

AN ECOLOGICAL VIEW OF FOUR SOCIAL CONTEXTS
INVESTIGATED WITH A LEWINIAN METHODOLOGY

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ABSTRACT

The purpose of this research was to explore four social contexts and determine the kinds of events that specify information for interactive possibilities. Subjects' descriptions of their own videotaped interaction were analyzed for two types of convergence: agreement on the selection of the most important events and similar interpretations of the functional meaning of these events. These were compared to descriptions from independent observers.

Critics of a hypothetico-deductive paradigm, particularly in social psychology, claim that experimental controls have eliminated most of what is social in experiments concerned with social interaction. The methodological principles of Kurt Lewin (1935) are here suggested as a possible solution to the design problems of abstraction, categorization and interpretation, and form the basis of this research design.

In addition, the concept of "affordance", coined by Gibson (1977) to refer to the complementarity of an animal and its environment is adopted in this dissertation. The dynamic relations referred to by the concept of affordance make it well-suited to describe the reciprocal relations in social interaction. Gibson's ecological view can be extended to the social environment and integrated with the sociogenetic theories of Mead (1934) and Vygotsky (1978). The main conceptual hypotheses are as follows:

- (1) In social interaction, behaviour, gestures and speech constitute events that specify perceptual information for interactive possibilities. The concept affordance

encompasses the reciprocal relations as well as the functional meaning of these events.

(2) Situations that appear to be different on the surface have dynamic structures that are invariant. These structures or events are perceived by interactants and used to coordinate their interaction.

(3) Social relations have been internalized such that the above perceived events have a functional meaning and operate as "signs" of that meaning.

Results indicated that there are main events in a social interaction which are more meaningful to interactants than others, and, that there is convergence, both on which events these are, and their general meaning. Also, independent observers shown two of the dyads, identified the same main events as important and described them in a similar way as the original interactants. The conceptual and practical implications of an ecological approach, a Lewinian methodology and the ability of subjects to consistently report on the function and meaning of their own behaviour are discussed.

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DEDICATION

A dissertation is not written, it is lived. Because they lived this with me, sharing the troubles and the triumphs in equal measure, I gratefully dedicate this to my daughters Kristen and Erin, and my husband Robin.

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CHAPTER ONE

OVERVIEW

Two compelling reasons for studying social interaction are suggested by Mead (1934): in the study of an individual organism's dependence on the social group we get a definition of social psychology and, more importantly, "the key to the genetic development of human intelligence is found... [in the recognition] that social beings are things as definitely as physical things are social" (Mead, 1934/1977, p. 349).

This research is an exploration of social knowing and social functioning. The processes of social interaction explored here, though examined in an everyday activity, are conceptualized historically. Virtually any social interaction could have served as a medium for the elucidation of the dynamic processes of interest, but for reasons articulated below an initial encounter was chosen as the research object.

The theories of Gibson (1966, 1979), Mead (1934) and Vygotsky (1978) span nearly eighty years, and yet, as will be discussed their theories focus on such essential features of the development of social adaptation and meaning in social interaction that the ideas continue to inspire research. Crucial to this research is the common materialist, nondualist, foundation of their approach to the relations of the organism in the environment.

A typical social situation, an initial encounter with a stranger, is used here as the medium through which the perception of interactive events and the shared meaning of communicative gestures and behaviours are explored. This phenomenon was chosen in particular because: (1) it is universal, (2) it is an episode of interaction

that is part of, but can be differentiated within, a social interaction, (3) it is immediate, (4) it is pervasive, that is, whenever two strangers meet there is an initial encounter, therefore, the processes can be studied in the laboratory as easily as in "the real world", (5) finally, and most importantly, the conceptual implications for a theory of interpersonal relations are far-reaching.

Research on the phenomenon of initial encounters from various fields is chronicled in chapter two. The focus of this review is the treatment by various fields of the functional nature of initial encounters and interaction. Regardless of the methods employed or theoretical orientations, research in diverse fields has either implicitly or explicitly assumed this functional significance. No attempt is made to synthesize this research beyond the theme of function, rather the problem of a lack of coherence is introduced. It is suggested that in the field of psychology the phenomenon of initial encounters (and social interaction in general) has been abstracted as a static entity from its dynamic context. The dynamic aspect of social interaction is discussed fully in the chapter on theory.

An investigation of the processes of social interaction that is explorative, and yet objective, requires a methodology that is not based on a traditional causal paradigm. In chapter three, past and current criticisms of traditional methods and their usefulness for the study of social behaviour are discussed. Adopted as an alternative in this research are the methodological principles of Lewin (1943/51): the "lawfulness" of everyday interaction is assumed a priori; the discovery of the processes in different social situations is the object of study. To this end, the subjects

are more than recipients of a treatment, they are co-investigators in the process of discovery; their judgments decide the unit of analysis (monadic or dyadic, one second or thirty seconds, etc) and their descriptions are the source of interpretation of these units.

The study of interactive processes also requires a language and theoretical position that envisions a person as an active agent simultaneously behaving, exploring, and perceiving in the world. Gibson's ecological approach, in particular, his concept of affordances, "what the environment affords the animal, what it provides or furnishes, either for good or ill" (Gibson, 1979/1986, p.127), advances such a theoretical position. The term affordance is well-suited for the reciprocal relationship of behaviour in social interaction because it is a non-dualist concept; objects are affordances in relation to a perceiver. Behaviour is thus always interrelated. What an object or the environment affords is derived from interaction with the world over time. What another person's behaviours or gestures mean is explained by Mead (1934) and Vygotsky (1978) as the internalization of social relations. The connections between these three theorists and the importance of their theories for the study of social interaction is discussed in chapter three.

Chapter four details the method that was used to investigate the following conceptual hypotheses:

(1) There is a shared social environment that is created when two people are together where each person's behaviour, gestures, and speech constitute events that specify information for interactive possibilities. (The term used to describe these events is

the concept of affordance, it refers to the reciprocal relations of the two people and the functional meaning of the perceptual information.)

(2) If, in social situations that are familiar to humans, social relations have been internalized the significance or the meaning of events is shared.

(3) There are dynamic structures, affordances, in social situations that are perceived by interactants and used to coordinate their interaction. Affordances are reciprocal, that is, they relate to both the observer and the object. Thus, if subjects are given the opportunity to describe their own interaction they will describe events in a dyadic unit. (Subjects will not focus on their own behaviour or the other person's exclusively, but will report events as joint actions, containing elements that relate to both participants).

In chapter four, the research design and procedure are detailed. Two complementary studies were designed to discover what kinds of structures or events were important to subjects in their own interaction, and how these decisions compared to decisions made by independent observers of the same interaction. The second study served two purposes: (1) the observers' descriptions of events were compared to the interactants/observers' descriptions to see what kinds of events were detected by other people, (2) it provided construct validity.

In chapter five the results are presented in three main sections: the quantitative and qualitative results for the first study, then the results of the second study. The qualitative results are the subjects' descriptions of which events were most important and the reasons offered by the subjects as to why these events were important. In

addition, the subjects' descriptions of social situations that are similar to the experimental situation are summarized.

In chapter six, the usefulness of the concept of affordance for the study of discourse events is discussed in the context of the current debates on this subject. Connections are drawn between the subjects' accounts of the functional nature of greetings to the theories on the function of greetings in anthropology. The subjects' descriptions of the situations are interpreted in a Lewinian framework. Finally, the usefulness and the practical applications of the findings and the research design for the clinical field as well as the benefits of the ecological view to social psychology are discussed.

CHAPTER TWO

REVIEW OF THE LITERATURE ON FUNCTION IN INTERACTION

The diversity of approaches to the phenomenon of initial encounters has led to an interesting collection of knowledge, ranging from taxonomic categories of behaviours and experimental manipulations to amusing anecdotes. Researchers in different fields have approached the problem armed with their own theories and methods and selected a compatible unit of analysis, with the result that their subject has often appeared quite different from what other researchers were investigating. Consequently, there is no synthesized and cohesive body of knowledge on this subject.

Each of the fields of ethology, anthropology, sociology, psychology, and psychiatry has coined or adopted a terminology to refer to the focus of their investigations. The nomenclature, usually the jargon of the field, provides a clue to the unit and method of analysis that is employed: ethologists observe "displays", sociologists study "greeting rituals", anthropologists systematize "kinetic codes", psychologists manipulate "interactional expectancies", communication scholars document "routines of conversational openings", and finally psychiatrists and developmental psychologists compare "approach behaviours". That greetings, displays, rituals, or opening conversations serve a function in social interaction is a theme common to all fields whether it is assumed, proposed or concluded. Since this research project is in part conceived to explore function, the following overview will

discuss how each field has treated the functional properties of behaviours in initial encounters and will attempt a synthesis based on the treatment of function.

Ethology

Ethologists (e.g. Eibl-Eibesfeldt, 1970, 1972, 1979, Blurton-Jones, 1972, Brannigan and Humphries, 1972, Smith, 1977, Hinde, 1970, 1972, 1982, Dawkins, 1986) have studied the phylogenic aspects of behaviour and adaptive predispositions. They have recorded, classified and compared across species, units of behaviour they call behaviour patterns or displays. This is a class of behaviour that refers to stereotyped behaviour units that are chained together in sequence, occurring in response to some stimulus in the environment. Heinroth (1910, cited in Lorenz, 1970) suggested that patterns of movement are as characteristic and as predictable as features of anatomy.

Classifications of universal greetings (cross-cultural and cross-species) have been studied as a unit of behaviour that is evidence of the phylogenic determinants of human behaviour by Eibl-Eibesfeldt (1970) and Morris (1968). Eibl-Eibesfeldt (1979) reported:

...we find that kiss-feeding is part of the maternal behaviour of chimpanzees, orangutans, and gorillas, and that chimpanzees kiss as an expression of friendly intent during greeting. We may with much greater confidence infer from these closely-related cases that kiss-feeding is homologous in the great apes and man. (Eibl-Eibesfeldt, 1979, p.2)

The conclusions of homologous origins of behaviours derived from comparative observations have been severely criticized. The sheer quantity and extensive variation that is possible in human behaviour patterns, not to mention the

subtlety and variation of individual behaviours, makes the observation and recording of these behaviours a problem of staggering proportions. In order to deal with this variation, the taxonomies made of human behaviours, such as Eibl-Eibesfeldt's research on greeting behaviours, seem to be pre-selected patterns. The starting point is a particular behaviour pattern; cultures and species are then selected for study with the object of observing this pattern and comparing it. This must leave literally thousands of behaviours which can not be assessed in terms of phylogeny.

Ethologists cite homologous origins as evidence of evolutionary function. Conclusions of function that are based on homology must be approached with caution given that the conclusions of homology themselves are suspect. However, as Eibl-Eibesfeldt pointed out, his studies of greetings reveal the existence of universal rules. The content of the greeting may vary according to cultural rules, but the form and the context in which they are performed "is in principle always the same" (Eibl-Eibesfeldt, 1970, p.445).

Sociology and Social Anthropology

General theory in sociology at the level of the individual deals with the capacities of humans to play social roles within a complex society (Merton, Broom, and Cottrell, 1959).

Mead (1934) argued that individual acts are always part of larger social acts and there is no self or communication separate from society. Conversely, society emerges through the process of communicative social acts, with gesture as the key mechanism of these social acts. According to Mead's (1934) theory, a gesture arises

out of cooperative activity and becomes a significant symbol, that is, communication, when it calls out the same response in the originator of the gesture as it does in the other participants in the social act. Significant gestures are characteristically human. They are based on linguistic symbols and are performed with the awareness of the response that will be evoked in the other person, a "taking the role of the other, a tendency to act as the other person acts" (1934/1977, p.73). (The concept of significant gestures is central to this research and is described in more detail in the chapter that follows.) With "self-conscious " gestures, the self that is communicating is both subject and object, a concept of self that Goffman (1961, 1963, 1971) incorporated and described poignantly in Asylums, Stigma, and Relations in Public.

Goffman (1959, 1961, 1961, 1963, 1963, 1967, 1971, 1974) expressed the mutual aspect of interaction. For example, he suggested that an individual projects a "definition of the situation" when he appears before others and that the others, "by virtue of any lines of action they initiate to him...contribute to a single overall definition of the situation" (1959, p.9). Goffman also noted that the lines of action would vary from one setting to another and that in each setting the participants would establish a "working consensus" (1959, p.10) of the situation. "Focused and unfocused interaction" (1963, p.34) represented the difference in communication between people who are merely in the same location versus individuals who are engaged in a mutual activity that excludes others. Within the mutual activity of interaction greetings were described as "access rituals" (1971, p.79), rituals that signify a change in the personal access one person gives to another.

Implicit in his descriptions is the function of greetings, behaviours, gestures, and even demeanour to convey interpersonal information about the individual's social intentions. With no language to describe the phenomena that he observed Goffman invented his own terminology but these expressions refer to isolated phenomena and although eloquent are inadequate to describe more general processes.

Simmel (1950) wrote that there is a sociological significance in the specific number of people that form a group. In a dyad, for example, there exists an obligation on the part of the members that does not exist in a larger group: "the limitation to two members is a condition under which alone several forms of relationship exist" (Simmel, 1950, p.122). A dyadic relationship, according to Simmel, has a quality that distinguishes it from all other groups of association. In larger group sizes, responsibility for the group can be diffused or delegated to some one else. In a dyad, the two people are responsible for the duties of the group, "neither can hold the group responsible for what he has done or failed to do" (Coser, 1971, p. 187). In addition, because there are only two people they are both necessary for the maintenance of the whole structure. The elimination of one member would result in the elimination of the dyad: "A dyad, however, depends on each of its two elements alone-in its death, though not in its life: for its life, it needs both, [underlining substituted for italics] but for its death, only one" (Simmel, 1950, p.124). Simmel argued that awareness of this obligation though not necessarily conscious was bound to influence the "inner attitude of the individual toward the dyad" (Simmel, 1950, p.124).

Simmel's interest in social forms of interaction was complimented by his interest in social types, the emergent structures of interaction. For example, he constructed social types such as the 'stranger', the 'mediator', and the 'adventurer'. The social type called 'the stranger' emerges "through his relations with others who assign him a particular position and expect him to behave in specific ways" (Coser, 1971, p. 182). The stranger comes in contact with a group but is not connected with any particular member of a group and hence according to Simmel (1950) is more objective: "He is not radically committed to the unique ingredients and peculiar tendencies of the group and therefore approaches them with the specific attitude of 'objectivity'" (Simmel, 1950, p. 404). Simmel (1950) suggested that a stranger, by virtue of this aspect of objectivity, is often the recipient of confidences that would not be shared among more organically connected group members and is called upon to arbitrate disputes as "the objective individual is bound by no commitments which could prejudice his perception, understanding, and evaluation of the given" (p.405).

According to Simmel (1950) the relations with a stranger are not with an individual but with "a particular type" (p.407). Furthermore, the relations of strangeness are present in intimate relationships. The feeling of strangeness, Simmel (1950) argued, is a dialectic of nearness and distance:

perhaps....It is rather caused by the fact that similarity, harmony, and nearness are accompanied by the feeling that they are not really the unique property of this particular relationship: they are something more general, something which potentially prevails between the partners and an indeterminate number of others, and therefore gives the relation, which alone was realized, no inner and exclusive necessity.

In summary, the research in the field of sociology provides a comprehensive view of

the rules of interaction, individual versus societal roles and the interrelatedness of interaction to the development of self.

Anthropologists have commonly studied the pattern of behaviours that is "greeting" in two ways. One is the study within one society of greeting behaviour as a formal ritual or as a set of cultural statements (Goody, 1972) and the significance of the ritual to the members of the society. Goody suggested that living successfully in small groups involves anticipating the behaviour of others and altering one's own: "social interaction depends on standardization of expression of social interaction and on the clear transmission of messages about these (1978, p.13).

The other approach used by anthropologists is cross-cultural comparison. Firth (1972) studied greetings as a "system of signs" that convey a meaning and/or function. Through the method of comparison one is able to discern the meaning of greetings for each culture. La Barre (1964) compiled an exhaustive comparison of gestures and kinetic movements and culturally learned kinetic codes. Birdwhistell (1970), detailed how the information conveyed by human gestures is coded differently across different cultures to express the essentials of a person's culture. Birdwhistell applied his methods of anthropological linguistics to the study of emotionally disturbed patients in a psychiatric setting. He discovered that these patients did not display behaviour patterns outside of the repertoire of normal adults but that these displays occur at the wrong place and/or are inappropriately intense or long (Birdwhistell, 1970).

In the field of anthropology rituals or individual gestures are symbols that can

stand for (or function as symbols of) social intentions. For example, Firth said that forms of greeting are symbolic devices that signify "incorporation or continuance of persons in a social scheme" (1972, p.2). That is, greetings are the acknowledgment of an encounter as a social situation and not merely a physical encounter (such as rubbing shoulders with some one on a bus). A social relationship is created by an exchange of signs, such as a word or a nod. This explanation designates the function of greetings as a ritual or symbol that distinguishes a social encounter from a non-social (or unacceptable) encounter.

Murphy (1971) described a Tuareg ritual that moderates the level of involvement in interaction. The custom of "veiling" of men in Tuareg society acts as a means of maintaining symbolic reserve: "...[the veils] operate to shield the individual from the perils of interaction through covering a major part of the expressive and communicative zones" (p.142). According to Murphy, the veils allow sociability, gregariousness and expressiveness. They hide "symbolically significant portions of the self while allowing the rest of the person to be engaged" (Murphy, 1971, p.143).

Murphy (1971) argued that norms and moral codes in societies constrain action yet allow it at the same time: "The norms provide the image of order and fitness; they bind time and activity in the mind, but they cannot be allowed to impede their flow....[Norms] may indeed constrain, but they can also give freedom of movement" (p.241). He cited Geertz's descriptions of the way kinship terms are used in a Javanese village as an example of the flexibility in the adherence to custom. Geertz

observed that the Javanese were more inclined to use a closer kinship term (e.g. brother rather than cousin), rather than a more accurate distant term:

...the fact that the terminology ignores this
 ...derives from the...Javanese conviction that it is best to avoid or to play down divisive or conflicting tendencies between individuals in the hope that by verbally ignoring them relationships will flow more smoothly. (Geertz, 1961, p.18)

Leach commented on the importance of kinship terms for the social system of a society. In contrast to the field of sociobiology where biology designates kinship, Leach (1982) suggested in the field of social anthropology kinship refers to named relationships which serve the function of linking individual members of a society in a network.¹:

The naming is crucial, for not only does this make it possible to contrast one kind of relationship with another, it also allows the group as a collective to determine what the 'proper' behavioural concomitants of the relationship should be. The naming of relationships marks the beginning of moral sanctions. (Leach, 1982, p.107)

However, Leach criticized the claim that "a great variety of fundamental facts concerning the structure and social organization of a society can be directly inferred from a close analysis of 'the kinship system' (1982, p.138). He (1982) argued that kinship terms in most languages are polysemic and not specific in meaning as are most kinship words in European languages.

¹ In the subfield of ethnosemantics native systems of meaning are studied through language structures. The systematic investigation of semantic domains (areas of meaning) such as kinship terms, disease categories, and color terminology, and, the comparison of the structure of semantic domains within and across languages are carried out to understand how people use such cultural knowledge to interpret behaviour and make decisions (Bock, 1980).

In the field of anthropology, descriptions of rituals, symbols, kinesic codes, norms and moral sanctions, and analyses of language and kinship structures, are the legacy of years of observation in different cultures. Analysis in the "functionalist" tradition has been based on an ideology and corresponding method where "It is assumed that observation of a cross section of society at a point in time should reveal the structure, the unchanging basic form of a society" (Lave, 1988, p.192).

Psychology

In the field of interpersonal interaction psychologists (and communication researchers) have employed a non-systemic approach that focuses on the individual. It is assumed that the individual has prior cognitions or emotions about the interaction that will effect what is done in the interaction. Experimental variations are thus aimed at influencing the thoughts or emotions of subjects and recording the consequences of this influence on behaviour, memory of interpersonal events, attraction, or preferences etc. The names of three major models within which many studies are conducted reveal the focus of the investigation: The arousal model (Patterson, 1973), the expectancy model (Honeycutt, 1989) and the uncertainty reduction model (Berger, 1986, and Sunnafrank, 1986). A recent study by Honeycutt, (1989) is an example of the expectancy model. Subjects' levels of expectancy were varied in the following way: subjects expected the forthcoming interaction to be friendly, unfriendly, or they had no expectation. Interaction involvement (initiating conversation and amount of talking) and behavioural responses (ratings by subjects of amount of effort required to sustain interaction) were measured

after the interaction to determine the effects of the expectancies on these measures. While studies of this sort provide some insights about the variety of subjects' experiences they offer only murky illumination of naturally occurring interactions since "information upon which a percept is based is preselected for the subject by varying particular parameters judged important by a given researcher" (Knowles and Smith, 1982, p.54).

In the clinical field research has emphasized the importance of appropriate initial encounters for healthy social relations. Tinbergen and Tinbergen (1972) observed that normal children exhibited the same behaviours as autistic children but to a lesser degree (this corroborates Birdwhistell's discovery of normal but inappropriately intense behaviour of psychiatric patients); thus they conceptualized autism as being at the far end of a continuum of shyness. In addition, they theorized that a genetic tendency for shyness was exacerbated by forced interactions, hence the way one approaches an autistic child could literally trigger a withdrawal response and a spiralling self-fulfilling process.

Studies investigating initial interactions with the handicapped reveal that healthy persons interact differently in subtle ways with a handicapped person that indicate a reluctance on the healthy person's part to interact with the handicapped person. (Pulton, 1981, Van Acker and Valenti, 1989).

In the field of developmental psychology studies of childrens' friendships and peer relations have indicated that children who are unable to fit in with another group of children usually do not know how to manage the first few minutes of an

interaction; they do not know how to approach and join in with other children (Corsaro, 1985). They are subsequently rebuffed by the other children and often develop an unpopular reputation. The practical implications of a greater understanding of initial behaviours are evident from these studies. It seems that with children (and in some situations for adults as well) if the first few seconds of an interaction are mismanaged, the consequences may be critical to personal and social development.

Summary

The research on initial social interactions is diverse, but the quantity of research that is the result of inter-disciplinary focus has not led to a coherent understanding. Mainly, it is the individualistic studies of psychology that can not be assimilated with the research at the group level of other fields. There are, however, two main themes we can extract: 1). A person's behaviours, demeanour, tone of voice, verbal expressions etc. provide information to the other person in an interaction, that is, there is something that exists in the social world that constitutes information. 2). Behaviour in the initial interaction serves either a function related to the immediate subsequent interaction, for example, by allowing the interaction to continue, or, a function related to a larger context, for example, the function of a ritual.

From the extensive attention devoted to greetings and initial encounters by several fields, there must be essential qualities in this microcosm of interaction that relate to an understanding of social interaction in general. Within the field of

psychology, various properties of initial encounters have been abstracted and studied in depth, yet the dynamic qualities and their significance for social interaction remain a mystery. According to Tolman and Lemery (1990), the problem of a lack of coherence in psychology (in general) is due to theoretical indeterminacy, a consequence of "empirical generalizations based upon classification and common characters of essentially static objects" (p.399). They stated:

The problem here is this: Any empirically concrete object or population of objects is infinite in its properties and can thus be abstracted in an equally infinite number of ways. But there is nothing in the immediate object or in the process of abstraction to tell us what must be abstracted for a proper understanding (Tolman and Lemery, 1990, p.399).

In addition, as Lave (1988) pointed out, within both psychology and anthropology a static approach that treats culture as something that exists because of events that happened in the past, in effect, defines culture "as 'what people have acquired, and carry around in their heads,' rather than as an immediate relation between individuals and the sociocultural order within which they live their lives" (p.91). Furthermore, the merging of culture into the concept of "knowledge" has the following consequence for the analysis of everyday activities:

...[it reduces] any unit of analysis which insists on the integral nature of individual cognition and its context, to a component, a literal subunit of the society (culture), leaving no basis for disentangling the sociocultural order from the individual's experience of it. (Lave, 1988, p. 92.)

The solution, Lave (1988) suggested, is to treat the "conceptions of persons, culture, the social world, and the everyday ...as objects of analysis rather than as unexamined explanatory devices" (p.92).

How these issues relate to the study of social interaction, as well as the need

for a methodology derived from a dynamic theory will be discussed in the following chapter.

CHAPTER THREE

THEORY AND METHODOLOGY

The interest in the phenomenon of initial social encounters has resulted in an extensive collection of cross-cultural and cross-species descriptions. Yet Van Acker and Valenti (1989) concluded that there remains a critical question to be answered:

What are the structural characteristics of an initial social encounter, defined over an interacting dyad, that constitute the informational support for perception of social intentions? (Van Acker and Valenti, 1989, p.398)

After all the attention directed towards this phenomenon, why is it that Van Acker and Valenti's critical question remains unanswered? Simply stated, neither the language nor the methods required for the answer existed. Until the last decade the field of social psychology lacked a theory of perception that could encompass the dynamic processes that constitute the reciprocal, mutual dance of initial interaction. Without a theoretical language, researchers studying social interaction either described the subject's ideas about the interaction or the overt behavioural characteristics, often in minute detail. (For a full description of this division see Lemery, 1990). On the interrelations of these ideas and behaviours both sides were rendered mute.

Encouraging progress has been made in the domain of social perception by the application to social behaviour of Gibson's (1966, 1979), ecological approach to perception.

The ecological approach

McArthur and Baron (1983) summarized the distinguishing features of this position: dynamic interactions with the environment reveal perceptual information that

specifies opportunities (or affordances) for action; and, attunement to particular opportunities or affordances are determined by a perceiver's history, goals, current context and biological adaptation. Affordances are defined by Gibson (1979) as information in the physical or social environment that specifies "functional utilities or action possibilities" (Baron and Boudreau, 1987, p.1223). This concept "draws our attention to a study of what information is available and useful to the social perceiver" (Knowles and Smith, 1982, p.60). The emphasis is on the "what of perceptual processing" (McArthur and Baron, 1983, p.206 underlining added). Since the concept of affordance is fundamental to this research, a detailed definition is required

The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill...the noun affordance is ...something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment. (Gibson, 1979, p.127)

Valenti and Good (1990) explained:

The world of places, objects, and events is meaningful for animals because of the specific functional and reciprocal relations that exist between animals and the particulars of the environment. These reciprocal relations are historically contingent on the coevolution of animal-environment ecosystems, and are continually maintained by adaptive interactions between individual animals and their econiche throughout their life-span. For example, certain places in the environment afford sitting to a human when the surface of support is approximately knee high relative to that particular person. The affordance of "sit-on-able" exists because of a functional relationship between the structure of the individual (i.e., their length, width, and, mass) and the structure of a particular environmental feature (e.g., a log, box, or chair). (Valenti and Good, 1990, p.8)

Reed and Jones (1982) emphasized the interrelatedness of what a thing is and what it means:

The meaning of or value of a thing consists of what it affords. Note the

implications of this proposed definition. What a thing affords a particular observer (or species of observer) points to the organism, the subject. The shape and size and composition and rigidity of a thing, however, point to its physical existence, the object. But these determine what it affords the observer. The affordance points both ways. What a thing is and what it means are not separate, the former being physical and the latter mental, as we are accustomed to believe. (Reed and Jones, 1982, p.407-408)

Eleanor Gibson (1982) described the gap that the concept of "affordances" filled:

A careful description of the information for perception, even as it approaches elegance in the form of a mathematical statement, does not convey sufficiently the reciprocity of a creature and the environment...The surfaces and substances of this environment provide opportunities of diverse kinds for the creature's activities, offering it support for living successfully in the world. These opportunities are its "affordance". The concept of affordances brought the new theory back to the functionalist outlook ...with the information spelled out and its functional significance stressed. A phenomenological description of perception made sense again too. What is perceived, by an ordinary person, by a child in any culture, or by a chimpanzee? It is the affordance of things-what to do with them, what they mean [underlining added]. (Gibson, 1982, p.xiii)

In summary, the ecological approach emphasizes dynamic processes, the interrelatedness of the person and the environment. What a thing is, and what it means to an observer are inextricably linked. An observer gives properties to an object that do not exist outside of that relationship, yet are part of the object's physical properties.² There is perceptual information available in the properties of an

² Lee (1976), who was described as the heir to the approach of Tylor, Frazer, Levy-Bruhl and Boas (Bock, 1980,) wrote of her difficulties in analyzing the linguistic structures of the Navaho and the Hopi because of the dualistic bias in the language of official American culture. The Navaho language revealed a view of man as a collaborator in the universe, simultaneously an agent and a passive recipient:

It is apparent through the Navaho linguistic structure, that when a man "rolled" a ball, this was an effective but not a transitive act. The ball contained the rollingness and man joined his operation to this before the ball could roll. (Lee, 1976, p.74)

object that provide opportunities for action and these properties are known through activity in the environment over time.

The concept of affordance, the cornerstone of an ecological approach, specifies two essential components of interaction that were the main focus of this research project: what is perceived in the social environment by interactants and what do these things mean for the coordination of social interaction. But perception and meaning are not separate. The affordance is not a physical property. An object or behaviour, affords some action, has value or meaning only in relation to a perceiver. It is this element of necessary reciprocity that makes the concept of affordance uniquely suited to describe the process of social interaction because a behaviour performed without a perceiver can have a different value or meaning than the same behaviour performed when a perceiver is present.

When the 'thing' is another thinking and behaving person the affordance, or the meaning of what that person is doing or saying, also provides opportunities for diverse kinds of activities. The social environment, according to the developmental theories of Mead (1934) and Vygotsky (1978), comes to be known through a similar process as the physical: through the process of activity in the social environment, the subject-object (or subject-subject) relations are experienced over time and internalized. The non-dualistic, developmental aspects of Gibson's (1966, 1979) theory of perception are easily assimilated with the views of Mead and Vygotsky. Examples of the similarities in the non-dualist approaches of Mead and Vygotsky follow. Mead (1934) wrote:

the self is not so much a substance as a process in which the conversation of gestures has been internalized within an organic form. This process does not exist for itself, but is simply a phase of the whole social organization of which the individual is part. (Mead, cited in Baldwin, 1986, p.107.)

Vygotsky wrote:

J. Baldwin was right to note that the child's concept of 'I' develops out of the concept of others. The concept 'personality' is, thus, a social, reflective concept that is built on the basis of the child's use in relation to oneself, of those means of adaptation that he uses in relation to others. (Vygotsky, cited in Valsiner and van der Veer, 1988, p.129.)

Mead and Vygotsky are frequently sighted in the contemporary literature of 'social cognition' research, as two proponents of the view that cognitive processes are a product of social life (Valsiner and van der Veer, 1988). Valsiner and van der Veer (1988) argued that the similarities noted "(Bruner, 1962, Glock, 1986, Kozulin, 1986, Luckman, 1977, van der Veer, 1985, 1987, Wertsch & Stone, 1985)" (p.118) between these two theorists is due to their common origins: the historical influences of other scholars connected with the sociogenetic viewpoint (also referred to as the sociocultural approach).³ The adjective genetic is used here in its original, though lesser known, general meaning of "the sense of development, as in 'genetic definitions' (1837) where the defined subject was 'considered as in the progress to be,

³ Valsiner and van der Veer (1988) traced the similarities between Mead and Vygotsky to their common historical origins: the common predecessors...the American philosophers and psychologists James Mark Baldwin, Josiah Royce, William James, John Dewey, and Charles Cooley....travelled to Europe....The European philosophical traditions of Kant, Hegel, Dilthey, Wundt, as well as other ideas ...were close to the American originators of the sociogenetic viewpoint. Furthermore, it was the influence of French sociology...that had a guiding influence on the originators of the idea that human cognition originates in the social life of its carriers. (Valsiner and van der Veer, 1988, p. 119)

as becoming'" (Williams, 1976, p. 142).⁴

The sociogenetic view

Valsiner and van der Veer (1988) summarized the sociogenetic view in two postulates:

First, the ontological postulate: all human cognition is social in its nature. By that is meant that adult human thinking processes are interdependent with the social discourse of the given society. Second, the developmental postulate: the social nature of human cognition emerges in the process of internalization of external social experiences by individuals in the process of socialization. (Valsiner and van der Veer, 1988, p.118)

Vygotsky (1978) concluded that perception in humans is unique because of the tendency to see the world in terms of sense and meaning, and not as occupied by shapes and colours. The distinction is between "lower" natural mental functions of perception and attention etc. and "higher", cultural mental functions which are the transformation of the lower functions, "structured and organized according to specifically human social goals and means of conduct" (Kozulin, 1986, p.xxv). We perceive objects in terms of our relationships with them. For example, Vygotsky wrote:

I do not merely see something round and black with two hands; I see a clock and I can distinguish one hand from the other. Some brain-injured patients say, when they see a clock, that they are seeing something round and white with two thin steel strips, but they do not know it is a clock; such people have lost their relationship with objects. (Vygotsky, 1978, p.33)

Mead (1934) expressed the relationship with objects in a similar way:

⁴ According to Williams (1976) the now normal scientific use of the word genetic was originated by Bateson in 1905 when developments in biology required a word to describe the 'Study of Heredity'.

Although external objects are there, independent of the experiencing individual, nevertheless they possess certain characteristics by virtue of their relations to his experiencing or to his mind, which they would not possess otherwise or apart from those relations...Experienced objects have definite meanings for the individuals thinking about them. (Mead, 1934/1977, p.193)

We can see the similarity to Vygotsky's conceptualization of relations in Mead's example of the meaning of a house:

We try to distinguish the meaning of a house from the stone, the cement, the bricks that make it up as a physical object, and in doing so we are referring to the use of it. That is what makes the house a mental affair. (Mead, 1934/1977, p.193)

Internalization of external social experiences is achieved by semiotic mechanisms. Adaptation in a social world requires more than individual knowledge of objects, experiences or affordances, it also requires the ability to convey the meanings of these things to others.

Mead and Vygotsky, though they described the mechanisms differently, both suggested that it is language that makes adaptation to the social environment possible. Language, the shared symbols or signs that are developed to communicate with others, functions intrapsychologically as well as interpsychologically. In Mead's terms this mechanism is significant gestures, a gesture that simultaneously calls out the same response in the sender as it does in the receiver. Vygotsky expressed this idea as signification, the creation of signs to influence the behaviour of others. In Vygotsky's theorizing, as in Mead's, the individual and the social are interrelated, such that each is an integral part of the other, "the individual and the social were conceived of as mutually constitutive elements of a single, interacting system" (Cole, 1985, p.148). According to Mead, the shared symbols of a group become

internalized so that even when a person is alone the positions of the other individuals may be imagined and can affect how one chooses to act. In Vygotsky's terms, these cognitive processes are internalized transformations of external social life.

Kozulin (1986) gave the following examples as evidence of the similarities between Mead and Vygotsky:

The mechanism of social behaviour and the mechanism of consciousness are the same... We are aware of ourselves, for we are aware of others, and in the same way as we know others; and this is as it is because in relation to ourselves we are in the same [position] as others are to us. (Vygotsky, cited in Kozulin, 1986)

According to Kozulin (1986) this statement bears a striking resemblance to Mead's concept of significant symbolic development:

As we shall see, the same procedure which is responsible for the genesis and existence of mind and consciousness—namely, the taking of the attitude of the other toward one's self, or toward one's own behavior—also necessarily involves the genesis and existence at the same time of significant symbols, or significant gestures. (Mead, cited in Kozulin, 1986)

The next section will outline the sociocultural approach first as described by Mead, and then by Vygotsky.

Mead's Concept of Shared Symbols

Mead attempted to articulate how the meaning that was discerned by individuals in an environment was conveyed to others or shared by others.

The social environment is endowed with meanings in terms of the process of social activity; it is an organization of objective relations which arises in relation to a group of organisms engaged in such activity, in processes of social experience and behavior. (Mead, 1934/1977, p.192)

The genesis of mind, according to Mead occurs when the organism is able to

point out meanings to others and to himself/herself, through the use of shared symbols, or language. Mead suggested that the shared meaning of gestures originated in the social act:

But if one is thinking about the chair, he must have some sort of a symbol for it...In a thought process there has to be some sort of a symbol that can refer to this meaning, that is, tend to call out this response, and also serve this purpose for other persons as well. It would not be a thought process if that were not the case....A person who is saying something is saying to himself what he says to others; otherwise he does not know what he is talking about. (Mead, 1934/1977, p.211)

Mead traced the development of gestures in their instinctual form, as used by animals, to the more complex forms of communication involving symbolic language (Baldwin, 1986). He described animal gestures as the beginning of acts, the first overt phases in a social act that contain information about the whole act, "including the future phases of the act that are likely to follow after the gesture" (Baldwin, 1986, p. 71). Mead suggested that "meaning is thus a development of something objectively there as a relation between certain phases of the social act; it is not a psychological addition to that act and it is not an 'idea' as traditionally conceived" (Mead, 1934, p.76).

Mead explained that the meaning of social gestures can be determined by the relationship in triad of events: (1) a first individual's gesture, (2) a second individual's gesture, and (3) the consequences of the interaction (Baldwin, 1986). The triadic matrix represents the simplest form of interaction where the meaning of the gestures resides in the interaction itself. For example, "if a dog growls and another dog uses this gesture to predict an attack, [as evidenced by the dog running away] then the gesture of growling has meaning" (Turner and Beeghley, 1981,

p.468). Vocal gestures, on the other hand are unique, according to Mead, because they serve as stimuli for the speaker and the hearer simultaneously. When the vocal gesture calls up the same meaning in the speaker as it does in the hearer (not all vocal gestures communicate the same meaning) it is defined by Mead as a "significant gesture" (Mead, 1934/1977, p36). For example, "The words "pull up a chair" have the same meaning for all people who speak English" (Baldwin, 1986, p.79) or are at least similar enough to be classified in the same class. When words have the same meaning for the speaker and the hearer they are referred to as "significant symbols" (Mead, 1934/1977, p.38).

Mead referred to language as the consciousness of meaning. "In language, what we have reached is the consciousness of meaning attached to a gesture" (Mead, cited in Baldwin, 1986, p.83). A higher form of consciousness, "reflective intelligence" (Mead, 1934) arises in situations where an obstacle is encountered and an inner conversation of significant symbols is engaged in to "discuss" possible solutions. It is the ability to hold the possible solutions with regard to the stimuli which present themselves that constitutes mind (Mead, 1934).

Mead suggested that the activities of play and the game are background factors in the genesis of self and self-consciousness. In play a child is able to assume a role because she has internalized a set of stimuli which calls out the responses in herself that they would call out in others, for example, she may play "market" and offer herself something and buy it. In an organized game where a number of players are involved the child must be able to take the role of every other player on the team and

realize the relationship of these roles to each other, as in a game of baseball for example. Self-consciousness, the act of taking oneself as an object emerges when we can internalize social relations; mind emerges when we can point out the meaning of something to ourselves and to others.

How common gestures are maintained in more complex situations of society as well as how an individual's behaviour is guided by these processes is described by Turner (1982):

Mead's scheme specifies the underlying behavioral processes by which people can be guided...by reading each other's gestures and by role-taking, humans assume not just the role of specific others in a social context but also the general perspective of the collective enterprise; and then they use this "generalized other" as a major force in minded deliberations and in self-evaluations. (Turner, 1982, p.219)

And Turner concluded, "Thus, from Mead's analysis, the scale and integration of the social order is connected to the development of common conventional symbols" (1982, p.219).

Vygotsky's concept of signification

Leont'ev (1981) has suggested, that the main accomplishment and contribution of Soviet psychology has been the account of the relationship between external activity and internal activity (see Leont'ev, 1981, Wertsch and Stone, 1985, for a discussion of the concept of internalization). Vygotsky argued that the relationship is a genetic or developmental one, where external activity is transformed to create internal processes (Wertsch and Stone, 1985).

According to Vygotsky humans are more than passive reflectors of natural connections, the adaptation to the environment (particularly the social environment)

requires the introduction of signs to establish connections in the brain that refer to the external world: "Humans introduce artificial stimuli; they signify behavior and with the help of signs create new connections in the brain that constitute external influence" (1960, p.111-112). Vygotsky's distinction between signals and signification is an extension of Pavlov's notion of the first and second signal system (Wertsch, 1985). "Signalization" is the general physiological activity of the nervous system and the foundation of both animal and human activity. "Signification" on the other hand is the active creation of signs:

It [signification] requires the active establishment of such connections that are impossible with a purely natural type of behavior....Humans introduce artificial stimuli; they signify behavior and with the help of signs create new connections in the brain that constitute external influence. (Vygotsky, cited in Wertsch, 1986, p.90)

External influences of social life create the necessity for complex sign systems because the individual must subordinate his/her behaviour to social demands.

A sign is always originally a means used for social purposes, a means of influencing others, and only later becomes a means of influencing oneself....The word's first function is its social function; and if we want to trace how it functions in the behavior of an individual, we must consider how it used to function in social behavior. (Vygotsky, cited in Wertsch & Stone, 1985, p.165)

The following lengthy quotation from Vygotsky illustrates the relationship of the concrete context of the social environment and the process of internalization:

In response to the child's unsuccessful grasping movement, a response emerges not on the part of the object, but on the part of another human [when the mother comes to the child's aid]. Thus, other people introduce the primary sense into this unsuccessful grasping movement. And only afterward, owing to the fact they have already connected the unsuccessful grasping movement with the whole objective situation, do children themselves begin to use the movement as an indication. The functions of the movement itself have

undergone a change here: from a movement directed toward an object it has become a movement directed toward another human being. The grasping is converted into an indication. Thanks to this, the movement is reduced and abbreviated, and the form of the indicatory gesture is elaborated. We can now say it is a gesture for oneself. However, this movement does not become a gesture for oneself except by first being an indication, i.e., functioning objectively as an indication and gesture for others, being comprehended and understood by surrounding people as an indicator....Its significance and functions first are created by the objective situation and then by the people surrounding the child. (Vygotsky, cited in Valsiner, 1989, p.70)

Vygotsky's interest in the semiotic mechanism of abbreviation was related to the comparison of the nature of inner speech with external speech (Wertsch, 1985). Wertsch argued that abbreviation is important in interpsychological functioning (as well as intrapsychological functioning) if one recognized the "relationship between linguistic representation and a situation definition" (1985, p.177). The degree of abbreviation rises as fewer and fewer aspects of a situation are articulated in explicit speech. The factor that influences the level of abbreviation is the intersubjectivity of the participants. He said intersubjectivity "exists when interlocutors share some aspect of their situation definitions. Typically this overlap may occur at several levels" (1985, p.159). He described how intersubjectivity is related to abbreviation:

A speaker may use quite explicit (nonabbreviated) utterances when a listener shares relatively little of the situation definition, but with greater intersubjectivity the speaker's utterances need not be so detailed, or explicit, because the listener can be relied upon to understand more abbreviated directives (Wertsch, 1985, p.177).

Wertsch suggested that "by identifying the points on which there is ...accord, one can recognize points of intersubjectivity" [underlining added] (1985, p. 162). He was primarily interested in discovering adult-child accord in the learning process but the discovery of the degree of intersubjectivity in adult-adult interaction would indicate,

in Rommetveit's (1985) words, the degree to which communication had transcended 'private worlds' and created a shared social world of the communication context. (Although Wertsch referred to verbal language, that is, utterances, it is obvious from Vygotsky's quote that nonverbal communication or gestures are forms of abbreviated syntax).

Summary

As described above, Mead and Vygotsky demonstrated the process of internalization,⁵ how shared symbols enable us to function and adapt in the social environment. The theories of Mead, Vygotsky and Gibson have a materialist base emphasizing the importance of an active exploration of the world as the basis of development. This is expressed in the following way by Leont'ev (cited in Mammen, 1989):

that the psychic image even from the very beginning "is related" to a reality that is external with respect to the brain of the subject and is not projected into the external world but more likely is extracted from it. (Leont'ev, cited in Mammen, 1989, p.76)

Mammen (1989) wrote that Leont'ev's concept of "extract" is used as a metaphor and is clearly similar to Gibson's concept of "pick-up":

The point here is that activity (in this case Man's), through its special form,

⁵ Although Mead and Vygotsky are recognized in this research as two researchers who made the developmental process of internalization the focus of their research there are naturally other scholars who have described the interrelatedness of the objective and the subjective, e.g. Murphy (1971):

For it is only by recognizing this embeddedness of the objective in our subjectivities and the corollary subjective reworking of the external world that we find forms of order and process that underlie mind and action. (Murphy, 1971, p.206)

practically abstracts or "extracts" its objects from the world's multiplicity. Depending upon its form and direction, the activity brings the subject into contact with different aspects of reality, which then asserts itself upon the subject. (Mammen, 1989, p.77)

The significant aspect of Gibson's ecological approach for social psychology is the view that a common world exists to be shared and that therefore, an experimental exploration of that world is possible. Gibson stressed that it is a mistake to dichotomize private perception of an individual and what is public knowledge (the sharing with others through common language). Shared awareness of a common world is not wholly contingent on verbal agreement, but due also to the ability to pick up information over time. Activity in the environment allows us to see things from many different perspectives and underlies the sharing of this information. We not only share with others the language to describe these things but we also share our independent perceptions of invariants in the environment (Reed and Jones, 1982)

The problem for psychology has been how to conceptualize the relationship between external activity and internal activity (Wertsch and Stone, 1985). Gibson, Mead, and Vygotsky all adopted a nondualist view emphasizing the dynamic nature of that relationship and articulating the developmental process by which the relationships of the external world become internalized. Vygotsky and Mead in particular, studied the dialectical nature of the emergence of self as a corollary of social processes. However, as Valsiner and van der Veer suggested "neither the dynamic functioning of the self, nor the process of internalization, are currently studied empirically in ways that would preserve the dynamic or developmental nature of the processes under study" (p.130). They also suggested that there are very simple reasons for this dearth

of empirical studies. It is "psychologists' uncritical acceptance of traditional methodology (see Hales, 1986a, p.268) [that] has eliminated the dynamic side of the phenomena from research (Valsiner, 1987)" (Valsiner and van der Veer, 1988, p.130). This quote directs us back to the opening statement at the beginning of this chapter. The full interrelations of the environment and the acting subject have been ignored because neither the language necessary to describe the unit of analysis nor the methodology have been developed with this goal in mind. In the last decade the scholars reviewed in the following section have called for a reevaluation of traditional experimental methods.

Methodology

In the following pages some of the criticisms directed at the shortcomings of the traditional experimental method, particularly as it is employed in the study of human interaction, will be reviewed. How this research project has attempted to avoid the caveats suggested by these criticisms will be presented as the goals of the methodology.

The criticisms fall into two categories, general problems associated with the view of human nature assumed by the experimental method, and particular problems resulting from a widespread but misguided attempt to make the execution of the experimental method more scientific. Naturally these problems are interrelated, but as will be demonstrated by several authors, the assumptions inherent in traditional experimental methods are often unstated, and therefore go unchallenged. The result is that a downward spiral is set in motion where ever more controls are added to the

experimental situation that take us continuously farther from the possibility of discovery.

The criticisms in the following discussion are not intended as a litany of charges against the field of psychology in general, rather the purpose is to demonstrate that support for alternatives to a hypothetico-deductive paradigm has been consistent, though often peripheral, throughout the history of psychology. Also as Tolman pointed out:

Psychology makes historical progress, that is, expands its command of relevant knowledge, through periodic protests aimed at some aspect of residual irrelevance in the mainstream "line of study" and its methods. (Tolman, 1991, p.2)

Although an effort has been made to introduce contemporary champions of alternative methods, a brief recognition of the historical precedents for these ideas is presented. Two persistent themes relevant to this research are: (1) the denigration by opponents, and defence by advocates, of the subjective aspects of experimentation, and (2) dynamic versus static objects of study.

Two early advocates of the usefulness of subjective experiences, Wundt and Brentano, distinguished between "simply perceiving subjective events, being aware of them, and observing them in some methodical way" (Danziger, 1990, p. 35) Wundt said the investigation of mental processes in their social aspects was the more important part of psychology and that in the analysis of human cultural products such as language, myth and custom the available information was no less objective than data obtained in experimental psychology (Danziger, 1990).

Kohler expressed the same confidence in the expression of experience:

if to me my words represent a description of my experiences, they are at the same time objective representations of the processes which underlie these experiences. Consequently, it does not matter very much whether my words are taken as messages about experience or about these physiological facts. (Kohler, 1947, p.40.)

Opponents of an approach that validates the relationship between the subject and the investigator may soon find themselves in a lonely scientific position. Moustgaard (1989) argued that one can see in physicist Neils Bohr's later work a suggestion of greater objective descriptions for psychology:

Bohr naturally realizes that the communication between the two persons in the experimental dyad is a necessity, and moreover, he emphasizes that this communication of data must be viewed as a communication between two equal partners, that is to say, a communication that cannot be reduced to one party's observation of the other party's "external" behaviour. (Moustgaard, 1989, p.107)

In contrast to the historically dominant Newtonian view of the world as a deterministic machine, Prigogine and Stengers (1984) presented a new evolutionary paradigm for the natural sciences. They described a view of the world undergoing qualitative change and development. According to Prigogine and Stengers (1984), when matter is in certain states of instability a "selection" occurs and a qualitatively new form of matter comes into being. New objects are created or selected from the possibilities that present themselves. An important concept in this view is that:

The objects are not determined in advance, whereafter they interact within the boundaries of their once-and-for-all given properties, such as the mechanists imagined it. On the contrary one can say that the objects are selected or constituted as special objects for each other through their connections. It is not until after this that they interact within the boundaries of their connections. (Mammen, 1989, p.81).

In the criticisms that follow, the appeal for alternative methods continues as the direct

consequences of adherence to a mechanistic view for experimentation in psychology are examined.

According to Rijsman and Stroebe (1989), the contemporary 'crisis in social psychology' was initially defined in the criticisms by Ring (1967), Gergen (1973), Harre and Secord (1972), and Israel and Tajfel (1972), of experimental social psychology. Gergen's (1984) criticism claimed that the principal problem has been an uncritical commitment to an empiricist world view where knowledge is a presumed result of inputs from the environment, where features of the stimulus environment become recorded on the human mind:

Human behavior, as it is generally envisioned is fundamentally contingent upon environmental events. Thus, the human mind, remains essentially unchanged, inert, or stable until environmental intervention occurs. (Gergen, 1984, p.5)

With this view psychologists not only focus their research on the relationships between observable stimulus events and responses, but the terminology used to describe these relationships "recapitulates an empiricist world view" (1984, p.5), with the result that psychologists committed themselves to a mechanistic explanation of behaviour, "In effect, metatheoretical commitment has preempted theoretical selection" (1984, p.5). In addition, Gergen (1984) argued that if persons are viewed as fundamentally dependent upon the environmental inputs, then it is reasonable to limit research to abridged events that begin with the introduction of a stimulus and end with a resulting response. In fact, Gergen said that to be defined as rigorous an experiment must necessarily confine itself to temporal phenomena, "As the temporal interval is increased, the experimental subject is potentially exposed to a wide range

of contaminating variables over which the experimenter can scarcely gain control" (1984, p.8). Yet very few instances of every day life are of such summary duration. Therefore, Gergen said, as long as the controlled experiment is "presumed to be the hallmark of superior scholarship" (1984, p.9), virtually all typical forms of social interaction are excluded from study.

Thines (1977) expressed the problem in a similar way: "...the a priori elaboration of being objectific must eliminate the time-perspective of the living subject in order to proceed efficiently" (p.36). He further argued that in order to eliminate any confounding effects of culture the experimenter has to exclude spontaneous behaviour:

The experimenter is studying cultural beings and he must extirpate cultural biases if he wants to reach what he supposes to be the true deterministic realm of behavioural facts. He expects to find them in physiology, not in ontogenetic time; in timeless realities, not in history; in the behaviour of an abstract subject, not in the historical subject. (Thines, 1977, p.38)

Harre and Secord (1972), influential critics of social psychology, specified the three assumptions that lead to the idea of laboratory experiments as the foremost source of scientific data.

...the mechanistic model of man, a Humean and externalistic idea of cause, and science conceived in the logical positivist form, are...still the unconsidered foundation [underlining added] of a very great deal of modern psychology, particularly at the scientific level. (Harre and Secord, 1972, p.33)

Even social psychology, Harre and Secord (1972) said, has accepted these conceptions for the most part without question. The evidence for this acceptance is a lack of effort devoted to an explication of the process of communication and the meaningfulness of social behaviour.

Social behaviour is meaningful behaviour. It involves an agent with certain intentions and expectations, as an agent capable of deliberating and choosing from a variety of courses of action, and whose words and actions are understood by his fellows. (Harre and Secord, 1972, p.35)

Romanshyn (1971) pointed out that the constricted apersonal, atemporal role of the subject resulting from the goal of objectivity, has largely eliminated the experience of subjects. He said that subjects are expected to limit their presence to responses to events narrowly defined by the experimenter. Since the subjects are expected to respond within the prescribed limits of experiments, a necessary consequence is that they can not enter the situation with a history or an intention. In view of these constrictions, Romanshyn (1971) claimed:

Experience became an epiphenomenon and eventually the conviction arose that a meaningful understanding of an organism's behavior was possible without a reference to that organism's experience of that behavior. (Romanshyn, 1971, p.97)

Yet Mixon (1986) pointed out that the critical difference between the naming of animal behaviour and the naming of human behaviour is that:

unlike animals, people engaged in behaviour themselves characterize, define, name what they are doing....A 'subject's' definition, a behaving human's definition, is important for the simple reason that the way people define behaviours influences what they do. (Mixon, 1986, p.128)

Mixon (1986) concluded that since characterized or named meaning is important for human subjects and influences how they behave, the investigators don't have the luxury of deciding meaning they must discover it.

If the foregoing critique is accurate, in the traditional psychology experiment all aspects of what constitutes a person have been eliminated as confounding or contaminating variables, or dismissed as irrelevant. Subjects are treated as apersonal,

ahistorical, and acultural beings; social phenomena are reduced to temporal, isolated and discrete entities--hardly characteristics of social behaviour. Given this state of affairs, what is left as the actual object of study?

Some critics have argued that it is the experimental design itself that has metamorphosed into the object of study. De Rivera (1976) argued that because the experimental method focuses on averages rather than individuals the events that are attended to by the experimenter are the objective conditions of the experiment. These become the "subject" of the experiment rather than the subjects. Mixon (1990) said:

from the beginning psychologists have put method before problem: psychologists study those problems that can be studied with methods thought to be scientific. In contrast the natural sciences began with problems and invented methods to solve them. (Mixon, 1990, p.99)

Romanyshyn (1971) described the consequences of the choice of method:

It is important to recognize in this situation the implicit power which the method question exercises. It not only decides the question of how an experiment is to be conducted, but it also determines the question of what is meaningful data in the experimental situation. In effect, the choice of a particular method for a psychological experiment means the creation of a circumscribed, well-defined universe within which certain events are attended to while others are ignored. (Romanyshyn, 1971, p.99).

Mixon (1990) suggested that there are two consequences of the emphasis on method over problem. One is that the study of any topic is justified on the basis that a scientific method was employed (a kind of moral scientism), and the other related consequence is that a fear of appearing unscientific has elevated methodological orthodoxy to be equated with scientific purity.

The general problems of social psychology are magnified when social

interaction is the focus of investigation. Problems of categorization, unitization and interpretation lurk in ambush at every step of design. Schneirla (1950) cautioned that even the most elementary categorization of behaviour, involves a degree of interpretative implication and statement of relationship. For example, the seemingly neutral statement, "The animal was heard to utter two sounds" (p.19). Thus, reduction of behaviour to elementary observable units is no more a guarantee of objectivity than the study of larger social acts.

There are two mistakes an experimenter can make by the "arithmomorphic division of human behavior" or "superimposing a unitizing schema on human action" (Danziger, 1990, p.175). First, there is the problem of reduction of behaviour in a social context to an elementary meaningless unit, (meaningless in Lewinian terms is a surface pattern of events rather than a unit of analysis that adequately represents the properties of the social group) (Lewin, cited in Danziger, 1990). Second, as Knowles and Smith (1982) pointed out, there is a problem of selection; the experimenter preselects the unit of analysis from the array of possible behaviours in the interaction and decides a priori what is important.

Once the units of behaviour are selected the problem of how to categorize them materializes. As Blurton-Jones (1972) pointed out, even in straightforward descriptions of movement there is "still room for selection influenced by hidden assumptions" (p.12) and an analysis of function that is a "description of behaviour in terms of the effects it has ...often very quickly produces circular arguments" (Blurton-Jones, 1972, p.12).

Harre (1982) suggested that there is a distinction between classifying events as behaviours, acts or actions:

Events produced by human beings can also be embedded in a network of relations which depend upon an actor's intentions in producing the actions. Looked at with respect to this system of connections, the phenomena produced by human beings may be divided and classified into categories quite distinct from those which would be used for analysing human events considered simply as behaviour. (Harre, 1982, p.11)

Harre's distinctions on the basis of relations is especially pertinent to the classification of inaction. Inaction, he said, cannot simply be categorized as non-action because:

"there are many contexts and occasions where one can be said actively or intentionally or deliberately to be refraining from acting" (1982, p.13).

Interpretations or explanations of behaviour echo a mechanistic view, but that view is especially inadequate at the level of explanation. Hobson (1991) argued that a deterministic explanation of human behaviour could not account for behaviour that is influenced by events that may or may not happen in the future. He posed the question: "How much of our behaviour is predicated on what we think some one else will think?" [underlining substituted for capitals] (Hobson, 1991, p.12). In the study of human interaction the embeddedness of the past, present and future in each individual's behaviour is further complicated by the relatedness of each person's presence for the other. Natsoulas (1985) inferred from Mead how one person is a social object to another:

As the individual's social acts are performed, he or she is a social object in the experience of others. Therefore, the individual is constituted by those social acts of others for which the individual provides stimulation by his or her social acts. (Natsoulas, 1985, p.69).

Natsoulas (1985) explained that, according to Mead, in order for individuals to be social objects they must have internalized the various attitudes of their society towards the social project in which one is engaged. Turner (1982) described how an individual's behaviour is guided by a general perspective of a collective enterprise but also the specific others in a social context:

By reading each other's gestures and by role-taking, humans ...not only adjust their conduct to each other in an immediate context, but they also constrain these person-to-person adjustments in terms of a broader perspective, or "community of attitudes". (Turner, 1982, p.218-219)

A stimulus-response, causal model cannot account for behaviour that is embedded in the past, present and future, nor can it adequately account for behaviour that is part of a collective structure as described above.

Attempts by cognitive social psychologists to interpret behaviour based on schemas, categories and scripts etc. were criticized because they render the relations between thought and action mysterious. Mixon (1986) reported:

when reading cognitive psychologists I am left with the impression that they believe that cognition alone produces behaviour. But how can cognitions or intentions by themselves empower us to do something? (Mixon, 1986, p.133)

Gergen (1989) argued that the individualistic nature of cognitive explanations of human action creates a host of conceptual problems.

If real world events are reduced to cognitive representations of the world, then social events cease to exist for the discipline as legitimate foci of concern. Further, once the reality of cognition is granted, there is no conceptual means of viably explaining either the origins or acquisition of cognitive categories...or the relationship between cognition and action. (Gergen, 1989, p.463)

Lemery (1990) traced the conceptual problems of the social cognition approach to the

historical dependence on a theoretical framework of representationalism, (the cognitive restructuring of a world we cannot directly know) and articulated the source of the difficulty in discovering the origins of cognition and the relationship of cognition to action noticed by Gergen.

Michaels and Carello (1981), Goldstick (1980), and Tolman (1986a) have pointed out that representationalism makes very problematic how cognition, which appears to guide action, evolved in a world that cannot be directly known....Representationalism jeopardizes the connection between cognition and its perceptual foundation such that cognition loses its basic function as a guide to action in the world. (Lemery, 1990, p.21)

Lave (1988) criticized the tendency in both anthropology and psychology to classify culture and cognition as two aspects of a single phenomenon:

...[the approach] heavily represented among cognitive psychologists, collapses culture and cognition into representations in the mind (cf. Minick 1985). The concept of "culture" is simply transformed into that of "knowledge", and culture dispensed with altogether. The second, heavily represented in anthropology, locates culture and cognition together into a superorganic system of meaning "an information pool"...cultural structures such as language become reified constructs, but cognition as an individual generative process, drops out of the equation. Neither appears to offer a satisfactory solution. (Lave, 1988, p.91.)

As the authors mentioned above have tried to demonstrate, most of the problems of categorization, unitization and interpretation are directly or indirectly a result of adherence to one particular "scientific" method, that is, a hypothetico-deductive paradigm. The foundation of such a paradigm is a mechanistic view of human nature.

Summary of Methodological Problems

Perhaps there is no more complex a subject for psychological study than social interaction. The complexity of two or more people who are simultaneously thinking

and behaving in accordance with each other, the situation, and their own social knowledge, might appear to be beyond the penetration of science. According to the criticisms in the previous section, certainly science as it is conceived in the traditional empiricist view can not lead to explication of the subtleties and complexities of social thought. The specific inadequacies of experimental research conceived in that tradition when employed in the study of social behaviour were discussed. It was suggested that a commitment to a narrow empiricist world view predetermines what may be regarded as scientific knowledge. The consequences of this view are that human behaviour is always regarded as a reaction or response to some stimulus in the world creating a subject/object dualism. This dualism makes problematic the study of human agency, reciprocal behaviour and intentional inaction, etc. Furthermore, a deterministic explanation of behaviour leads to a ludicrous elimination from study a good part of all that is meaningful in human experience. Substituting for meaning are rigorous controls and experiments that are asocial, apersonal, ahistorical and acultural. In addition, the difficulties in fitting phenomena into this constrained model have resulted in a dominance of method over problem. Problems are adjusted to fit the method, rather than the method being developed to fit the problem. Problems specific to the study of social interaction are those of selection, categorization, and unitization. Which behaviours are important to the interaction and which are not? What label or meaning can be attached to these behaviours and what constitutes a unit of behaviour?

All of the researchers discussed above are searching for a methodology to

overcome these problems and many creative projects are under way. Gergen and Harre, for example, though their research projects are quite different have developed a similar social epistemological approach. Another alternative is the methodology developed by Kurt Lewin over forty years ago. Lewin's methodology, employed in the resolution of many problems in the earlier days of social psychology, has been eclipsed by the methods criticized above. Yet, ironically Lewin appears to offer a solution to many of the problems just discussed.

Kurt Lewin's Methodology

Lewin's field theory is not a general theory that explains social relationships or specific behaviours. Rather it is a:

metatheory, a body of methodological perspectives on the representation of psychological reality, the relationship between psychological law and the individual case, the method to be used in the construction of concepts, and the meaning of scientific causality. (Pepitone, 1986, p.xv)

The features of Lewin's methodology which are relevant to the criticisms in the previous section are: 1) the goal of the experiment, 2) the unit of analysis, 3) the treatment of subjects, and 4) the distinction between observation and interpretation.

As Danziger (1990) pointed out, Lewin's experiments were not intended to search for the lawfulness of psychological processes through statistical regularities. The lawfulness of psychological processes was assumed a priori. Instead, the aim of Lewin's experiments was the discovery of essential qualitative relationships, the structured whole extended over time from which any action sequence takes its meaning (Danziger, 1990). This meant that "results expressed in terms of relationships among independently defined variables" (Danziger, 1990, p.176) were

not relevant to psychological research. According to Danziger (1990) Lewin's approach implies that:

An attempt at studying the investigative object person-in-a-situation cannot be based on establishing relationships [because]...any elementary component of such action sequences obtains its psychological meaning from the action structure in which it is embedded. (Danziger, 1990, p.176)

Danziger (1990) explained that the centerpiece of Lewin's approach was the distinction between the surface pattern of events, the phenotype, and "an underlying causal reality", the genotype (Danziger, 1990, p.177). If the meaning of any behaviour depends on its embeddedness in a larger structure then the same action can have a different meaning or a different psychological significance depending on the situation or context. The previous statement may appear simple and hardly new, but Danziger (1990) demonstrated that historically this idea was not reflected in the methods of experimentation. Studying genotypical contexts "meant penetrating beyond apparent [underlining added] meaning of an action to an underlying context that was causally effective" (Danziger, 1990, p.177).

Vygotsky summarized Lewin's distinction between analysis based on phenotypes (external features) and "genotypic analysis, wherein a phenomenon is explained on the basis of its origin rather than its outer appearance" (Vygotsky, 1978, p.62). A developmental study of a problem, Vygotsky argued was the "disclosure of its genesis, its causal dynamic base" (Vygotsky, 1978, p.62.), whereas a phenotypic analysis is "the analysis that begins directly with an object's current features and manifestations" (Vygotsky, 1978, p.62).

Lewin's research was thus focused on the experimental simulation of

situations:

Lewin's investigations were "experimental", not only in the sense that they represented an artificial re-creation of common human situations, but also because they included planned variations in these situations for the purpose of exploring their genotypical structure. (Danziger, 1990, p.177)

This strategy was the basis of Lewin's research practice:

If the pattern of the total field is generally more important than, for instance, size, it becomes possible to study fundamental social constellations experimentally by "transposing" them into an appropriate group-size. (Gestalt psychology understands by "transposition" a change which leaves the essential structural characteristics unaltered.) If the experimenter is able to create such a transposition, he does not need to be afraid of creating "artificial," "unlifelike" situations. (Lewin, 1943/1951, p.164)

Danziger (1990) summarized this approach as not a search for lawfulness according to some specific empirical measures but an exploration of genotypes, "qualitatively distinct and temporally extended patterns of events that were characteristic of specific human situations" (p.178). Research for Lewin and his Berlin group was thus aimed at the experimental simulation of typical situations in pursuit of the discovery of the genotypic qualities of situations.

In addition to assuming an alternate concept of lawfulness, Kurt Lewin and his Berlin group treated subjects in a way that was an exception to the usual role of subjects in investigative practice:

Because the objects of natural scientific research cannot "answer back" or give an intentional account of themselves, many psychological investigators had sought to approximate this state of affairs in their relations with their experimental subjects. For Kurt Lewin and his group, however, this was an absurd methodological precept for the science of psychology. (Danziger, 1990, p.175)

Lewin's approach, according to De Rivera (1976), implies that in order to get at the

"meaning" of the behaviour or experience, the context of the situation, that is, the total situation for the subject, must be considered and the only person with access to this information is the subject.

The observation of external behaviour may yield valuable information concerning the specific structure of psychic events, but decisive information concerning the actual processes often comes only from self-observation. (Lewin, cited in DeRivera, 1976, p.17)

Thus, the subject and the experimenter must work together in partnership to interpret what the essential structures of a raw phenomenon are (De Rivera, 1976).

Lewin also distinguished between what is an observation and what can be added as interpretation. To deny that observation of a friendly or aggressive act can be observed just as accurately as the movement of an arm without interpretation "implies the impossibility of a scientific social psychology" (1943/1951, p.156).

Lewin wrote that observation of what others mean by their actions has to be possible because social life would not be possible without it.

Within three or four years, the child can perceive rather complicated social actions. This social perception has to be adequate in most of the essential cases if the child is to survive socially...We do well to start again with the simple facts of everyday life for which the possibility of an adequate social observation never could be in doubt because community life is unthinkable without it. (Lewin, 1943/1951, p.156-157)

In summary, Lewin's methodology differs from the traditional experimental approach in the following ways: The goal of the experiment is not to demonstrate regularity through the reliance on statistical averages but rather to discover the process of that regularity. Subjects are treated as co-investigators, their experience of the experimental situation is regarded as legitimate data, in fact, decisive information

about the process of interaction is only available from self-observation. Also, it is the subjects who give the meaning to the experience, not the experimenter. The experimental situation is a recreation of common situations, not an isolation of selected variables.

Theoretical and Methodological Goals

Described in the following section will be an ecological approach to the study of interaction that is based on the theories of Gibson (1966, 1979), Mead (1934), and Vygotsky (1978). These three theories all have in common an essential feature: the interrelatedness of the subject and the object. Also, behaviour is treated as simultaneously contingent on the immediate situation, and, relations to a greater whole. The methodology is primarily influenced by Gibson and Lewin. Gibson's theory specifies a unit that must incorporate dynamic reciprocity, and gives us the language for that unit, that is, affordances.

Gibson's (1979) concept of affordance provides the language and the conceptual framework that allows us to transcend the division between an ethological/structural/behavioural description and a cognitive/subjective interpretation of social interaction. An affordance encompasses the unity of the subject and the object, that is, perceiving the objective information of the social environment while acting and providing perceptual information for some one else. In Gibson's formulation the subjective and objective are neither separate nor additive:

Gibson could conceive of affordances not as relations between two things, [i.e. not the relation between observers and environments] but as facts of the environment of all observers that can be used by particular observers

[underlining substituted for italics]. As environmental facts, affordances are real and external, not mere possibilities. (Reed, 1988, p.294)

The facts of an environment are public as well as private and our knowledge of these facts develops with experience, over time. Because we all have the opportunity to actively explore the environment a shared awareness of what the environment affords is possible (Reed, 1988).

Lemery (1990) developed an ecological methodology to demonstrate how behavioural, perceptual, and cognitive aspects of social interaction develop and function together over time. As subjects learned to perform a videotaped interaction, perception, cognition and behaviour converged on certain events (over two or three rehearsals) that afforded accurate learning of the interaction. Thus, Lemery articulated empirically the genesis of affordances in social interaction. It appeared that social interaction was possible through the mutual identification of certain events that are "the focus of coordinated behaviour, mutual perception, and cognitive interpretation" (p.189). In addition, Lemery's (1990) ecological methodology has shown the functional nature of the main events of an interaction as the focal point of psychological and inter-psychological processes necessary to the coordination of interaction.

The implication of Lemery's (1990) research for this study is that the main events in an interaction can be accepted as structures that afford or facilitate the mutual coordination of interaction. What remains to be discovered is affordances, and the functional significance of those affordances, in situations that are conventional rather than novel. To accomplish this, the relations in interactions that are familiar

features of daily life must be explored.

A study of a typical life situation requires a research strategy that is based on the assumption that the processes in a larger social unit can be represented in a smaller unit as long as the essential qualities of the larger unit are retained. If Lewin's conceptual framework is adopted the discovery of affordances in an interaction can be achieved by the simulation of a typical social interaction and the treatment of the subjects' self-observations as the legitimate source of descriptions of the functions or meanings of affordances.

One purpose of this research project was to determine where these main events occur in an interaction, and what function or meaning they have for the subjects. As has been suggested by the criticisms above, this kind of investigation is seriously compromised by using traditional experimental methods. The methodology developed for this project is in accordance with Lewin's alternative methodology. The subjects decide the unit of analysis, it is their descriptions of what is meaningful in their own interaction and their selection of main events that constitutes the data. The experimenter guides the subjects to observe their own interaction for the purposes of finding the main events of the interaction but leaves the decision of the unit of analysis up to the subjects. The experimenter, in effect, does not know what unit subjects will describe, his or her own behaviour, the other person's behaviour, or both of their behaviour together.

Conceptual hypotheses

When two people are alone in a room a shared social world is created such

that each person's presence is naturally interrelated with the other. The other person's behaviour, speech, and gestures provide perceptual information specifying the interactive possibilities in a particular encounter. The term used here to describe the perceptual information that specifies these possibilities is affordances. This term refers to the reciprocal relationship and the functional meaning of the perceptual information.

If, in social situations that are familiar to humans, relations have been internalized such that the significance and the affordances of behavioural (including language) events is known, the affordances are what enable interactants to coordinate their behaviour and to agree on the communicative context of the situation.

In four social situations with different interactive possibilities, there should be affordances that can be perceived and because these affordances are available for all observers to perceive it should be possible for interactants to agree on what these affordances are. In addition, because the very nature of affordances is reciprocal, that is, it relates to both the observer and the object, the affordances will be described by observers not in a dualistic, linear way, but as a dynamic event that refers to the subject-subject, and subject-object relations and the embeddedness of past, present and future events. In other words, if the subjects have the freedom to decide the unit of analysis, it will necessarily be an interactive unit rather than an individual unit.

Also, inaction has phenomenal significance for interactants in a social interaction and given the opportunity the subjects would readily report nonbehaviour as an affordance. Furthermore, interactants' actions or nonactions are based on the

assumption of intersubjectivity, and the language used in their descriptions will reflect that intersubjectivity.

If, as Gibson has suggested, affordances are available for all to observe, then even subjects who did not engage in the original interaction should still be able to view that interaction and agree on its main events. They should know from their own internalization of social relations the significance of the events in that situation.

CHAPTER 4

METHOD

Two studies were planned to determine what perceptual information is available in a social environment that affords social interaction. The first study, based on a Lewinian approach, was conceived as a simulation of a typical initial encounter wherein the psychological processes of a social situation would be represented. The subjects' reports of their own interaction is considered the primary source of information about these processes. Therefore, the experimental situation was designed with the general purpose of videotaping an interaction that the interactants could subsequently view and contribute the meaning of events.

The purpose of the second study was to discover what information is available to independent observers. In addition, the second study is designed to provide convergent and construct validity as well as inter-observer reliability for the first study.

Research of this type requires pilot work to establish reliable and objective techniques. In the following pages the pilot work that preceded the final studies is described. Presented first are the empirical hypotheses which are the objectives of the research project as a whole.

Empirical Hypotheses Study 1

Hypothesis one

If interaction is a dynamic process, there will be certain main events that constitute perceptual information that interactants use to guide their behaviour and

interactants/observers will agree on what these events are.

Hypothesis two

Agreement will be due to the affordances in the environment and not the instructions; thus, there should be no difference in the level of agreement for the four situations.

Hypothesis three

If interactive processes are inherently mutual and subjects have the freedom to choose the unit, they will select and describe a unit that is interactive and not idiosyncratic.

Hypothesis four

If affordances in social interaction are also the meanings of behaviours, gestures, expressions, et cetera, for subsequent interaction possibilities, the events will be described by interactants in terms of affordances, that is, function, and there will be convergence on the meaning of these behaviours.

Empirical Hypotheses Study 2

Hypothesis five

If perceptual information is available for all observers then subjects (observers) who did not take part in the original interaction will identify the same main events as the interactants/observers.

Hypothesis six

Observers will agree among themselves and with the interactants/observers on the meaning of the events.

Hypothesis seven

When asked the relationship of the interactants/observers, the observers will agree and correctly describe the relationship based on the information in the interaction.

Pilot studies: Introduction.

The foundation of the method is Lemery's (1990) innovation. He demonstrated how people develop a realization of the meaning of an unfamiliar social interaction through the processes of perceiving and behaving. The purpose of the current research was to discover what constitutes information and the extent of the shared meaning in a familiar interaction.

Precedents were not available for the method of this research, consequently a technique had to be developed by trial and error. The purpose of the pilot work was the development of a design that was consistent with the conceptual foundation of the research but would also produce data that could be objectively analysed. A series of pilot studies were conducted, four pilot studies for Study 1 and one for Study 2. Each of these studies extended the development of the method. The first two were rudimentary, designed to try out the basic structure of the experimental situation and discover the kinds of questions or instructions subjects needed to provide information about their interaction. They are reported because they contribute useful information about technique and the development of the final method. The third and fourth pilot studies repeated the contextual situation that was useful in the second pilot but each in turn improved the objective analysis.

There were thirty subjects in the pilot studies but only four in each of the first two pilots; the procedure was abandoned in both cases after only two dyads because it was immediately clear that, while the interactions were straightforward, there were serious problems of analysis. These problems are explained in the following pages.

In the more structured pilot studies, three and four, there were twenty-two subjects, six dyads in pilot three and five dyads in pilot four. These final two pilot studies refined the experimental technique and provided support for the conceptual foundation of the design. Pilot four replicated the results of pilot three and provided confirmation that a change in the sequence of questions on the subjects' response sheets made analysis easier for the subjects and for the experimenter.

The thirty subjects were undergraduate students, graduate students, college students, staff at the University of Victoria, and members of the community. There were 12 males and 18 females paired randomly throughout the four studies as follows: 1 male/male dyad, 10 male/female dyads, and 4 female/female dyads. In addition, in order to ensure they were strangers, subjects from different recruitment sources were matched. In only one dyad (in Pilot 1) did the subjects know each other.

The technique required subjects to be videotaped interacting, then view their own videotape afterwards and note the main events and their meaning. It was essential that the method allowed the subjects to determine not only the unit of analysis but also the object of analysis. The pilot studies each contributed, like building blocks, an important piece of information toward the final design.

Pilot Studies

Pilot 1

To estimate how much instruction subjects needed to be able to produce meaningful information about their interaction, subjects were given blank paper and the instruction to "write down what you think are the main events in this interaction using the time on the videotape to identify them". Four subjects, a male/male dyad and a female/male dyad were given a task to complete together. They were told to read a paragraph about a marketing problem and to reach a consensus on a solution. After they reached a consensus the interactants viewed their own videotapes and identified the main events according to the instructions above.

Problems

The subjects remained focused on the consensus task when viewing the tape and tended to omit the behaviours that they thought were peripheral to the task. This included the subtle behaviours that indicated a person was finished thinking and ready to discuss the problem, or did not agree with his/her partner but acquiesced in order to reach a consensus. These were pointed out to the experimenter verbally in the debriefing but were not written on the paper. In other words, the subjects had used the other person's gestures and behaviour as a guide to their own behaviour but did not record this information. Instead, they focused on the verbal content of their interaction and specifically, the dialogue that related to the task. Their "social" interaction was secondary to the subjects and the completion of the task (since that was their instruction) remained their primary focus. Thus, in order to centre the

focus of the subjects on the interaction, the interaction itself must be the task.

Pilot 2

Four subjects, 2 male/female dyads, were given a social situation as a context: Two travellers meet in a bus station in a foreign country. One makes it a point not to talk to strangers, while the other needs information about bus schedules and currencies that only the stranger can provide, as he/she was overheard speaking English.

Subject 1 was seated in the video room and told the first part of the context. Subject 2 was given the latter part of the context in the anteroom and then entered the room where Subject 1 was already seated. They were filmed from the moment Subject 2 entered the door until approximately ninety seconds had elapsed. Subjects were then asked to view the videotape and write down the main events.

Problems

This Trial was successful in that subjects did remain focused on the social interaction aspects when noting events; however, the events fell into two separate categories. Some subjects noted physical events, while others noted experiential events. This made comparison of subjects' responses difficult (even though they had reported the time of events). It was apparent that the task was somewhat equivocal. In order to report the same aspects of the interaction, subjects needed more structure in the instructions.

Pilot 3

Since the context of the bus station achieved the goal of allowing the subjects

to concentrate on the interaction, it was repeated in the third pilot. The purpose of this pilot was to introduce written instructions in an effort to structure the responses of the subjects into a form that could be analysed easily. Twelve subjects, 4 male/female dyads and 2 female/female dyads were the subjects for Pilot 3. A printed two page form for the subjects' event analysis was introduced. The first page asked the subjects to watch the interaction twice to familiarize themselves with the events, a third time to make a mental note of important events and the fourth time to answer the following questions:

How would you rate how well you were able to put yourself in the situation?

(Subjects rated their response on a scale of 1-5, ranging from "not at all" (1) to "completely" (5).)

How real did the situation feel for you?

(Again subjects rated their response on a scale of 1-5, from "not very" (1) to "very real" (5).)

How did you feel interacting with the other person?

Look at the tape and mark down what physical events made you feel this way and the time they occurred. (This question was followed by an elaboration of what might be an event and an example.)

Write down any events (including some you may have already mentioned above) that you feel are main events or significant events in the whole interaction. Describe these events in physical terms and in chronological order.

Analysis was completed by matching the times of the events and the content of the description of events for each pair in a dyad.

Results and Problems

The more structured form was successful in drawing out both physical and

experiential events. However, the information was still separate. Subjects gave a general description of their experiential state, then listed several events that made them feel this way. It was difficult to relate specific events to the experiential state; however, a relation between the experiential description and the selected events was obvious. For example; one subject answered that he felt "Uncomfortable at times, stuck for things to say". In answer to what events made him feel this way he listed the following:

At time 1:21 when the person turned away from me and swung her hair over her head which put a wall between us. Again her looking away at 1:39 after I asked a question shut the conversation down and left me feeling uncomfortable and lost for something to say. This feeling was again apparent from 2:03 until 2:26 when after a brief answer to my question my "partner" sat quietly looking at the floor.

Yet on the second page of the data sheet when asked to list what he felt were the significant events in the whole interaction there were events in the very beginning of the interaction that may have contributed to the feeling of discomfort, for example,

My partner gave a clear message to me that she was not interested in conversing at 0:50 when she gave a short answer to my question and then looked down and away from me. The same feeling was present at 0:58 when she responded in the same way.

It was clear that by asking the experiential question first, only those events that supported the subject's reported feeling about the interaction were listed. Other events with significant meaning for the interaction were listed separately.

Another problem that made the objective matching of events difficult was the unit chosen by the subjects. Some gave the time of the onset of an event and others gave the end of an event. This meant that an event that lasted eight or nine seconds could

not be identified as being the same event except by the verbal description. Problems of interpretation were thus introduced. Also, subjects were often listing events twice, once on the first page and once again on the second page. This made the task tedious and lengthy (often an hour and a half was needed). The mean agreement on important events was 55%.

Pilot 4

In the fourth and final pilot the bus station context was used once again with a variation in the instructions: one subject was told that he/she was to imagine himself/herself in a bus station in a foreign country and when he/she encountered a stranger he/she felt like making conversation. The other subject was told to treat the stranger entering the bus station just as he/she would have treated any stranger in real life. A new data sheet was introduced to overcome the problems uncovered in Pilot 3. Ten subjects, 3 male/female dyads and 2 female/female dyads, were told to write down any events that they felt were the main or significant events, the time when these events began and when they ended. On the next page they were asked to make a second selection out of the events that they had listed. They were asked to put a check mark (and an identifying number) beside the events that were the most important to the interaction and then say how each of these events were important.

The remaining questions on the page were the same as those in Pilot 3.

Results and Problems

The new data sheet was successful. Subjects had no difficulty in producing a list of important events and the reasons for their importance to the interaction. The

task was completed usually within one hour and was reported to be interesting by most subjects. The events were clearly distinguished and could be matched easily and objectively. The subjects' explanations of how the events were important provided a chronological account of what information was used by the subjects to guide their own behaviour in the interaction. Average agreement on important events was 66%, that is, subjects were able to agree within one second, two-thirds of the time on the events that were the most functionally significant.

Asked to rate on a scale of 1 to 5 how easily they were able to put themselves in the situation, six of the ten subjects circled 4. Asked to rate how real the situation was, four circled 2, two circled 3, three circled 4 and one circled 5. In other words, subjects found it easy to put themselves in the situation but did not find it very real. When asked to say what situation this was similar to, most subjects described a phenomenologically similar situation and not a contextually similar situation. Subjects offered the following descriptions:

- *-meeting someone for the first time in a strange place with no one else around
- *-starting a new class at school-not knowing anyone.
- waiting at a bus stop when one wants to talk to another person sitting there
- *-meeting some one at a party or a family social gathering-grasping at finding things in common
- other bus travel situations with strangers
- *-sitting at a table in cafeteria at UVIC when one other person is already there
- *-being at a party - pretending to enjoy myself while talking to some one and being bored
- going to Vancouver for the first time and taking the public bus alone
- *-it was slightly similar to meeting some one who you hadn't met before simply because it was reminiscent of the awkwardness one usually feels in beginning an interaction with someone you don't know
- *-talking to strangers at the beginning of class, finding similarities to continue the conversation

Seven out of ten descriptions (marked with an asterisk) omit any reference to the context of the bus station or travelling. Instead, they describe situations that are similar psychologically. It was clear from the subjects' descriptions that the invention of the bus station context was not necessary, the psychological situation was a very familiar one. In addition, subjects did not persist with the "fellow travellers" role. Striving for common ground upon which to have a conversation, subjects wound their way through discussions of travelling to eventually "discovering" they were both students from British Columbia and conversation continued on the topic of university life rather than travelling. Since subjects were spontaneously creating this situation, the instructions were changed to make university life the "official" situation of the final study. In the final study subjects were told that they were sitting in a waiting room somewhere on campus when another stranger came in and sat down beside them. This context was the situation that they were in fact experiencing, they were in a room on campus and a stranger came in and sat down beside them.

Pilot for Study 2

Eight senior high school students, 5 females and 3 males were the subjects in the pilot for the second study. They were all acquaintances of the author. They did not take part in the interaction. No context was given for the interaction nor was the setting of the filming described in any way; they were simply asked to view a tape of two people interacting and answer a few questions. They watched the tape with very low sound so that the words were inaudible and answered three questions:

What is the relationship of the interactants, that is, what is going on?

How do you know this (answered by referring to events on the tape)?

What are the most important events to the interaction?

Results

Since subjects were not asked to do a structured event analysis, no exact figure can be given for agreement in this pilot; however, in the examples below one can see that the subjects agreed in general on the structure of the interaction and from a 15 second portion of the tape were able to assess correctly the interactional situation and predict how the rest of the interaction would progress. Two examples of the subjects' answers follow:

Question: What do you think is going on?

Subject 1: 2 people are waiting in some sort of office

Subject 2: waiting in an office, maybe a doctor's office

Question: What do you think is going to happen next?

Subject 1: The man is going to try to start conversation

Subject 2: The man will ask her the time

Question: How do you know this?

Subject 1: The man turns his head and looks like he is going to speak.

Subject 2: :08 The man glances at her watch as she looks at it.

With very little information available to them subjects were able to make decisions about the context and the relationship of the subjects in the stimulus tape.

This pilot study indicated that the task of event analysis would be possible for independent observers.

Summary of pilot studies

The results of the five pilot studies indicated that a contextual situation conceptually consistent with Lewinian methodological principles could be created in the laboratory. In addition, the results in general furnished support for the hypotheses. After an objective measure was refined it was possible to determine that the subjects agreed approximately two-thirds of the time on their selection of important interactive events. The subjects described them in interactive rather than idiosyncratic units and terms, and, there was convergence on the meaning of the events for the structure of the interaction.

Hypothesis two, that predicted no difference in agreement across four situations, can not be justified from the pilot studies. Only a larger design with a greater number of subjects, such as the one planned for the final study, could provide this evidence. However, the situations in pilots three and four were sufficiently different to indicate that in at least two situations agreement was consistent.

Final Studies

Study 1

Eighty subjects participated in the first study, fifty-eight females and twenty-two males. Subjects participated in pairs (dyads). The eighty subjects were paired randomly as follows: 21 female/female dyads, 16 female/male dyads, and 3 male/male dyads. The subjects were undergraduates, graduate students, and staff of the University of Victoria, or students and staff of Camosun College. The age range was eighteen years old to forty-seven years old. The researcher recruited subjects by

visiting four classes, one in the winter session and three in the inter-session. An incentive of a \$50.00 draw was offered. Subjects were asked to participate in a study that would require them to interact with a stranger while being videotaped and answer some questions about the interaction afterwards. In class, volunteers signed a form with their name and telephone number and the times they might be available to participate. These people were called at a later date and asked if they still wished to participate and the above description of the study was repeated.

Setting

All subjects were filmed in the Human Interaction Lab, a large room with two chairs, an end table and a coffee table with magazines, paintings, curtains and two corner tables (see Appendix A for diagram). The room resembles a Doctor's office waiting room. There were four cameras, one in each corner of the room but only one was used. The camera was focused on the seated subject, the empty chair and the door to the room so that the entrance of the second subject was the beginning of the interaction.

Procedure

Both the order of the four social situations and assignment of subjects to dyads were randomized. To ensure that the subjects were strangers, a dyad was comprised of volunteers from different sources. The designations of "Subject 1" or "Subject 2" were decided simply, whoever arrived first (Subject 1) was shown into the interaction lab, and asked to wait until the other subject (Subject 2) arrived. The two interactants were given their instructions separately although they were assured that they both had

the same amount of information about the situation. They were separated because it was important to capture their first encounter on videotape without the experimenter present. One subject was given the instructions while seated in the actual video lab with the door closed, and the other subject (Subject 2) was given the instructions in the anteroom of the lab just before entering the room to join the other subject.

Dyads were given the instructions for one of four social situations. Since the instructions comprise the experimental manipulation they are provided in full.

Both subjects were given a short introduction to the experiment.

This experiment is about encounters with strangers. I would like you to listen to the situation I'm going to tell you about and I want you to imagine that you are in that situation. You will both be given the same amount of information.

Then the interactants were given the instructions pertinent to their assignment.

Instructions for the social situation where both subjects do not interact were as follows:

Subject 1. (seated in the room) Here is the situation. You are in a waiting room somewhere on campus, it could be any room on campus, waiting to see the Dean, or the student loans officer, a counsellor, or waiting to be in an experiment even. You have been sitting there for a few minutes when another person comes in and sits down beside you. * You don't feel like talking because you are thinking about your meeting that will take place soon. So treat this person just as you would any stranger in this kind of a situation.*

Now I'd like you to wait for a few minutes while I tell the other person the situation. As soon as he/she opens the door you are the stranger in the waiting room.

Subject 2. (waiting in the anteroom): Here is the situation. When you go in that door you are entering a waiting room, it could be any room on campus, waiting to see the Dean or the student loans officer, a counsellor or a waiting room for an experiment and you will take a seat beside a stranger. * You don't feel like talking because you are thinking about the meeting that will take place soon. So treat this person just as you would any stranger in this kind of a situation.*

Now I'd like you to go in the room and sit in the chair that is available next to the stranger-there are only two seats. As soon as you open the door you are in the

situation.

Only the information between the asterisks varied for three of the situations.

The variations were as follows:

For the Full interaction situation Subject 1 was told:

You have been sitting there for a few minutes when another person comes in and sits down beside you. Treat them like you would any stranger in that situation. Subject 2 was told: Engage the stranger in conversation in the same way that you would normally do it in real life.

In the Yes-No situation Subject 1 is told:

You don't feel like talking because you are thinking about your meeting. The stranger may try to talk to you but you want to discourage this person from trying to talk with you. Subject 2 was told: You are kind of worried, thinking about the upcoming meeting and so you feel like talking to the stranger for distraction. I want you to go in the room and engage the stranger in conversation. He/she might not want to talk with you but you really want to talk to stop yourself from worrying about the meeting, however do not try to initiate conversation beyond what would be normal.

The instructions for the last situation were quite different.

In the Real situation Subject 1 was told: Go in the room and take a seat and the other person will be here soon. When the other person arrived the researcher called from the door way, "Okay, he/she is here, I'll be in the control room adjusting the camera, I've turned them on and I'll be with you in a minute or so". Subject 2 was greeted in the anteroom and told: Go on in the room and have a seat- I'll just let the other person who is in the room already know that you are here". The part of the statement to Subject 1 about the cameras was then repeated in case it was not heard.

In summary, the instructions created four social psychological situations:

1. No, two people sitting together in a waiting room not talking.
2. Yes, two people having a conversation in a waiting room.
3. Yes-No, one person trying to start a conversation with another person who does not wish to talk.

4. Real, two people sitting in a room waiting for an experimenter to tell them what to do.

The experimental design for Study 1 and Study 2 is illustrated in Figure 1 below.

The subjects were filmed in the above situations for approximately ninety seconds. The cameras were then shut off and the researcher entered the room and said:

Okay that's it for this part of the experiment, now I'd like you to come into the control room and you'll see your tape and answer some questions about it.

Once in the control room subjects were introduced to each other by name and told the procedure for the analysis. The instructions were type-written on each of their data sheets but were given orally to make sure they were clear and there were no questions. One subject remained in the control room while the other took a duplicate videotape and went to a separate room where another video machine and monitor were set up on a desk. The experimenter remained in the experimental room to be available to answer questions (if necessary) from either of the subjects.

Subjects were asked to watch the interaction twice to familiarize themselves with the events, then on the third viewing to make a mental note of what they thought were the important events. On the fourth viewing they wrote down the events that they felt were the main or significant events. They wrote down the time when these events began and when they ended (the event boundaries) using the clock on the videotape. They were told that these events would typically include what one person did, what the other person did, and some things that both of them did together. They

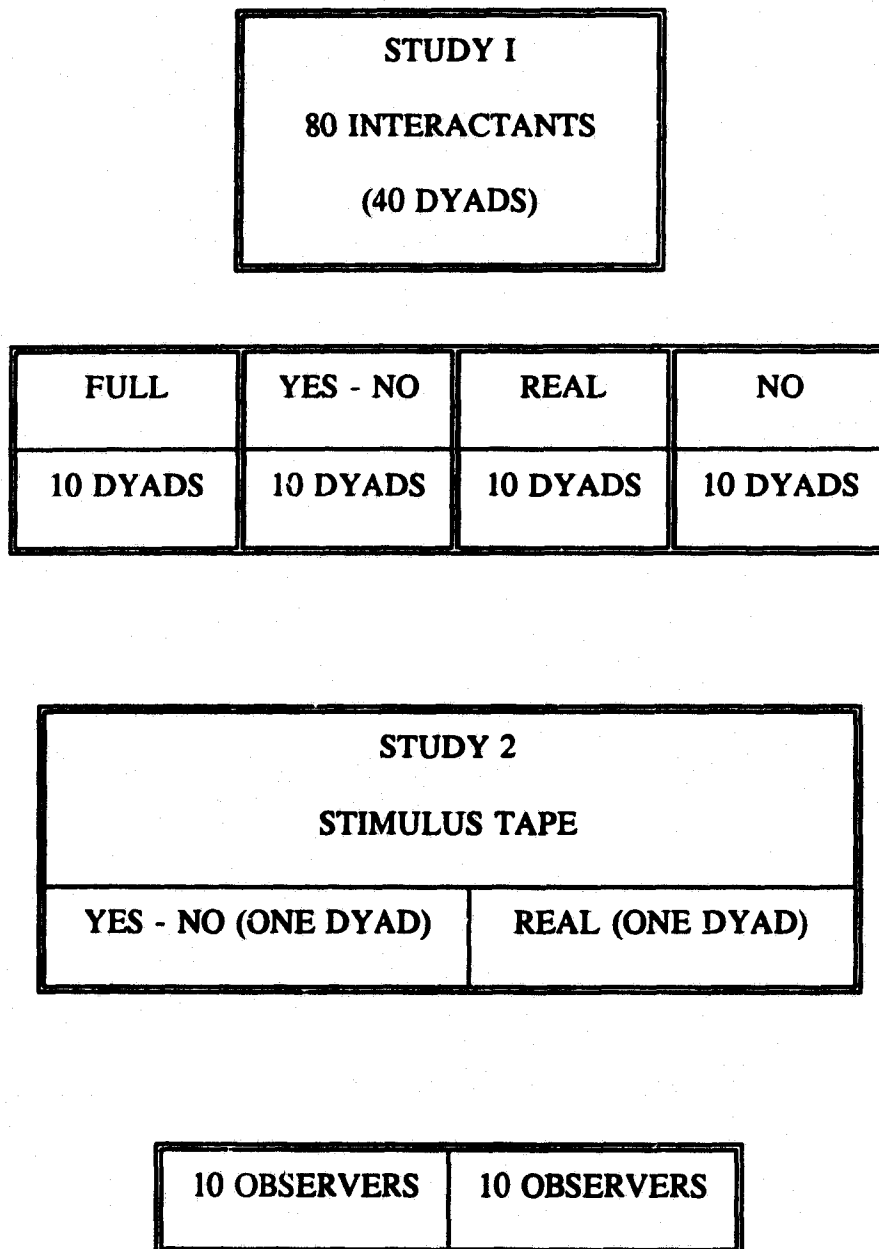


FIGURE 1. SCHEMATIC DIAGRAM OF EMPIRICAL DESIGN

were asked to describe the events in physical terms and in chronological order.

The next page of their instructions asked them to make a second selection. They put a check mark and an identifying number beside the events that were "the most important" and said in their own words how each of these events were important. This completed their analysis of the tape.

In summary, the subjects were asked to make two selections and produce two different kinds of data. First they identified and described physical events that could be seen on the videotape. They made a second selection from these events and described in their own words the meaning of these events, either for the structure of the interaction or for the relationship of the two interactants.

Finally, they answered three short questions at the bottom of the data sheet regarding how well they were able to put themselves into the situation, how real the situation felt and what, in their own experience, the situation resembled. Subjects took about forty-five minutes to watch the tape and do the analysis. The researcher quickly looked over the sheets to make sure the subjects' analysis was clear. Afterwards they were debriefed (either separately or together if they finished around the same time) and thanked for their participation and reminded of the \$50.00 draw.

Study 2

Subjects

Twenty subjects participated in the second study, 12 females and eight males, ranging in age from 16 to 76 years. They were given very little information about

the study beforehand. They were simply asked to take part in a psychology experiment that would only require them to view a videotape of two people talking and answer some questions about what was going on. None of the subjects had seen the video interaction laboratory before and only two of them were students at the University of Victoria, the rest were members of the community.

Procedure

Two dyads chosen from the original forty were the stimuli for this second study. One dyad was randomly chosen from the three social situations where subjects were asked to imagine themselves in a waiting room. The second dyad was randomly chosen from the dyads that had not been given a context and had instead just been asked to wait. Random selection resulted in one tape of two females in the 'Yes-No' situation and one tape of two males in the 'Real' situation.

Because it was important for the subjects not to see the laboratory where the filming was done, subjects either viewed the tape in their own home or in the home of the researcher. They were given exactly the same instructions for the event analysis as the subjects in the first study. Only the questions on the second page were different. These additional questions asked the subjects to specify the relationship of the two people and say how they knew this by referring to events they observed on the tape. Finally, they rated, on a scale of 1 to 5, the extent to which they thought the interaction was planned or spontaneous.

CHAPTER FIVE

RESULTS

The experimental situation resulted in two kinds of information produced by the subjects. They first noted the times of main events that occurred chronologically in the interaction from a time signal on the videotape. These events were a physical description of the events as they appeared on the videotape. They then selected important events from this list and gave an interpretation of their importance for the interaction. The times of the events presented a concrete detail for comparison, that is, if two subjects in a dyad chose the same event this was indicated by the times they recorded for the event. These times were used as a measure of agreement (details of the calculation of agreement follows) on the selection of important events.

The interpretations were copied out in full from the subjects' answer sheets with only minor editing changes such as spelling or capitalization. The complete responses of subjects are included in Appendix B. Analysis focused on the frequency of common descriptions. The descriptions that occurred most frequently were summarized into categories.

The results are presented in three sections in this chapter. The first section contains the results of the quantitative analyses of the times of the selected events from Study 1. These analyses address the first three hypotheses. In the second section, the qualitative analyses of the subjects' descriptions and tables of the common categories are presented. These analyses address hypothesis four. Thus, the first two sections deal with the data generated by the subjects who observed and analyzed their

own videotape.

Finally, in the third section, the results of Study 2 which addressed hypotheses five, six and seven are presented. Because the subjects in Study 2 were observers watching the same videotape (10 observers saw one tape and 10 saw another) and not videotaped interactants, it is simple to combine their quantitative and qualitative analyses because they refer to the same events.

Study 1

Quantitative Results

Hypothesis One

According to hypothesis one, there are main events in an interaction that provide perceptual information about the other person's interactive intentions. The percentage of agreement is the degree to which interactants in a dyad have chosen the same events as main events. Recall from the procedure that subjects were told: 1) to select the main events in their interaction 2) to select from those main events the most important ones. The agreement is calculated on their decisions about the most important events, their second selection, and not simply agreement on all possible events, or a structural account of the interaction.

The criterion for agreement is whether or not subjects in a dyad chose the same event to within a one second interval. The percentage of agreement is the percentage of events that each subject chose that coincided with the events chosen by his/her partner in the dyad. For example, Subject 1 Dyad 1, in the No situation, chose four events. Two of those events were as follows::02-:04, and :04-:06. Her

partner, Subject 2 Dyad 1, chose three events, two of which coincided with Subject 1's :04, and :06. Subject 1 was said to have a 50% (2 out of 4 events the same) agreement with Subject 2, and Subject 2 was said to have a 66.6% (2 out of 3 events the same) agreement with Subject 1. The agreement for the dyad was averaged so that the percentage of agreement for the dyad was 58.3%.

In Table 1 below, the percentage of agreement for each dyad, in each situation, is presented. Each column lists the agreement for 10 dyads and the descriptive statistics. The means for each situation ranged from 67.48% to 75.12%. On average, dyads in each situation agreed approximately two thirds to three-quarters of the time.

The Full interaction situation, where subjects chatted together throughout the filming, had the highest range of scores, (71) highest standard deviation (26.55), and lowest mean (67.48%). In this situation subjects did not have to coordinate their behaviour as attentively as in the other situations, the structure of their interaction was settled quickly as they entered into conversation with each other and any one conversational event was as important as any other. Forty-eight percent of subjects in this situation did not choose as important any events after 1:00 appeared on the tape (this is less than 60 seconds of actual interaction time because 8-10 seconds had already elapsed before the interaction begins) even though the instructions suggested events were possible up to 1:40 minutes on the tape.

In contrast, in the Yes-No interaction only 15% of subjects ended their

Table 1

Percentage Agreement			
Full	No	Yes-No	Real
%	%	%	%
29.1	58.3	92.8	62.5
100.0	75.0	85.7	57.5
45.0	83.3	58.3	87.5
90.0	67.5	58.3	87.5
80.0	51.7	87.5	66.6
83.3	58.3	81.2	58.5
37.5	87.5	87.5	100.0
36.6	100.0	83.3	100.0
73.3	75.0	58.3	66.6
100.0	58.3	58.3	37.5
X=67.48%	X=71.49%	X=75.12%	X=72.4%
Median=76.6%	Median=71.2%	Median=82.2%	Median=66.6%
range=71	range=48.3	range=34.5	range=62.5
SD=26.55	SD=14.70	SD=14.02	SD=19.49
N=40 dyads			

analysis before 1:00 appeared on the tape. The mean is highest (75.12% agreement), the range (34.5) and standard deviation are lowest (14.02) and the median is highest (82.2%). This situation is different than the Full situation in that it is ongoing and is not "settled" in the first 60 seconds. Subjects were continually coordinating the interaction where one person was trying to establish a conversation and the other person was trying to end conversation. They were both attentive to each of these events as the interaction progressed and used this information to guide them throughout the duration of the interaction.

Forty-five percent of subjects in the No Interaction situation also ended their analysis before 1:00. This corroborates an earlier study on initial encounters (Mullett, 1986) which traced the patterns of initial interaction and found that in situations where interactants either did not converse or did engage in a full cooperative interaction, the behaviours in the first 15 to 20 seconds were seen by observers as differentiated; the rest of the interaction looked like "more of the same". In the summaries of the subjects' descriptions, evidence for this variation in the length of time significant events continue to be reported is indicated by more entries in the Yes-No column than the others.

In Study 1 subjects did not report any difficulty in the task of event selection, and the percentage of agreement overall indicates that there is good consensus on which events are the main events in their interaction. These events are the points of accord, psychologically significant points in the interaction where the relationship is clear. There were essentially three or four main events selected by subjects. These

kinds of events are discussed in full with the results of Study 2. The concrete behaviours or statements (or lack of both) that constitute the perceptual information in these events are summarized in the subjects' descriptions and in the tables of affordances in the qualitative analysis.

Hypothesis two

Hypothesis two predicted that the agreement on these events would not be related to the instructions but instead agreement would be possible because there are events in an interaction that are available to all observers; events that are affordances, significant because of the meaning they have for the interaction. An analysis of variance confirmed that the means of the percentage of agreement for the four situations were not significantly different, $F(3,36) = .27$. In the Real situation where the subjects were not given any instructions, the agreement was as high as the other three situations. The instructions in the Full, Yes-No, and No situations did not result in a higher level of agreement in these situations compared to the Real situation where the subjects did not receive any instructions. In addition, the mean in this situation was affected by one extreme score of 37.5%. Without this score the mean would have been 76.3%, the highest of the four situations. In this dyad with the extreme score, one subject stopped her analysis with the event "small talk initiated", at :30-:35 seconds. Her partner continued to report the events involved in that small talk. As will be seen in the descriptive analyses provided by the subjects, the Real situation is closest in structure and psychological meaning to the Full situation.

One could argue that a large amount of time selected for events, or a larger

number of events would lead to a greater percentage of agreement because the chance for subjects' events to overlap would be greatly increased. Listed in Tables 2 to 5 are the number of events that the subjects chose and the mean number of seconds of videotape that they felt was important.

The percentage agreement for each dyad is shown with the mean number of seconds chosen. Pearson product-moment correlations for all four situations indicated that there was no correlation between the amount of tape chosen and the level of agreement, (Real $r = .0024$, Yes-No $r = -.0004$, No $r = .0015$, and Full $r = .0018$).

Hypothesis three

Hypothesis three predicted that the unit is inherently interactive and if the experimental design allows the subjects the freedom to choose the unit rather than imposing it, the unit that the subjects choose will necessarily be an interactive unit. There will not be a tendency either to focus on themselves or the other person but rather the unit will be an interactive one; it will incorporate the interrelatedness of each person's behaviour in a social situation.

For this analysis a behaviour was counted as interactive if the event chosen referred to the simultaneous behaviour of the two interactants or the subject described one behaviour in terms of the effect it had on both interactants, for example, "her greeting made it possible for us to have a conversation". The percentage of events that were described as interactive ranged from 75% to 85% across the four situations. In other words, approximately three-quarters of the events were described in terms of an interactive rather than an individual unit. (Recall that the subjects' instructions

Table 2

Raw data for Real Situation				
			(y)	(z)
	# of events agreed upon	% tape chosen	x % tape in dyad	% agreement
Dyad 1	S1 2/8 S2 4/4	6.6 6.6	6.6	62.5
Dyad 2	3/4 2/5	23.3 35.5	29.4	57.5
Dyad 3	3/4 4/4	63.3 11.1	37.2	87.5
Dyad 4	3/4 2/2	7.7 5.5	6.6	87.5
Dyad 5	1/4 1/2	16.6 6.6	11.6	37.5
Dyad 6	2/3 2/3	5.5 5.5	5.5	66.6
Dyad 7	3/5 4/7	14.4 25.5	19.9	58.5
Dyad 8	3/3 4/4	16.6 46.6	31.6	100
Dyad 9	2/2 4/4	27.7 33.3	30.5	100
Dyad 10	3/3 2/6	8.8 27.7	18.2	66.6
	S1=Subject 1 S2=Subject 2		$r(y,z) = .0024$	

Table 3

Raw data for No Situation				
			(y)	(z)
	# of events agreed upon	% tape chosen	x % tape in dyad	% agreement
Dyad 1	S1 2/4 S2 2/3	18.8 3.3	11.0	58.3
Dyad 2	2/4 3/3	7.7 3.3	5.5	75
Dyad 3	3/3 2/3	3.3 50	26.6	83.3
Dyad 4	3/5 3/4	90 18.8	54.4	67.5
Dyad 5	2/3 2/4	13.3 10	11.6	58.3
Dyad 6	2/7 3/4	25.5 5.5	15.5	51.7
Dyad 7	4/4 3/4	56.6 61.1	58.8	87.5
Dyad 8	4/4 4/4	5.5 8.8	7.1	100
Dyad 9	1/2 2/2	15.5 86.6	51.0	75
Dyad 10	2/4 2/3	5.5 20	12.7	58.3
	S1=Subject 1 S2=Subject 2		$r(y,z) = .0015$	

Table 4

Raw data for Full Situation				
			(y)	(z)
	# of events agreed upon	% tape chosen	x % tape in dyad	% agreement
Dyad 1	S1 1/4 S2 1/3	21.1 5.5	13.3	29.1
Dyad 2	3/3 7/7	83.3 20	51.6	100
Dyad 3	2/4 2/5	14.4 10	12.2	45
Dyad 4	2/2 4/5	13.3 8.8	11	90
Dyad 5	3/3 4/6	15.5 41.1	28.3	83.3
Dyad 6	3/5 2/2	33.3 5.5	19.4	80
Dyad 7	1/2 1/4	13.3 15.5	14.4	37.5
Dyad 8	2/5 1/3	28.8 6.6	17.1	36.6
Dyad 9	4/6 4/5	60 14.4	37.2	73.3
Dyad 10	6/6 5/5	7.7 23.3	15.5	100
	S1=Subject 1 S2=Subject 2		$r(y,z) = .0018$	

Table 5

Raw data for Yes-No Situation				
			(y)	(z)
	# of events agreed upon	% tape chosen	x % tape in dyad	% agreement
Dyad 1	S1 6/7 S2 4/5	16.6 25.5	21.0	92.8
Dyad 2	4/4 4/7	31 31	31	85.7
Dyad 3	5/10 4/6	31 13.3	22.1	58.3
Dyad 4	2/2 5/8	32.2 28.8	30.5	81.2
Dyad 5	2/3 2/4	14.4 18.8	16.6	58.3
Dyad 6	6/8 4/4	26.6 57.5	42	87.5
Dyad 7	2/2 3/4	16.6 12.2	14.4	87.5
Dyad 8	2/3 2/2	6.6 14.4	10.5	83.3
Dyad 9	1/2 2/3	87.7 34.4	61.0	58.3
Dyad 10	2/4 2/3	11.1 3.3	7.2	58.3
	S1 = Subject 1 S2 = Subject 2		$r(y,z) = .0004$	

were to choose an event that could be what they did, or what the other person did, or what both of them did together.)

Summary of Quantitative Results for Study 1

On average, subjects were agreed about which events were the most important for the interaction two-thirds to three-quarters of the time. This agreement was not dependent on the instructions or which situation subjects were in, nor was it correlated with the size of the events (amount of videotape time). In addition, three quarters of the events subjects chose and described were an interactive unit rather than an individualistic unit.

Qualitative Analysis

Hypothesis Four

Hypothesis four stated that subjects would describe the events in terms of what the events afforded the dyads by way of subsequent interactive possibilities and that there would be convergence on the meaning ascribed to these affordances.

As noted in the introduction, the qualitative analysis involved the sorting into categories the most common interpretations of events in each situation. Categories with the highest frequencies of descriptions became the main categories. There were essentially four: greetings, descriptions of how the magazine or newspapers were employed as an interactive tool, posture and body movements, and the use of questions as a conversational device. These descriptions of behaviours were predominately descriptions of function, how a particular event facilitated the coordination of the interaction, or indicated the social intentions of the interactants.

The events that were described in this way were called affordances. In Tables 6 through 9 the subjects' most common descriptions are given. Events that were described as experiential rather than functional, and events that were functional but did not fall into the major categories, are not included.

The qualitative analysis reveals the connections of the subjects to each other and to aspects of their environment. Seventy-five of the events that were identified as main events involved the use of the magazines or newspapers as a tool to either approach or avoid the other person. In other words, the magazine was spontaneously described as an affordance seventy-five times. Seventy-one descriptions of the first greeting or contact as an affordance were given. The convergence on the interactive meaning of these events extends across the situations. Even in a different interactional context an affordance can have the same properties. These similar descriptions can be seen across the four columns in Tables 6,7,and 9. The final two categories of affordances, questions and posture in Tables 8 and 9 respectively, report 65 descriptions of affordances, making the total number of descriptions of affordances 211. There were 331 events recorded by subjects in total, therefore the percentage of events described as affordances on Tables 6 to 9 is 63.7%.

Even though the categories only represent the typical elements of the interaction that constitute information for the subjects about the interactional possibilities and not an exhaustive list of all possible affordances, 63.7% of the events are represented. Thus Hypothesis four was supported. Subjects' spontaneous interpretations of events showed considerable convergence. This convergence is quite

impressive considering the fact that not all subjects saw the same tape; there were 40 different videotapes of the four situations and subjects in those situations had the freedom to comply in any way they wished with the psychological description of the situation.

Descriptions of Affordances

The greatest frequency of descriptions of affordances centred on the magazines. These descriptions will be discussed in more detail below. The following discussion will enable the reader to understand the abbreviated descriptions in the other tables without further discussion.

Table 6. Magazines as affordances for communication

Subjects described the newspapers (this included books and magazines but was mostly newspapers) as affordances. Notice the affordance is repeated across the columns if the same description was given for a different situation. After the description of the affordance the number of times this description was used is given.

No situation. In the situation where the subjects did not talk with each other, (No) the newspapers were used as a way to disengage oneself from the other person, and at the same time if the other person was also reading a newspaper, reading together was a way to interact while not talking. Subjects reported a sense of rapport or togetherness or that they were nonverbally interacting. In the No situation subjects reported 18 events involving the use of newspapers as an affordance, either to communicate their intentions to the other person or to ease their own sense of discomfort. In each situation there is at least one unique use of the magazine for a

particular purpose as well as an overlap of purpose with the other situations. In the No interaction situation the magazine was used to "be doing something useful" and "to reduce the discomfort of silence". Also in this situation the reading was described as "nonverbal interacting".

Yes-No Situation. In the Yes-No situation the magazine was used extensively as a means to communicate to the other person intentions about interacting. There were more unique descriptions in this situation than in any of the others. Continuing to read while answering the other person's questions was described five times as an affordance that meant "no intent to talk". Rustling the paper, or purposefully thumbing through the paper, also indicated that a person did not intend to talk ("no intent to talk"). Subjects could have simply told the other person politely that they did not feel like talking, instead they relied on elaborate gestures with the magazine to convey this information.

Returning to reading the magazine after replying instead of furthering the conversation is an indication of the awareness of both subjects that there are expectations of mutual responsibility in an interaction. Moving closer physically to the magazine is described as a communication to the other person of a reluctance to talk, and finally, not picking up a magazine when the other person has one indicates an interest in talking. Notice that in the last event a failure to do something is described as an affordance; doing nothing in an interactive situation has meaning because each person's behaviour is interrelated with the other's and the social environment.

Full situation. The Full situation was very similar to the Real situation.

Where subjects engaged each other in conversation, they used the magazines in the same way as they were described in the Real situation. One difference in the Full situation was the function of the magazine as a conversational tool. In contrast, the subjects in the Real situation seemed to use the fact that they had both been asked to participate in an experiment as the basis of common ground for conversation.

Real situation. In the Real situation the magazine was described as the same affordance as the other three situations. The gesture of putting the magazine down or looking up from it was an indication of communication possibilities (open to communicate). The magazine was also uniquely described as a "back-up device".

Table 7. Descriptions of greetings as affordances.

In Table 7 the descriptions of the meaning of the first contact or greeting, and, affordances for future interaction are described. In these descriptions it is the Full situation that has more unique descriptions. Five subjects described the greeting as "breaking the ice". Seven said the greeting indicated a willingness to initiate an interaction, while two subjects described the first communication as "a commitment of self". The total number of events reported that were a description of the first contact was 71, with 11 different descriptions of the meaning of that first communication.

In Tables 8 and 9 two other categories of affordances are described, questions and posture shifts respectively.

Approach and Avoidance affordances

In Table 10 the affordances that were described in the above categories were

separated into two categories of approach and avoidance. In this table, the kinds of events that served as information about the other person's intentions to interact or not interact are contrasted. The number of times each of these were described is given in brackets following the description.

Summary of Descriptions of Affordances

In the tables of affordances, the kinds of behaviours, gestures, expressions and events that interactants/observers used as information to understand their own interaction and guide their behaviour are described. There were four main categories of events described as affordances: greetings, magazines, body position and questions. These refer to 63.7% of the total events chosen by subjects as important to the interaction.

Behaviours with the magazines were chosen most often as a source of information that clearly specified interactional intentions. In general, putting the magazine down afforded conversation as it indicated an attentiveness, whereas continuing to read while answering the other person afforded termination of the conversation since it indicated a lack of interest.

The greeting was described as an affordance by 85% of the interactants/observers. For some it served merely as an acknowledgment, a recognition that they were both in a social situation; for others it set the tone, or served as a sign of the other person's intentions for the interaction as a whole.

Affordances were described similarly across different situations even though the outcome of the situations varied, for example, no conversing versus chatting.

Table 6

Magazines/Books as Affordances			
Full	No	Yes-No	Real
to indicate <u>might</u> not talk (3)	to be doing something purposeful (2)	to indicate "no intent to talk" (8)	put down/look up from to be open to communication (3)
put down/look up from to be open to communication (1)	reduce discomfort of silence (1)	doesn't pick up magazine = "intent to talk" (1)	put down magazine to indicate attention to conversation and willingness to continue conversation (6)
magazine used as tool to interact (3)	to indicate "no intent to talk" (7)	put down/look up from to be open to communicate (1)	back-up device (1)
put down magazine to indicate attention to conversation and willingness to continue conversation (12)	reading together was nonverbal interacting (7)	answer while reading = "no intent to talk" (5)	
	put down/look up from to be open to communicate (1)	rustling/thumbing - = "no intent to talk" (4)	
		magazine used as tool to interact (3)	
		returns to magazine instead of furthering conversation (5)	
		head closer to magazine - "don't want to talk" (1)	
Total = 75			

Table 7

First Contact/Greeting As Affordance			
Full	No	Yes-No	Real
broke the ice (5)	acknowledgement (8 non-verbal, 1 verbal)	acknowledgement (8)	broke the ice (4)
willingness to initiate (7)	sets tone (1)	indicated friendliness (1)	indicated friendliness (6)
acknowledgement (4)	with look away = "don't want to interact" (4)	sets tone (1)	with introduction "normal start to interaction" (5)
commitment of self (2)	understanding, togetherness (3)	with look away = "don't want to interact" (5)	
indicated friendliness (2)	contact (3)	not friendly (1)	
TOTAL = 71			

Table 8

Questions As Affordances			
Full	No	Yes-No	Real
Question=initiate conversation/keep it going (5)		Question=attempt to be friendly/establish common ground(6)	Question= reduce tension/ice breaker (7)
		Question requiring long or definite response=to engage other (5)	
		No question, only answers=not interested (2)	
		Brief answers=not interested (4)	
2nd question= re-start, carry on conversation (2)			
			Reciprocal question= reciprocation of conversation/keeps conversation going (5)
TOTAL = 36			

Table 9

Posture Shift As Affordances			
Full	No	Yes-No	REAL
same actions = comfortableness (1)	turn away to avoid (4)	turn away to avoid (2)	same actions = rapport (3) nervous (1)
no movement = lack of response (5)	same actions = both uncomfortable bored (4)	same actions = mutual under- standing (1)	
	reading together = nonverbal interacting (3)	move body to create boundary (1)	
		move body so other cannot avoid eye contact (4)	
TOTAL = 29			

Table 10

<u>Summary Of Approach And Avoidance Affordances From Tables 6-9</u>	
Approach	Avoidance
<u>Greeting:</u> broke the ice (9) willingness to communicate (7) acknowledgement (21) commitment of self (2) friendliness (9)	<u>Greeting with look away:</u> don't want to interact (9) not friendly (1)
<u>Greeting + introduction:</u> "normal" start to interaction (5)	
<u>Magazine:</u> put down to be open to communicate (6) used as tool to interact (6) put down to indicate attentiveness and willingness to contribute to conversation (10)	<u>Magazine as indication don't intend to interact:</u> reading instead of looking at other person (18) answering while reading (5) thumbing or rustling (4) return to magazine after answer without furthering conversation (5) head closer to magazine (1)
<u>Body Shift:</u> to be same indicating comfortableness and rapport (5)	<u>Body Shift:</u> turn away to avoid (6) use body to create boundary (1) no movement indicates a lack of response (1)
<u>Question:</u> attempt to be friendly, establish common ground, reduce tension requiring longer or definite response (18) (5)	<u>Question:</u> none offered, only answers (2) brief answers (4)
<u>2nd Question:</u> to carry on conversation (2)	
<u>Question/question exchange:</u> reciprocation or keep conversation going (5)	
Total = 118	Total = 57

Thus, the meanings of affordances are related to the immediate subsequent interaction possibilities and are used throughout the interaction to guide behaviour.

Finally, it is important to repeat that the 80 interactants/observers saw 40 different tapes. The convergence of descriptions within a situation is as notable as the convergence between situations.

Generic descriptions of the situations

In Tables 11-15 the subjects' descriptions with the account of the meaning have been reduced to very brief statements. These tables allow the reader to see at a glance the sort of events the subjects have called main events and the kinds of meanings they ascribed to them. We can collapse these summaries into a generic description of each situation, the signature so to speak of a particular interactive situation. The structural descriptions as well as the meanings are in the subjects' own words, no interpretation has been added by the author.

No situation. In the No interaction situation the subjects first acknowledge each other and exchange a brief glance that signals they don't wish to talk to each other. Sometimes a second glance is exchanged to reevaluate the situation or confirm it before they read magazines. Reading allows them to engage in purposeful behaviour, reduces the discomfort of silence and confirms the message that the interactants have no intention of talking. Most look up every now and then to see what the other person is doing. This pattern continues until the end of the interactional sequence.

Ye;-No situation. The descriptions in the Yes-No situation are longer because

as pointed out earlier this interaction continued to be mediated throughout. It begins with a greeting which is most often friendly, but is followed by an immediate look away indicating no intention to interact. The greeting is followed by a question that is an attempt to be friendly and to establish common ground for conversation. The person initiating conversation moves their body position so that it is harder for the other person to avoid eye contact and the other person moves his/her body to decrease the possibility of interaction. The person avoiding conversation answers questions with quick replies, nodding while reading, talking while reading or paper rustling to indicate they have no interest in talking. The person initiating conversation asks questions that call for longer replies, moves body closer, shows the magazine to the partner to try to engage him/her. The person avoiding conversation engages in various behaviours to give an impression of having been interrupted or of being preoccupied, for example, speaks without looking at the other, thumbs through the magazine, gives one word answers. Both the performer and the perceiver of these behaviours described them in the same way.

Full situation. In the Full interaction situation, a greeting sets the tone of friendliness, and indicates a willingness to initiate a conversation. The first conversation breaks the ice and sharing a joke establishes "common ground". Attention is directed away from the magazines and conversation is initiated and sustained with questions. Rapport, a feeling of being more comfortable develops, as interactants nod together and share more laughter. Shifting their body position towards each other, the magazines are put down or closed up, (sometimes

stylistically) and full attention is directed at the other person. Questions and topics offered by both interactants is perceived as a willingness to share responsibility for the conversation. The back and forth nature of the interaction continues with a growing sense of comfortableness and ease.

Real situation. In the Real situation the greeting if delivered with a smile indicates a friendliness and a readiness to interact. The first part of the interaction is awkward with subjects looking at each other to see if the conversation is going to continue. Both feel that they are uncomfortable together. The first conversation is regarded as ice breaking and deciding whether or not they are going to be friendly or not. They look around the room, are nervous and don't know what to do next to break the ice. Some introduce themselves, "a normal polite start" and another indicator of a willingness to interact. Some questions go back and forth, reciprocating gestures in an interaction. When one person speaks, the other feels more relaxed, he or she perceives the other person as friendly. In the first conversation they are both trying to find something mutually interesting, and smile in recognition of what the partner is attempting in conversation. Imitation of each other's behaviour, nodding, are seen as reciprocation. Putting the magazine down or looking away from it, directs attention to communicating with the other person. As they laugh together and continue conversation they feel more at ease, more relaxed and that "this isn't too bad". A little feeling of nervousness occurs again as conversation lags from lack of a mutual topic. Body shifting in synchrony gives a feeling of rapport even without conversation.

In Table 15 the abbreviated structural descriptions of the interactions for the four situations are contrasted in columns, the structural aspect of the interaction can be followed from the subjects' descriptions.

Ecological Validity

The answers to the question: "How easy was it to put yourself in the situation?" which the subjects rated on a scale from 1 to 5 were as follows:

Ratings of 4 or 5 were given by 72.25 % of the subjects across all four situations. In other words, three quarters of the subjects said it was easy or very easy to put themselves in the situation.

Ratings of 4 or 5 were given by 58% of subjects in answer to the question: "How real did the situation feel?", in other words, approximately two-thirds of the subjects found the situation to be real or very real. Ninety percent of the subjects rated the situation 3 (which we might call somewhat real) or above.

The Real situation was experienced as the most real; however, the No interaction situation was the easiest for subjects to envision.

Descriptions of similar situations offered by the subjects contain more significant information since they suggest why a situation might feel real or a role might be easy to assume. These descriptions can be summarized in six categories. Because many subjects suggested two or three similar situations the numbers of a certain category of descriptions does not exclude those subjects from being included in some other category. There were four dominant categories with at least 18 similar descriptions (there were 40 descriptions in total). The categories are summarized in

Table 11

Categories Of Full Situation	
Events	Interpretations/Reasons
Greeting	Acknowledgement, friendly, broke the ice, willingness to initiate a conversation, openness
First Conversation	Acknowledges the other, broke the ice
Laughed Together	Sharing joke led to "common ground"
Both Look Away From Magazines	Allowed conversation to occur & rapport be established
"Normal" Conversation	Rapport established
Look at Magazine	Might be involved in reading
Conversation re Magazines	Directed the interaction
Question	Seemed possible to keep conversation going
Second Statement	Start a conversation
Second Question	Expects conversation to carry on
Nodding	Agreement, understanding
Laughter	Empathy, feel more comfortable
Posture Shift	Readiness for interaction, comfortableness to each other, excited re interaction
Little Glances	Gauging other's interest
Closes, puts down or looks away from magazine	Expects conversation to carry on, "show of folding up", turning full attention to other, definite indication of interest in talking
Body Shift	More open
Silence	Tension greater
Uses paper to initiate	Made it possible to talk
Answers and changes topic	Willingness to contribute
Silence	Maybe other doesn't like the topic
Other continues conversation	Likes talking with me
Fidget with magazine	Still in interaction
Look up and start talking again	Dialogue restart of interaction
Didn't pick up magazine when other has one	Indication of interest in talking
Synchrony	Trying to get comfortable with each other
Talking about similar things	Conversation easier, more personal
Looking at each other	Gauging receptivity to communication
Other remains still	Lack of response

Table 12

Categories Of No Situation	
Events	Interpretations/Reasons
Eye contact	Acknowledgement
Brief glance	"Don't want to talk"
Second glance	Reevaluation or confirmation of situation
Read magazine	Purposeful, reduces discomfort of silence, "no intent to talk"
"Reading together"	Nonverbal interacting
Turn body away	To avoid interacting
First comment	Conversation can start
Put down magazine	Now no barrier to conversation
Look away	To avoid eye contact, "don't bother me"
Looking around	Signalling boredom
Nonverbal agreement of situation	Both bored, uncomfortable
Nonverbal pre-occupation	Occupation with something other than not interacting
Look, sum up	Sum up what other is doing
Look, curiosity	What is other doing?

Table 13

Categories Of Real Situation	
Events	Interpretations/Reasons
Eye contact	Acknowledging, see what other looks like, see if know other
Greeting	Ice breaking, opportunity for conversation
Greet, with smile	Openness, friendliness, ready to interact
Speak without looking at other	Not interested in talking
Mutual look	To see if chance to continue speaking
Laughter (both)	Both uncomfortable
Look away	Ice breaking over
First talk	Ice breaking conversation - nervous
Talk while looking at other	Deciding to be friendly or not
Look around room	Nervousness, don't know what to do next to break ice
Introduction (names)	Starts interaction in a normal, polite, friendly way. Also -
Question, then other person asks question	Reciprocating gestures in interaction
One person speaks	More relaxed now, perceive other person is friendly
First conversation	Both trying to find something mutually interesting
Smile	Recognition of what partner is attempting to conversation
Follow-up question	
Pick up magazine, put back	Willing to continue communication, giving full attention to
Imitation of other's behaviour (fidget)	Imitation
Nodding	Reciprocating agreement
Put magazine down	Openness, friendliness, willing to interact rather than read
Holds magazine doesn't read	Backup device
Laughter (both)	More relaxed, "this isn't too bad"
Second conversation	Break silence so feel more at ease
Synchrony (look at floor)	Nervousness, not sure what to do next
Speak again	Unsure of mutual topic so interaction ends
Looking	Essential to communication
Body shift, synchrony	Non-verbal rapport

Table 14

Categories Of Yes-No Situation	
Events	Interpretations/Reasons
Greeting	Acknowledgement, friendly, sets tone
No greeting	No acknowledgement
Greeting, look away immediately	Don't want to interact
Vague response	Leaves further interaction possible
Question	Attempt to be friendly, attempt to establish common ground for
Body position	so that harder for other to avoid eye contact
Synchrony	Mutual understanding of the situation
Move body again	To decrease possibility of interaction
Quick replies	Indicate no interest in talking
Question asked calling for longer response	Attempt to engage in conversation
Nodding while reading, talking while reading, paper	Newspaper/magazine used to give idea don't want to talk
Body position	To create physical boundary
No question offered from other	No interest in furthering conversation
Delayed response	Impression of interrupting
Speaking without looking	Impression of interrupting
Synchrony	Response
Back & forth glancing	Gauging of attention and interest
Shows magazine cover to other and comments	Uses magazine as tool to try to engage partner
Thumbs through magazine	Appears to not want to talk
Moves head closer to magazine/book - one word	Avoiding eye contact
Answers while reading	Making statement "I'm preoccupied"
Ignores comments	"Not interested"
Returning to magazine after answering	Doesn't further conversation
Magazine indicator of interaction	Down before talking
Conversation polite	No substance to interaction
Other only answered questions	No initiation of conversation
Questions set context of conversation	Questions allow elaboration of topic
Looking away from eye contact - not looking up,	Guideline for any further attempts at interaction cue "not
Speaks hesitantly, inexpressively	Clear communication don't want to make contact

Table 15

Synthesis Of Subjects' Descriptions Of Structure			
Full	No	Yes-No	Real
First conversation	Eye contact	Greeting	Eye contact
Eye contact	Brief glance	Vague response	Greeting
Greeting	Second glance	Question	Greet, with smile
Look away from magazine	Read Magazine	Body position to encourage talk	Talk without look
Normal conversation	"Reading" together	Talk	Mutual look
Look up, smile	Turn body away	Synchrony	Laugh (both)
Question	First comment	Body shift to avoid	Look away
Look at magazine	Put down magazine	Brief replies	First talk
Question about magazine	Look away	Question	Talk while look
Question	Looking around	Respond while reading magazine	Look around
Second question	Nonverbal agreement of situation	Nod, talk	Introduction
Folds up magazine	Nonverbal preoccupation	Body as boundary	Question
Nods Head	Look, sum up	No follow-up question	One person speaks
Laughter (both)	Look, curiosity	Delayed response	First conversation
Posture shift		Speak, without look	Smile
Little glances		Synchrony	Follow-up question
Closes magazine		Body turned towards	Pick up magazine, put back
Uncrosses legs		Body turned away	Imitation of fidget
Crossed arms		Glancing, gauging	Nodding
Silence		Uses magazine to talk	Put magazine down
Other continuous conversation		Turns through magazine	Holds magazine, doesn't read
Fidget paper		Head closer to magazine	Speak anticipated
Look back to magazine		Brief answers	Laugh (both)
Look up, talk		Talk, while read	Second conversation
D'n't pick up magazine (other)		Ignores comments	Synchrony (look at floor)
Synchrony		Turns to magazine, or follow-up	Speak again
Common talk		Put down magazine	Looking
Looking, gauging		Resume read, following	Body shift, synchrony
Remain still		Magazine indicator of talk, down	
		Polite talk, no substance	
		No follow-up of questions	
		Question sets context	
		Look away	
		Answer without looking	
		Speak with no expression	

Table 16. Some examples of the major category descriptions are as follows:

Bus:

- on a bus, or in any public (quiet) place with just one other person in close proximity.
- sitting on a seat with someone on a bus.
- it is similar to sitting at a bus stop in an unfamiliar area & having someone sit down beside you and having a conversation while waiting for the bus.

Waiting room:

- similar to waiting in a waiting room, where everyone is very quiet or very tense and no one has any wish to make conversation.

Doctor's office:

- not feeling well & just wanted to be left alone to think my own thoughts.
- waiting in a closed environment with a few people, i.e. doctor's office with only a few patients waiting.

Any encounter with stranger:

- this situation is similar to many first encounters
- it is like when you are out somewhere with 2 other people, 1 of which you know very well, the other not at all, but someone your friend thinks highly of, then your friend leaves the room and you are left with the stranger.

The above descriptions indicate that to the subjects there is a genotypic similarity between the experimental situation and others they have experienced.

Eighteen subjects spontaneously suggested that sitting in a room at the university that is decorated as a typical office waiting room was psychologically the same experience

TABLE 16

Subjects' Descriptions of Similar Situations	
Sitting in a waiting room	26
Waiting in a doctor or dentist's office	21
Similar to being on a bus or at a bus stop	18
Any first or public place encounter with a stranger	18
Encountering another student in cafeteria, or class etc.	8
Waiting to be interviewed for a job	6
Total subjects = 80	

as sitting at a bus stop beside a stranger.

Summary of Qualitative Analyses

The generic descriptions of the structure of the interactions include the genotypes and the phenotypes of that particular situation. It is clear that there are behaviours, gestures etc., that have a shared meaning, that afford interaction or avoidance of interaction when used in any social situation, whether one is sitting in a bus or in an office waiting room. What varies across situations, are specific things in the environment that may be used as a medium for affordances, but the psychological meaning of that medium is the same across situations. (For example, in the bus situation, reading the advertisements would substitute for the magazines.)

The descriptions of affordances articulate what these behaviours mean, in the intersubjectivity of the subjects for each of their particular situations. These affordances are events that subjects have agreed are more important than other events in the interactions. They are the events that are the information that subjects used to coordinate their interactions. From the subjects' descriptions of important events it is clear that there is an expectation of reciprocity in a social interaction, where each member is expected to assume some responsibility for keeping the conversation going, consequently, inaction or a failure to perform a reciprocal gesture is an important event. In addition, both are aware of what is required and so it is the deliberate failure to comply with the obligations of the situation that make the event significant. Thus, points of intersubjectivity can occur in cases where interactants appear on the surface to be acting independently of each other.

Study 2

Independent observers produced the same kind of information from viewing the videotape as the interactants/observers. They identified main events, and wrote descriptions of their importance. The events and their meanings constitute the data for hypotheses five and six. They are presented together in this case because the observers saw the same tapes (10 saw Dyad 1, and 10 saw Dyad 2) so the events and the descriptions can easily be matched.

In addition to describing main events, the observers made decisions about the relationship of the interactants (data for hypothesis seven) and reported what information on the tape led them to this decision (perceptual information).

Hypotheses five and six.

Hypothesis five predicted that if perceptual information is available for all observers then subjects who did not take part in the original interaction would be able to view a videotape and identify the same main events as important with a similar level of agreement as the original interactants/observers. Agreement on which events are significant in the coordination of interaction is complemented by agreement or convergence on the meaning of those events. Hypothesis six predicted that the independent observers would describe the meaning of the events similarly to the interactants/observers descriptions of their own behaviour.

Dyad 1, Kirk and Jamie

Table 17 shows the agreement of the ten observers with the interactants Kirk and Jamie (Dyad 1). The areas of agreement are shaded. Kirk and Jamie agreed

Table 17

Study 2			
<u>Agreement of Observers and Interactants/Observers on Main Events</u>			
Dyad 1			
Kirk's Events	Observers' Agreement	Jamie's Events	Observers' Agreement
1. :07-:10	1. 70%	1. :07-:08	1. 60%
2. :11-:21	2. 40%	2. :28-:34	2. 40%
3. :55-:59	3. 80%	3. :54-1:12	3. 80%
4. 1:11-1:15	4. 40%	4. 1:26-1:30	4. 40%
		5. 1:40-1:43	5. 20%

between themselves that there are essentially two main events to their interaction.

The first is the initial greeting which is described as breaking the ice and setting the tone for the interaction. The second is when Jamie begins a conversation with Kirk.

This event is perceived by both of them as important because it affords a "friendliness" and relaxation. This event made them both feel more at ease and part of a "social" situation.

Sixty percent of the observers chose the same 1 second event of greeting as Jamie did, and 70% chose the same 3 second event of greeting that Kirk chose. Eighty percent of the observers agreed with the original interactants that the event where Jamie initiated conversation with Kirk, with Kirk smiling encouragement as he did so, was significant because of the change in the social atmosphere from that point. Some observers even used the same words to describe the event as the original interactants. The descriptions of these two events and their meaning as given by the interactants and the observers were as follows:

Kirk

:07-:08 greeting with a short smile and raised eyebrows.

Reasons: I felt that I tried to appear friendly when I greeted Jamie.

:55-:59 Jamie speaks, we discuss how we were selected for the experiment.

Reasons: When Jamie began to speak it made me feel more relaxed, and I perceived him as being a friendly person.

1:11-1:15 We both look away.

Reasons: This was another awkward period of silence.

Jamie

:07-:08 James walks in, both greet each other.

Reasons: Was important because of the breaking of the ice.

:54-1:12 First conversation is struck.

Reasons: The ice is really broken-we both realize that we are "social".

The observers' descriptions of the meaning of these events reflect the same awareness of them as affordances of "comfort" in the situation. Their descriptions of the reasons why the second event was important are given below. The accounts that are similar to the interactant/observers' reasons are marked with an asterisk.

Observers' descriptions of turning point event:

*-Important because he begins the conversation -which continues & both appear more comfortable.

*-First person again glances at second person this time second person doesn't look away-this signals first person is willing to talk.

*-B checks to see if he has the attention of A and seeing that he does, B initiates conversation.

*-Began with James trying to interact and find out what the other was about and how come he was there.

*-Although Y seems most nervous, he initiates the conversation. X seems more comfortable not conversing; he could go either way, whereas Y would rather "break the ice".

*-The event in which A breaks the silence between them and opens the conversation by telling B how he came to be in the experiment.

*-Now that he had his undivided attention, expectant attention, the 2nd man finally

spoke to the 1st man.

*-They have eye contact and that allows one to initiate conversation.

Dyad 2, Sheila and Mary

The other dyad, Sheila and Mary is two subjects in the Yes-No situation. Sheila enters the room where Mary is sitting reading and tries to engage Mary in conversation. Results of observations from this dyad are presented in Table 18. The agreement on important main events between Sheila and Mary is 58.3%. They agreed that there are two main events, one that is only one second long early on in the interaction and the other that is 10 seconds long in about the middle of the interaction. Nine out of 10 or 90% of subjects chose the same 1 or 2 second event as Mary and Sheila. For the second event Mary had a more restricted range for the unit, delimiting it to 7 seconds. Eighty percent of observers chose a unit that coincided with Mary's unit. Sheila described this event in a larger unit of 10 seconds. Ten out of 10 observers chose a unit that coincided with the 10 seconds that Sheila chose for the second event. The first event that only lasts one second and occurs at :21 seconds is when Mary makes the first gesture that indicates she has no wish to interact. It is very subtle. Mary glances at Sheila, gives her a one word answer to her question and returns to reading her magazine. The second event occurs when Sheila asks another question, Mary glances at Sheila again then goes back to reading, answering the question while looking at the magazine. In Sheila's analysis she included her question as part of the event, whereas Mary described the event as

Table 18

Study 2			
<u>Agreement of Observers and Interactants/Observers on Main Events</u>			
Dyad 2			
Mary's Events	Observers' Agreement	Sheila's Events	Observers' Agreement
1. :04-:08	1. 30%	1. :12-:13	1. 50%
2. :21-:22	2. 90%	2. :21-:23	2. 90%
3. :43-:51	3. 80%	3. :41-:51	3. 100%
		4. 59:60	4. 20%

beginning with her reply, hence Sheila's event is 10 seconds long and Mary's is 8.

The interactants and the observers agreed that these two events are the most important and constitute the perceptual information for the relationship of the interactants, that is, that one would very much like to interact while the other is definitely not interested. Their descriptions are as follows:

Mary

:21-:22 Mary looks up for a glance at Sheila, gives one word answer, returns to reading-head turned away.

Reasons: avoiding continuing eye contact using one word answers.

:43-:51 Sheila looks at Mary, Mary glances at Sheila, answers question while looking at magazine.

Reasons: Making a statement that her mind is preoccupied. Mary stops the interaction-conversation for 35 seconds.

Sheila

:21-:23 she looks up, gives a friendly but somewhat amused yes, and returns to her magazine.

Reasons: she returns quickly to her magazine (not very friendly).

:41-:51 I ask if she's been waiting long & she looks at me giving a reply at the same time as she goes back to her magazine.

Reasons: She looks at me (somewhat less reserved, more friendly).

Observers' Descriptions of First event:

(Sheila is wearing a pink shirt and a blue coat. Mary is wearing a purple shirt).

-Blue was very nervous and looks for any support, even from P., a complete stranger.

*-Event 1 was B's initial attempt to initiate conversation by speaking to A; previous overtures to be acknowledged by A by just looking did not succeed.

*-Newcomer is determined to start interaction with first person, just in case the first attempt (failed attempt) was not noticed.

*-first verbal contact, P girl controlled interaction by answering into her magazine, thus ending possible conversation.

*-first attempt at conversing doesn't work, not knowing what to do, X picks up a magazine.

*-They both obviously know that the other is there for an appointment of some sort but it's a polite gesture [question about appointment] to start conversation.

*-A indicates her reluctance to enter into a conversation.

*-Y seems friendly and wanting to communicate with X, e.g. initiating conversation, looking directly at X. X seemed to want to be left alone, e.g. barely glancing at Y and tersely answering.

*-This event is important because it is the first attempt at conversation.

Observers' descriptions of the second event:

-Is important because it seems to demonstrate # 2's discomfort with her situation.

-Y seems uncomfortable when there is silence between the two, e.g. fidgeting when there are pauses in conversation.

*-indicates A's unwillingness to engage in a conversation and also that she is preoccupied or worried rather than unfriendly.

*-one woman looks at the other woman as she asks "waiting long?" she nods her head up and down and says "for awhile" then back to the magazine trying to look preoccupied.

*-this is important because it is the breakdown of the "I don't know you so I don't have to talk to you" barrier, it is the start of communication.

-first attempt at conversation doesn't work, not knowing what to do X picks up a magazine.

*-old person makes certain there is no misunderstanding -she is not wanting to talk.

*-Event 2 was B's second attempt to make contact by speaking to A; which A did not acknowledge by looking, that is, with eye contact.

*-Purple had no intention of speaking to B, and only responds when forced into responding.

*-B stating that she is feeling nervous pushes P girl to respond by such a personal statement, it would be uncourteous not to respond. P girl's answer just dwindles away to silence but she looks up and away as if to receptionist, nodding throughout her answer.

Descriptions of relationship decisions and perceptual information.

Hypothesis seven. Hypothesis seven predicted that independent observers could describe the relationship of the interactants without being told the context of the situation. After subjects completed their event analyses they answered the questions concerning the relationship of the interactants and the perceptual information that led to that decision. Their complete responses to these questions are included in Appendix C. For Dyad 1, Jamie and Kirk, subjects' decisions converged on four aspects of the relationship. The number of subjects whose descriptions were in this category is given after the description:

They were strangers (8)

They were both there for the same reason (5)

Being in that room waiting for an experiment was the only thing they had in common	(7)
One person was more uncomfortable than the other	(4)
	(n=10)

For Dyad 2, Sheila and Mary, subjects' decisions also converged on four aspects:

They were strangers	(9)
They were strangers in an uncomfortable situation	(7)
One person wanted to talk, the other didn't	(6)
They were both uncomfortable	(6)
	(n=10)

Descriptions that are not included in these categories referred to some other aspect of the relationship. For example, in Dyad 1 only one person described the relationship as "one person is making overtures regards communications with the other".

This description is not incorrect, it is just specific to one part of the interaction.

There was variation in the amount of detail subjects gave, but all captured some important psychological aspect of the situation. The following example of an observer's comments of Dyad 2 illustrates the ability of some subjects to report on the meanings of very subtle behaviours:

Relationship: They don't know each other, they're patients/clients maybe waiting for a mammogram, obstetrician, psychologist. They are both nervous and neither really wants to be there. B is more open & desires any human contact, A is more reserved. They may both be somewhat embarrassed by being there. B is more openly nervous but A is also nervous. They attempt a solution to this in different ways.

Perceptual information: I know they don't know each other because they don't greet each other. The waiting room looks like a waiting room (magazines) and B asks A if she's waiting for an appointment. The word appointment indicates that they are waiting to see someone else, a professional, (hence the need for an appointment). Their nervousness is indicated by B's fidgeting and A's preoccupation with the magazine and rigid body (she moves little throughout the tape and holds her magazine in an awkward rigid position). The fact that they don't really want to be there is indicated by A's statement near the end of the tape "I haven't had to come here before", and B's concurrence. This also gives a clue to why they might be embarrassed. B's openness is indicated by her open body stance and her desire to communicate. A's reservedness is indicated by her closed body stance and her unwillingness to engage in conversation and A's equal determination to disappear into her magazine.

This lengthy example indicates the different kinds of information that subjects used, the environment, non-verbal behaviours, the tense and length of their statements, et cetera, to reach a decision. This example is pertinent for another reason. The original instruction to Subject 1 was, "you are thinking about your upcoming appointment and you don't feel like talking", and to Subject 2, "you are thinking about your upcoming meeting so you want to talk to the other person to distract yourself". The observer suggested that they are both nervous but "attempt a solution to this in different ways", thus, accurately describing the complete situation.

Summary of Study 2 Results

Without any additional information of the context of an interaction, subjects were able to view a videotape and use the perceptual information available to reach a consensus with the interactants/observers on which are the most important interactive events. Decisions clustered on two main events in each interaction. These events, according to their descriptions, are interactive events that contain meaning and

information about the interactants relationship. Thus, hypotheses five and six were supported. Agreement on which events are meaningful and convergence on what that meaning is, was approximately 80% in both cases.

Subjects' descriptions of the relationship indicated that they were able to describe correctly the interactants as strangers and the interactional relationship indicated by their conversation and gestures. The explanations they gave for their decisions centred around the main events, in some cases the descriptions of the events were elaborated.

CHAPTER SIX

DISCUSSION

Subjects described events in terms of what they mean for interactive possibilities, that is, as affordances. Research in social perception and social behaviour that employs Gibson's concept of affordances has occasioned much current debate. One recent criticism has suggested that the concept of affordance may be applied to discourse events but only in a limited sense because the question of why an event affords discourse activities for particular participants is left unanswered.

What Gibson and Gibsonians of course reject is the idea that the participants need to mentally represent meanings of each others' acts in order to know what they afford, to decide in their heads on appropriate reaction, to plan how to carry out the reactions and to execute them (Leudar, 1991, p.213).

Leudar (1991) also argued that the concept of affordance situates an individual as the subject of affordances but neglects the agency of interactants.

An individual participating in joint activities is not just a subject, but also an agent, who affirms or resists subjectivization, and in acting towards others, constitutes them into subjects....Affordances of joint activity must thus point not just between the individual and her environ, but coordinate the participants as (possibly collective) agents and subjects (Leudar, 1991, p.213).

There are two crucial issues in the statements above. First, the implication that meaning is subsequent to action and requires mental representation. Second, that affordances can not account for the individual to be both a subject (of affordances) and an agent. The inadequacy of Gibson's concept to explain discourse events stems not from the limitations inherent in the concept itself, but perhaps in Leudar's interpretation. Gibson saw meaning as a relation between the organism and the environment. Furthermore, as Ginsburg (1990) suggested, "the sensitivity of a

perceiver to any one or more of the affordances of an object in the perceiver's perceptual environment will vary with the line of action-the overall act-in which the perceiver is engaged" (p.359). Perceiving the affordances of an environment involves an active exploration of the social environment, a "detection" of the functional meaning of things for the perceiver. In Leudar's interpretation, the dynamic quality of active perception and the overall context of the social situation of which the perceiver is aware are missing. Gibson wrote:

perception of the environment is not based on a sequence of snapshots but on invariant-extraction from a flux, one does not need to have ideas about the environment in order to perceive it. (Gibson, 1979/1986, p.304)

He also indicated that affordances provided by other people are "the richest and most elaborate affordances of the environment" but that the perceiving of the mutual affordances of behaviour is "nonetheless lawful" (p.135) and is based on the pick-up of information because "other persons can only give off information about themselves insofar as they are tangible, audible, odorous, tastable or visible" (p.135).

As Leudar (1991) has conceptualized the process, a person must notice the behaviour of some one else, represent the meaning of their behaviour and decide on a course of action. The behaviour of the other in this conceptualization is reduced to a static stimulus and the mutual aspect of interaction is replaced by a stimulus-response relationship. Gibson's concept of affordance, on the other hand, emphasizes a functional, reciprocal relationship. Also in this research subjects did not make a distinction between verbal events and nonverbal events. Verbal events were described as affording interactive possibilities as readily as nonverbal events (as was inaction,

which presents another problem for Leudar's conceptualization).

Leudar's (1991) criticism introduces the problem of the analysis of meaning. To make explicit what is actually involved when a behaviour or expression is said to have meaning, is a basic philosophical problem. Early theories of meaning, can be grouped according to Alston (1967, into three basic types: referential, "Language is used to talk about the extralinguistic world" (p.237), ideational, language "expresses our thoughts and ideas" (p.237), and stimulus-response, "words have meaning by virtue of the ways in which they figure in human activity" (p.237). Wittgenstein's pragmatic view of language avoided these three approaches and concentrated on the regularities in the use of language rather than trying to locate its meaning in any one place (cited in Alston, 1967). Bower (1979) suggested that: "one could argue that modern experimental psychology began with the problem of meaning...how one particular item of sensory information can stand for-signify or represent-some other" (p.183). Most solutions were some form of an associationist account, for example, meaning of a word is "acquired by association with the sensory qualities that the word represents" (Bower, 1979, p.183).

A skirmish in the long standing debate on meaning is eschewed here. Offered instead is a reiteration of Gibson's position: the concept of affordance includes meaning, what to do with things, based on the relations between the perceiver and the social environment. Action possibilities (or no action), that is, the possibilities for response (or courses of action in Leudar's (1991) terms), are present in the other person's acts. Tolman (1991) suggested that the direct realism of Gibson's (1979)

theory of perception:

overcomes one important source of theoretical indeterminacy, the presumed lack of access to objects in themselves....Furthermore, unlike naive realism, this theory does not imply a neglect of the specifically human capacity for meaning in perception. Rather, it attempts to give a more adequate account of meaning based on the direct access to or reflection of objects. (Tolman, 1991, p.8)

Two essential qualities of affordances are the pick up of information over time and that this information is in the world. Affordances come to be known through developmental processes, through activity in the world. How this can be said of gestures or behaviours specifically, was explained by Mead (1934/1977) as the triadic relations on which meaning is based.

The meaning of a gesture by one organism...is found in the response of another organism to what would be the completion of the act of the first organism which that gesture initiates and indicates (Mead, 1934/1977, p.210).

In other words, the meaning of a gesture develops out of the social act. Notice that the response in Mead's conception is not a separate or static entity, the response is in the gesture of the first organism as well as the other organism.

The ontogenesis of meaning is expressed similarly in a Vygotskian approach.

In summarizing the studies of mother-child interactions Wertsch (1985) has written:

Rather than understanding the task and then doing it, the children seem to have done the task (as a participant in interpsychological functioning) and then understood it (Wertsch, 1985, p.166).

In this research project subjects provided a description of the end products of these developmental processes, meanings of gestures and behaviours as they constituted interactive events. In instances where they used the same words to describe behaviours, we discover words that have come to be symbols or signs of behaviours

that indicate an attitude, for example, "looking preoccupied".

Lewin's approach of using the subjects as coinvestigators alleviated the methodological problems of an a priori selection of a meaningful unit, and post hoc interpretation by the experimenter of which behaviours were important and what they meant. Subjects did not have the difficulty Leudar (1991) suggested of describing themselves as both agent and subject, nor in describing events that coordinated one of them as agent and the other participant as subject. Because the methodology was not inherently dualistic, neither were the subjects' descriptions. They repeatedly described events in such a way that indicated they viewed the events as a mutual coordination of their behaviour. They were instructed that an event could be what one person did, or what both of them together did, or anything at all but given this choice they repeatedly chose an interactive unit. Very few individual, isolated events were meaningful to the subjects. In other words, the subjects almost always described behaviour as interrelated, either in response to them or in an effort to influence them in some way, for example, by a lack of response.

The subjects' descriptions of similar situations illustrated Lewin's distinction between a phenotype, and a genotype. A phenotypic classification of an object is based on its immediate perceptible appearance whereas a genotypic classification distinguishes one object from another according to the object's dynamic relations (Lewin, 1935). Close to half of the subjects suggested that their experimental situation was the same as sitting at a bus stop, or on a bus. As a phenotypic classification this seems absurd. What does a room that looks like an office waiting

room in a university have in common with an outdoor bus shelter or a bus? What subjects have described is a genotypic similarity: the dynamic processes in a situation of sitting in a room with a stranger are the same as sitting at a bus stop or on a bus with a stranger. As Lewin suggested, the situations were different from other everyday life experiences only on the surface, the dynamic relations were the same. In other words, it is only the content of the interactions that differs in this hypothetical waiting room from the interactions that take place on a bus, or as one subject suggested in a room alone with the other dinner guests while the host is in the kitchen.

In addition, the situation itself operated as a "sign" (Vygotsky, 1978) to the subjects. The instructions were merely a sketch of a psychological situation. They allowed the subjects the opportunity to be spontaneous. Indeed they were not told in any way how to behave. The behaviours were completely their own, yet no subjects said that they didn't know what to do, in fact, some said, that they always behaved in a certain way (e.g. "I don't usually say much") in similar situations. In other words, the description of the hypothetical situation was a sign to them of a familiar psychological situation. They knew immediately the relations that were inherent in the psychological context.

The subjects' descriptions of similar situations and their ability to recognize the description of the experimental situation as a "sign" of a more general psychological situation lends support to Lewin's methodological principles: an experimental simulation of a real life situation is possible as long as the unit of

analysis preserves the essential qualities of that situation.

From the subjects' descriptions of the behaviours and gestures we are able to distinguish the kinds of gestures that Mead called symbolic gestures and Vygotsky referred to as signs. Subjects were able to describe, with ease, behaviours and gestures that were specifically meaningful for the interaction. For each situation there are gestures that are specific to that situation, but there are also gestures that are the same across all four situations. Also, some gestures that are similar in appearance have a different meaning according to the situations, and yet the subjects have agreed on this meaning. Symbolic gestures are apparently dynamic, related to the situation and the relationship of the individuals. ⁶

Connections to other fields.

In the review of the various ways other fields have studied the phenomenon of initial encounters, I suggested that the main emphasis was function. The subjects in this experiment described the functional properties of the information in the other person's behaviour and their behaviour together. One description that recurred in all four situations and was reported by the observers was the function of the initial greeting. In the field of anthropology, the greeting is viewed as a ritual that

⁶ Birdwhistell (1970), studied gestures extensively and wrote the following about their meaning:

Gestures are characterized by the fact that informants can easily recall them and attach a general order of meaning to them as recognized. However, this easy access to their form or meaning proves illusory when they are examined in the actual interactional flow. Although they have an apparent unitary and discrete quality, they prove consistently to carry the instruction to look elsewhere in the body behavioural stream for their...interpretation. (Birdwhistell, 1970, p. 119)

acknowledges the fact of a social encounter and gives respect to the other person (e.g. Firth, Goffman). Almost all subjects spontaneously used the expression "acknowledgment of me" or "acknowledged our situation". Their description seems to be similar to the suggestion by Firth and Goffman that a greeting is an acknowledgment that a social situation exists, rather than a mere physical encounter with another human being; it was important to the subjects that acknowledgment was given in some form of greeting. (In fact, it is quite surprising how small a gesture can be, for example, "eye contact" and still serve as a greeting and fulfil the function of acknowledgment).

The field of ethology, so promising with its emphasis on naturalistic observation, and a basic question of function, if it is to make the transition to "human ethology" has to evolve new methods that make use of naturalistic observation, and, as Harre (1972) suggested "for scientific purposes, treat people as if they were human beings" (p.84). It is clear from the subjects' descriptions that they are competent to provide an account of the function of their own and their fellow interactant's behaviour.

The ease with which subjects agreed on main events and the meaning of those events has implications for the clinical field. If, as Scheler suggested (cited in Owens, 1970), empirical psychology has not objectively studied intersubjectivity because it has assumed the fact of intersubjectivity, some therapeutic approaches are based on the opposite assumption, that an identified patient does not share the same version of reality as the people around him or her, for example reality therapy or

cognitive therapy. In contrast, some systemic therapies treat the identified patient as the one individual who is in touch with reality but has had to behave in extreme ways in order to force the family into therapy. Therapy based on the methods and theories developed by the Milan group (another systemic therapy) operates on the assumption that the family creates reality together and treatment is directed at introducing new perspectives into the family system in order to produce change. The contributions of this research on social interaction to the field of therapy are two: first, subjects involved in an ordinary interaction provide a base rate of agreement, second, and more important, the method itself is easily adaptable to testing the underlying assumptions of intersubjectivity (that is, the patient does not see the situation in the same way as the rest of the world).

The shortcoming of this research is that the phenomenon studied is of very short duration but the method was time consuming, approximately twelve months was spent data gathering. However, once the objectivity of subjects' accounts is established as a scientific fact, a detailed event analysis can be bypassed. The observers' descriptions of the relationship and the perceptual information they used to make the decision contain most of the essential elements of the interaction. An abbreviated method was tried in a class room with first year psychology students at Malaspina College. They were asked to view Dyad 2, Sheila and Mary, and answer the same questions that the observers were asked concerning the relationship and perceptual events, that is, "what is going on and what made you think this?" Ten students submitted their descriptions for analysis. Their responses were not different

in any way from the observers who had done the event analysis beforehand. The same basic structure was described, two strangers sitting in an office waiting room for some kind of specialist, doctor, job interview etc, and one person is looking for reassurance from the other person who is more contemplative and prefers to be left alone. They reported the same kinds of perceptual information that this description was based on, e.g. greeting behaviours, the use of the magazine, questions and brief answers, the persistence of one interactant to engage the other and the setting.

From this group analysis it is clear that the more detailed event analysis is not always necessary and that if the goal is simply to determine agreement on the basic psychological structures of an interaction an abbreviated version of this method will yield the essential elements.

In conclusion, the implications of this research are that social relations have been internalized such that interactants see meaning as interactive events. The meaning is not arbitrary, nor are subjects capricious in their decisions of that meaning. There is support for the proposition that meaning has developed out of social interactions, through the development of symbolic gestures, including language.

The agreement of the interactants/observers and the observers that these are not just events that occurred but that they are meaningful, has two important implications for future research in social interaction: first, subjects are a reliable source of information about their own interaction and are not any less objective than "neutral" observers and second, subjects are able to recognize genotypic structures in interactions and do not simply stay focused on the descriptive, or phenotypic elements

of an interaction, and they do this with consistent regularity.

Ginsburg (1990) noted that it is unfortunate that the ecological view has not had a great impact on social psychology because:

our understanding of social life would benefit considerably if social psychologists were to reveal, through their investigations, the invariant structures that exist in contextualized social interactions and are directly detected by the interactants...the structure is assuredly there: Events occur and are routinely detected; acts are often readily recognized and accommodated; relationships between people are displayed in the structure of their temporally extended joint action and are detected by other people. (Ginsburg, 1990, p.361)

This research demonstrated the kinds of structures that interactants recognize in their own interaction and the recognition of relationships by other observers. The ecological view and the concept of affordance, a dynamic, relational term, provide a language that allows the reciprocal qualities of social interaction to be maintained and a theoretical argument that makes integration with other fields possible.

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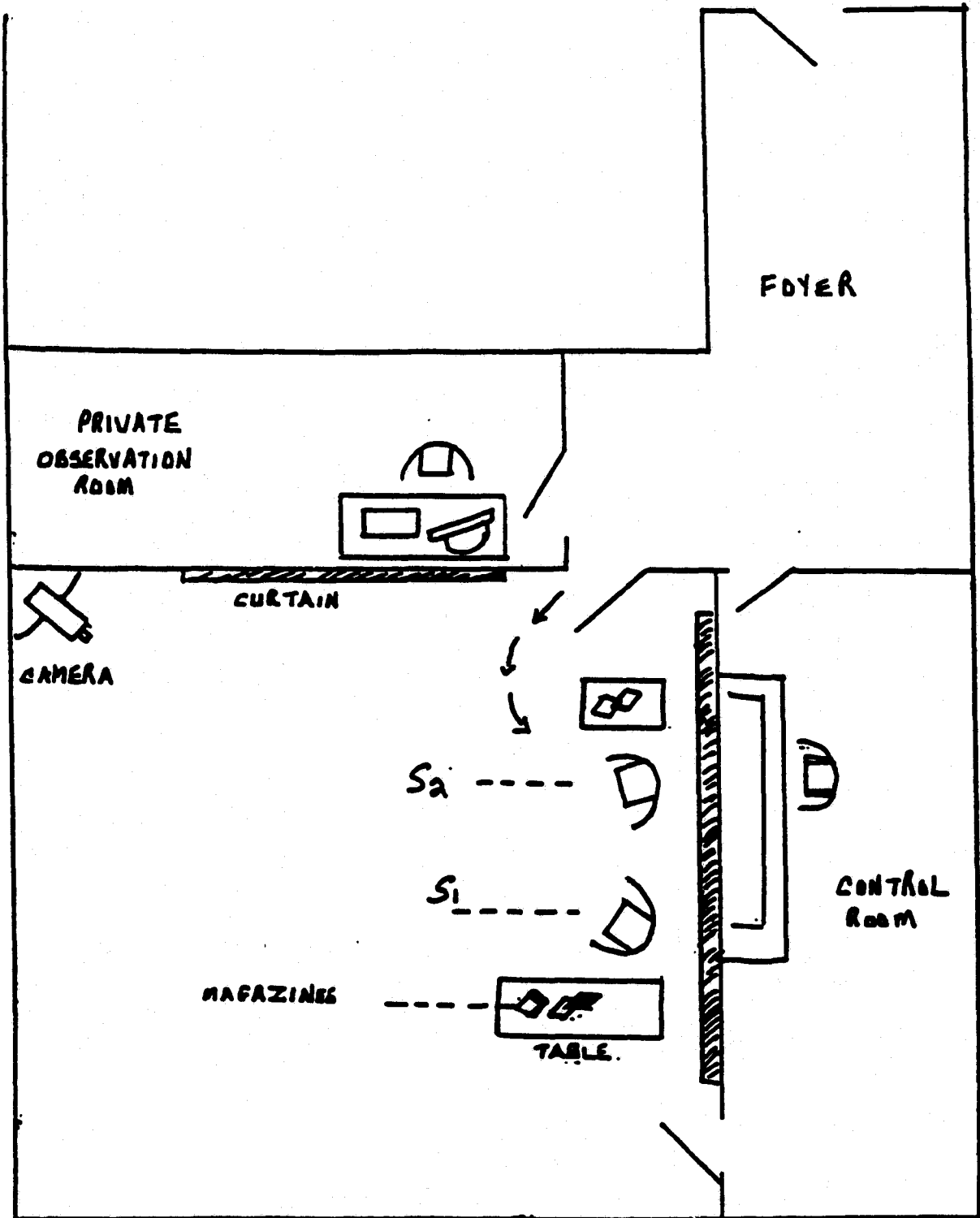
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APPENDIX A

Diagram of Human Interaction Laboratory

HUMAN INTERACTION LABORATORY SETUP



APPENDIX B

Study 1 Raw Data

Full InteractionDyad 1

Subject 1

1. :19-:21 first attempt at conversation
2. 1:22-1:34 start giggling together
3. 1:30-end both look away from mags.
4. 1:34-end more "normal conversation"

Reasons.

1. attempt broke the ice
2. both shared a joke which led to a "common ground"
3. allowed conversation to occur & rapport be established
4. rapport was established.

Subject 2.

1. :06 B looks up and smiles.
2. :16-18. A turns to B and smiles and says "so how long have you been waiting?"
3. :49-:51 B asks "Do you want a magazine or something?" and turns to look at A. A replies that "actually I..." turns to look at the magazines beside her & picks one up.

Reasons

1. important because it "opened" the possibility of an interaction - contact was made.
2. Set the tone- responded to the eye contact & smile.
3. Directed the interaction.

Dyad 2.

Subject 1.

1. :00-:01 Looked up as the person entered the room, smiled
2. :11-:24 other person said hello, asked me a question which I answered & added a further comment.
3. :27-1:28 the other person asked a question which I answered, then I asked a question to which she responded, and a dialogue took place.

Reasons.

1. -----
2. was most important for me, when the other person said "hello" and seemed willing to initiate a conversation.
3. was also important when the other person asked another question, it seemed possible to keep the conversation going.

Subject 2.

1. :01-:02 Y looks up at X and smiles as X enters room.
2. :10-:12 X greets Y, they both look back at their magazines.
3. :14-:23 X asks Y a question, Y responds, X responds, they both smile and look back down at their papers.
4. :27-:28 X asks another question and folds up her paper.
5. :50-:51 Y nods head as if understanding something X said
6. :58-1:00 X pulls foot up onto knee and tosses her hair.
7. 1:00-1:02 X uses a hand gesture to get her point across.

Dyad 3.**Subject 1.**

1. :05-:10 Initial greeting. Person who initially says hi looks down after greeting. -new person looks around.
2. :21-:24 laughter -both individuals.
3. :31- :35 eye contact -both make and hold -one breaks eye contact then regains. Nodding with eye contact.
4. 1:33-end. shift (both) in posture towards each other.

Reasons.

1. the initial greeting.
2. verbal greeting, both are friendly towards each other.
3. start a conversation.
4. X folding up paper means she expects the conversation to carry on.
5. Y is agreeing with X.
6. X takes a minute to think about response to Y's question.
7. hand gesture used to get point across.

Reasons.

1. initial person puts self on line through being the first to initiate interaction.
2. Events important as they demonstrated empathy towards each other-both laugh -nervous-make other person feel comfortable.
3. Nodding agreement -empathy encouragement, eye contact-quite powerful.
4. posture shift-important for comfortableness to each other - both excited about the interaction.

Subject 2.

1. :00-:01 greeting of "Hi" smiles from person sitting down-looks up to other person, then looks to magazine.
2. :04-:09 Person on right takes little glances over at the other person, trying to be discrete, while she sits down.
3. :31-:32 Person on right closes magazine and starts to talk to other person while looking at them instead of while leafing through magazine.
4. :55- :56 Person on right uncrosses leg.
5. 1:02- 1:03 Person on left lays magazine down on lap and crosses arms, then looks at other person while conversing.

Dyad 4**Subject 1.**

1. :12-:14 first mutual eye contact.
2. 1:15-1:25 silence have run out of things to say.

Reasons.

1. Important because of the acknowledgment someone else is there
2. Important because one person is "checking out" the other, trying not to be obvious
3. one person decides to turn her full attention to the other by closing the magazine.
4. Person becomes more "open".
5. Person has put her attention away from magazine but still shows some reserve due to crossing of arms.

Reasons.

1. Eye contact was important to "break the ice" to eliminate the tension involved when two people are sitting alone in a room together. It was also important because I was told to engage the other person.
2. The silence was important to the interaction in the sense that it made us realize the importance of continuing the "babble". When we stopped talking the tension returned in an even greater amount than it was when I first entered the room.

Subject 2.

1. :00-:03 Look to the right as Tina walks in.
2. :12- 13 Tina looks at me /I look at her
3. :13-:14 We both look at each other again.
4. :14-:16 I turn and ask question
5. 1:24- 1:27 I turn head and ask another question.

Reasons.

1. important as it acknowledges the other person instead of ignoring them.
2. look at each other signifies an interest and may be an attempt to start an interaction.
3. continuation of above.
4. actually looking at the other person and initiating a conversation.
5. same as above.

Dyad 5.**Subject 1.**

1. :17-:18 Kim finds paper of interest - Carol adjusts & tries to move further away in her seat from Kim.
2. :39-40 Kim asks Carol what she thinks of war (after expressing that war infuriates her)
3. :40-52 Carol stumped-offers opinion & changes direction of conversation.

Reasons.

1. If not for that article the exchange of words would have been different.
2. Had Kim not directly asked a question, Carol may not have participated in the conversation.
3. Carol was willing to contribute to conversation enabling it to continue-showing a willingness to engage in conversation.

Subject 2.

1. :16-:20 K looks around the room
2. :20-:21 C turns her body away as K sits down.
3. :24-:40 K begins conversation refers to paper.
4. :41-:42 C silent
5. :43-:54 C states her view

Reasons.

1. Looking at paper gives K something current to talk to C about-> they talk about views on war.
2. C turns away I don't know why except that it was an abrupt movement & it caught my

6. :55-:59 K fidgets with paper and hums and hahs

- attention.
 3. proves that 1 is an important event.
 4. silence from C-> maybe she doesn't like the topic -feels it is personal-or she's thinking of an appropriate answer that won't offend K.
 5. states her view; continues conversation (maybe she likes talking to K.)
 6. K still engages in the interaction but has nothing to say in response.

Dyad 6.

Subject 1.

1. :15-:17 -look up at person entering & smile
2. :28-:38 newcomer says "Hi"- I turn & look up -answer question.
3. :38-:39 I look back at book.
4. :39-:55 I look up & start talking.- dialogue.
5. :55-:56 I put down book

Reasons.

1. acknowledgment that person enters & smile indicating "friendliness".
2. start of verbal interaction to see if it may/may not continue.
3. indication of possible end of verbal interaction.
4. restart of interaction.
5. definite indication that my interest is directed towards talking with the other person.

Subject 2.

1. :29-:31 I initiated conversation, asked other person question
2. :54-:57 laughing together. (nervousness perhaps).

Reasons.

1. initiating the conversation was most important to me because I felt I had to initiate because I was entering the strangers' territory.
2. Laughing together was partially because of nervousness and it helped to "break the ice".

Dyad 7

Subject 1.

1. :22-:28 I shift my focus away from the paper and to the stranger, by turning my head completely in his direction & making a "show" of folding up the paper & putting it away. He briefly clasps his hands.
2. :32-:38 I am spoken to again, & respond by brushing at my face, crossing my arms & uncrossing my legs.

Reasons.

1. I believe was significant because I acknowledged his presence and shifted my main focus to him, he responded to my action in a physical way (clasping his hands briefly).
2. was significant because I am spoken to again (the conversation in effect begins) I shift my body position to prepare for it.

Subject 2.

1. :04-:07 Paulo looks up, smiles says "How ya doing"
2. :07-:14 Paulo looks down to paper.
3. :15-:16 Paulo looks up as I say "how's it going?"
4. :15-:16 Paulo looks down at paper.
5. :22-:25 Paulo responds while folding up newspaper & putting it down.

Reasons.

1. His looking up & smiling & saying "hi" suggested he was approachable.
2. His looking down indicated he might be involved in what he's reading & therefore not in a talkative mood.
3. I make a comment and his looking up suggests he's not totally wrapped up in his paper. My comment & my failure to pick up a newspaper suggest I'm interested in making small talk.
4. Paulo's brief look down adds some uncertainty in that he seems approachable, but is still trying to read.
5. Folding the newspaper & putting it away signifies he's now fully engaged in the conversation.

Dyad 8

Subject 1

1. :10-:12 Hello, unsure, first introduction. We spoke.
2. :20-:23 She makes first friendly conversation, I nervously laugh.
3. :38-41 We both say "yeah" to each other in answering each others' questions.
4. :58-1:04 I realize we have something in common and close my book and pay more attention.
5. 1:15-1:27 talk about common living accommodations, similarities.

Reasons.

1. Breaking the ice, words were spoken.
2. We are going to talk, she has made the first move.
3. We both use the same words. I think we're trying to get comfortable with one another.
4. I closed my book and I focused myself more on her and the conversation, I feel more relaxed.
5. We start talking about similar things to make the conversation easier.

Subject 2.

1. :09-:13 Subject x looks up and smiles, then says "hi" to subject y when subject y sits down, subject y says "hi".
2. :15 Subject y puts wallet down, engages in conversation with subject x.
3. :32 Subject y asks subject x the nature of her visit.

Reasons.

1. By looking up, smiling and greeting subject y, [second person in room, this subject] subject x opened the opportunity for conversation by letting subject y know she was friendly. Also time when eye contact established.
2. Small talk developed at this point when Subject y responded to Subject x's friendly greeting by contributing and showing interest in establishing same kind of contact.
3. This interaction opened up the opportunity to go beyond small talk and engage in more personal conversation.

Dyad 9

Subject 1.

1. :05-:10 x greets y, y sits down.
2. :15-:20 y initiates conversation, x puts down magazine.
3. :31-:37 x picks up a magazine, y looks the other way.
4. :38-:54 x tossed magazine & talks, y laughs.
5. :58-1:04 x & y talk about magazines.
6. 1:14-1:30 y tells x something about the magazine & they talk about it, while x opens magazine & looks at it.

Subject 2.

1. :06 Anne says Hi.
2. :15-18 I ask "who are you waiting to see?"
3. :21-28 Then she asks me who I'm waiting for & I ignore her question & ask her how long she's been waiting. She sighs & says "a couple of minutes".
4. :28 Then I answer her question about who I'm waiting for & tell her I'm waiting for a counsellor as well.
5. :37 She laughs a little & I thought she was laughing at the experimental situation so I laughed too because we were in the same boat.

Reasons.

1. was important because it initiated contact.
2. was important because it takes their interaction beyond greetings into an actual conversation.
3. was important because it was the event which was a possible turning point in the interaction, where they could have both lapsed into silence the entire time.
4. was important because x & y almost started to ignore each other & stop talking but the silence was broken.
5. was important because it kept up the connection & the conversation.
6. was important because the two people started to exchange information and were not strangers so much any more.

Reasons.

1. imp. because I thought I'd be the 1st to say hi.
2. imp. because it was my opening line. My ice-breaker.
3. imp. because I thought I'd have to keep talking & mostly because I initially ignored her question.
5. imp. because I laughed when she laughed. I sort of-copied her.

Dyad 10

Subject 1.

1. :05-:07 Terry acknowledged presence of Pam. Chin rub (strong perfume).
2. :28 sits like me, however, she is angled towards me & I am angled away from her.
:39 asks time.
:45 have I waited long?
1:11 cough
1:27 shift in chair.

Reasons.

1. I was concerned about allergies. I do not like strong perfume even if it doesn't cause allergies.
2. Pam was more open and willing, at least with her posture to have a conversation than I was.

Subject 2.

1. :01-:06 Pam enters room, Terry looks up and smiles then looks down.
2. :28-:29 Pam looks over at Terry, Terry looking down still.
3. :37-:47 Pam asks Terry the time, she responds, smiles slightly, then they exchange a few words re how long Terry's been waiting, she replies & smiles; Pam smiles in return.
4. 1:11 Pam coughs (nervously). Terry's reading still, does not look up.
5. 1:23 -1:27 Pam shifts body position, more in direction of Terry. Terry remains still & looking down.

Reasons.

1. exchange of smiles establishes receptivity to communication.
2. attempt on Pam's behalf to gauge Terry's openness to communicate/be friendly etc. not picked up.
3. more direct attempt at socializing, but indirect content-wise-passive communication i.e. question & answer-friendly but guarded.
4. 2 very subtle overtures on Pam's & behalf to indirectly orient Terry to her, to communicate.
5. Receptiveness but shut down by Terry's lack of response.

No interactionDyad 1

Subject 1:

1. :02-:04 D. looks at door opening, then at seat, then back to door where individual who is now entering is more visible.
2. :04- :06 D establishes eye contact with male, and smiles. D looks down at floor, then glances again in direction of male but with no eye contact made this 2nd time.
3. :18-:25 Male looks at magazine and reaches for one.
4. :22-:28 D looks at magazine, & reaches for one.

Reasons.

1. In looking at seat next to me upon noticing that the door was opening- I was assessing where this newcomer would sit (& how close) & preparing myself for an interaction.
2. Brief initial glance and smile- acknowledges presence of other. Glance kept brief since neither party intent on communicating- However, I gave a 2nd brief glance as I was not sure if male was going to further verbally or nonverbally extend the greeting (despite fact that I was already aware that we had both been instructed not to pursue conversation).
- 3 I was beginning to feel & uncomfortable with the silence &
4. the closeness of the other; picking up magazine made my sitting there seem more purposeful & decreased the discomfort.

Subject 2.

1. :04 female looks up from chair and smiles at male (lifts eyebrows as well)
2. :06 female looks away and then quickly glances back a second time before looking away again. (down).
3. :47 Male looks at female -covers this up by glancing at the background.

Reasons

1. Initial contact-any future interactions would proceed from this point. If eye contact or verbal exchanges would have continued longer I probably would have conversed with subject the full time period.
2. This second look could have been a reevaluation or opening to further interaction.
3. I (male) wanted to see what female was doing i.e. was she trying to

avoid contact. Contact was not made but I felt assured she was acting naturally. This was an opportunity for me to engage female.

Dyad 2.

Subject 1.

1. :00-:02 A sitting looks at paper, looks up at person entering the room
2. :05-:06 A looks again at B then looks back at paper. B looks to right at magazines.
3. :24-:25 A moves arm to left ear while B turns the next page of magazine.
4. :37-:40 B flickers through pages while A shuffles paper.

Reasons.

1. entering the room, first interaction from both people involved
2. however though no verbal communication was involved, still both interacted non-verbally (i.e. both moved at same time.
- 3 I would say that #3 & 4 (both are & similar) shows that even though no
4. verbal communication was used and no eye contact was made, both people involved tended to interact in a certain way. That is, both moved together > when one moved the other also would. Main point being that people tend to react together even though they don't know each other.

Subject 2.

1. :02 He looks up.
2. :04 she walks in & looks at him then sits down.
3. :05 He looks at her.

Reasons.

1. A nonverbal way of saying: "I notice your presence"
2. She looks at him to acknowledge him, if he looks at her (which she didn't notice).
3. He looks at her to see what she's doing and where she sat down.

Dyad 3

Subject 1.

1. :00 I sat with my right leg crossed over my left -turned from whoever was going to sit beside me.
2. :12-:13 Leaning my head away from whoever has just disturbed me, I look up and say "Hi".
3. :20 Gloria sits down and crosses her left leg over her right, turning her body away from mine.

Subject 2.

1. :00-:12 acknowledges entrance-"hi" looks up.
2. :20-:24 immediately picks up a newspaper.
3. :39- 1:08 both individuals turn the newspaper at the same time. 2nd occupant goes back 1 page to read versus front to back treatment of first occupant.

Dyad 4

Subject 1.

1. :12-:21 stranger enters room, sits, crosses legs.
2. :24-:1:33 stranger picks up and reads newspaper.
3. 1:22-1:24 stranger makes comment.
4. 1:33 stranger puts down paper.
5. 1:34 I look away and down from stranger after he puts down paper.

Reasons

1. I did not want to be disturbed and turned my body (and right leg) away from whoever was going to approach me.
2. I kept my head from directly facing her inclining my chin towards her only.
3. Gloria did virtually the same thing as I did, turning her body, left leg away from mine.

Reasons.

1. Quick acknowledgment of 2nd occupant by seated 1st occupant.
2. 2nd occupant immediately picks up newspaper and begins reading-mimicking actions of 1st occupant.
3. 1 1/2 minutes of interaction both individuals remain separate & read respective newspapers.

Reasons.

1. was important because that's when you look at the other person to see if they are familiar or what they're like.
2. was important because he picked up the paper perhaps to avoid a conversation & pass the time.
3. stranger breaks the silence with a comment. Now maybe a

conversation could start if both parties agreed.

4. putting down paper, now both people are just sitting there doing nothing. The paper isn't a barrier to communication any more.
5. I look away as he puts down paper, perhaps to avoid eye contact and conversation.

Subject 2.

1. :12-:19 I walk into the room, Joanne looks up and smiles, I walk over to the chair next to her. She again looks down after smiling as I cross in front and take my seat.
2. :28-:31 I look up and get bearings in room. Joanne looks up at room (maybe connected to my looking up) and then tightly grips her hands. Looks down at lap and keeps her hands tightly clasped (and continues to do so for a long time). Continues to look down.
3. 1:22-1:29 I look over to Joanne and comment on how hot it is and smile-Joanne looks at me and smiles. Both our gazes revert back to our laps/paper. I break off eye contact before Joanne at 1:24. Joanne at 1:27.
4. 1:45 look across.

Reasons.

1. Contact made (esp eye contact) but more structurally controlled - walking into room.
2. I look up which seems to affect a reaction with Joanne-synchronous movement in same way.
3. Important because contact (esp. eye contact) made voluntarily -not cued by structural circumstances as much.
4. Try to make eye contact and social contact.

Dyad 5

Subject 1.

1. :06-:08 S looks at D as she enters
2. :07-:11 D placing herself in chair,

Reasons.

1. S looks at D as she enters recognizing her presence in the

crosses legs

3. :43-:51 D glances over at papers.

room. Recognition of there being another person whom she may or may not interact with.

2. D places herself in the interaction. Important because this is moment that interaction could take place.
3. D looks at papers signalling no intent to make some kind of conversation with other person and that she is bored or uncomfortable.

Subject 2.

1. :05-:07 Y looks over as X walks in, and stomps foot
2. :09-:11 X turns and sits and looks toward Y
3. :35-:39 X adjusts glasses, puts hand through hair & sighs, looking up & around.
4. :54 Y looks up and taps foot again.

Reasons.

1. acknowledges the presence of X- looks away quickly -don't bother me.
2. acknowledges Y
3. this is boring me silly
4. yes-I agree.

Dyad 6

Subject 1.

1. :00-:06 D comes in, sits down and crosses legs, while P watches her.
2. :06-:08 D looks at watch.
3. :16-:17 D touches hair and looks over at side table beside her.
4. :30-:34 P. begins to look at magazines (etc.) on side table while D. checks her watch.
5. :34-:37 D uncrosses her legs.
6. 1:02-1:04 P. chooses magazine and picks it up. D leans forward and looks at watch.

Reasons.

1. Initial encounter sets "tone"
2. Indicates preoccupation with "time"- how long to wait.
3. Initial attempts to find something else to do besides just sit (and not talk to other person).
4. Indicates P. has found an "activity" to occupy him while D. is still preoccupied with time.
5. May indicate some restlessness, "or" feeling more at ease in situation.

7. 1:10-1:15 D. looks over at P.

6. Same as 4.

7. Indicates some curiosity about what other person is doing to fill time.

Subject 2.

1. :00 Paul looked up and smiled and nodded then looked downward
2. :02-:04 P. watched as Diane entered room and approached seat.
3. :25-:26 D looks at P and then floor. D stops looking at Paul.
4. 1:10 D looks at P's magazines.

Reasons.

1. Greeting, acknowledging the presence of the other person.
2. Paul able to see (sum up) D.
3. Diane able to see (sum up) P.
4. Diane looking at what Paul's doing.

Dyad 7

Subject 1.

1. :06 sec. look up and smile at each other.
2. :25-:36 picks up newspaper (man)
3. :50-1:26 looks at table (girl)
4. 1:26-1:29 looks at newspaper that man reading

Reasons.

1. because it was the beginning of the interaction & the only time they looked at each other simultaneously.
2. he had to occupy himself to avoid an interaction-made it less likely the other person would attempt to speak with him
3. avoids total contact of eyes blatantly obvious she wanted to avoid interaction
4. Although avoiding interaction- perhaps showing curiosity in activity of other person.

Subject 2.

1. :04-:09 F look up, smile, sitting, M enters

Reasons.

1. Acknowledged presence of M.
2. M decides personal level of

2. :19-:24 M plays with paper on table.
3. :37-:38 M quick look to F
4. :22-:43 F leg shakes
:50-:59 F leg shakes
1:07-1:19 F leg shakes
1:23-end F leg shakes.
5. 1:25-end F looks to M.

Dyad 8

Subject 1.

1. :07-:08 X looks up (briefly) as far as knees to who is entering (y) and returns to reading.
2. :08-:10 Y sits down while looking down and away from x. Places purse on far side of chair away from x . All done in one quick motion.
3. :15 X raises left side (near y) of paper aware that y did look over.
4. :16-:17 X adjusts in seat, changing body position to her back facing more in the direction of y and at the same time raising side of newspaper closest to y up, this action covered her face and made it possible for no eye contact.

Subject 2.

1. :09 -:12 I look at her & sit down
2. :12-:14 I open my book.
3. :14-:16 I look at her then look away.

interaction.

3. M checks for any contact with F. (and/or confirms relationship).
4. F adjustment verifying level of personal interaction.
5. Confirmation of relationship (or reevaluation)
7. Leg shakes of F and M (nervous time killer) start/end of movement seem to preamble finish/onset of another posture/movement.

Reasons.

1. I x, was curious to see who was coming in even though I did not wish to socialize & I made sure that eye contact was made.
2. Y's action when sitting down was with so much energy, almost forced, I was concerned [that] she would try to talk.
3. X, I was really worried that she was a person that could not entertain herself and was nervous and would choose to talk to me. I did not wish to be rude.
4. The silence was bothering me because I felt I should start conversation even though I did not want to. I hoped my body language would inform y that under no certain terms I would converse.

Reasons.

1. I looked at her but received no response. -> chilling effect.
2. I opened my book-felt rude.
- 3 I looked at her-and she responded

4. :16-:17 she lifts paper.

& by lifting up her paper. Coldly
4. ended any interaction.

Dyad 9

Subject 1.

1. :04- :05 I look up to Shani (eye contact, she looks at me in same way at same time) then immediately look down to lap
2. :15- :28 I start looking to my left (away from Shani) at a magazine and then pick it up and put it on lap. (like Shani).

Reasons.

1. I thought 1 and 2 were important because they showed we were together in a common understanding of the situation-we did the same things in the same rhythms/timings. Our eye contact at 1. was exactly the same -- pleasant very brief. Our bodies and posture and pace and activity at 2. and for the remainder of the interaction were the same.

Subject 2.

1. :21-:23 We both started leafing through our magazines.
2. :14-1:30 Throughout we were both semi- turned towards each other.

Reasons.

1. Leafing through our pamphlets showed our nervousness of either being in a room with a stranger, or our doctor's appointments. 2. But we also tended to do things at the same time. We were both turned towards each other which showed that we sort of wanted to know each other, being the only two humans in the room.

Dyad 10

Subject 1.

1. :09 I turn and give her a quick smile.
2. :13-:14 She looks quickly at me

Reasons.

1. was important because I acknowledged her, but then went back to my magazine.

- before sitting down.
3. :32-:33 She finds something to read.
 4. 1:15-1:17 I flip through magazine.

2. She acknowledged me instead of just sitting and ignoring me.
3. When she picked up the magazine I think it indicated that neither of us were going to talk to each other.
4. I realized that I was not really reading the magazine.

Subject 2.

1. :09 Kristen looks up and towards door and smiles.
2. :16-:31 flipping through magazine, I'm still looking for a magazine, choose a magazine.
3. 1:22-1:24 shuffles, leaning towards me, has left leg crossed over right and is leaning back away from me.

Reasons.

1. Kristen looked up and smiled sort of uncomfortably, from that I felt that she was as uncomfortable as I was.
2. I felt that I had to be doing something. The magazines were boring but I wanted to look at something other than the wall.
3. I was aware of Kristen shuffling where I had not been aware of the pages turning.

Yes-No-SituationDyad 1

Subject 1

1. :11-:14 Mike sits down and asks if Steve is in the experiment-also - important -he's trying to dwell on the only thing he knows we have in common.
2. :27-:28 Steve answers "sort of" - displayed a little thought, to his answer, and leaves his response open to further prodding-expecting further speculation from Mike-encouraged Mike to continue.
3. 1:04-1:05 Mike asks about time of experiment-demands physical effort from Steve.
4. 1:10-1:14 Mike talks about the time both have spent in experiment-something he knows is common ground.
5. 1:18-1:21 Mike stands up, tries different approach-asks about marks on floor-this makes Steve look, think, and make a guess as to their importance.
6. 1:30-1:32 Mike suggests that there should be music-obviously feeling or thinking that the audible level needs to be "livened up".
7. 1:35-1:36 Steve attempts humour and allows himself to make eye contact -something he was avoiding.

Reasons.

1. Mike asks obvious question, but knows that it is the only thing we have in common so far. Tries to get to familiar ground.
2. Steve answers "sort of"- displays a little thought, to his answer, and leaves his response open to further prodding-expecting further speculation from Mike-encourages Mike to continue.
3. Mike stands up -changes his position and conversation approach-asks about marks on floor-this makes Steve observe the marks, think about their reason and respond, breaking his concentration on other matters in his mind.
4. Mike asks about time-this is the first time he really breaks into the conversation by calling Steve to physically look at something and give a factual response.
5. Mike states that they have both been there for six minutes. An obvious assumption, but it is the only time that we can both relate to-tries to portray the camaraderie between the two subjects.
6. Mike suggests that there should be music to "liven" things up a bit-a plea for conversation. By standing he is uncomfortable with the lack of communication. Almost sarcasm towards the flat conversational response of Steve-implying he is responsible for the silence.
7. "Make it the new sub" Steve attempts humour- and makes first

eye contact-first step beyond the disinterested conversation-Mike is now getting some attention.

Subject 2.

1. :10-:11 Mike shifts chair towards Steve.
2. :13-:18 Both look at each other then away.
3. :29-:33 Mike leans back then Steve leans forward.
4. 1:13-1:18 Mike and Steve smile-over joke or reference to time.
5. 1:18-1:36 Mike stands up, leaves, then sits down. Steve leans back as soon as Mike stands up.

Reasons.

1. Shifting chair towards Steve is an attempt to change the position so we are better able to communicate and see each other.
2. Set the tone because Steve does not look at Mike to engage in conversation so Mike looks away into neutral space.
3. Mike leans back to face Steve more squarely (face-to-face) -Steve then leans forward to avoid Mike (unfriendly gesture).
4. This smiling has to do with our mutual understanding of the situation we are in. It is a recognition that we both recognize we are in an unusual situation-not important to the interaction but important to the effect of experiment on interaction.
5. Mike stands up to get in front of Steve in order to secure eye contact (then he will have to talk). Steve leans back to distance himself from Mike. Then we try the whole sit down sequence again...give him another chance to be friendly.

Dyad 2

Subject 1.

1. :16-:17 Stranger says Hello & I also greet him back, but look away.
2. :23-:27 Further interaction. He asks

Reasons.

1. is important because the stranger acknowledges that I'm present and initiates interaction. The fact that I

- why I'm here.
3. :44-:57 Asks how I know Jennifer & I answer with much eye contact.
 4. 1:06-1:16 Asks another question & continues to talk while I read and acknowledge that he's talking by nodding.

1. look away is important because it lets him know that I'm not keen to interact.
2. is important because it lets me know that he really does want to engage in conversation and by looking after my quick reply I'm letting him know further that I'm not interested in talking.
3. is important because he asks a question that requires a lengthier response because it's not easy to explain the relationship with a short answer.
4. is important because although he continues to talk I'm no longer looking up and am basically ignoring him by nodding while reading.

Subject 2.

1. :08-:10 I enter, Michelle looks up.
2. :16-:17 I said "hi" looking in Michelle's direction, she says "hi" looking away.
3. :28--:32 Michelle picks up & I look at magazine.
4. :33-:36 I speak, Michelle looks and responds very quickly.
5. :45-:55 brief verbal interaction with me looking at Michelle much of the time & Michelle switching between me and & magazine.
6. 1:07-1:10 Michelle turns body away from me while I ask question.
7. 1:12-1:17 I speak, Michelle was looking at magazine.

Reasons.

1. first visual contact.
2. first verbal contact
3. focus of attention switches away from each other.
4. Michelle's responses to my question shortens considerably giving me first impression she doesn't want to talk.
5. more indication Michelle doesn't want to talk
6. physical boundary formed between Michelle & I.
7. little 2-way interaction.

Dyad 3

Subject 1.

1. :04-:05 Female looks up and smiles.
2. :12-:16 Female rustles paper, male sits down and picks up paper.
3. :38-:40 Male pulls feet in, says "been waiting long?", smiles looks over.
4. :40-:41 Female looks over, responds "no" & smiles back.
5. :47-47.85 Male looks over asks a question.
6. :48-:51.78 Female pauses, looks over & responds.
7. 1:01-1:03 Male says "bored of waiting" doesn't even look up.
8. 1:03-1:05 Female looking at magazines looks over very quickly.
9. 1:15-1:21 Male says "last time here?"
10. 1:21-1:27 Female says "seldom as possible".

Subject 2.

1. :05-:07 eye contact we both smile.
2. :07-:10 I check out the room.
3. :38-:39 I initiate conversation.
4. :39-:41 other responds and smiles.
5. :49-:51 she turns to me smiles & responds & looks back to the paper.
6. 1:30-1:32: we laugh together.

Reasons.

1. eye contact established.
2. paper rustling-"I'm reading don't talk to me."
3. he initiates conversation. Feet come in (less relaxed) looks over & smile, friendly.
4. a friendly answer, but not overly responsive. Doesn't ask any question in return or open up the conversation. Short response with little effort. Reconfirms the "don't talk to me" message.
5. another effort at conversation.
6. response is delayed as I finish reading sentence-give impression of having been interrupted.
7. statement by Ron. Doesn't even look up & smile. Has got the message but still wants to break the silence.
8. a long verbal response, but very short look-up and smile.
9. last ditch effort-Again doesn't look over.
10. relatively negative response.

Reasons.

1. first point of contact & 2 smiles
2. my feeling safe in the room.
3. first verbal contact-risk
4. first reciprocation of verbal contact.
5. first time I am aware she turns to me to respond -contact.
6. synchronistic laugh.

Dyad 4**Subject 1.**

1. :23-:29 When their gaze meets she says "hi", he returns it, she asks him a question, plays with her hair he answers, turning to look at her twice, then back to magazine, she looks at him until he looks away, then so does she, keeps playing with hair nervously.
2. 1:05-1:28 she smiles, at something on cover of magazine, she says something about it looking down, she looks to make sure she's got his attention, he turns to look when she makes comment, she brings magazine closer so he can see it, he leans over to look more closely, she finishes comment with upward inflection, he says oh yeah. She says something else, still looking to magazine, he leaning slightly toward her, she puts magazine down after a pause, clears throat, he leans away.

Subject 2.

1. :00-:04 Y sits and looks at magazine.
2. :22-:25 X looks at Y then says "hi", Y says Hi back.
3. :27-:30 X asks if Y has been waiting long.
4. :30-:32 Y says no, looks at X, then looks at ground.
5. 1:16-1:20 X says something about the magazine cover and shows it to Y.
6. 1:20-1:24 X says something about

Reasons.

1. important because of their synchronized glancing and eye contact, smiles etc. which lead to a verbal greeting.
2. important because of back & forth glancing, gauging of others interest and attention in attempt to make conversation

Reasons.

1. Y establishes that he doesn't want to interact by looking at a magazine to begin with.
2. Both people say Hi, attempt to interact.
3. X tries to establish a conversation with Y.
4. Y gives a short answer, then avoids conversation by looking to the ground.
5. X tries to interact with Y by showing him a magazine cover and

the magazine, Y says "oh yeah"

7. 1:31- 1:33 X says something, Y laughs, looks towards X then turns away.
8. 1:33-1:37 Y thumbs through a magazine.

makes comments about it.

6. Y avoids conversation by appearing disinterested.
- 7 X tries to establish a conversation & while Y appears not to want to.
8. Any attempt by X is not facilitated by Y.

Dyad 5

Subject 1.

1. :04-:08 Sheila enters-Mary turns head away becomes more engrossed with book by moving head closer.
2. :21-:22 Mary looks up for a glance at Sheila, gives one word answer, returns to reading-head turned away.
3. :43-:51 Sheila looks at Mary, Mary glances at Sheila, answers question while looking at magazine.

Reasons.

1. avoiding eye contact.
2. avoiding continuing eye contact using one word answers.
3. making a statement that her mind is preoccupied. Mary stops the interaction-conversation for 35 seconds.

Subject 2.

1. :12-:16 I sit down next to her, she keeps reading
2. :21-:23 she looks up, gives a friendly but somewhat amused yes, and returns to her magazine.
3. :41-:51 I ask if she's been waiting long & she looks at me, giving a reply at the same time as she goes back to her magazine.
4. :59-:60 I say "I hate waiting", no response from her, she keeps looking down.

Reasons.

1. She didn't give me eye contact, (not being friendly).
2. She returns quickly to her magazine (not very friendly).
3. She looks at me (somewhat less reserved, more friendly).
4. She ignores my comment (maybe she isn't interested after all).

Dyad 6**Subject 1.**

1. :01-:04 Look up & " hi".
2. :11-:12 Look at each other when question asked.
3. :30-:31 Look up to answer question, head back down.
4. :42-:44 Look at each other when answering question; head back down.
5. :58-1:05 Look around room when listening to him & then looks down.
6. 1:05-1:12 Look at him to answer question & look away to "search" for answer; smiles.
7. 1:18-1:19 Puts down book to answer; his down also.
8. 1:22-1:24 Sigh-chest rises as he frowns.

Reasons.

1. Establishing each other's presence & familiarity.
2. Acknowledging the question & responding & returning to magazine w/out furthering.
3. Same as above.
4. Same as above.
5. Looking away to get info-don't want to look at him while searching for the answer, smiling, nervous?
6. He's asking questions & she's not looking at him but, around the room before resuming her reading.
7. When the question is asked, both put down their books and respond before reading again.
8. After answering deep breath & resumes reading as he frowns to himself in response to the question.

Subject 2.

1. :00-:06 Y orients towards door, briefly looks up, X greets Y, recognizing one another.
2. :11-:12 X picks up magazine.
3. :24-:40 X orients towards Y, rubs nose, pauses, looks at magazine.
4. :43-1:12 X puts magazine down, orients to Y asks question, Y looks up & at X. By end of engagement both X and Y are looking at magazines. Extended conversation with X almost always looking Y, when Y answers X's questions she does look at him, but then it's back to her magazine. Y sighs at end, X looks at his magazine.

Reasons.

1. Important because I recognized Y right away which certainly alleviates any qualms about meeting a stranger.
2. Event 1. was easily the most important because it was during this exchange that a "common ground" was discovered from which I /we could ease the nervousness of strangers in a room, and build a conversation from. It gave us something to talk about.
3. The magazines were a tremendous indicator of engagement/interaction. It was almost always "put down" right before talking. It's position

flowed coherently with conversation or lack there of.

4. Extended genial conversation. Was polite but seemed to lack substance. Y only answered questions, never initiated or asked questions, just gave short answers to X but at least we had a laugh and extended interaction.

Dyad 7

Subject 1.

1. :10-:14 looked up and smiled at Debbie coming in the door, we said hello to each other.
2. :14-:25 Debbie picked up a magazine and started to leaf through it.

Subject 2.

1. :10 Second person enters, first looks up and greets them, which is answered.
2. :17 Second person sits and picks up magazine
3. :25-:32 Second person initiates conversation, response from first.
4. 1:27-1:31 Second person initiates conversation, which is answered.

Reasons.

1. Important because we acknowledged each other.
2. Both of us were now able to focus on the magazines, not each other, something to fill the time and feel less awkward, when you don't know someone.

Reasons.

1. Establishes contact by both eye contact and language. By picking up magazine Second person decreased likelihood of conversation. First person already holding one set the stage prior to the filming, this is one of the more important aspects which is not captured on tape.
3. Establishing contact and sets context for the 2 waiting, i.e. who is first, how late are the appointments running.
4. Further elaborates context, i.e., is there someone else in an appointment now.

Dyad 8**Subject 1.(x)**

1. :48-:50 y says hi, x turns to look at y says hi then goes back to reading.
2. 1:21-1:24 y communicates on weather, laughing. x still does not look up-but smiles and says yes.
3. 1:27-1:28 x turns head away from y, y does not attempt any more interaction.

Reasons.

1. is important because it is when y first attempts to interact with x, and x's response is a guideline for y in attempting further interaction. x does make eye contact with y in event 1, the only time during the entire interaction.
2. Event 2. is y's cue that x is not interested in interacting. 2. is discouragement with no eye contact.
3. is when x makes a physical gesture to discourage interaction. -is discouragement with the turning of the head.

Subject 2.

1. :59 R sits down, L does not look up or speak.
2. 1:19-1:23 L answers does not look away from paper, speaks hesitantly, inexpressively.

Reasons.

1. Most significant event was that L did not look up or acknowledge the entrance of R.
2. L answering non expressively without any eye contact. Both of these events gave clear communication (non-verbal) from L to R that L was not wanting to make contact with R. The cues greatly affected R's behaviour being a North American communicator. Also see entire interaction as one event where L avoids contact.

Dyad 9

Subject 1.

1. :15 sec Sx picks up magazine but looks over at Sy (me)
2. :19-1:37 Sx tries to engage Sy into conversation while Sy continuously flips through magazine. Sy answers all questions with short answers that do not encourage conversation.
3. :55 sec Sy crosses other leg & slightly turns chair in other direction away from Sx.

Reasons.

1. is important because Sx recognizes the presence of a second person in the waiting room, whom he can engage in conversation.
2. are important because they show & how Sy is discouraging Sx from engaging in conversation. 2. is more subtle & more polite however 3. is more of a forceful gesture without verbalizing the wish not to be talked to.

Subject 2.

1. :05-:09 I walked in the room, Karen looked at me, and noticed someone was in.
2. :18-:34 I initiated conversation with her. We had eye contact however, she did not show interest in talking to me.
3. :35-:46 I tried to talk to her again, she did not seem to want to talk to me. Responded to me very briefly and remained attention on the magazine.

Reasons.

1. because this event brings 2 persons together.
2. because I initiated conversation.
3. because she did not show interest in talking.

Dyad 10

Subject 1

1. :06-:08 I look toward him and smile.
2. :13 He sits & turns slightly toward me.

Reasons.

1. greeting.
2. turning towards me-> makes me feel uncomfortable, I.E. the "come on" stance.

3. :17-:23 He addresses me-asks about the book & I respond by showing him the cover.
4. 1:23 He moves his gaze to the table & books to his right.

Subject 2.

1. :06 S looks up-apparently B enters.
2. :18 B asks about book, S responds.
3. 1:39 B & S look & smile.

3. addressing me-> trying to engage me in conversation again makes me feel wary, especially as he is a man. He directs too much attention towards me, which makes me suspicious of him.
4. turning away-gets the point I don't wish to communicate nor have eye contact.

Reasons.

1. S acknowledges entrance.
2. feeble attempt at establishing conversation.
3. shared acknowledgment of discomfort.

Real InteractionDyad 1

Subject 1

1. :14-:20 Mike comes in, introduces, sits down.
2. :20-:22 Kathy gestures to me with her hand-asks a question, smiles.
3. :23-:28 I ask a question.
4. :29-:44 I pick up a magazine, look at it briefly, put it back.
5. :51-1:01 Kathy fiddles with her earring.
6. :55-:57 I scratch my neck.
7. 1:11-1:12 Kathy nods agreement to something I said.
8. 1:26-1:27 Kathy talks, I nod agreement.

Reasons.

1. was important because it started off the interaction in a normal and comfortable way. (I introduced myself probably because I figured it was the proper thing to do, and I didn't know what else to say.)
- 2 are important reciprocating gestures & 3. in the conversation.
4. I don't know why I picked up the magazine, I can't remember what it was now. I put it back because I was concentrating on what she was saying.
- 5&6. could be related-imitation.
- 7&8. reciprocating agreement.

Subject 2.

1. :13 greeting with smile as Mike enters, put magazine down.
2. :14-:15 Mike initiates introduction & hand shake.
3. :39-:40 while Mike is still holding magazine, C is getting more into conversation & moves closer.
4. :42-:45 Mike puts magazine down.

Reasons.

1. Indicates openness, friendliness, ready to interact rather than look at magazine.
2. indicates openness, friendliness, assertiveness, willingness to interact.
3. unperturbed by the "back-up" device (Mike holding magazine) shows C is eager to communicate.
4. shows Mike is willing to continue communicating.

Dyad 2

Subject 1

1. :07 Greeting with a short smile and raised eyebrows.
2. :11-:21 Both of us glance around the room but appear to not want to look at each other.
3. :55-59 Jamie speaks, we discuss how we were selected for the experiment.
4. 1:11-1:15 We both look away again.

Reasons.

1. I feel that I tried to appear friendly when I greeted Jamie.
2. It felt awkward to me when we first met and were both silent while we glanced around the room.
3. When Jamie began to speak it made me feel more relaxed, and I perceived him as being a friendly person.
4. This was another awkward period of silence.

Subject 2.

1. :07-:08 James walks in, both greet each other.
2. :28-:34 Both look up at cameras, Kirk smiles.
3. :54-1:12 First conversation is struck.
4. 1:26-1:30 James about to say something, Kirk anticipates.
5. 1:40-1:43 First mutual smile.

Reasons.

1. was important because of the breaking of the ice.
2. both trying to find something mutually interesting, Kirk realizes this and smiles.
3. The ice is really broken-we both realize that we are "social".
4. Kirk feels the tension.
5. The first mutual chuckle means that this isn't going to be bad.

Dyad 3

Subject 1.

1. :16-:24 -both sat down huffing and puffing from biking and running to the lab.
2. :24-:53 -started talking about why they were huffing and puffing.
3. 1:04-1:12 x breaks the silence by readjusting belt bag & then y

Reasons.

1. was important because it was a common element between both individuals so it was easy to start a conversation (#2) around it.
3. broke the silence otherwise it would have become very uncomfortable for both.

- readjusts herself in the seat.
4. 1:28-1:40 Y looks up from ground and starts talking again.

Subject 2.

1. :24 conversation begins.
2. :33-:36 we both looked at the floor.
3. :53 conversation ends, silence, and a lot of looking around.
4. 1:06-1:11 conversation again. Brian looks in his pouch for kleenex, conversation ends-both stare at floor again.

Dyad 4

Subject 1.

1. :04-:08 Suzanne enters room; Karen & Suzanne establish eye contact.
2. :12 Suzanne introduces herself & extends hand.
3. :15 Karen puts magazine down.
4. :26 Suzanne lowers leg to mirror Karen's posture.

4. Again #4 broke the silence. That conversation was needed so each subject could feel more at ease.

Reasons.

1. The opening conversation is the most important because it is the ice breaker and breaks the opening tension and nervousness.
2. The fact that we both looked at the floor showed our nervousness and unsureness of what we should be doing without any prior instructions (no eye contact).
3. The closing of the initial conversation closed off anything that we had to say at the time. This led to us being very quiet and the beginning of us looking around for something to do.
4. We did start to talk again but really didn't know what to talk about. This really seemed to kill the interaction.

Reasons.

1. This was anticipated meeting-"first impressions" are critical-eye contact essential to communication.
2. Suzanne has "opened the door" to communication by telling me who she is-and establishes physical contact by offering her hand.
3. Putting the magazine down signifies Karen wants to give full attention to conversation with Suzanne.

4. "Mirroring" is a form of non-verbal movement which establishes "rapport" or empathy, creating a "safe" environment.

Subject 2.

1. :10-:14 introduction
2. :26-end I lean forward while talking.

Reasons.

1. The introduction was important as it made our situation more comfortable. since this is the "normal" thing to do.
2. Me, leaning forward -closer to Karen showed that I was interested in our conversation.

Dyad 5

Subject 1.

1. :18-:20 Tracey looks at me as if expecting more response.
2. :31-:39 I look up in response to Tracey's comment about the cameras but do not make much of a response; look down at magazine again.
3. :38-:42 Tracey takes a newspaper but continues to look in my direction and then she sort of sighs.
4. :50-:51 Looks my way one more time but sees I'm still reading.

Reasons.

1. After I greeted her with "Hi" I went back to my reading however she expected more of a response from myself upon her entry.
2. I again do not make much of a response to her comments but continue to read the magazine.
3. Tracey has an expectation of myself and, unknown to me, she seems a bit surprised that I am not more talkative.
4. She looks my way to see what I'm doing and perhaps to see if I want to talk.

Subject 2.

1. :12 Said .ello (both of us) J. looks up.

Reasons.

1. We greeted each other which made it a bit more relaxing.

2. :30-:35 small talk (initiated by Tracey).

2. We both acknowledged the presence of the cameras, which in a way vocalized why we were here.

Dyad 6

Subject 1.

1. :08-:11 Caitlin comes into the room.
2. :53 Caitlin begins conversation.
3. 1:31 Caitlin starts conversation again.

Reasons.

1. we first meet.
2. first person to speak.
3. pick up conversation again.

Subject 2.

1. :08-:11 G enters room A looks at G.
2. :14 G looks at the door.
3. :53 G asks a question.

Reasons.

1. Is important because being in the room gives a probability of interacting with Anne.
2. Possibility of us both remaining silent for 90 mins if a question was not asked.
3. I turn my head and looked at Anne when asking a question. My posture was relaxed, because I did not realize that I was in an experiment.

Dyad 7

Subject 1.

1. :07-:09 smile and "hi" greeting the person.
2. :20-:23 Y starts conversation- "you're a student as well".
3. :34-:40 exchanging info about school. Y is controlling

Reasons.

1. smile & hi are important when someone is entering the room, helps "break the ice".
2. the conversation is important to reduce tension.
3. to discuss similarities is important

- conversation but is moving about - hands touching face-X is in same position.
4. 1:30-1:31 Y glances at X for response -no response Y sitting back on her chair.
 5. 1:32-1:33 Y crosses her legs and says "are we to wait for her?"

Subject 2.

1. :08 A looks up and smiles as B enters the room.
2. :09 A says "hi", looks down (breaks eye contact) crosses room.
3. :18-:29 A turns face to B and speaks, at :29 B looks away.
4. :32-:39 A speaks to B, B looks at A, at :39 A looks away.
5. :44 A looks at B and speaks (:44-:54)
6. :51 B laughs, A smiles.
7. :54 A looks away, gazes at floor.

Dyad 8

Subject 1.

1. :11-:21 eye contact, mutual laughing
2. :21-:23 M lays down magazine. A picks up magazine.
3. :31-:34 pregnant pause.

- to understand the individual.
4. to cross check what the other person is doing before leaping into a conversation.
5. the question helped break the tension.

Reasons.

1. initial posture of A facilitated eye contact.
2. eye contact was broken.
3. eye contact and interaction initiated.
4. eye contact and interaction continued.
5. eye contact and interaction.
6. both smiling.
7. eye contact broken, posture of A prevents eye contact.

Reasons.

1. Indication to each other that we were open to communicating.
2. Indicating attention will focus on other person-at least not be distracted or give sign of not wanting to interact.
3. Lapse in conversation forced more conversation.

Subject 2.

1. :10-:11 X or Y say Hi roughly the same time.
2. :13-:14 X sits, makes comment.
3. :21-:22 X picks up magazine, Y puts hers down.
4. :35-1:14 Y asks question, X responds.

Reasons.

1. By one party (and particularly by both X and Y) saying hi, this introduces an opportunity for conversation (esp. a friendly one) "polite start".
2. Reinforces opportunity for conversation as a greeting can end without conversation flowing.
3. By Y putting down her magazine, the opportunity for conversation is reciprocated.
4. Y starts conversation, X continues it.

Dyad 9**Subject 1.**

1. :10-:20 names, introduction, appraisal -H fixes hair on sitting down. B smiling & looking, nods head says "hello". H smiling & averting eyes, nervous laugh, exchange names-first sustained eye contact (:19).
2. 1:00-1:15 Heather laughs talks about where she was born, puts hand on her leg & returns question to B.

Reasons.

1. Establish that the other person is okay, that you approve (by smiling).
2. Keep conversation going, rather than lapse into uncomfortable silence.

Subject 2.

1. :15-:19 introduced each other.
2. :19-:32 conversation on being filmed.
3. 1:00-1:02 began to enquire about the other.
4. 1:03-1:14 conversation flowed easily.

Reasons.

1. The introduction began the interaction on a friendly basis.
2. Talking easily about the different situation we were both in eased the tension.
3. Asking questions made the

conversation flow.

4. Talking is always better than silence in a conversation.

Dyad 10

Subject 1.

1. :21-:22 H & E exchange smiles.
2. :53-:59 E asks H question, H looks over & answers.
3. :59-1:00 H pauses, asks E question.

Subject 2.

1. :20 sec. Eta enters and is greeted by other subject who says "hi" to her & she acknowledges & says "hi" back.
2. :26-:31 sec. Eta makes a comment about the door, whether it is supposed to be open or shut.
3. :32-:34 Other subject says something & Eta smiles back.
4. :40 Eta asks the other subject if she was a psychology student
5. :41-:49 Heather sits up and runs her left hand through her hair and mentions something about community colleges and university programmes.
6. :52-:60 Conversation starts about summer courses, undergraduate studies, Malaspina college offering degrees, UVIC courses, community college involvement in degree programmes.

Reasons.

1. Initial exchange-important because first and because establishes friendly intent of both partners i.e. both smiled, made eye contact, said "Hello".
2. E asking question-started conversation going.
3. H responding & asking further question & kept conversation going.

Reasons.

1. Both subjects looked and smiled at each other when they said "hi".
2. The closing of the door created the "breaking the ice" atmosphere. Eta asked Heather if the door was supposed to be closed. This produced a response from the stranger.
- 3 Questions about university gets - conversation going.
- 6.

APPENDIX C

**Study 2 Raw Data
Observers' Descriptions of Situations and Perceptual Information.**

Study 2

Summary of Subjects' Descriptions of Perceptual Information Leading to Decisions of Relationship

Dyad 1, Jamie and Kirk

1. Relationship: They do not know each other but they know they are there for the same reason.

Perceptual Information: They just say a brief "hi" and then both sit without speaking-B looking more uncomfortable than A (:18-:29). The question "How did you get into this?" demonstrating they knew they were both there for the same reason.

2. Relationship: They are complete strangers. Both are participating in an experiment. The 1st man, perhaps because he is a student, seemed more at ease than the 2nd, although both displayed discomfort. Their lack of instruction before hand would set the stage for this.

Perceptual information: The sparring that took place between them before they finally spoke made it evident they were strangers.

3. Relationship: These people do not know each other at all, the only common ground is that they are both participating in the same experiment.

Perceptual information: Firstly, the immediate "hi's" were not followed by any evidence of a past relationship (no "how's it been" etc.). Secondly, the amount of nervousness in each subject's posture points to an uncomfortable first meeting. Finally, the first question of Y and X's answers suggests neither subject knew each other.

4. Relationship: Strangers-are awkward with each other.

Perceptual information: Limited discussion, seem awkward with each other.

5. Relationship: These are two strangers forced into an uncomfortable wait in a room where one person (1st person) is unwilling to make an effort to make conversation. Second person is clearly the victim of the 1st person's lack of interest and is obviously nervous and uncomfortable.

Perceptual information: 2nd person fidgets with his cap, he seems to squirm in his seat and looks around for some diversion. He also makes several attempts to initiate dialogue.

6. Relationship: Both in an unknown situation and both people do not know each other, one seeming more unsure than the other.

Perceptual information: There was no immediate transaction when Jamie came in besides the polite "hi" upon walking in.

7. Relationship: Strangers but have something in common, being students, being interviewed for a psychology experiment.

Perceptual information: Unwillingness of Red & Grey to look at each other-there was no "friendly greeting" at the beginning.

8. Relationship: Two total strangers appear to have been made to go and wait in a room without any knowledge of the reason.

Perceptual information: B asks A "How'd you get hooked up with this?" A responds he is in a psyc class here. B explains his relationship with Jennifer.

9. Relationship: First person may have initially been relieved that someone else is also in the room however second person doesn't seem as if wants to engage in conversation. The second person's uncomfortable feeling makes the first person uncomfortable.

Perceptual information: The first event above [as second person enters the room the first person looks up, both say "hi" but second person looks away. First person looks like he would like to engage in conversation but the second person gives the signal by looking away that he doesn't want to talk.] also the time that elapsed before the second person actually began the conversation.

10. Relationship: One person is making overtures regards communications with the other.

Perceptual information: In event # 3 [the event where they are both smiling at each other indicates that they are ready to communicate in a friendly way] A & B are smiling at each other-would suggest a degree of friendliness.

Dyad 2. Sheila and Mary

Relationship: In this situation one subject (B) is uncomfortable and one is not (A). B wishes to interact or communicate, and A, who is absorbed (in magazine) and is not restless or uncomfortable, does not actively take up the interaction.

Perceptual Information: In each of the "looking" events, B seems to be expecting A to return eye contact in order to initiate interaction or acknowledgment, and seems frustrated by A's lack of attention.

Relationship: Two strangers meet in an environment in which neither is comfortable or familiar. Blue looks for support from Purple; she needs reassurance. Purple is not interested in looking for reassurance; she's closed off about showing her nervousness & discomfort.

Perceptual information: Blue initiates every exchange. She continuously turns toward Purple for feed-back. The way in which she speaks suggests deference to Purple; she wants purple to relieve the strain of this uncomfortable situation by talking and maybe sharing that she too is nervous. Purple's posture suggests that she has marshalled her defences & prefers to "fight this on her own". Purple doesn't want to share anything.

Relationship: Strangers: I feel b girl is amused with situation-obvious avoidance from p girl. b girl involved in game of communication or need for it. Both uncomfortable.

Perceptual information: Strangers because no recognition is seen in each other. b girl is amused with situation (1:15-1:19) deciding next point of attack. Gaining courage through fiddling with magazine. Eyes darting skyward point to amusement and playing a game. B uncomfortable, in constant conversation, and fiddling. p girl's rigidity and avoidance of eye contact.

Relationship: They don't know each other, in an office or waiting room. They are both nervous.

Perceptual information: If they knew each other y would have acknowledged x. It is some kind of waiting room because x asks "been waiting long?"

Relationship: These two women are in an office of some kind and it's to do with very personal situations. Neither wants to talk about their situation but the blue coat woman I think would like to maybe try and get some support. They are total strangers sharing maybe a similar experience, but it seems very personal and maybe embarrassing to talk about. The woman in the Blue coat is trying to talk with this woman to ease her own mind.

Perceptual information: I can see it in their movements that they are thinking about their problems and pretending to read. They both look very embarrassingly nervous by the way they move. The blue coat woman would really like to talk to the other woman and tries to gain her attention several times.

Relationship: Complete strangers.

Perceptual Information: The lady in pink is hesitant to talk to lady in purple because it's a fact that if you don't know somebody, you always tend to tell them in a way

"hey I don't know who you are, why are you talking to me".

Relationship: They don't know each other, they're patients/clients maybe waiting for a mammogram, obstetrician, psychologist. They are both nervous and neither really wants to be there. B is more open & desires any human contact, A is more reserved. They may both be somewhat embarrassed by being there. B is more openly nervous but A is also nervous. They attempt a solution to this in different ways.

Perceptual information: I know they don't know each other because they don't greet each other. The waiting room looks like a waiting room (magazines) & B asks A if she's waiting for an appointment. The word appointment indicates that they are waiting to see someone else, a professional (hence the need for an appointment). Their nervousness is indicated by B's fidgeting & A's preoccupation with the magazine & rigid body (she moves very little throughout the tape & holds her magazine in an awkward rigid position. The fact that they don't really want to be there is indicated by A's statement near the end of the tape " I haven't had to come here before." & B's concurrence. This also gives a clue to why they might be embarrassed. B's openness is indicated by her open body stance & her desire to communicate. A's reservedness is indicated by her closed body stance and her unwillingness to engage in conversation. That they attempt to solve their fears in different ways is shown by B's determination to start a conversation & A's equal determination to disappear into her magazine.

Relationship: Strangers; y is more open, friendly and wants to talk, she seems more comfortable in this situation communicating. x is the opposite e.g. introverted, not wanting to talk, uncomfortable communicating.

Perceptual information: Strangers, refer to 1. no greeting between the two, y wanting to communicate -see events 1,2,4,6,8,9,-y is looking at & talking to x, fidgets when not talking, refer to event 7, x not wanting to communicate refer to events 2,6,10, x uncomfortable talking refer to 6 and 10.

Relationship: These two people are strangers, who are in the same ambiguous situation. However, they seem nervous or embarrassed about their situation.

Perceptual information: Throughout the tape #1 appears uncomfortable because of her posture, and her rigid reading of her magazine. #2 appears uncomfortable because she is always looking up, trying to talk to #1 and quickly flipping through her magazine. Lastly, their final exchange 1:26 clearly indicates nervousness for #2 and seems to imply a sense of awkwardness for #1.

Relationship: Strangers waiting to see someone.

Perceptual information: As it seems as though they don't know each other starting the conversation looked difficult, and one question was "have you been waiting long?".