studying before they analyse any one aspect in depth. For some experimental psychologists the need for description has been less obvious. This was especially the case with those learning theorists who, modelling their approach on that of classical physics, forgot that classical physics dealt to a large extent with everyday phenomena, such as falling apples, or the appearance of sticks in water, which did not require description. Where classical physics dealt with phenomena that were not immediately apparent, such as the movements of heavenly bodies or the colours produced by a prism, careful description was essential. And to carry this one stage further, it is almost a truism to say that many of the difficulties that psychiatrists face arise because they lack an adequate taxonomy, and *faute de mieux* must depend on one based on the inappropriate model of somatic disease.

Anyone examining the literature on inter-individual relationships cannot fail to be struck by the diversity of theoretical and methodological approaches used in their study, and by the dearth of attempts to integrate them. I believe that the lack of integration in this area of social science stems in part from the absence of a descriptive base. If we are to make progress in understanding relationships, or if we are to specify the conditions necessary for the development of one sort of relation-ship rather than another, we must surely start with a descriptive approach.

Of course this does not mean that description is an end in itself. Description, and the classification of phenomena that description makes possible, are but first steps. Indeed description must be guided by its longer-term goals, for description inevitably involves selection amongst the phenomena available for description, and that selection must be guided by the uses to which the description is to be put. Whilst the long-term goal of a comprehensive theory of inter-individual relationships is still far beyond our grasp, description may help us towards more limited objectives. It may form a basis for greater understanding of the dynamics of relationships, point to more accurate prognoses, or help us to specify the conditions necessary for the formation of this sort of relationship rather than that.

This paper contains a tentative attempt to specify some of the dimensions along which relationships differ, and to examine their relevance to the dynamic stability of relationships. The focus is especially, but not exclusively, on parent–child relationships. The paper was first presented as part

of an annual series to commemorate the work of Emanuel Miller: since Dr. Miller was initially trained in moral sciences, and had a continuing interest in the conceptual and methodological issues relating to his work, I hope its aim would have appealed to him.

In view of its complexity, the subject of inter-personal relationships might seem inappropriate for a biologist: principles useful in studying animals could be at best trivial and at worst misleading when applied to man. It is therefore perhaps necessary to explain how my concern in this topic arose. At a time when the extent to which short periods of separation between mother and infant could affect the behavioural development of the infant was controversial, we started to use rhesus monkeys for an experimental approach to the problem. The experiments showed that the distress shown by the infants after reunion was related to certain aspects of the mother–infant relationship before separation— namely to a measure of the frequency with which the infant's attempts to gain contact with the mother were rejected, and a measure of how great a part the infant had to play in maintaining mutual proximity with his mother when off her (Hinde and Spencer-Booth, 1970, 1971a). These two measures, which we had found to have predictive value, could be described colloquially as measures of "tension" in the relationship, but how were we to know that the measures we had chosen were the most useful ones? The number of things we could have measured were almost infinite, so how could we know that those chosen were the ones of greatest immediate significance or predictive value? The need for guidelines for describing relationships was apparent, but what we could find in the literature on human inter-personal relationships was only moderately helpful (see Swensen, 1973).

In such a situation, one possible approach would be to measure many aspects of the interactions in which one is interested and then, by factor analysis or some comparable technique, assess which measures co-vary and thus perhaps depend on common underlying mechanisms. But however many measures one uses, some selection must operate, and the factors extracted are inevitably limited by the data fed in.

Since selection is inevitable, how can we guide that selection along lines relevant to our long-term aims? Here it seems reasonable not to discard as preliminary guidelines the qualities we notice in everyday life—for instance is this couple affectionate or competitive, understanding or insensi-

tive with each other? Perhaps, if we can only come to terms with such qualities with sufficient precision, they will help us towards understanding the dynamics of relationships, and indicate to us the bricks appropriate for our theoretical structure.

Now in everyday life the criteria by which such qualities are assessed are some-what intangible, and we must attempt to associate them with objective measures. But in so doing we must also remember that objective behavioural data can be misleading if devoid of meaning (cf. Poole, 1975)—and the quickest (and sometimes only?) way to meaning may be through the use of introspective evidence. The student of interpersonal relationships must thus walk along a knife-edge: objective criteria are essential for purposes of description and communication, but this need must not lead to a neglect of the complexity and inter-subjectivity inherent in relationships.

Although this work started with studies of rhesus monkeys (see Hinde and Simpson, 1975), I hope it will already be apparent that I do not believe that studying monkeys can enable us fully to comprehend human interpersonal relation-ships. However I do believe that principles derived from monkeys are worth trying out on man and that, in part because of the ways in which monkeys differ from man and especially because of their relative simplicity, studies of non-human primates can sometimes enable us to see more clearly issues that would 'otherwise be obscured by the complexity of the human case (Hinde, in press a).

INTERACTIONS AND RELATIONSHIPS

It is necessary first to define what is meant by a relationship, and to make some general points about the dynamics of relationships. A relationship involves a series of interactions in time. By an interaction we usually mean a sequence in which individual A shows behaviour X to individual B, or A shows X to B and B responds with T. Often interactions consist of a sequence of such events, but it would be unprofitable to attempt to specify precisely either the limits of complexity of the behavioural events or even the precise dividing line between an interaction and a relationship (see discussion in Hinde, in press, b; Hinde and Stevenson–Hinde, in press).

For example, interactions involving a sequence of behavioural events can be classified according to the extent to which each response by each participant was determined by the preceding behaviour of

the other participant, and how much it was predetermined and independent of the other's behaviour (Jones and Gerard, 1967). In so far as the behavioural events are independent of each other they can be considered as units: in so far as they form a predetermined sequence, that sequence can be considered as a unit. In general the distinction between an interaction, which involves a strictly limited span of time, and a relationship, which involves a much longer period, is clear enough.

To describe an interaction, it is necessary to describe first what *A* did to *B* (and *B* to *A*). They may for instance be talking or fighting or kissing. In addition we must specify how they are doing it—are they talking in an animated or dispassionate fashion? What are they talking about? Are they fighting savagely? Kissing passionately, tenderly, or dutifully? In more general terms, to what extent are they involved in what they are doing? To what extent are the different aspects of their behaviour consistent with each other? For instance, does the tone of their voices belie the words that they use (Haley, 1959). The complexity that may underlie quite brief encounters has been analysed with elegance by Goffman (1961, 1963, 1967) and will not be discussed here. We may refer to such properties of interactions as qualities, without of course any implication that they cannot be subjected to quantitative treatment. In human interactions such qualities can be as or more important than what the interactants actually did together.

A relationship involves a series of interactions* *in time.* To describe a relation-ship, it is necessary to describe the interactions that occur—that is, their content and their quality. It is also necessary to describe how those interactions are patterned in time— that is, their absolute and relative frequencies, when they occur with respect to each other, and how they affect each other. The importance of patterning will be discussed later: it is sufficient here to say that the most important clues to the significance and meaning of an interaction to the participants may be the context of other interactions in which it lies.

In practice, of course, we would never describe a relationship in terms of the details of all the interactions that occur—we abstract from the empirical data to make generalizations about the nature of the interactions that characterize the relationship, and how they are patterned (Hinde, in press, b). In the human case there may be short cuts to this end—

interviews may permit assessment of some aspects of a relationship more rapidly than observation. Here two contradictory points must be made. On the one hand, the discrepancies between how a person says he behaves and what he actually does are notorious. On the other, as we shall see in a moment, what a person thinks about a relationship may be more important for some issues than the interactions that actually occur within that relationship. But in any case every relationship must involve a series of interactions in time; what the participants think about the relationship must be in some way related to those interactions; and description of the relationship must ultimately be derived from them.

In studying relationships, it is a proper assumption that each interaction affects the future course of the relationship, even if only by confirming the *status quo.* In other words any stability that a relationship has is dynamic in nature. Since all relationships are prone to change—either as a consequence of interactions within the relationship or through changes in the participants produced in other ways—stability in a relationship is a relative matter: it implies that the relationship continues, but need imply neither absolute constancy of content nor a specified final or goal state (Hinde and Stevenson-Hinde, in press).

The manner and extent to which one interaction affects subsequent ones is not always immediately obvious, and requires consideration of effects between behavioural, affective and cognitive levels. One rather crude experimental example will serve to exemplify this. Valins (1966) showed male subjects pictures of semi-nude females whilst providing them with a false feed-back purporting to be of their own heart rate. Both in assessments immediately after the presentations and in interviews a month later the men preferred the pictures that they *thought* had aroused them to those they *thought* had not. This suggests that in a natural interaction it is not so much the stimuli presented by each partner to the other that matter, as the extent to which the recipient of the stimuli believes himself to have been affected by them. We shall return to this issue later.

We may now discuss some of the dimensions along which relationships differ. **In** each case, as appropriate or necessary, some attempt is made to indicate how the dimension may affect the dynamic stability of relationships, its particular rele-

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*This paper is concerned primarily with relationships between individuals known to each other, rather than with categories of individual relationships (e.g. "the mother-child relationship") or relationships between categories of individuals (e.g. policemen and motorists).

vance to studies of the parent–child relationship, and the attempts we are making to measure it in rhesus monkeys. It will quickly become apparent that some of the dimensions are mutually related, and that each can be applied at a number of different levels of analysis.

SOME DIMENSIONS OF RELATIONSHIPS

(i) Content of interactions

Description of a relationship usually starts from the content of the interactions that occur within it. Because particular types of interaction tend to be associated together, relationships can be classified according to the types of interaction they contain (Simpson, 1973). Thus a monkey consort relationship involves sex behaviour, grooming and mutual proximity, whilst a mother—infant relationship involves nursing, grooming, protection, play, proximity, etc.

Within any type of relationship, the quality of a particular one may depend on the presence or prominence of certain types of interaction. Thus we are more likely to describe a mother–infant relationship as a warm one if play is frequent than if it is scarce, though of course other criteria contribute to our judgement. In rhesus monkeys, Simpson has shown that some mothers play a game with their infants which bears some resemblances to the looking–looking away games that human mothers play (Hinde and Simpson, 1975), and preliminary data suggest that the mothers who play that game also have warm relationships with their infants as assessed by other criteria (Simpson, personal communication).

It is worth noting here that we have already applied this dimension both at the level of discriminating major functional categories of relationship (consort from mother—infant), and at the level of distinguishing some mother—infant relationships from others according to whether or not they contain play. We could go further and use the dimension to distinguish mother–infant relationships containing play from each other according to the kinds of play involved. The reader will observe that, in a similar way, many of the dimensions discussed later can apply at a number of different levels of analysis.

(ii) Diversity of interactions

A related characteristic concerns the *diversity* of types of interaction that occur. This approximates to what Altman and Taylor (1973) call the "breadth" of the relationship. If a relationship involves only one type of interaction, as for instance a relationship with a drinking companion or business colleague, it can be described as single-stranded or uniplex: if many, as multi-stranded or multiplex. The distinction is of course not absolute, and again depends on the level of analysis. Thus the mother–infant relationship could be called uniplex, involving only maternal–filial responses; or multiplex, involving suckling, grooming, playing, protecting and so on. The important issue is the dimension of diversity of behaviour involved, not the dichotomy.

The diversity of interactions within a relationship is of crucial importance to its dynamics, for interactions of one type may affect others in a variety of ways :

(a) By conditioning. In the course of each type of interaction, each participant may become conditioned to characteristics of the other not necessarily crucial for that interaction, but possibly relevant to other types of interaction. This has been studied experimentally in the context of the formation of parent–offspring relation-ships in birds. Each of a number of filial responses (such as begging, following, obtaining warmth) can at first be elicited by a rather wide range of stimulus situations : as a result of experience, the range of stimuli effective for each response becomes limited to those that have actually been encountered, and each response also conditioned to other aspects of the eliciting situation that were initially not effective. Since the parent bears the stimuli initially effective for several types of filial behaviour, by this conditioning some parental characteristics become effective for several responses. Thus the chick's experience in one type of interaction affects subsequent interactions of other types with the same mother (Bateson, 1966, 1973; James, 1959; Hinde, 1961). The process whereby stimuli from the mother come to be effective for diverse responses in the repertoire of the chick must surely contribute to the way in which the chick comes to respond to her not merely as a collection of separate elicitors, but as an individual. Similar principles probably operate in non-human primates, and the conditioning paradigm has been applied successfully to the formation of relationships in man (Lott and Lott, 1972; Byrne and Clore, 1970).

(b) *Through values gained and costs incurred.* Thibaut and Kelly (1959), Homans (1961) and others have linked everyday experience with reinforcement theory in the view that individuals continue to perform activities so long as the values

thereby obtained outweigh the costs. (The limitations of the usefulness of the reinforcement concept in the understanding of relationships has been discussed elsewhere (Hinde and Stevenson-Hinde, in press) and the matter will not be pursued here. For present purposes it is sufficient to agree that it is useful for some purposes.) Now a relation-ship is extended in time, and the pay-off for one type of response may lie in the future, and perhaps in another type of interaction made possible by continued association with the same individual. In other words, much of our social behaviour depends not on an immediate return, but on expectations of future interactions with the same person. In a multiplex relationship the expectation may involve a quite different type of interaction from that currently in progress.

(c) *Through positive or negative effects of one type of interaction on others not mediated **through** values or costs consequent upon that type of interaction.* The mechanisms involved here are diverse. For example, some types of interaction pave the way for others : thus over a wide range of species courtship, through its endocrine or psychological effects on the partner, leads to copulation. Again, in human cultures, convention decrees that certain types of interactions (e.g. greeting ceremonies) precede others. Furthermore, whilst some types of interaction may be frequently associated with each other in a relationship, others may be (or be deemed) incompatible—for instance filial and sexual responses to the same woman.

For such reasons, the diversity of interactions within a relationship is one of its crucial characteristics.

(iii) *Reciprocity vs complementarity: control and power*

An issue which cuts across the previous ones concerns the extent to which the interactions are reciprocal (or symmetrical) or complementary. A reciprocal interaction is one in which the participants show similar behaviour, either simultaneously or alternately, whereas in a complementary interaction the behaviour of one differs from, but complements, that of the other. Thus when two monkeys engage in rough-and-tumble play they may alternately chase and be chased, bite and be bitten, as first one and then the other takes the initiative: the interaction is reciprocal. But when the young infant interacts with his mother he often shows filial behaviour, she maternal. In male–female copulatory behaviour the part taken by each is complementary to that taken by the

other, but in sociosexual behaviour in a broad sense, in which either sex may be mounter or mountee, the rules are less well defined. Dominance–subordinance interactions are by definition complementary, grooming interactions more nearly reciprocal.

In some relationships, all interactions are reciprocal. For example, some relation-ships between young monkeys approach this condition, each participant playing equivalent, though alternating, parts. In other relationships all interactions are complementary. The classic dominance–subordinance relationship is a case in point: monkey A threatens monkey B, bites B, and has priority to food and water over B; whilst B avoids A and grooms A more than A grooms B. In such a case dominance–subordinance can be regarded as an intervening variable in the loose sense that it links not necessarily a number of independent and dependent variables (Miller, 1959), but at least a number of dependent ones (Hinde, 1970, p. 198). Its usefulness will depend on the number of variables so linked. Where only one dependent variable is being studied (e.g. who threatens whom?), it is of merely descriptive usefulness, but where several are involved it can be explanatory. It is useful in an explanatory sense in so far as there are regularities, across a number of relationships, in the pattern of directions of interactions. If, for instance, the participants who threaten more are usually the ones that are avoided˛ more, receive more grooming and hold their tails highest, we may "explain" all these aspects of the relationship in terms of the "dominance–subordinance" of the participants.

In that the interactions in some relationships are consistently reciprocal, and in others consistently complementary, it might seem that relationships, rather than interactions, could be classified on this dimension. In many relationships, however, the pattern of directions of interactions does not conform to any established pattern. Thus Jackson (1959) who classified relationships (rather than interactions) into complementary relationships (i.e. those in which one receives and the other gives, or one is dominant and the other submissive) and symmetric relationships (the participants have equivalent status), introduced also a third category of "parallel" relationships. In these the relative parts played by the participants changed, with either often initiating, controlling or taking decisions in particular types of inter-action. The classification of marital relationships used by Lederer and Jackson (1968) depended in part on the extent to which

there was or was not agreement between the partners concerning the areas over which each exercised control. The category of "parallel" relationships thus represents a failure in the attempt to classify relationships as either complementary or reciprocal, and it would seem better to consider reciprocity versus complementarity at the level of interactions.

In any case, complementarity within a relationship may involve more than one dimension. In his classic work, Winch (1958) distinguished four types of marriage based on the two dimensions of dominance–subordinance and nurturance-receptivity. However he recognized that not all marriages fall into these types, and this is in part because of a lack of correspondence between the direction of dominance–subordinance or nurturance–receptivity amongst the different interactions within relationships. It is probably necessary to go even further than this and to recognize that "role bargaining" goes on over many contexts within the relationship with results that cannot be interpreted along just one or two dimensions (see also Maslow, 1962).

So far I have argued against the labelling of whole relationships as reciprocal or complementary, expressed doubts about the extent to which relationships can be characterized in terms of complementariness along only one or two dimensions, and argued for characterization of the types of interactions or areas within the relation-ships according to the nature of their reciprocity or complementariness. Such a procedure will, of course, gain accuracy only at the cost of complexity. It remains to add that even that may not be sufficient. Consider for example Berne's (1964) (1964) distinction between three *"ego-states"—Parent, Adult and Child.* The ego state that is dominant is inferred from current behaviour and feelings, and the terms are self-explanatory. Thus the Child is innocent, spontaneous, fun-loving; the Adult mature and oriented towards reality; and the Parent authoritative. Transactions between the two individuals can be analysed according to the ego-states involved at the time of the interchange, and these may change from moment to moment. In the current usage, a transaction between two similar ego states (e.g. Adult and Adult) could be termed reciprocal, and one between two different states (e.g. Parent and Child) as complementary. *

Now Berne has shown that the ego state of a respondent that replies may not be the ego state that was addressed, and the reply may be addressed to an ego state of the initiator other than the ego state which started the interchange. For instance, the initial remark may be addressed from adult to adult ego state, but the reply may come from the child ego state of the respondent and be addressed to the parent ego state of the initiator. Furthermore transactions may take place at two levels—an overt "social" level and covert "psychological" level. Thus the true nature of the complementarity in a relationship may require analysis beyond even the level of the interactions within that relationship (see also Haley, 1959).

Two other aspects of complementarity must be mentioned briefly—control, and power. Although the concept of "control" has been used in the preceding paragraphs, characterization of a relationship in terms of which partner has control is fraught with difficulties, and this is nowhere more apparent than in studies of the parent–child relationship. Whilst it was formerly assumed by students of human mother–child interaction (though not by ethologists concerned with non-human species) that control lay with the mother, Bell (1968) reviewed convincing evidence for the importance of the child's role. This has led to an increasing emphasis on the effects of the infant on his caregiver (Lewis and Rosenblum, 1974). It has been argued elsewhere (Hinde, 1974, 1975), however, that there is great need to specify rather precisely the questions being asked in this area. That the infant's behaviour, as well as the mother's, determines the moment to moment course of interaction sequences; and that differences in infant behaviour, as well as those in the mother's behaviour, play an important part in determining inter-dyad differences in interaction sequences, is now clear (e.g. Bell, 1974; Trevarthen, 1974). That differences between mothers at one age are related to differences between infants at a later age is shown by numerous studies involving a variety of dependent variables. Some studies go further and show both that differences between mothers at one age are related to later differences in infant behaviour, and that differences between infants at one age are related to differences between mothers at a later age (Clarke-Stewart, 1973). Finally, there is considerable evidence from monkeys that rate of

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This example has been chosen in part to air a difference in terminology. Berne classifies trans-actions according to whether the ego state of the respondent addressed by the initiator is the ego state that replies to the initiator, and whether it replies to the ego state by which it was addressed. If the answer to both questions is yes, the transaction is classed as "complementary" by Berne; whereas if one is no, it is classed as "crossed". Berne here is concerned with whether the participants are to continue the transaction in the mode in which it was started, or are behaving in a way that will lead to its being broken off.

change of the mother–infant relationship as the infant develops is determined more immediately by changes in the mother than by changes in the infant. This last issue has been little studied in man, but it is worth pointing out that, while we notice the over-protective mother who retards the development of her child's independence, we do not comment on the mother who weans the child from the breast before it wants to be weaned, or who moves her child from cot to bed long before it needs to move. In summary, then, questions about who has the controlling role in the relationship are for some purposes too vague; the issues must be framed more precisely if the answers are to bring understanding about the dynamics of the relationship.

Another way of approaching the question of . control in the mother–infant relationship is through the concepts of exchange theory. In general, A's power over *B* depends on A's ability to affect outcomes for B and the adverse affects of the exercise of that ability on his own outcomes. Thus A's power over *B is* the greater, the more he can give *B* and the less the cost of doing so. What *A* can give *B* depends both on A's resources, and on *B's* needs for those resources and the alternative sources open to B (Emerson, 1962). Now French and Raven (1959) have delineated five types of power, and we may speculate about how these change as the mother–infant relationship develops. *Reward* power is based on the ability of *A* to reward *B*. This operates both ways in the parent–child relationship. With young infants the rewards that the infant gives the parent, such as smiling or even just existing, seem to involve the infant in little cost. However the infant's dependency on his parents, in terms of his needs and the availability of other sources of nurturance, is high, and clearly greater than their dependency on him. The age changes in these factors, though depending on many issues including cultural ones, will clearly lead to a relative diminution in parental power. Coercive power, based on the ability of *A* to punish *B,* also operates both ways: the aversive effect that babies' cries can have is well known. In most cultures, the normal ability of parents to punish young infants, as distinct from their ability not to reward them, would seem to be small. Age changes must again be much affected by cultural factors, but probably involve an increase and then a decrease of parental power. Referent power is based on identification of *B* with *A* in such a way that *B* models himself on *A*. This probably arises primarily from reward power and is exerted primarily by parent over child, but the mother who "over-identifies" with her child is a fairly familiar figure. Expert power, which depends on A's special knowledge, and legitimate power, which depends on norms internalized from the culture, also rest primarily with the parent. However changing cultural norms can perhaps be regarded as having increased the child's legitimate power over its parents. Whilst the age changes indicated above are based only on speculation, they suggest dimensions along which parent–child relationships may, change with age and differ from each other.

This discussion indicates that the dimension, or dimensions, of reciprocity vs complementarity, though appearing simple at first sight, in fact involves great complexity. That does not lessen its importance for the understanding of relation-ships. We may mention briefly three ways in which such qualities affect the dynamic stability of a relationship :

(a) *Control and dynamic stability.* Complementarity involving control of, or power over, one partner by the other does not necessarily lead to stability in the relation-ship. For example Homans (1961) points out that a leader inevitably earns unpopularity by determining the behaviour of others, and this must be compensated by generous rewards. The issue has been considered in detail by Jones and Gerard (1967), who list the various ways in which the power in a relationship may be increased.

(b) *Compensatory responses.* In any continuing relationship, the behavioural propensities of the participants are likely to change with time—either as a result of interactions within the relationship, or of external vicissitudes. Small changes in one partner will require different changes in the other according to whether the interactions concerned are reciprocal or complementary. Thus in the reciprocal play interactions of rhesus monkeys, if one infant monkey changes in such a manner that he seeks to play less, his peer must change in *a similar* fashion if the relationship is to continue. But if, in a mother–infant relationship, the infant demands more contact, the mother must behave in *a complementary* fashion and provide that contact if tension is to be minimized (Hinde and Davies, 1972). (A third possibility, that change in one partner is countered by appropriate extinction, punishment or selective reinforcement in the other, has been considered elsewhere (Hinde and Stevenson-Hinde, in press)).

(c) *Complementarity leading to change.* Some relationships, by the very nature of the comple-

mentarity of their interactions, carry the seeds of their own destruction or transmutation from the very start. The parent–child and teacher–pupil relationship are obvious examples.

(iv) *Qualities of interactions*

In addition to describing what the participants in a relationship do together, we must describe how they do it. A mother rhesus may reject her infant roughly, by hitting it or pushing it away, or gently, by crossing her arms over her nipples but remaining available for the infant to cuddle against; and if she permits access, she may or may not embrace the infant as it cuddles to her.

One important quality, that we have been especially concerned with in studies of rhesus monkeys, concerns the extent to which the behaviour of each of the two individuals "meshes" with that of the other—that is, whether the goals of each are aligned with the ongoing goals of the other. For example, we have evidence that, when the infant is young, the mother often initiates bouts of ventro-ventral contact when the infant is not ready and subsequently breaks contact, and the infant similarly often initiates contact when the mother is not ready and subsequently breaks contact. This happens less often as the infant gets older. In other words although, as the infant gets older, the mother-infant relationship becomes more distant in the sense that mother and infant spend less time together, it becomes closer in that their behaviour (or some of their behaviour) becomes better meshed (Hinde and White, 1974). Again, Simpson (Hinde and Simpson, in press; Simpson, in prep.) has shown that mother-infant pairs, studied when the infants are the same age, differ in various measures of "meshing" between the partners. These data could be interpreted as involving little more than one partner ceasing to approach (or leave) the other in the absence of signals that he or she is likely to accept the move. However it could, and probably often does, involve much more—including behaviour directed towards changing the goals of the partner's behaviour (Bowlby, 1969). We have suggested that "meshing" may be the behavioural correlate of some aspects of intersubjectivity (Asch, 1952).

The importance of a similar dimension is apparent in the human parent-child relationship (Bowlby, 1969). At first, expression of the infant's demands are not related to the mother's behaviour, but gradually he comes to tailor his demands to her willingness to respond. One might predict that an infant whose mother was always equally responsive or unresponsive would have difficulty in acquiring this sort of sensitivity. Reciprocally the mother, by virtue of temperament and/or experience, must come to adjust her life so that it does not clash too dramatically with the infant's demands. It must be noted that, in at least some Western cultures, the relationships judged to be healthiest are those in which each participant makes some adjustment, so that, for example, neither follows its own intrinsic schedule or is forced slavishly to follow the other's.

It is unnecessary to say more about qualities of the mother-infant relationship, since much current research is aimed towards obtaining reliable indices of such qualities as maternal tenderness and sensitivity. The task is of course a difficult one, and the extent to which such qualities are correlated between different types of interaction in the same relationship is an open one.

A quality of one of the constituent interactions of a relationship may or may not be applicable to others. For example, a rhesus mother may be rejecting of her infant's nursing requests but not of his requests to be groomed: indeed chimpanzees and rhesus mothers often comfort infants, who are distressed because access to the nipple has been denied them, with other types of attention. Furthermore the quality even of one type of interaction may vary with the context : rhesus mothers reject their infants less when living alone than when in a group (Hinde and Spencer-Booth, 1967), and pig-tailed monkey mothers hit their infants more when living in a poor laboratory environment than when in a so-called rich laboratory environment (Jensen *et al.,* 1968).

On the other hand, qualities can be valid not only for all types of interaction within a relationship, but for all or most of the relationships of a given individual. In so far as one individual behaves consistently to diverse others, but differently from the ways in which they behave to each other, he may be labelled as rejecting, cold, affectionate, and so on.

Qualities which apply to reciprocal interactions (i.e. those in which the two partners take similar parts, either at the same time or alternately as in peer–peer play) may apply either to one or to both partners. Thus it is possible for both partners to show sensitivity, or for one to behave with sensitivity and the other not. But where the qualities imply complementarity (i.e. two partners take different parts, as in mother–infant relationships), they often

apply to the interaction more readily than to either partner independently; if one partner controls, the other must be controlled; if one rejects, the other must be rejected. Where a quality depends on both partners, it is likely to do so in complex ways. For example, how a rhesus mother rejects an infant's attempts to gain the nipple depends in part on how often he makes such attempts: the same mother might never reject an undemanding infant but vigorously reject a demanding one. But conversely how often the infant attempts to make contact will depend in part on how and how often the mother rejects him, as well as on other factors such as his changing milk requirements, the availability of playmates, and so forth.

The rewards obtained by the participants in a relationship may of course depend not only on what the participants do together, but also on how they do it. The qualities of interactions may therefore be of crucial importance for the stability of the relationship.

(v.) Relative frequency and patterning of interactions

Some of the judgements that we make about the quality of relationships depend not so much on the content or quality of particular types of interactions, but on how interactions are patterned—that is, on their relative as well as their absolute frequency, and on how they are interrelated. For example, we should describe a mother–infant relationship in which the baby regularly cried just before feeding differently from one in which it regularly cried after feeding.

Rhesus monkeys can be used to describe a rather different type of case. If a rhesus mother frequently rejects her infant's attempts to gain ventro–ventral contact and never initiates them, we might describe her as rejecting. If she never rejects the infant and frequently initiates contact herself, we might describe her as possessive. But if she often rejects and often initiates, or seldom does either, we would describe her respectively as controlling or permissive. These latter judgements could not be based solely on one type of interaction, and must depend on both.

We are in fact dealing here with emergent qualities—qualities not present in the separate interactions, but emergent from the relations between them. Clearly the rewards obtained from a relationship—and perhaps even more the ratio of rewards to costs—may depend on such qualities.

(vi.) Multidimensional qualities

We have already mentioned that qualities of interactions may apply to only one type of interaction, or to a range of interactions within the relationship. Sometimes our readiness to apply a quality label to a relationship depends on the concurrence of a number of characteristics. For instance, we find rhesus mothers who frequently take the initiative in making ventro–ventral contact with their infants, also place one of their arms round the infant for much of the time that it is in contact, and also rank high in the frequency with which they groom their infants (Hinde and Spencer-Booth, 1971b; Hinde and Simpson, in press). We are tempted to describe such relationships as "warm". "Warmth", however, is not simply the opposite of "rejectingness". The three measures just mentioned are only weakly negatively correlated with the frequency with which the mother rejects the infant's attempts to gain ventro–ventral contact, or the relative role that the infant has to play in keeping near the mother when off her.

Many everyday judgements about relationships turn out on analysis to depend on characteristics even more diverse than those just mentioned as aspects of "maternal warmth" in rhesus monkeys. For example, we would be more prone to describe a relationship as affectionate if:

(a) It involves interactions of a number of different types (i.e. is multiplex).

(b) It is of long duration.

(c) In the absence of the other each partner shows special types of behaviour adapted to or tending to restore proximity.

(d) The behaviour of each partner is organized in relation to the ongoing behaviour of the other (i.e. they mesh).

(e) The anxiety induced by strange objects or situations is alleviated by the presence of the partner.

(f) Actions conducive to the welfare of the other are likely to be repeated.

It is not suggested that these are all the properties on which the designation "affectionate" may depend, nor that all these are always necessary; and it will be noted that some of them would also be characteristic of long-standing enemies, and that the label of affectionate depends in part on their co-

existence. These properties have been listed in part because they can all be identified, and studied with moderate rigour, even in the rhesus mother–infant relationship. But setting them out like this serves to emphasize that affection is multidimensional, and cannot be assessed along a simple scale—a point of which novelists are well aware. Furthermore, it is possible that we shall be able to use these observables in studies aimed at investigating the conditions conducive to the formation of affectionate relationships, and other less tangible properties of affectionate relationships may turn out to be associated with them. It is of course implied that each of these properties (except (b)) may affect the dynamic stability of the relationship.

(vii) *Cognitive and moral levels—levels of perspective*

Two sets of properties of crucial importance to both the nature and stability of a relationship concern the cognitive and moral levels of the participants. These are of course relatively loose terms, but I refer to the stages described by Piaget (1959), Kohlberg and Turiel (1971), and Loevinger and Wessler (1970). It will be apparent that many of the qualities of the interactions in a relationship, the kinds of complementariness that can occur, and the ability of the relationship to withstand viscissitudes, may be related to the absolute and relative cognitive levels of the participants. Furthermore, relationships may have special properties depending on the interrelations between the absolute and relative moral and cognitive levels of the participants and other characteristics of the relationship. Thus relationships involving dominance–subordinance and nurturance–dependence interactions will differ markedly in character if the partners function at different moral or cognitive levels than if they are similar in these respects.

It may be noted here that the parent–child relationship, so often held up as the source of all relationships, is highly peculiar in the discrepancy in these characters between the two participants. Its very nature depends on the differences between them. But here also is another curious thing. Recent studies of mother–infant interaction emphasize that a mother behaves to her infant as though it was functioning at a much more advanced level than is likely to be the case. She constantly imputes intent to its movements, cries and gurgles (Bruner, in press). Whilst there may be a greater element of intent than we are willing to allow (Trevarthen, 1974), mothers perpetually overestimate it. Furthermore, much of the complex interaction between mother

and infant, and especially the conversational games, depend on the mother doing so. Does this mean that the mother–infant relationship depends for its nature on a delusion?

It may be profitable to link discussion of the levels of the participants in a relationship to another approach to the structure of interpersonal relationships. At the behavioural level, a relationship involves two individuals, *say A* and *B*. Yet A's behaviour to *B is* directed not to *B* as he is, but to A's perception of *B,* and this may bear little or no resemblance to *B* as he is. The less resemblance, the less accurate will be A's predictions of *B's* behaviour, and the less can A's behaviour "mesh" with that of *B*. Similarly *B* behaves towards *A* according to *B's* perception of *A,* which may not necessarily be closely similar to *A* as he is. Furthermore *A* may behave towards *B* in ways that *B* deems inappropriate, and/or *B* may attempt to constrain his behaviour to meet A's inappropriate and inaccurate expectations. We may refer here to Secord and Backman's (1965) view that "congruency" is an important factor in interpersonal attraction. "Congruency" is the perceptual cognitive state achieved in a relationship when *B's* characteristics or behaviour contain implications congruent with A's own behaviour or self-image. Especially relevant in this context are "congruency by implication", where A views *B's* behaviour as confirming A's view of A's self concept, and "congruency by validation" where *B's* behaviour leads A to behave in ways that confirm his self concept.

It could perhaps be argued that this level of analysis is necessary even to under-stand an interaction between, let us say, a dominant and subordinate rhesus monkey. Indeed "meshing" (see above) at a behavioural level in a variety of contexts would be a probable correlate of "congruency". But we know from our own experience that it is also necessary to consider A's view of *B's* view of himself. This of course is the approach of Laing (1969), (Laing *et al.,* 1966), who emphasizes three levels of perspective :

Direct perspective—A's view of A's relationship with *B,* A's relationship with *A, B's* relationship with *B,* or *B's* relationship with *A*. Similarly with *B's* views.

Metaperspective—B's view of A's view of A's relationship with *B,* A's relationship with A, etc.

Metametaperspective—A's view of *B's* view of *A's* view of A's relationship with *B,* etc.

Laing has used his existential phenomenology to examine the extent to which

(a) The two participants agree at the direct level (e.g. does A's view of the relationship *(AB)* agree with ***B's*** view of (AB).

(b) They are aware of and understand the other's point of view (e.g. does *A's* view of *B's* view of *AB* correspond with *B's* view of (AB)).

(c) They feel understood (e.g. does *A's* view of *B's* view of *A's* view of himself *(AA)* agree with *A's* view of himself).

(d) Each realizes that the other understands him (e.g. does *A's* view of *B's* view of *A's* view of himself correspond with ***B's*** view of *A's* view of himself).

The importance of this approach to an understanding of the development of the mother–child relationship is apparent, as it provides a way of picturing the initial difference in complexity of cognitive functioning, and the manner in which that difference is reduced. The very fact that it is of doubtful utility to talk of the newborn's view of his relationship with his mother, implies that Laing's levels of perspective may represent also levels of development. That the infant must reconcile its own view of its mother (or of its mother's relationship with herself) with her own is a matter that has been frequently discussed (Scott, 1973a, b). That maternal understanding of the infant's view of herself is conducive to good motherhood is something we probably all believe. And we may think that it operates through the infant's feeling of the mother's understanding of the infant's view of her. However, to return to a point made earlier, it may also be that at times the mother's behaviour seems to depend on her having a view of the baby's view of her that differs from, and is in some ways more complex than, the view that the baby actually has of her.

(viii) Penetration

A number of writers have stressed the importance of dimensions describing the intimacy of a relationship or the extent to which the personality of each is penetrated by the other (Altman and Taylor, 1973; Rokeach, 1968; Lewin, 1964; Fromm, 1956). Altman and Taylor use a useful "onion skin" model of personality—the personality is pictured as involving central less visible areas surrounded by more numerous peripheral ones, the skins being divided into sectors corresponding to different areas (e.g. sex, the family, work, etc.), and these subdivided into units within those general areas. Gradual penetration of the onion at particular points can represent the manner in which relationships develop towards increasing intimacy. Altman and Tailor (1973) discuss two dimensions, one relating to the number of sectors (general areas) penetrated, and the other to the number of units within those sectors. It is apparent that the former may be closely related to the number of types of interaction in the relationship (see (ii) above), but the two must be distinguished. An extreme case is the confidante—someone with whom social penetration may be extensive, but with whom we engage in only one type of inter-action, conversation.

The second dimension, the depth to which penetration has proceeded, is one on which Altman and Taylor (1973) place special emphasis. Although it appears intangible, they have shown that it can be assessed with some degree of objectivity.

They also list a number of overlapping dimensions of behaviour that are relevant to the penetration process—breadth of interaction; uniqueness of interaction; efficiency of exchange (e.g. sensitivity and accuracy in communication) ; substitutability and equivalency (i.e. the number of ways a given feeling can be conveyed) ; synchronization and pacing (i.e. meshing) ; permeability and openness; voluntariness and spontaneity; and evaluation (ability to convey positive and negative judgements about each other). It will be apparent that some of these are related to dimensions discussed in this paper.

These dimensions of breadth and depth are of crucial importance for the under-standing of many adult relationships. I am not aware of studies of the parent–child relationship from this point of view. One may speculate that in the early years there is a marked imbalance in the degree of penetration with, following the levels of perspective, a trend towards a more balanced situation, the changes being especially marked (and important?) around puberty.

STAGES OF RELATIONSHIP AND SOCIAL CONTEXT

So far properties of relationships have been discussed as though they could be abstracted from the relationship and studied in the abstract. This is unlikely to be the case, for at least two reasons.

First, the dynamic properties of a relationship change as it progresses. Social exchange theorists have recognized four stages (sampling, bargaining,

commitment and institutionalization) and argued that the nature of the rewarding events and the costs incurred change as the relationship proceeds (Thibaut and Kelly, 1959; Secord and Backman, 1974; Altman and Taylor, 1973). This implies that the qualities of a relationship must be considered with respect to the stage of that relationship, especially when prognosis is an issue. The point hardly needs making in the case of the parent–child relationship and has in fact already been made in several contexts: the judgements we make about a parent–child relationship are always with reference to the age of the child or (in the case of adoptions) the duration of the relationship.

Second, each participant in a relationship is enmeshed also in a network of other relationships. The rewards he obtains and the costs he incurs will affect, and be affected by, the dynamics of the other relationships in which he is involved. Thus the qualities of one relationship must be considered in the context of the other relationships in which each of the participants is involved.

CONCLUSION

It will be apparent that the list of dimensions I have given is by no means exhaustive, and that those discussed are not independent of each other. Furthermore, each can be applied at a number of different levels of analysis. The list is intended only as a temporary framework, possibly of some heuristic value, but not intended to be fundamental. How far the dimensions discussed will prove to be relevant to the questions in which we are interested is a matter that future research must decide. Perhaps, however, specification of dimensions will prove a useful preliminary to inter-relating the work of students from different disciplines—or even the work of students from the same discipline.

Finally, I would like to emphasize two points made in the introduction. First, although this paper grew from studies of rhesus monkeys, there should be no need to reaffirm that studies of non-human species can be of only limited usefulness for understanding human relationships. I hope, however, that I have justified my belief that we can exploit their differences from man. The very fact that they are so much simpler than man may enable us to try out some concepts and to set some of our thoughts in order.

Second, while I hope that a taxonomic approach will have some unifying value in this crucially important field, it is only a first step. And it

is appropriate, by way of conclusion, to indicate one way in which a first step in a field as complex as this is almost inevitably an oversimplification. Some of the previous discussion has concerned the relation between the characteristics of a relationship and prognosis. But a relationship with specific characteristics may "mean" one thing to one person and another to another. Prognoses about relationships must therefore involve the personalities of the participants as well as the nature of the relationship itself. If an important dimension of personality is the extent to which behavioural propensities change with situational (relationship) determinants (Bem and Allen, 1974), unravelling the interactions between personality characteristics and dimensions of relationships will be no small task. But some agreed means of describing relationships will be an essential tool.

SUMMARY

(1) The study of inter-individual relationships requires a descriptive basis. Description, however, must be guided with respect to the ultimate goals of the investigator—understanding the dynamics of relationships, prognosis, specification of necessary conditions, etc.

(2) The nature of inter-individual relationships, how they can be described, and the nature of their stability, are discussed briefly.

(3) The following aspects of relationships are discussed: (i) Content of the component interactions; (ii) Diversity of interactions; (iii) Reciprocity vs Complementarity: Control and Power; (iv) Qualities of component interactions; (v) Relative frequency and patterning of interactions; (vi) Multidimensional qualities; (vii) Cognitive and moral levels: Levels of perspective; (viii) Penetration.

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