THE ALPHA PHASE: WHEN AND HOW INTERACTIONS ARE INITIATED, LIMITED OR AVOIDED.

by

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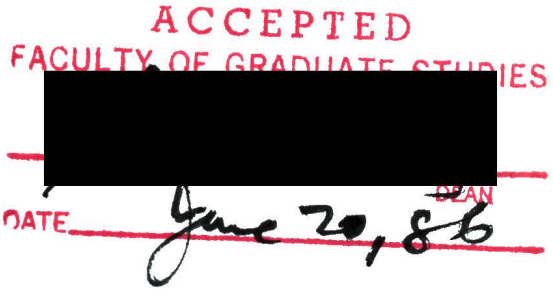

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ABSTRACT

This thesis presents a model of a functional view of social interaction, focussing on how an encounter with another person is managed, that is, how our initial behaviour initiates, limits, or suppresses a subsequent interaction. The model proposed that (a) there are different degrees of relationship in interactions, and these must be established mutually and (b) the degree of relationship is established by a pattern of dyadic behaviours in a temporal phase, the alpha phase at the beginning of an interaction.

These dyadic behaviours were studied experimentally. Three different situations were created by giving pairs of strangers, all females, one of three different tasks, each of which would implicitly dictate a certain degree of relationship: (1) working on a puzzle with someone else, (2) working individually on two separate puzzles, or (3) working individually on two separate puzzles while under time pressure. The model predicted that the alpha phase for the three different tasks would follow three different patterns, by which each dyad would establish its relationship. The interactions of the pairs were videotaped and then analyzed by microanalysis of synchrony methods. Results supported the model. The pattern of behaviours differed significantly in magnitude, timing and duration for each of the three conditions in the alpha phase. Experimental insights are discussed and further studies suggested.

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DEDICATION

This thesis is dedicated to my mother, Noreen and posthumously, to my father, Alex Adamson for teaching me to make decisions based on the important values in life, for unconditional love and support, for being courageous nonconformists and for starting an outstanding poetry book collection for me when I was five years old.

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*

I have been one acquainted with the night.
I have walked out in rain--and back in rain.
I have outwalked the furthest city light.

I have looked down the saddest city lane.
I have passed the night watchman on his beat
And dropped my eyes, unwilling to explain.

- Robert Frost

CHAPTER 1

A MODEL OF INITIAL ENCOUNTERS

The moment we encounter another person, a social situation exists that will exert an influence on all our behaviour in this particular interaction. What behaviours will be engaged in, what will be their function, and how will they vary from one situation to another?

Parts of these questions have been addressed from many diverse perspectives. Ethologists such as Eibl-Eibesfeldt, Blurton-Jones, and Brannigan and Humphries have studied the phylogeny of certain behaviours and their adaptiveness to the social and ecological environment (for example, smiling as a signal of appeasement). Sociolinguist Elizabeth Bates looked at the influence of interactive processes on language development in children. Social anthropologists Erving Goffman and Adam Kendon have viewed interactions as encounters. For Goffman, each social situation has within it roles for each participant, roles that are negotiated by a reciprocal "definition of the situation". Kendon's structural approach examines how behaviour helps to organize social encounters. Communication theorists Bateson, Jackson, Haley, and Weakland's research with schizophrenics led to a truly interactive theory of communication. With the exception of Elizabeth Bates' experiments, all of these studies are either descriptive or theoretical. All, however, have a common theme. In contrast to theorists who focus on the individual and on processes "inside" the person, these theorists focus on the context, which includes not only the physical environment but especially other people. In other words, behaviour is adaptive to its physical and social context. Moreover, the social context includes

a reciprocal relationship with others, so the behaviour of the interactants is determined by mutual influence.

The model to be presented here will propose a view of social interactions, compatible with the theories above and in contrast to theories focussing on the individual. Specifically it will focus on how an encounter with another person is managed—that is, how our behaviour initiates, limits, or suppresses an interaction. As will be seen in Chapter 2, other researchers who have studied initial encounters have hinted at such a model, based on their observations.

I. There are different degrees of relationship in interactions, and these must be established mutually.

This model assumes that in every interaction there are different possible degrees of relationship. Within each interaction there is a range of involvement, a temporary status for the interactants unique to the interaction of the moment. Relationship, as used here, does not mean role (as, for example, a doctor-patient relationship), nor does it mean status in the sense of superior-subordinate status. Degree of relationship may be thought of as the degree of affiliation or "togetherness" evident from overt behaviour. For example, a pair working on a task together manifests an affiliative relationship, whereas two strangers who pass on the street display a minimal relationship--they act as if separate or isolated. (Notice, though, how the behaviour of strangers is still coordinated and complementary; the behaviour of both makes it possible to remain strangers and pass each other without colliding.) Two friends may be working side by side but

be too busy to talk; they would have the relationship of non-conversants but obviously only as a transient state; it is their relationship for this particular interaction. In between would be, for example, the "small talk" relationship, in which overt interaction occurs within clear limits. Most of the examples to be given here, and the research to be reported, involve strangers, but the model applies equally to friends, co-workers, and other people who know each other.

The model assumes, further, that in order for an interaction to proceed smoothly the degree of relationship must be established mutually. An interaction will not be smooth if one person is behaving in accordance with the relationship of "strangers who don't talk to each other" and the other is behaving as if the relationship is one of "strangers chatting". For example, if one person is standing in a line-up at the bank mentally balancing his chequebook and the person behind him starts telling him why she likes this bank, he will probably nod, mumble "yes", and terminate the exchange quickly. The other person might wonder what went wrong and may falsely regard him as unfriendly. The answer lies not in the personality flaws of the interactants ("pushy" or "unfriendly") but in the nature of this particular interaction. The two people did not have a mutual "definition of the situation" (Goffman, 1959, p. 1). They had not established a "chatting" relationship; one of them was trying to chat while one of them was trying to think. The same encounter with the relationship mutually established might proceed as follows: Two people are standing in a bank line-up in silence; after a few minutes, they exchange a quick glance, then small smiles. After a second glance, one person tells the other

why she likes this bank; he agrees and begins to offer explanations of why the service is slow on this particular day. They have now mutually established a certain degree of relationship and may continue to talk on a level appropriate to it until a teller is free.

Another example of two strangers mutually establishing a relationship for an interaction is behaviour on airplanes. Two strangers who find themselves seated next to each other on a plane can either talk to each other, as the situation is conducive to conversation and chatting is an accepted pastime between passengers, or ignore each other for four hours, as silence is also accepted between passengers. Whether they talk or ignore each other--or more precisely, how they arrive at one kind of interaction or the other--is the subject of this thesis.

II. The degree of relationship for the encounter is established by a pattern of dyadic behaviours in the alpha phase.

This model proposes that the degree of relationship in any particular interaction is established by communication in the earliest seconds of the encounter--a period that will be called "the alpha phase". This broad premise subsumes several related assumptions:

First, any initial interaction is functionally differentiated over time. The degree of relationship is established in the earliest moments of an interaction, the alpha phase. As soon as any two people come in contact with each other, their behaviours are establishing the degree of their relationship. As will be seen, the alpha phase may be as short as fifteen seconds. Most importantly, the alpha phase must occur before

the rest of the interaction can take place, that is, before interaction within the established relationship. Once a relationship has been established, the subsequent (or "task") interaction can proceed. Thus, there is an initial phase (the alpha phase) in which the nature of a relationship is mutually established and then another subsequent phase in which it is implemented.

In other words, the alpha phase is a period of time (usually a very short period) beginning immediately when two people encounter one another and before they interact with any degree of relationship. This period is used to establish what the relationship will be, so that the subsequent interaction will proceed smoothly. If the appropriate relationship is established in the alpha phase, then the "task"--whatever it is--can be accomplished. For example, the strangers on the plane who establish the relationship of "two strangers not talking" can settle into this relationship together and, soon after the alpha phase, each stranger becomes psychologically not there for the other. If a clear relationship is not established, it is not possible to get on with the task. In the bank line-up example, the crossed interaction might continue in fits and starts, with one person continuing to start conversations and the other person continuing to end them. They would never get to a mutually established relationship, either of conversants or of non-conversants.

The alpha phase, then, is the first part of the encounter; the reciprocal behaviours engaged at this time will determine the interaction immediately following. The relationship established in this

phase will calibrate the subsequent interaction, regulating and limiting its possible fluctuation.

Logic suggests certain necessary characteristics of the behaviours in the alpha phase. They must be quick, mutual, standard, and for the most part nonverbal. Because the theory proposes that the alpha phase is over in as little time as fifteen seconds, these behaviours must occur quickly. They must also be brief because a number of behaviours may be needed--some simultaneous and some alternating. Since the relationship must be established mutually, the behaviours may be the same, reciprocal, or coordinated. Because strangers as well as acquaintances will use the system, the behaviours must be standardized. Thus, total strangers can assume their parts as smoothly as two dance partners. Similarly, because the subsequent interaction may be "not talking", these behaviours must be primarily nonverbal. A relationship with a stranger has to be established before launching into speech. Often without the exchange of a single word, an interaction can be established by each person's behaving in the perfect complement of the behaviour of the other person. What are the actual behaviours of the alpha phase? We know when the behaviours occur and their characteristics. They are primarily nonverbal: smiling, mutual gaze, posture, facial expressons, and paralanguage (e.g., tone of voice).

This theory proposes that the behaviours occurring in the alpha phase are not just single or isolated behaviours in any random order. They are behaviours in a particular pattern. The pattern that encourages, regulates, or terminates subsequent interaction is based on the magnitude, timing, duration and order of behaviours.

Magnitude refers to the amount of any behaviour, such as smiling, e.g., a small smile or a big smile with teeth showing. Talking may vary in magnitude by the number of words or by the variety in tone (for example, a conversation uttered in a monotone has less magnitude than an animated conversation complete with gestures). Also, the number of body parts turned to or away from the other person may vary.

Timing refers to when something happens in the alpha phase and is perhaps the most difficult aspect of behaviour to coordinate. Eye contact is only possible if both people look at each other at the same time. The timing of looking at and looking away from some one must be synchronous--any delay in looking is noticed and may cause the other person to look away sooner, and eye contact may be more difficult to establish thereafter.

Duration is how long a particular behaviour lasts. We are all intuitively aware of how much eye contact is appropriate in any situation, although we may be unaware of the actual time of such durations. Similarly, verbal dialogues can be of widely different durations.

If behaviours are to communicate a message within a short time span, they must occur in a certain order. For example, a smile that appears and disappears before eye contact (or at least before the other person is looking) communicates nothing. It has to be seen to be communicative. Note the importance of mutuality in the formation of the pattern of behaviour. Timing, duration, and order all require the cooperation of the other person.

Other aspects of the alpha phase

It is interesting to note here that the interaction occurring within the alpha phase is analogic (Bateson, 1951); it is a small sample of what the subsequent interaction will be like. The behaviours are similar but are not the same. For example, if there is very little mutual gazing, no verbal exchange, and only a small smile in the alpha phase, then the subsequent interaction may be silence with no other acknowledgment of the presence of the other person. Watzlawick, Beavin, and Jackson (1967) suggested that nonverbal, analogic communication would be used particularly for the definition of relationship. These behaviours may also be thought of as metacommunication, as the content of the communication is secondary to the relationship being communicated. Here are two examples illustrating these concepts:

Two airline passengers who are going to ignore each other may have the following interaction: The seated passenger reaches for a book as the approaching passenger takes his seat. As the approaching passenger begins to sit down, he glances quickly over to the left at the first passenger, sees that he is reading, notices that he has not looked up at his arrival, then reaches for a magazine and divides his attention between the magazine and whatever is happening to his right. The first passenger may glance over quickly to see if his seat-mate is now occupied. A relationship has been established; they are two "non-conversants." The behaviour of reading a book, especially of being too engrossed to look up from the book when another approaches, signals or communicates that the reader is not going to make conversation (at least not in the near future). The behaviour of the other person also

displays their reciprocal relationship of non-conversants. The "reading behaviour" in the alpha phase is analogic and may even be slightly exaggerated. After the relationship is established, actual reading becomes possible as the other person ceases to be psychologically present. The subsequent interaction in this example is no (overt) interaction.

An example of the same kind of interaction within a shorter time period occurs in an elevator. Often two or more people will stand side by side, craning their necks to fix their eyes on the numbers lighting up above the door; even when there are no numbers, people will still stare at the spot where they would be. The behaviour is metacommunicative about the relationship. Two people are staring at a spot as if there is something there, when they both know there is nothing there. What they are not doing is looking at each other--the relationship is clearly "non-conversants."

Further examples

How then are these mutually coordinated behaviours organized, what are their patterns, and is there for each social situation a distinctive pattern of behaviours? When an interaction goes smoothly, our behaviours go virtually unnoticed. Often only when the behaviours are not mutual or reciprocal do we actually notice the encounter. Examples of successful everyday interactions that are probably taken for granted follow:

Two strangers walking down a dark street late at night coordinate all their behaviours in order to pass without looking at each other or speaking to one another; they pass as if the other person were a tree.

Yet they do not bump into each other, and they make sure each has an equal share of the sidewalk. They coordinate all their movements together to have the relationship, not only of non-conversants, but nonexistence!

When there are no external limitations, such as time and context, the limit of the interaction can be established by the participants in the alpha phase. For example, two people meet in a hallway and exchange the ritualized greeting: "Hi, how are you", answered by "Good, how are you?" (notice there are exactly four words each). When these messages are delivered in a flat monotone, accompanied by other nonverbal indications (the pace of walking is not slowed, the body is not turned to the other person but is still facing the direction it was headed in earlier), both individuals are indicating these are not real questions. The interaction will be limited to a formula. In contrast, when two people meet in the hall and greet with enthusiasm and pleasure in their voices, the same question can sound entirely different. If it is delivered with an emphasis on "How <u>are</u> you?" (while coming to a complete stop, with the participants fully facing each other), then it is a real question. The subsequent interaction will have a different set of limits than the previous example.

An example of an interaction with situational limitations may occur in the grocery store. Two people are standing side by side looking over the radishes (which are terrible). They exchange glances, raised eyebrows, and grimaces, all referring to the condition of the radishes. A relationship has now been established of two people with the same opinion about the radishes, and any subsequent interaction will

be a discussion of the radishes and perhaps other produce. It is interesting to note here that, although a basis for conversing has been established, it would be very odd if one of the people turned to the other, extended her hand, and said "How do you do? Do you shop here often? Do you live near by?" In other words, a basis for conversing has been established but only within the relationship of "two shoppers chatting" and only on the topic of vegetables.

In a different situation, a temporary limitation may be in effect, and establishing the relationship is complex and logistically tricky but necessary if the subsequent interaction not to be limited. For example, if A and B are talking and person C enters the room wishing to talk to A, then A and C will exchange eye contact and smiles several times, and A may orient his body towards C while he continues to talk to B. The nonverbal interaction of A and C is analogous to being put on hold on the telephone. It is effectively--though nonverbally--saying, "I'm on the other line right now, but I'll be with you in a moment". So C will wait as a listener for a turn to talk with A. Another possible way the situation could be handled would be for A immediately to summarize the conversation A and B were having, whereupon C could join in and converse with A and B.

Sometimes the same people encounter one another more than once a day, and the interactive relationship must be established each time. For example, a nurse who arrives at the hospital at the start of a shift has a long conversation with a co-worker, but when she encounters the same person in the corridor later they exchange exaggerated facial

expressions indicating they are harassed and busy. They cooperate to pass each other without any further interaction being necessary.

All of these examples are situations where the interactions were smooth and successful--successful in that a reciprocal relationship was established. Interactions where a mutual relationship is not established, where there seems to be a misfire in the smooth exchange of reciprocal behaviours, are often more noticeable. The hospital setting provides another example: A nurse enters a ward and gives her customary announcement, "Hi, I'm Pat, I'll be looking after you". Her friendly but businesslike manner conveys an obligatory statement and is usually answered with a perfunctory "Hi" from the patients. One day, however, an elderly gentleman patient sits up in bed and offers his hand and his name: "How do you do. I'm Mr. Newroth." There is a momentary awkwardness, as he has proposed a different relationship from the one her brusque, businesslike behaviour had initiated. A relationship has not been established mutually yet, and the nurse is forced to change her task behaviour (going about the business of organizing the room) to come over to shake hands, completing the alpha phase.

In summary, every encounter with another person results in an interaction being initiated, limited, or suppressed. Interactions are differentiated over time. During the first phase, called here the alpha phase, a degree of relationship is established which calibrates the subsequent phase, the task phase of the interaction. The degree of relationship is established by a pattern of reciprocal behaviours; these behaviours are mutual, quick, standard, and for the most part nonverbal. Most importantly, the behaviours in each social situation occur in a

particular pattern based on the magnitude, timing, duration, and order of these behaviours.

The next chapter will examine previous theory and research on greetings and related topics. The following chapters will describe an experimental test of the model proposed here. In this experiment, the degree of relationship between strangers was varied so that the behavioural patterns emerging in the alpha phase could be examined.

CHAPTER 2

HISTORICAL REVIEW OF THE LITERATURE

How people begin an interaction has been studied for many years in the field of anthropology, under the general heading, greetings. As early as 1889, anthropologist Ling Roth reported various greeting behaviours around the world, noting that behaviours in each culture were highly standardized and ritual. An example of Japanese custom reported by Roth illustrates the extent of the ritual. Roth writes:

> Two coolies--the lowest class of society--on meeting, never fail to go through the usual custom in the country, of bowing several times, and asking after each other's health, then that of their families, and so on. Little children act towards each other in just the same way, or if an old grey-headed man meets a little girl six years old, the same ceremony is gone through. (1889, p.175)

He commented that these behaviours are so prevalent and ritualized that the absence of them is remarkable. As an example of the significance of the absence of such rituals, he recalled the following anecdote:

> In the time of the Tudors it appears to have been the custom in England, when a gentleman lost his bonnet, for all those who were with him to doff theirs. It was the omission on the part of his followers to conform to this custom which partly foretold to Thos. Cromwell that he was about to fall into disgrace (1889, p.176).

Books of etiquette documented the rigidity of our own society's greeting rituals in this same time period, as witnessed in the following instructions on bowing from 1894:

> The bow should be a graceful bend, or inclination of the head; not a hasty movement, nor a stiff jerk. A gentleman should raise his hat, indeed take it off his head, but not with a flourish, nor seize it with a sudden dash, as is now so often seen. There is great art in making a bow, dignified and stately, but at the same time neither stiff nor awkward. (Etiquette of good society, 1894, p. 43)

Emily Post (1926) detailed when a greeting may be given: "It is a mark of high breeding not to speak to a lady in the street, until you perceive that she has noticed you by an inclination of the head" (p. 116). She also described how to know when someone deliberately avoids noticing you:

> It may be annoying to be passed by an "unseeing" acquaintance, but one should be careful not to confuse absent-minded unseeingness with alert and intentional slight. A "cut" is very different. It is a direct stare of blank refusal, and is not only insulting to its victim but embarassing to every witness. Happily it is practically unknown in polite society. (1926, p. 26)

For approximately sixty years, greeting behaviours were described in categories of what was said with which accompanying gestures. In 1964, LaBarre presented a state-of-the-art paper on cultural kinesics which listed greeting gestures around the world. The purpose of his

paper was to try to shed light on the boundary line between instinctual movements and culturally learned kinesic codes.

In 1959, Erving Goffman looked beyond the content of greeting behaviours and introduced a new way of thinking about what happens when one person encounters another. He speculated that the behaviour, the words, and the demeanor of one person convey information that will be important for the way the others in the situation will treat him. Over a period of twelve years, he observed these subtle behaviours and articulated their function; so eloquent was his articulation that all subsequent authors quote him and use his terminology. Roth had hinted in 1889 that it was not so much the behaviours themselves that were important but the observance of the ritual. Goffman tried to explain why the observance of the ritual was important, what was being conveyed by one person's behaviour to another, and how that behaviour affected the encounter.

Goffman suggested that an individual projects a definition of the situation (1959, p. 1) when he appears before others and

> that the others, however passive their role may seem to be, will themselves effectively project a definition of the situation by virtue of any lines of action they initiate to him...together the participants contribute to a single overall definition of the situation. (1959, p. 9)

He posited that the definition of the situation has an effect on what follows: "The initial definition of the situation projected by an individual tends to provide a plan for the co-operative activity that follows" (1959, p. 12) and that

it would seem that an individual can more easily make a choice as to what line of treatment to demand from and extend to the others present at the beginning of an encounter than he can alter the line of treatment that is being pursued once the interaction is underway. (1959, p. 11).

Goffman was also the first to suggest that these behaviours would vary from one situation to another within a culture. He referred to the "single overall definition of the situation" as the working consensus and said

> It is to be understood that the working consensus established in one interaction setting will be quite different in content from the working consensus established in a different type of setting. (1959, p. 10)

In 1963 Goffman coined several new expressions describing the subtlest initial behaviours. Civil inattention is the minimal recognition of another person as a social entity:

> One gives to another enough visual notice to demonstrate that one appreciates that the other is present (and that one openly admits to having seen him), while at the next moment withdrawing one's attention from him so as to express that he does not constitute a target of special curiosity or design...Where the courtesy is performed between two persons passing on the street, civil inattention may take the special form of eying the other up to eight feet, during which time sides of the street are apportioned by gesture,

and then casting the eyes down as the other passes--a kind of dimming of lights. In any case, we have here what is perhaps the slightest of interpersonal rituals, yet one that constantly regulates the social intercourse of persons in our society. (1963, p. 84)

He distinguished between focused and unfocused interactions:

> Unfocused interaction, concerned with what can be communicated between persons merely by virtue of their presence together in the same social situation; and focused interaction, concerned with clusters of individuals who extend to one another a special type of mutual activity that can exclude others who are present in the situation. (1963, p. 83)

He also introducted the concept of accessibility. According to Goffman, participants in any social gathering are obliged to be accessible to the others present:

> Participation in a face engagement can be a sign of social closeness and relatedness; when this opportunity to participate is proffered by another, it ought not to be refused, for to decline such a request is to reject someone who has committed himself to a sign of desiring contact. (1963, p. 104)

In 1971 Goffman applied his theory specifically to greetings, describing them as a class of supportive rituals, because they function to maintain relationships. He distinguished between passing greetings and greetings of an encounter. The latter, he felt, reflected back to

the relationship between the participants and forward to a period of "increased access" (1971, p. 77). He said greetings are "ritual displays that mark a change in the degree of access" and coined the term access rituals (1971, p. 79) to refer to the behaviours known as greetings.

About the same time that Goffman was formulating his theory, Hall (1964) was also writing about the initial phase of interaction. According to Hall, information about an imminent interaction may be indicated indirectly. He suggested that communication can be divided up into three interrelated parts or phases: a beginning phase, a peak phase, and a terminating phase. Hall emphasized that what happens in one phase influences the other two considerably. In the beginning phase, there are what he referred to as

> Adumbrations--those indications preceeding or surrounding formal communications which enable organisms to engage in the mutual exchange and evaluation of covert information on what each can expect from the other. (1964, p. 154; italics added)

Following in Goffman's tradition, Schegloff (1968) studied greetings as the opening sequence of conversations. He concentrated on discovering the structure, sequence, and common linguistic patterns of greetings. In his view, the opening sequence permits further interaction. He analyzed tape-recorded conversations of telephone calls to a police station and recorded the sequencing of those conversations. He called the opening sequence the summons-answer sequence; a summons may consist of someone calling your name or asking questions such as

"You know what?" These are answered by responses indicating the listener's availability, for example, "What?" Schegloff notices that the French answer the phone (the summons) with an expression immediately indicating their availability, "J'ecoute" (p. 1094).

Schegloff's (1968) study of verbal conversational sequencing has implications for nonverbal behaviour as well. His sequencing theory is based on the assumption that

> a person who seeks to engage in an activity that requires the collaborative work of two parties must first establish, via some interactional procedure, that another party is available to collaborate. (1968, p. 1088)

He gave as an example an anecdote of two people who were sitting on a bus, beside each other but not speaking, for a long time. Then one of them began to speak but did not turn her head. The other passengers looked around the bus trying to find out to whom her speaking was addressed, since it did not appear to be addressed to her seat mate. It seems that some nonverbal behaviour would be required before launching into speech. Thus, in this case, "availability" has to be indicated nonverbally.

Callan (1970) viewed greetings in terms of everyday ceremonial behaviour and said that it is characteristic of at least Western European society that meetings and partings are structured. Echoing Ling Roth, Callan remarked that beyond the obvious rules about handshaking and etiquette, there is a whole network

> of prescribed behaviour ranging from the most formal and institutionalized to the most minute and momentary--but

apparently essential actions. (1970, p. 114)

Thus, it appears that greetings, although they may be spontaneous, are not in any way haphazard but rather are finely-tuned interactions with a standard structure.

Firth (1972) also concurred with Roth's description of greetings as ritual. According to Firth, a greeting is often mistakenly treated as a spontaneous emotional reaction to the coming together of people, but he argued that sociological observation suggests that it is highly standardized and in a general sense may "be termed ritual since it follows patterned routines; it is a system of signs that convey other than overt messages" (1972, p. 29; italics added). Such a communicative function is evident in societies where the forms of greeting are much more descriptive than affective. He cites as examples typical expressions of greetings in many societies: "You have come" and "Enter /the house/" (Firth, 1972, p. 304). Firth saw these expressions as evidence that what is said is not important but rather only that something is said. Thus, form is the basis of the ritual, not content.

Firth (1972) proposed, further, that verbal utterances of greeting signify recognition of the situation in social terms. In this way, greetings reduce the uncertainty of potentially threatening silence, provide a social frame for the physical movement of coming or going, and put the two people in communication. For example, two people who find themselves together at a party may introduce themselves and follow with remarks such as "I work with Mary (the hostess). Are you a friend of Mary or her husband?" He described greeting as the acknowledgment of a socially acceptable encounter with someone else. In contrast, a merely

physical encounter, such as rubbing shoulders with another person on a bus, is not socially acceptable, and the other's existence is not recognized in a social way. In Firth's view, a social relationship is created only by an exchange of signs, such as a word or a nod. The forms of greeting are symbolic devices that signify "incorporation or continuance of persons in a social scheme" (1972, p. 2). A sign, for Firth, was the recognition of another person as part of a common social situation. He also maintained that, in the great variety of greeting behaviours around the world, the range of these simple sets of words and nonverbal behaviours is small and, although they are highly conventionalized, they are not simply formal procedures without meaning or function. They are usually effective in changing the behaviour of another person.

Kendon and Ferber (1973) were the first researchers to record human greeting behaviours on film to be used later for systematic analysis. Their comprehensive collection of examples and careful analysis outlined the subtlety, variety, and breadth of this topic.

They described greeting as the

> unit of social interaction often observed when people come into one another's presence, which includes a distinctive exchange of gestures or utterances in which each person appears to signal to the other, directly and explicitly, that he has been seen. (1973, p. 592)

They listed several reasons why they chose to study greetings:

> First of all, they have an important function in the

> management of relations between people. It is by way of the greeting that a guest is made to feel properly part of a party. It is by way of a greeting that friends acknowledge, and so confirm and continue their friendship. In the manner in which the greeting ritual is performed, the greeters signal to each other their respective social status, their degree of familiarity, their degree of liking for one another, and also, very often, what roles they will play in the encounter that is about to begin. (1973, p. 593)

Secondly, they felt that the greeting would be an excellent unit of social behaviour to study across cultures, because greetings occur all over the world and would provide insights into what is universal in communicative behaviour. Finally, they suggested that greeting occurs in similar contexts in the animal species and therefore would be useful in making comparisons between animal and human behaviour and in developing a comparative ethology.

The purpose of their study was to develop a description of how people greet one another and to formulate a list of behavioural units occurring time and time again. Their materials were five films and a videotape. Two films and the videotape were made in field studies for this study in particular; one of these, a film of an outdoor birthday party, was their principal document for analysis. Three cameras were used, two fixed on the edges of the site and one that was handheld. The cameras were set far back so that two people approaching each other from a distance would be in one frame. They were able to film a total of 63

greetings from the 45 adult guests; these combined with observations in the other films provided them with a wealth of examples.

Kendon and Ferber used the term salutations to refer to the whole greeting interaction, including gestures and utterances, and then made a distinction between close and distant salutations. The typical pattern of the distance salutation included sighting (seeing someone to greet), orienting (either by the body or torso or with hand or head gestures), and initiation of approach (moving towards the other person). A number of different behaviours followed the distance salutation, as the interactants continued to approach each other. People did not look continuously at each other; they often looked quickly away just before close salutation. Some touched their hair or clothing or drew one or both arms across their own bodies. When they were close enough to begin interaction with speech, they looked at one another, smiled, and got ready for the gestures involved in close salutation (e.g. handshaking). Following the close salutation, the greeters moved out of the distinct spatial and orientational frame they had established for it, and the greeting was now said to be over. What followed was quite variable, but one phase often observed was the "How are you?" phase, in which the interactants engaged in an exchange of information about one another, frequently highly formalised and quite brief.

The main contribution of Kendon and Ferber (1973) is the richness of examples of how the salutation sequence was managed. One example was a greeting with a tentative beginning:

> In these cases we see p hinting to q that he wants to approach him, for example by subtly synchronising his

movements with him, but not approaching him until this hint has been acknowledged with an explicit signal (p. 610).

The differences between the greetings of people who knew each other (such as host and hostess greeting guests) and those of people who did not know each other were also recorded and noted. They observed that when the greetings were between guests (that is, between people who did not know each other intimately), the approach was preceded by "catching the eye" of the other and that

> sometimes one may see what would appear to be an even more tentative form of beginning a greeting. Here p avoids catching the eye of the other, but at the same time he synchronizes his movements with those of the other and he may also glance at the other fleetingly, looking away each time the other looks at him, until the other actually directs a salutation display to him. (1973, p. 616)

Kendon and Ferber concluded that

> these examples support the observations of Goffman (1963) that an exchange of glances is one of the ways individuals give one another clearance for further interaction. After this moment of looking, however, one or other of the greeting pair (or sometimes both) looks away, and each may continue to avoid looking at the other until they are almost close enough for the close salutation (p. 628).
>
> However...though looking away increases sharply in most cases just before the close salutation, thereafter looking at increases more sharply. Almost everyone is looking directly

at the other as he begins the close salutation (p. 634).

The greeting transaction as a whole was seen by Kendon and Ferber as a unit with certain temporal phases. The first phase was sighting and orientation, in which greeters first looked at each other; this generally occurred when they were within ten feet of one another and almost always included a smile. This phase was followed by a distance salutation or announcement, and finally there was an approach phase with a close salutation:

> The distance salutation often seems to function merely to establish that the two greeters have seen one another and that they are now ratified in a greeting relationship, the close salutation would seem to have several additional functions. These have to do with establishing or reaffirming the kind of relationship that the two greeters have to one another, both in reference to all the different situations in which they may meet, and in reference to the specific situation in which the greeting is taking place. (1973, p. 659)

Kendon and Ferber provided a comprehensive description of greetings, yet they concluded, "there are many aspects of the behaviour we have had to leave undescribed" (p. 658). They hoped that further study would be inspired by their findings:

> It is hoped that the detail we have provided, and the format within which this detail has been set, will offer a guide to those who would follow with more rigorous observational and experimental studies (p. 658).

For ethologists, who compare and contrast animal and human behaviour, Callan's assumption that greetings are essential actions has a more literal and salient meaning. Greetings are regarded as signs indicating to others that their approach is acceptable and not threatening. Ethologists assume that human behaviour is adaptive to survival in a social group. Accordingly, they study greetings from a phylogenetic perspective and usually assume that greetings function as signs of appeasement or acceptance (in order to reduce the probability of an attack by the other).

Ethologists Brannigan and Humphries (1972), however, thought that greetings as "signs of appeasement" may be too simplistic an interpretation for the complexity and diversity of human interactions. They claimed that the practical properties of these signs extend beyond the immediate interaction and serve an evolutionary function:

> The biological function of an activity can be defined in terms of selective advantage, in which case the biological function of signals is to modify a reactor's behaviour so that this behaviour will mesh more adaptively with the future behaviour of the actor. Signals should then be regarded as giving information about future likely behaviour and to signal how another person's previous behaviour has been received. (1972, p. 48)

Eibl-Eibesfeldt (1970, 1971, 1972), who was also interested in the phylogenetic adaptation of various greeting behaviours, studied the gestures of born deaf and blind children in social situations and found them to be similar to children who were not disabled. He saw this

similarity as evidence that some social gestures, such as smiling, were innate. Attempting to trace the natural history of greeting behaviours, he speculated that the "reply to a greeting is an important confirmation of one's willingness for contact and to a certain extent it implies a pledge" (p.166). He also pointed out that "The reply to a greeting can relax the tension in a situation." He speculated further that nodding as a greeting gesture is linked to consent: "There is consent in greeting, the consent to friendly contact. In its origin nodding is a ritualized bowing gesture" (p.169).

Greeting rituals have been construed as a sophisticated signal by Laver (1975, 1981), who proposed that the speaker's choice of a formulaic phrase for greeting indicates her perception of the formality of a situation and of her acquaintance and social relationship with a listener. Laver referred to these formulaic phrases, or small talk, as phatic communion (1975, p. 215). He proposed that, once an interaction is well under way, conversational rules and maxims may regulate the flow of talk, but in the marginal phases, that is, at the beginning and ending of interaction, social factors are more important.

According to Laver, phatic communion imparts covert information that helps the participants reach what Goffman (1959) had called the "working consensus" of the interaction (1959). Phatic communion also provides information about the participants' roles in situations where the role structure is not familiar or immediately obvious. In this view, communication (either verbal or nonverbal) in the first few seconds of an interaction has a function extending beyond the observance of common courtesy. It appears to be instrumental in establishing the

context in which a particular type of interaction may take place. Situations that are not ambiguous in terms of the roles of the interactants do not elicit phatic communion, which serves primarily to allow participants in an unfamiliar setting to explore and construct appropriate roles for themselves for that situation.

Laver proposed that the opening phase of an interaction was made up of eight stages. His first stage is mutual eye contact: "To accept eye contact is the first signal of acknowledgment that one accepts the other participant's invitation to engage in an encounter" (1981, p. 219). The second stage is the exchange of some kind of gesture of acknowledgement (e.g., a wave). In the third stage, the participants assume a facial expression indicating attention or geniality (e.g., a smile). The fourth stage is when the participants establish the proximity appropriate for the remainder of the interaction. In the fifth stage, the participants exchange conventional contact gestures of greeting (e.g., handshakes or hugs) appropriate to their relationship. In the sixth stage, the participants take up mutual bodily orientations appropriate to the relationship. The seventh phase consists of "the exchange of stereotyped linguistic symbols used as tokens in the transactions of phatic communion" 1981, p. 220); "small talk" is an example. The eighth and last stage of the opening phase is an indication by the participants that it is time to begin the main business of the interaction. This is suggested by a variety of signals of transition; note that the transition may be to conversation or to silence.

In summary, Laver (1975) suggested that there are two broad functions of phatic communion, namely, the establishment and consolidation of the interpersonal relationship between the two participants and the transition from interaction back to non-interaction:

> One of the chief functions it serves is the facilitation of psychologically comfortable transition from silence to interaction and then from interaction back to silence again. The point has been made that phatic communion is achieved through stereotyped patterns of behaviour and indulgence in such behaviour is almost universal in a very wide range of different types of daily interactions. It seems reasonable to call such obligatory stereotyped behaviour ceremonial or ritual behaviour...phatic communion is essentially a ceremony involved with transitions from one social state to another. (p. 219)

McBride (1975) posited that once two individuals interact, they establish a history together of how they interact. Thus each interaction may be unique, but both interactants use their own experiences to adjust to each other, and these experiences give some direction to the interaction. He said that there is an outcome to interaction that is <u>mutually designed</u>,

> which may in turn become one step along an interactive progression, along which the participants may travel until some stable and mutually acceptable relationship is reached. The goal of the interaction is not to make a

> complete relationship but merely to take an adequate step along the path.../but/ there is no navigation without a destination. (1975, p. 421)

First to do a laboratory study of greetings were Krivonos and Knapp in 1975. They set up a social situation in a video lab where greetings would take place between acquainted or unacquainted pairs. They believed that while

> greeting behaviour is quantitatively only a small part of human interaction, it appears to have important qualitative consequences for the interpersonal transaction which follows it. (1975, p. 115)

They described three functions of greetings: the transition from absence to accessibility is accommodated, any change in the state of the relationship is conveyed, and interpersonal relationships are maintained.

Because, as Krivonos and Knapp pointed out, the literature on greetings is mostly anecdotal and sketchy, without even a taxonomy of greeting behaviours available, their study was designed to provide information on the specific verbal and nonverbal behaviours involved in greetings and to find out whether or not there was any variation according to the degree of acquaintanceship between two people. The point at which a topic of conversation was introduced was taken to be the end of the opening greeting sequence; they found that this occurred after approximately fifteen seconds. Verbal behaviours most common to the opening sequence were topic initiations, verbal salutes ("Hi"), and references to the other by name. The most frequent nonverbal greeting

behaviours were head gesture, mutual glances, and a smile. For unacquainted pairs, the typical greeting sequence was a mutual glance, head gesture, verbal salute, and personal inquiry. Only one nonverbal behaviour differed for acquainted and unacquainted pairs; there was more smiling by the acquainted pairs. There were also more verbal utterances by acquainted pairs.

Krivonos and Knapp concluded,

> There seems to be a patterned behavioural regularity that occurs in the human greeting situation in this study. Other situations may, and probably do "require" different patterns of regularity. (1975, p. 122; italics added)

Krivonos and Knapp also pointed out that opening sequences with the same people may vary as the situation changes, for example, greetings may be shorter and less effusive after shorter absences. They described greetings between people who run into each other constantly every day as following Goffman's "attenuation rule" (p. 118), that is, such greetings would become less expansive, from "hello" to a smile or nod.

Although their study provided information about the differences in greeting patterns between acquainted and unacquainted pairs, Krivonos and Knapp concluded that it

> barely begins to reveal the intricacy of the human greeting...further study needs to be undertaken to refine and clarify the ritual patterns and functions of greetings and to discover how, when, and why they are used differently in a variety of communicative situations (p. 124).

Schiffrin (1977) gathered observations and anecdotes of encounters and proposed that the basic opening sequence consists of three steps: First, there is cognitive recognition of A and B by each other. This is a mental sorting-out process of differentiating potential from non-potential interactions. For example, the other person can be recognized as a member of a particular social class or an ethnic group, or as an acquaintance or not. Second, A and B exchange identification displays. The previous cognitive recognition is usually (though not always) made overt by an identification display which, according to Schiffrin, is "the first ritually required display in opening encounters" (p. 680). Schiffrin proposed that an identification display can consist of more than one behaviour (e.g., smile, walk towards, call the other's name). She suggested that the function of displays at this stage in the sequence is more technical than ritual because "they express the fulfillment of a technical requirement for personal interaction--that individuals know one another" (1977, p. 680). Third, A and B greet by means of access displays. Greetings occur after identification displays and indicate that further access is socially permissable. The main function of these access displays is ritual. Schiffrin said that this basic framework could be regarded as "either the structure of opening sequences or production rules for participants representing possibilities for action within normative limits" (1977, p. 681). She also mentioned in passing that the sequence suggested that A and B simultaneously begin increasing the potential for accessibility; she proposed that it is this simultaneity rather than the first individual's greeting that generates the opening sequence.

Finally, almost a century after the first article on greetings as ritual, Goody (1978) pointed out that living successfully in stable social groups makes complex demands on group members. Basically, these involve anticipating the behaviour of others and altering one's own plans accordingly. In Goody's terms, "social interaction depends on standardization of expression of social intentions and on the clear transmission of messages about these" (1978, p. 13).

How the literature relates to the theoretical model

The reader may have noticed already that each of these authors has touched on one or more parts of the theoretical model outlined in Chapter 1. These connections will be made here more formally.

The first assumption of the model is that there are different degrees of relationship in interaction, and these must be mutually established. Goffman (1959) referred to one person's projecting a "definition of the situation" and the other interactants' confirming or disconfiming this definition by what they do in response or by the action they initiate. Examples of degrees of relationship are his descriptions of "civil inattention" and focussed versus unfocussed interactions (Goffman, 1963). That the degree of relationship is mutually established is expressed by Goffman's (1959) pithy term "working consensus" of the situation and also by McBride's (1975) "mutually designed" outcome of an interaction.

The second assumption of the model is that the degree of relationship for the encounter is established by a pattern of dyadic behaviours in the alpha phase. Goffman (1959) emphasized the importance

of the initial definition of the situation while Hall (1964) proposed three temporal phases of communication, starting with a beginning phase of "adumbrations" that indicate what will follow. Schegloff (1968) suggested that availibility to interact must be established before a conversation can begin, and Kendon and Ferber (1973) described "tentative" greetings where interactants waited for a "clearance" signal before extending a greeting. Ethologists Brannigan and Humphries (1972) and Eibl-Eibesfeldt (1970) described greetings as signs or signals that give information about future behaviour and imply consent to friendly contact. Krivonos and Knapp (1975) described access rituals as opening up access with those one does not know and as expressing "I see you and I am friendly". The first overt behaviours in Schiffrin's (1977) opening sequence are access displays. In Laver's (1981) eight stages of the opening phase of an interaction, the first stage is mutual eye contact signaling agreement to engage in an encounter.

Finally the model proposed that behaviours suggested by the model in the alpha phase are quick, mutual, standard, nonverbal and patterned. Krivonos and Knapp (1975) discovered that these behaviours occur within the first 15 seconds. Schiffrin (1977) and Laver (1981) stress mutuality in noting that it is the simultaneous occurrence of behaviours that marks the beginning of an opening stage. Roth (1889), Goffman (1971), Firth (1972), Laver (1975), Goody (1978), Brannigan and Humphries (1972), and Callan (1970) have all noticed that greeting behaviours are standard or ritualized. Kendon and Ferber (1973) described the many nonverbal gestures of greeting, such as eyebrow flashes, head tosses, and waves; Krivonos and Knapp (1975) documented

smiles and eye contact as forms of greeting. That opening sequences or greetings occur in patterns is suggested by Schegloff (1968) in his structure of the summons-answer sequence; Krivonos and Knapp (1975) also observed a regular pattern for acquainted pairs and a pattern for unacquainted pairs in their laboratory study.

CHAPTER 3

METHOD

The purpose of the present experiment was to test the proposed model, with particular focus on the hypothesis that the degree of relationship is established by a pattern of mutual behaviours in the alpha phase. The strongest test of this hypothesis is a laboratory experiment, rather than an observational or correlational study. In an experiment, it is not only possible to videotape all behaviour for detailed analysis, it is also possible to explore the full range of the continuum of relationships that strangers might have, from "no interaction" to "becoming acquaintances." This was done by giving pairs of strangers one of three different tasks, each of which would implicitly dictate a certain degree of relationship as most suited to its successful completion. The model predicts that the alpha phase for the three different tasks must follow three different patterns, by which each dyad establishes its relationship.

Research Design

There were three experimental conditions:

(1) Pairs of subjects worked individually on two different puzzles while under time pressure (designated the timed condition). This should create a situation in which little or no interaction would be most functional for completion of the task.

(2) Pairs of subjects worked individually on two different puzzles with no time pressure (the untimed condition). This should create a situation in which occasional but limited interaction would be functional.

(3) Pairs of subjects worked on one puzzle together (the shared condition). This should create a situation in which considerable interaction would be functional.

Subjects

Sixty-six females participated in this study. Their ages ranged from approximately 20 to 50 years; five were non-Caucasian. They were primarily undergraduates at the University of Victoria and were recruited in a variety of ways. Most were contacted in their summer-session classes; others were recruited in person or by phone from departmental offices or from the hallways. In addition, advertisements were posted throughout the university asking for volunteers and, finally, volunteers in the Psychology Deparment's summer-session subject pool were called.

All subjects were paid $2.00 for their participation. They were initially told (either in person or by telephone) that the researcher was studying communication, both verbal and nonverbal, and were given examples of typical research in this field. They were then told that this experiment involved working on a puzzle, either with another person or alone, while being videotaped.

Because initial encounters between strangers would obviously be different than encounters between friends or acquaintances, only strangers were used in the study. Summer-session students are less likely to know each other than are winter-term students. In addition, subjects were paired with students from another department or faculty. For example, English students were scheduled in the same time slot as

Geography students, Anthropology students were paired with students from the Education faculty, and so on.

Previous research has demonstrated that females tend to smile more than males, both alone and in a social setting (Mackey, 1976). To avoid such gender effects, which were not the focus of this experiment, only females were recruited.

Ten pairs of strangers were assigned randomly to each condition, in permutations of three. Three pairs had to be replaced: In one Timed condition, Subject 1 thought that she had completed the puzzle and left the room to get the experimenter before a minute had passed. In another Timed condition, Subject 2 entered the room, smiled at Subject 1, then left the room again to ask the experimenter to repeat the time limit. In one of the Untimed conditions, Subject 2 entered the room, walked in front of the table, then around behind Subject 1, and finally asked her where the puzzle was. Three new pairs replacing these were added at the end of the experiment.

Equipment

The study was conducted in the Human Interaction Lab of the Psychology Department at the University of Victoria. There is one camera in each of the four corners of the 18′ x 22′ room. For this experiment, a large rectangular table was placed 8 feet from the door. One chair was placed to the left of the middle of the table, facing the door, and one on the adjacent end, diagonal to the first chair, at what was a comfortable working position for a shared task. (See diagram in Appendix).

In all three conditions, one subject was already seated in the experimental room when the second subject entered. The first 60 seconds of interaction, from the moment the subjects first saw each other, were recorded on videotape in split-screen.

The tasks were two commercial puzzles (called "Mindbenders") which required the participants to form geometric shapes. One puzzle contained 16 pieces (in four shapes and three colours), which have to be assembled to form a perfect circle without any two pieces of the same colour touching. This puzzle was also used in the shared condition. The other puzzle contained 14 square pieces, each of which had four coloured circles with small symbols in the centre (O, +, or >). These pieces have to be arranged in a three-level pyramid, with nine squares on the bottom level, four squares in the middle level, and one square on the top. Each level has to be positioned in the center of the level below it according to the diagram on the back of the box. The tricky part of this puzzle was that the circle on the upper level had to be the same colour as the circle on the lower level that it was covering. This was actually the easier of the two puzzles to assemble, although the instructions were more difficult to understand. Both puzzles were in boxes that had a cartoon of a man going crazy and biting his fingernails and that carried the following statement about the puzzle: "A fiendish diabolical puzzle designed to bend your mind." The instructions were on the back of the box.

Two cameras were used to film the interactions: One was focussed on the seated subject's face (Subject 1), the other was focussed on the door over the top of Subject 1's head in order to film the complete

entrance of Subject 2, from the moment she opened the door, saw Subject 1, and walked across the room to sit at the table beside her. Each of these images was projected on one half of the video screen. This split-screen technique made it possible to view both subjects at the same time on the videotape.

A microphone hung from the ceiling, directly above the table. The sequence was timed by chronometer in the video equipment; this time signal was recorded on the tape for use later in scoring. A hand-held stop watch was also used, but only as a prop to emphasize the time limit in the Timed condition.

Procedure

In order that the subjects in a dyad did not meet and greet ahead of time, one subject was met outside the lab on the first floor, while the other was met at an office on the second floor by a second experimenter, who accompanied the subject downstairs. The main experimenter was always waiting outside the lab to signal whether or not "the coast was clear" for the arrival of the subject from the second floor.

Subject 1 was whoever arrived first. She was taken into the lab and seated at the chair facing the door and given the instructions for the appropriate condition. The brief, five-part instructions were the same for all three conditions except for the small differences regarding timing and working together or separately that created the experimental condition. These instructions were as follows, with the differences shown in boldface:

Timed Condition

Subject 1:

Please sit here at the table (indicating chair facing door).

Your task is to work on this puzzle and try to complete it within 3 minutes. I'll tell you when to start. The instructions are on the back.

There will be someone else coming in to work on this other puzzle. They will also be under time pressure but will not be competing with you in any way.

While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

Start now (pressing start button on stopwatch, then leaving the room).

Subject 2:

When you go in the room I want you to sit down at the table.

Your task will be to work on a puzzle and try to complete it within 5 minutes. The instructions are on the back of the box.

There is someone else in there already working on a different puzzle. They are also being timed but are not competing with you in any way.

While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

You will be timed as soon as you enter the door (with stop watch ready, pressing start button as soon as subject reaches for door). Okay, go ahead in the room.

Untimed Condition

Subject 1:

Please sit here at the table (indicating chair facing door).

Your task is to work on this puzzle. The instructions are on the back.

There will be some one else coming in to work on this other puzzle. They will not be competing with you in any way.

While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

Start anytime. (leaving the room.)

Subject 2:

When you go in the room I want you to sit down at the table.

Your task will be to work on a puzzle. The instructions are on the back of the box.

There is some one else in there already working on a different puzzle. They are not competing with you in any way.

While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

You can start anytime. Okay, go ahead in the room.

Shared Condition

Subject 1:

Please sit here at the table (indicating chair facing door).

Your task is to work on this puzzle. The instructions are on the back.

There will be some one else coming in to work on it with you, so you'll be doing it together.

While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

Start anytime, and the other person will be here in a minute or two (leaving the room.)

Subject 2:

When you go in the room I want you to sit down at the table.

Your task will be to work on a puzzle. The instructions are on the back of the box.

There is someone else in there already who will be working on it with you, so you'll be working on it together.

While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

You can start anytime. Okay, go ahead in the room.

The videorecording and time signal were started while S2 was still in the anteroom of the lab. One minute after S2 entered the room, the video recording was stopped, and the experimenter went into the lab to tell the subjects that the experiment was over.

This time period was chosen because this was a study of what people did when they first came into contact with another person. The opening of the door provided a clear and obvious beginning to the interaction. It was documented in pilot work that the "task interaction" was fully under way by one minute and that subsequent filming up to two or three minutes showed no changes in the interaction. At the end of one minute, subjects were reassured in a light manner that the puzzles were difficult and that no one had completed them within the short time period of the experiment. Each pair was told about the purpose of the experiment. They were then taken into the control room, shown the tape of their interaction, and given further explanation of the study. After they had viewed the tape, subjects were asked to sign a permission form (see Appendix) giving the experimenter permission to use the tape in various ways; they could refuse any showing of the tape that they found objectionable. They were then given $2.00 and thanked for their participation in the study.

Scoring

General Procedure

Data were transferred from VHS to Beta tapes so that the original data could not be damaged. Also, the Betamax 1 VCR is more suited to microanalysis.

The scoring procedure was based on the methods developed by Bavelas, Black, Lemery, MacInnis, and Mullett (1986) for synchrony analysis. Each subject's behaviour on the tape was viewed separately, the times of their behaviours were determined and recorded. These times were later matched to see which behaviours occurred at the same time (in synchrony). First, Subject 1's behaviour was analyzed in detail. When all the data were recorded for this subject, Subject 2's behaviour was scored. (Analyzing both subjects' behaviours at once can lead to a bias towards seeing synchronous behaviours and possibly not seeing other behaviours.) The timing of each behaviour was started at its onset and was determined by microanalysis as follows: The tape was watched in real time several times, then was replayed in slow motion several times, until the scorer was confident of the time. Because the patterns of behaviours that were perceptible to the other person were of primary importance, rather than micro-movements, behaviours were recorded to 10ths of a second rather than to 3/100ths (the smallest interval possible with the equipment), which was used by Bavelas et al. (1986). This method of recording allows the behaviours themselves to dictate the time intervals, so that the patterns of these behaviours can emerge on their own. Otherwise, because the patterns were unknown, any segmentation by an arbitrary unit of time (for example, five second intervals) might possibly miss the overall pattern. (See Appendix for scoring instructions.) These scores were noted on a continuous time graph from 0 seconds to 15 seconds. This representation made the patterns visually recognizable so that the similarities within the

conditions and the differences across the conditions were apparent at a glance.

One dyad was dropped from the shared condition after careful analysis of their behaviour revealed that one subject was behaving in a way that was more a reaction to the other subject's leg brace than to the situation at hand (Pulton), 1981).

Scoring of specific behaviours

All behaviours that were part of the interaction were recorded. This excluded behaviours that were not part of the interaction but were instead typical of a person working alone on this task, such as moving pieces of the puzzle or running her fingers through her hair.

The specific behaviours recorded were smiles, talking, and eye contact. One of the subjects was seated at a table while the other one was walking into the room so that recording of posture was not meaningful. Also, head movements (such as turning or lowering) were not recorded because these would be incorporated by the eye contact measure. (It will be seen later that the orientation of the head is usually in the direction of the object or person being looked at.)

Smiles were recorded from onset to approximate termination. The exact offset was unresolvable for two reasons: First, the focus of the camera was set to record all of S2's entrance into the room, so that a simultaneous close-up of the face was not possible. Second, smiles often faded from a broad smile to a faint smile as the subject lowered her head to the task. From the picture provided by the angle of the camera, it was not possible to determine whether or not the subject was

still smiling when she lowered her head. However, it was possible to say that the subject was no longer smiling by some later point. Scoring of smiles has been a common problem. The quality of film in Kendon and Ferber's (1973) study prevented a fine-grained analysis of smiles, but he distinguished a "smiling face from a non-smiling face and...broad smiles from other smiles" (p.639).

Although the dyad's exact "eye contact" cannot be measured on split-screen, a subject was said to be looking at the other if her face was oriented in the direction of the other subject's face. Kendon and Ferber's (1973) study confirmed that "where an individual orients his face nevertheless indicates where he is most likely to be looking" (p. 629). Vine's (1971) study on the judgment of direction of eye gaze produced results indicating that, in natural interactions, if we are looking at the face of another person we tend to give eye gaze; otherwise, we look well away from the face of the other person.

The door's opening was designated as the beginning of the interactive sequence. The lab was a very quiet room, and the door's opening was a loud stimulus, so it would have been natural for S1 to look toward the door when it opened. However mutual eye contact is only possible when the door is opened enough so that S2 is visible; therefore, this is the earliest point at which eye contact can be measured. This point is referred to as "face available", which means that S2's complete face appeared, framed by the opening door and the doorframe, and S2 was looking in S1's direction (that is, S2's face was not looking off to the side or down at the floor).

Talking was timed by playing the tape in real time and then in slow motion. Rather than recording just the onset and offset of speaking the actual words were transcribed. In the case of talking the offset is less important than the number of utterances strung together and what is said, for example, a task-oriented statement might indicate the end of the alpha phase.

When determining the length of the alpha phase, the scorer stopped when it seemed as if the "greeting" interaction was over and the task interaction had begun. Distinguishing when one part of an interaction ended and another began may seem to be a difficult or nebulous task; however, the two scorers discovered that Barker's principle for identifying "behavior units" was easy to apply. Behaviour units are:

> inherent segments of the stream of behavior. The boundaries of behavior units occur at those points of the behavior stream where changes occur independently of the operations of the investigator" (1978, p. 4).

The alpha phase had quite obviously ended when there was nothing new, that is, the interaction continued to look the same for the rest of the tape. Interaction after that point was the behavioural equivalent of "et cetera".

Reliability

Inter-judge reliability was established by having two independent judges separately score the tapes of ten dyads for the times and occurrence of behaviours.

Both scorers recorded all the times of the behaviours described above. These times were then matched to determine (a) the percentage of

agreement on the occurrence of the behaviours and (b) if a behaviour was recorded, the agreement on the time it occurred.

The percentage of agreement of the occurrence of each behaviour is as follows:

S1 and S2 looking at each other for the first time: 20/20 = 100%

S1 and S2 looking at each other for the first two times: 31/34 = 91%

S1 and S2 looking away from each other for the first time: 18/20 = 90%

S1 and S2 looking away from each other for the first two times: 26/33 = 76%

All looking behaviour: 37/51 = 72%

The onset of talking: 28/31 = 90%

The onset of smiling: 20/21 = 95%

The reliabilities of the time scores for the behaviours that had previously been agreed upon were as follows:

Onset of talking, N= 31, r= .99

Onset of smiling, N= 21, r= .98

Onset of looking at, N= 39, r=.99

Onset of looking away, N= 35, r= .99

As described above, both scorers also recorded their subjective decisions of when the alpha phase ended for each of the 10 dyadic interactions. This was done by watching the tape and noting when the

first behaviour unit seemed to end and another one seemed to start. The reliability of this judgment was $\underline{r}$=.87

CHAPTER 4

RESULTS AND DISCUSSION

Results

Qualitative Results

General pattern

In the alpha phase, there was a pattern of dyadic behaviour unique to each of the three conditions; these patterns were distinctly recognizable on the video tape. The behaviours that form these patterns have been transcribed onto a continuous time graph ranging from 0 to 15 seconds (see Figure 1). The dyads have been grouped by condition so that the general patterns are evident and comparisons among conditions are possible. Each graph shows 10 dyads for the Timed and Untimed conditions and 9 for the Shared condition.

S1's behaviour is represented on top of the line and S2's below the line. With this system it is possible to see at a glance when behaviours are occurring at the same time, for example, mutual smiling and eye contact.

In the Timed condition (Figure 1a), there was a general pattern of delayed behaviour that terminated quickly. Behaviours directed towards the other person did not occur until approximately 2.5 seconds. With the exception of smiles, there was very little behaviour happening at the same time. Smiles in this condition generally did not accompany other behaviours but either happened or continued after the subjects were no longer looking at each other. Smiles also seemed to serve as greetings in four cases, as they occurred in place of a greeting or in

response to a greeting. Greetings were very brief, when they occurred, and were usually delivered without eye contact. Little or no eye contact is typical of this condition. By approximately 9 seconds, both subjects were working on their puzzles in silence; their alpha phase was over.

In the Untimed condition (Figure 1b), mutual activity started sooner, around 2 seconds. As can be seen on the graph, smiling, greeting, and eye contact all occurred together for the first few seconds. About halfway through the alpha phase, around 7.5 seconds, there was some small talk, but after this time the talking became sporadic and more truncated with some smiling and some talking continuing to the end.

In the Shared condition (Figure 1c), as soon as S2 appeared in the doorway (approximately 1 second on the graph) there was immediately a great deal of behaviour. Smiling, eye contact, and greeting usually occurred in the first second. Small talk occurred at about the same time as in the Untimed condition, that is, in the middle of the alpha phase, but was followed by more smiling and eye contact. In two of the dyads the subjects exchanged names at this point. In the last 5 seconds, S1 usually introduced the topic of the puzzle and explained the instructions to the other subject. In all of the dyads in this condition, nonverbal and verbal behaviour was continuous throughout the 15 seconds.

Figure 1a: Transcript of 10 dyads' behaviour in the Timed condition elapsed over 15 seconds.

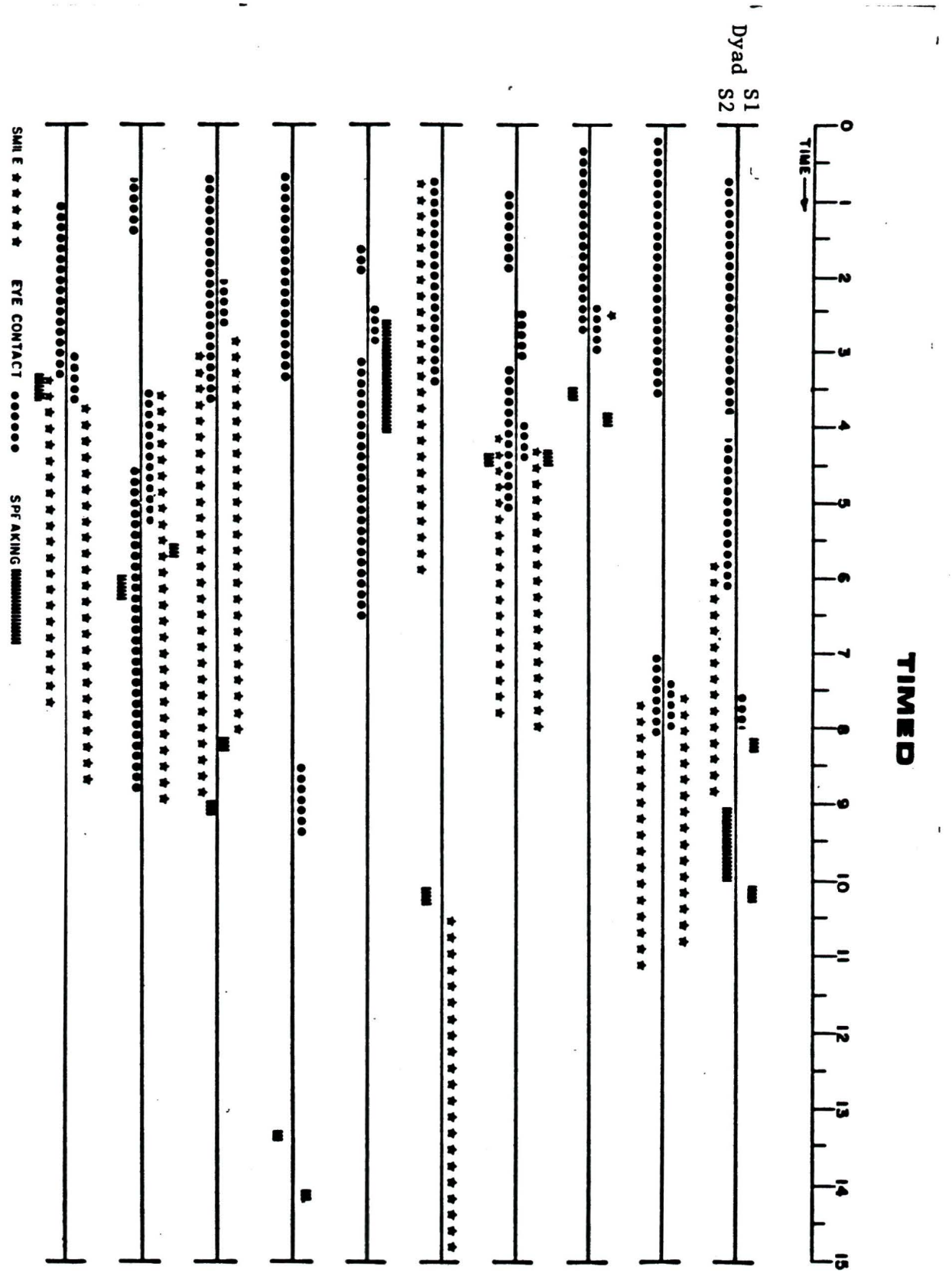


Figure 1b: Transcript of 10 dyads' behaviour in the Untimed condition elapsed over 15 seconds.

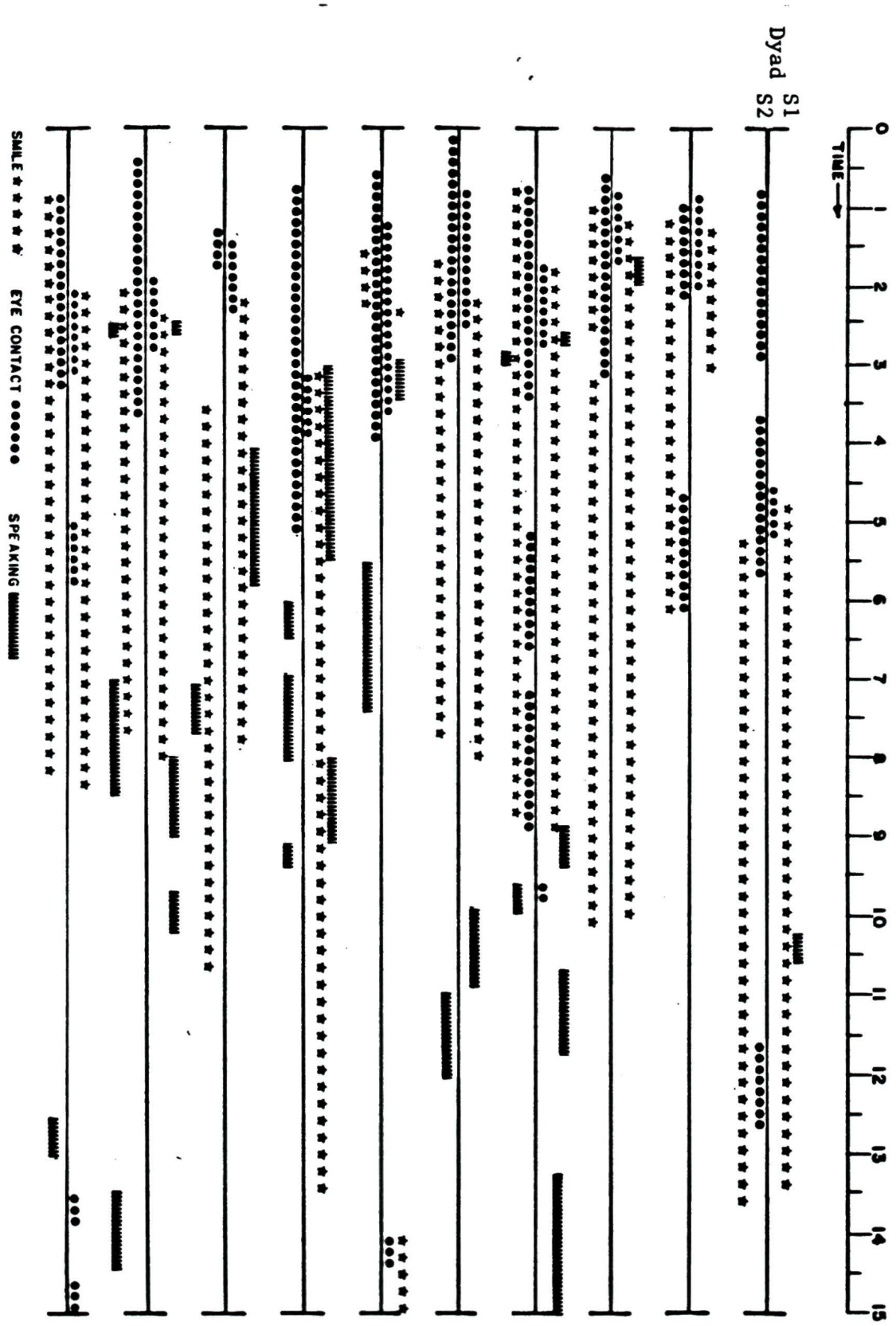
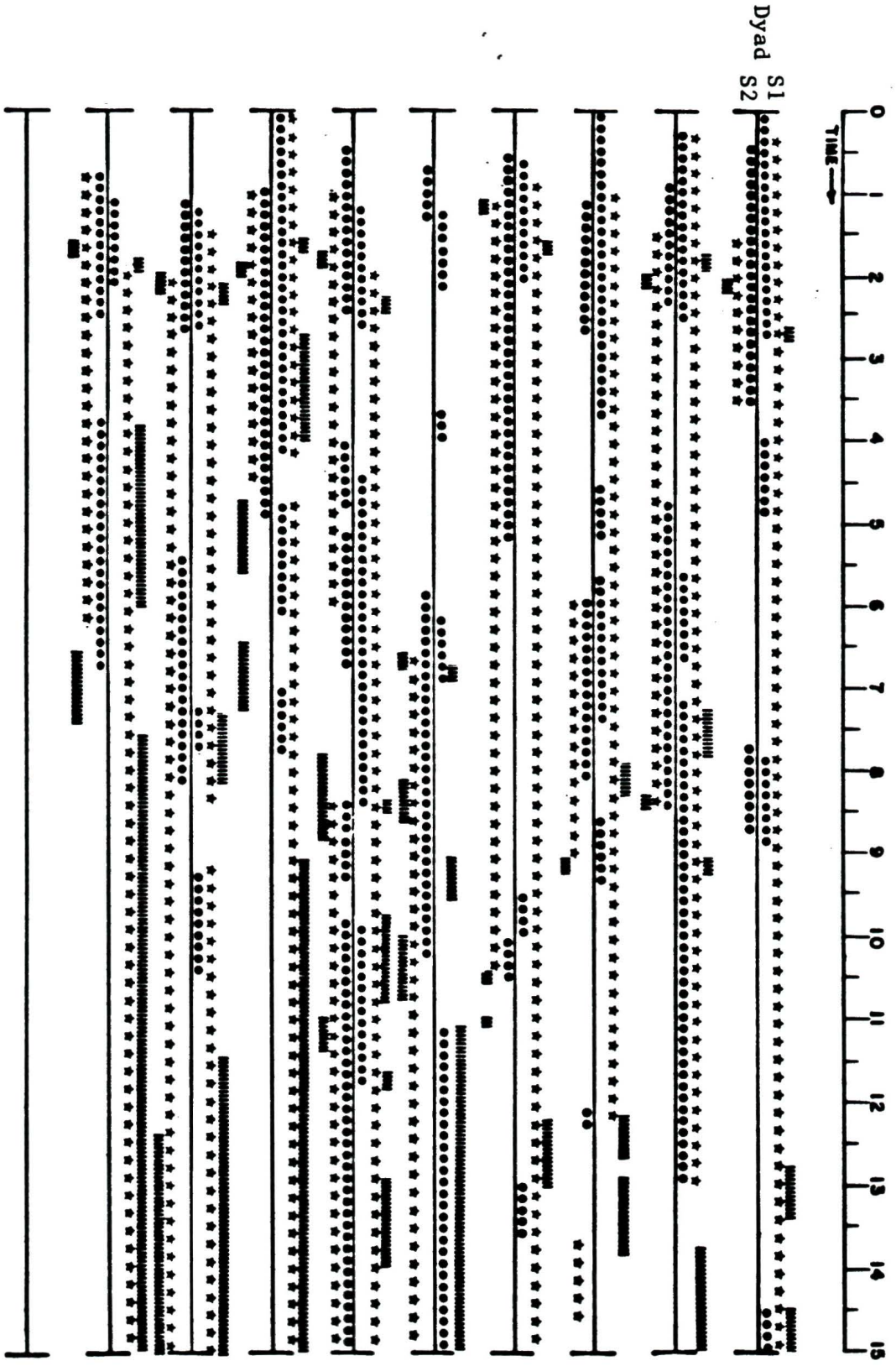


Figure 1c: Transcript of 9 dyads' behaviour in the Shared condition elapsed over 15 seconds.



Pattern of mutual behaviours

Figure 2 shows graphic representations of only those behaviours that were both active and mutual, for example, looking would be included but listening would not. Talking was only included if a reply was immediate; in other words, a single utterance was not included but turn-taking was. There is no differentiation of behaviours on this chart, so the activity represented could be talking, smiling, eye contact, or a combination of all three. Because only mutual behaviours were included, an interaction may appear as a straight line. For example, if S1 is looking at S2 but S2 is not looking at her, and they do not smile at each other at the same time, their interaction will appear as a straight line. To make the patterns easier to see, the interactions have been rank-ordered from no mutual activity to the most and also from the earliest beginning in the interaction to the latest.

It can easily be seen that in the Timed (Figure 2a) condition three of the dyads had no eye contact, no mutual smiles, and no exchange of greetings or other utterances. In all of the dyads in this condition, behaviours that occurred at the same time were of a very short duration.

In the Untimed condition (Figure 2b), there were bursts of activity lasting one or two seconds interspersed with periods of non-activity, resulting in an "on-off" pattern.

In the Shared condition (Figure 2c), there were periods of mutual behaviours lasting typically 3 or 4 seconds. These activities began as soon as S2 appeared in the door. In every dyad in the Shared condition there was an immediate burst of mutual activity.

Figure 2a: Patterns of mutual behaviour for 10 dyads in the Timed condition during the alpha phase.

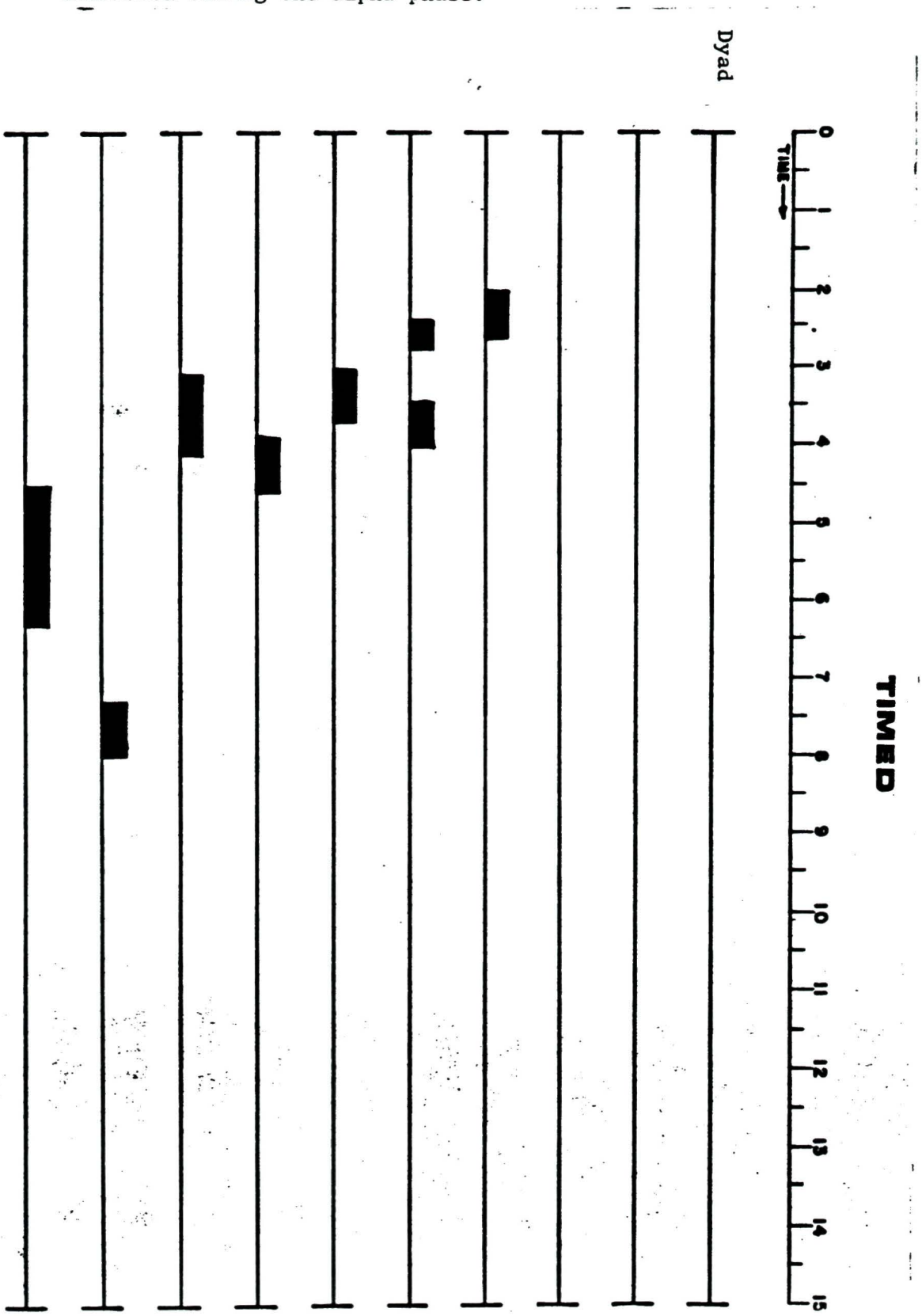


Figure 2b: Patterns of mutual behaviour for 10 dyads in the Untimed condition during the alpha phase.

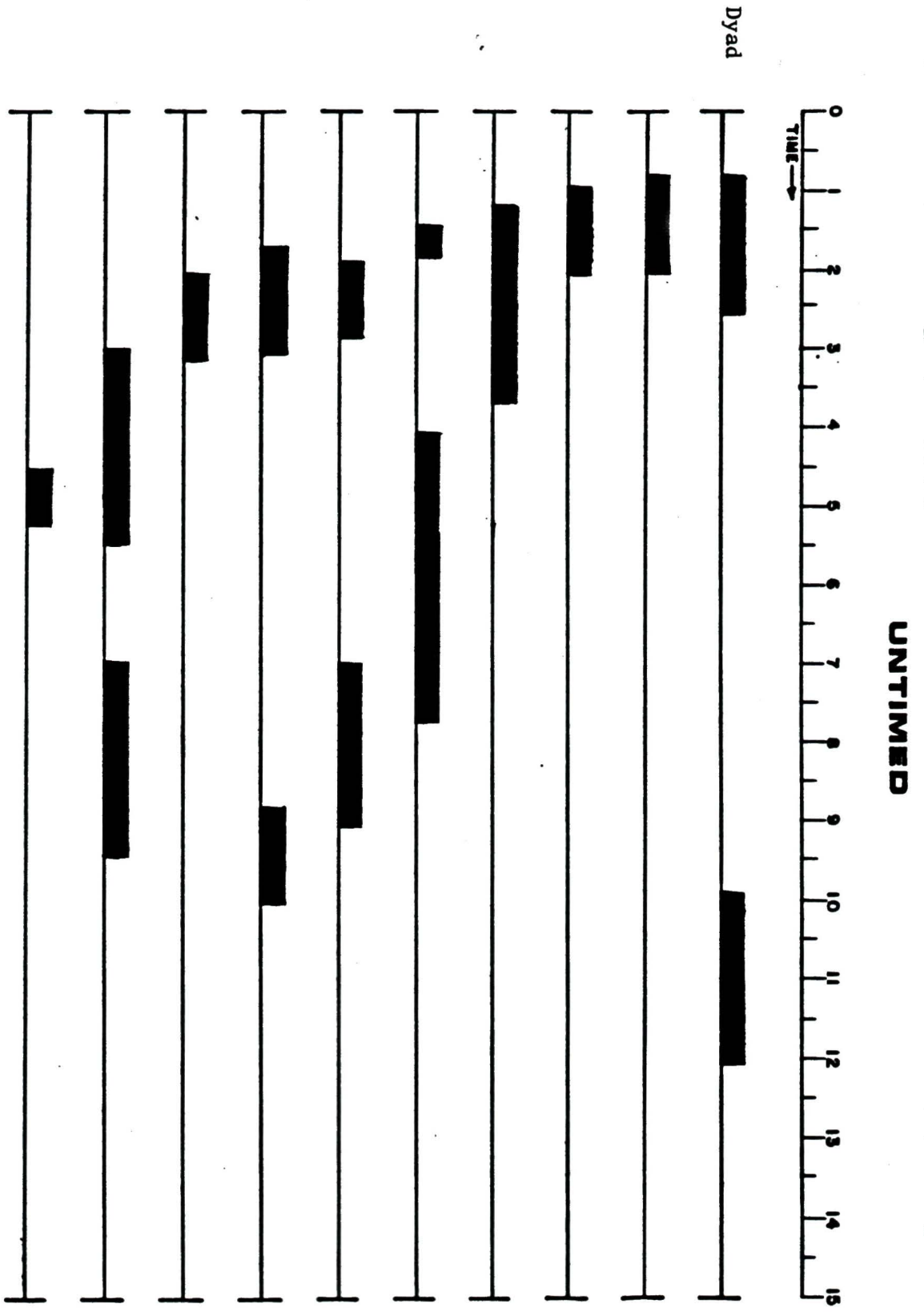
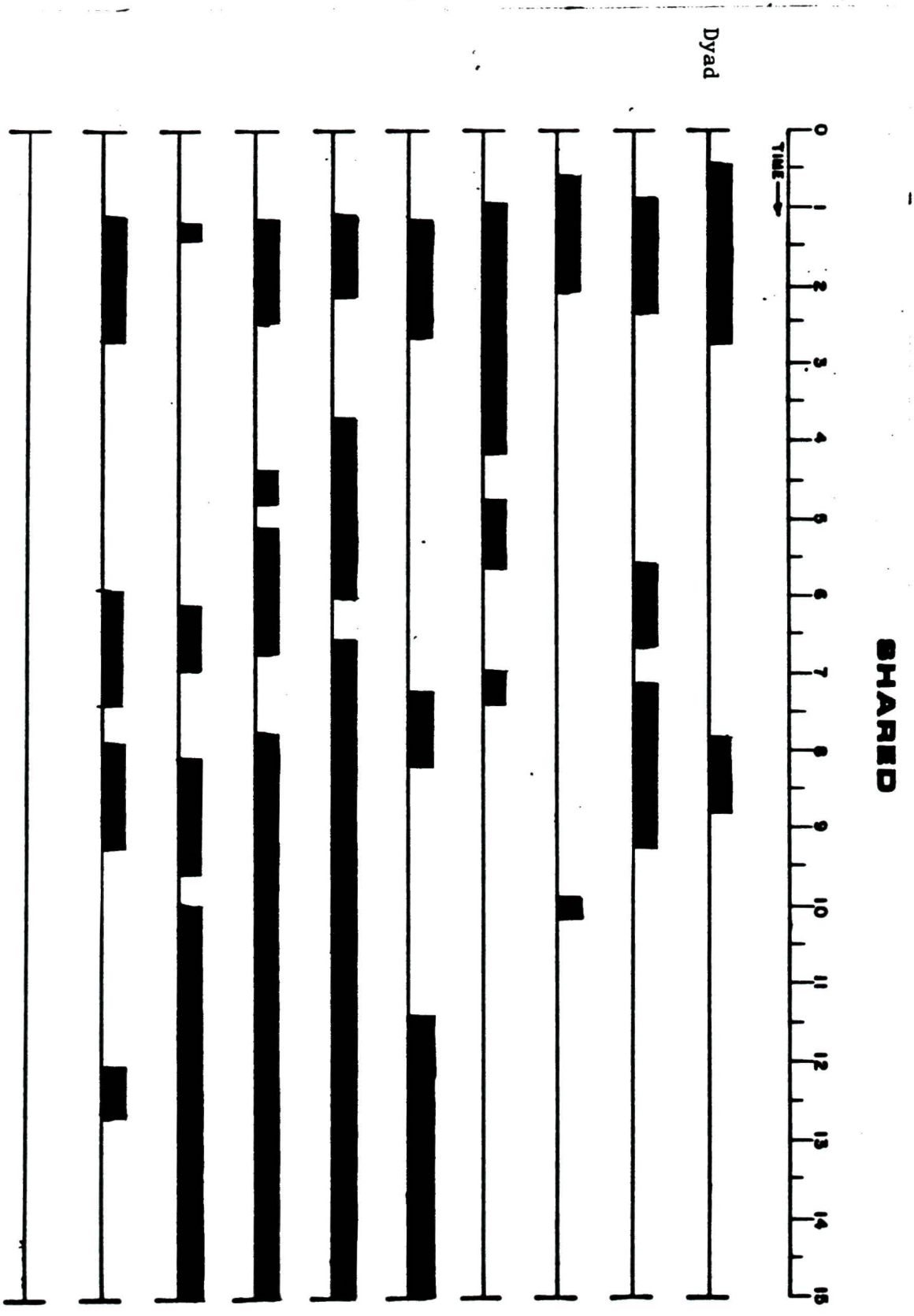


Figure 2c: Patterns of mutual behaviour for 9 dyads in the Shared condition during the alpha phase.



Quantitative Results

Once the patterns were represented graphically, a series of statistical tests were conducted so that the minute details of each pattern could be captured and compared for each condition. The theoretical model proposed that the behaviours occur in a particular pattern and not in any random order. This pattern is based on the magnitude, timing, duration and order of the behaviours. In order to test this proposition systematically, statistical comparisons were performed on the time scores of eye contact, smiling, and talking so that each feature of the pattern could be contrasted.

The amount of talking was measured by counting the number of utterances (U's), that is, sentences or exclamations, that occurred in the first fifteen seconds. These were compared for the three conditions. The average amount of talking was greater in the Untimed condition than the Timed and greater in the Shared condition than either the Timed or Untimed conditions. The means of the three conditions for amount of talking were:

Timed = 1.4 U's Untimed = 2.7 U's Shared = 5.4 U's

An analysis of variance indicated that there was a significant difference in the amount of talking in the three conditions, F (2,26) = 21.34, $p < .0001$.

In addition, the frequency of turn-taking was compared for the three conditions. This was a measure of how many times an exchange of words took place, that is, how many times one person spoke and was answered with a verbal utterance. Again the analysis of variance indicated that there was a significant difference in the amount of turn-taking or

mutual conversation in the three conditions, F (2, 26) = 19.25, p < .0001 In the Shared condition there was more turn-taking than either the Untimed or Timed condition, and there was more turn-taking in the Untimed than the Timed condition. The means of the frequency of exchanges for the three conditions were:

Timed = .4 turn Untimed = 1 turn Shared = 2.3 turns

The difference in the amount of talking was probably due to the different social situations created by the instructions and not to differences in reticence of the individual subjects; evidence of this is provided by the large amount of variance accounted for by the experimental condition, 59.7% .

Eye contact is a very subtle behaviour for two people to coordinate and by definition is a mutual behaviour. The length of time that the two subjects in each condition looked at each other for the first time is referred to as the "duration of first eye contact". The subjects in the Timed condition looked at each other for the least amount of time, under half a second! Subjects in the Untimed condtion looked at each other for one second longer, and in the Shared condition subjects added another fraction of a second of looking. The mean amounts of eye contact were:

Timed = .3 sec. Untimed = 1.28 sec. Shared = 1.63 sec.

An analysis of variance showed there was a significant difference between the three conditions, F (2, 26) = 7.28, p < .003. A post hoc comparison of the means indicated that there was a significant difference between the Timed and Untimed conditions, F (1, 18) = 13.53, p < .002, and between the Timed and Shared task conditions, F (1, 17) =

12.80, $p < .002$, but no significant difference between the Untimed and Shared.

To find out how the coordination of the timing of the eye contact was managed, a second measure of looking was used. The length of time it took for the seated subject (S1) to look up at the other person entering the room was compared across the three conditions. S1 was chosen over S2 for this measure because she was not doing anything but working on the puzzle, whereas S2 was entering the room and would presumably be looking towards where she was walking. If we keep in mind that the door opening in a quiet room provided a very loud stimulus, the results are surprising. Subjects in the Timed condition did not look up when the door opened but waited over 4 seconds and then looked at the other subject. By this time S2 had reached the table and was about to sit down. In the Untimed condition the seated subjects waited approximately 1.5 seconds before looking. They waited until S2 was halfway across the room to the table before looking up. In the Shared condition subjects started looking up at just after .5 second. They were looking at the door as soon as they heard it start to open so that when S2 opened the door half a second later S1 was looking at her. The mean number of seconds that elapsed before S1 looked at S2 were:

Timed = 4.35 sec. Untimed = 1.38 sec. Shared = .62 sec.

There was a significant difference between the three conditions, $F(2, 25) = 11.64$, $p < .0003$

Smiles could be seen on the tape to be a multi-purpose behaviour; they occurred in place of talking and even in place of looking but they also accompanied both looking and talking. There were fewer smiles

overall in the Timed condition, but the timing of any smile, whether by S1 or S2, was recorded and compared across the three conditions. Analysis of variance results: F (2, 50) = 7.15, p <.002. The mean times of the onset of smiles were:

Timed = 4.85 sec. Untimed = 2.6 sec. Shared = 2.06 sec.

The mutuality of the smiles was assessed by a correlation between the times of the smiles of the two subjects (across all conditions in which mutual smiles occurred, N = 24). The correlation of .996 indicated that the subjects smiled at each other at the same time.

The amount of time it took to establish a relationship so that the task interaction could begin has been described as a period called the alpha phase. Evidence that the alpha phase is a distinct phase at the beginning of an interaction was provided by the high reliability of the two judges' decisions about when it ended and the task interaction began (see page 48, above). When the length of the alpha phase was compared for the three conditions, there was a significant difference in the length of time it took for the alpha phase to end. In the Timed condition subjects very quickly got through the alpha phase and on to the task interaction. Subjects in the Untimed condition took longer than either the Timed or the Shared. The mean lengths of time in seconds for each condition were:

Timed = 7.52 sec. Untimed = 15.2 sec. Shared = 12.12 sec.

There was a significant difference in the three conditions in the length of the alpha phase F (2, 26) = 3.7, p < .04. In all three conditions, the alpha phase was over in fifteen seconds or less. A post hoc comparison of the three groups indicated that there was a significant

difference between the Timed and the Untimed condition, F (1, 18) = 5.14, $p < .04$ and a significant difference between the Timed and Shared condition, F (1, 17) = 20.58, $p < .0003$. There was not a significant difference between the Untimed condition and the Shared condition.

Illustration of the Pattern

To put all of this in a frame of reference so that the numbers can be related to how the interaction actually looked, let us imagine this experiment the way an anthropologist such as Ling Roth would describe it if he were studying the culture and civilization of contemporary Victoria:

> In Victoria, when two women of the educated class find themselves in a situation where talking is not appropriate, they will upon meeting in a room go through a typical ceremony. They will wait until the woman entering the room is halfway into the room, then exchange a cursory glance, a perfunctory greeting (perhaps accompanied by a smile), then act as if the other woman is not there. If, in another situation, it is not clear whether or not talking is appropriate the women will look at each other quite soon after the second woman enters the room, smile within a second or so, and exchange a greeting. They will then exchange remarks intermittently, engaging in equal amounts of silence and talking without ever appearing actually to enter into conversation. On the other hand, when the situation seems appropriate for talking the two women will immediately upon entering the room look at each other,

smile, and exchange greetings, often accompanied by a joking remark and laughter from both of them. They will continue to talk, smile, and look at each other as they work on a task together.

Summary and Discussion

How are these results pertinent to the theoretical model? The first assumption of the model is that there are different possible degrees of relationship in each interaction and that the degree of relationship must be established mutually. The second assumption is that the pattern of behaviours in the alpha phase establishes this relationship. Thus, interactions are functionally differentiated over time, such that the alpha phase shapes the subsequent interaction.

In this experiment, the three different tasks implicitly required three different relationships. These requirements should cause different patterns of behaviour in the alpha phase. Subjects in the Timed condition could do their tasks best if they assumed the relationship of non-conversants while working on the task, that is, after the first 8 seconds they did not look at each other or talk but instead concentrated on their individual puzzles in silence. This relationship of non-conversants was mutually established by their behaviour in the alpha phase. The magnitude, timing, and duration of their behaviour formed a pattern of a delayed, perfunctory greeting or acknowledgment, then they went on to the task. These behaviours were

reciprocal, for example, one subject was not trying to make conversation while the other was engrossed in the task.

In the Untimed condition, the task dictated a more ambiguous relationship, best described as "two people who can talk if they want to and maybe will later". The subjects dealt with this situation by retaining the ambiguity and in this way kept the opportunity to talk later still available (a kind of foot-in-the-door technique). They communicated this relationship in the alpha phase by alternating periods of talking and looking with periods of silence.

In the Shared condition, the task required the pair to have the relationship of interactants. Their behaviour in the alpha phase was greater in magnitude -- as soon as the door opened they began smiling, looking, and talking to each other with laughing and humourous remarks. They immediately communicated a degree of relationship in which conversation was not only permissible but required.

In each of the three conditions the subjects established a degree of relationship that was functional for their task and different from the other two relationships. It is interesting to note here that the behaviours of acquainted pairs observed by Krivonos and Knapp (1975) are similar to the behaviours of the subjects in the Shared condition. Krivonos and Knapp found that there was a greater amount of topic initiation by acquainted pairs than unacquainted pairs (near the end of 15 seconds). In this experiment, the Shared condition pairs introduced the topic of starting the puzzle, for example, "Well, we've got this puzzle to do" at around 12 seconds. It seems that the relationship of

being acquainted and the relationship of conversants resulted in the same behaviours.

The behaviours in the alpha phase were seen to be quick (sometimes under half a second) and mutual. Subjects' behaviours were reciprocal, for example, greetings were often delivered simultaneously. Behaviours were also predominantly nonverbal and standardized, consisting mostly of eye contact and smiling with varying amounts of talking. The pattern of behaviours engaged in by the subjects seemed to act like a language system which communicated as effectively as verbal language; for example, in the Timed condition it was unnecessary to say "I can't talk right now" or in the Shared to say "We should discuss this".

The analogic aspect of the alpha phase is evident in the patterns of behaviours. They look like and are a sample of the subsequent interaction but are not the same as the behaviours in the subsequent interaction. In the Timed condition the pattern is minimal behaviour in the alpha phase. In the Untimed it is a "short burst then pause" pattern, while in the Shared it is a "turned on and left on" pattern of behaviours.

Methodological Implications

Decisions regarding scoring of videotaped data are difficult to make before the behaviours have been closely viewed. The behaviours are usually richer and more complex than anticipated. During the process of analysis in this experiment this methodological problem was clarified and a practical solution was found.

Analyzing behaviours such as the ones in this experiment could present the classic problem of reductionism versus holism. A holistic

approach to this data might suggest stopping at the qualitative level of analysis, that is, the general patterns. If, on the other hand, a reductionistic method is seen as the method that produces concrete answers, then a decision on which behaviours are the ones that should be recorded has to be made. But according to Watzlawick, Beavin, and Jackson (1967) all behaviour in the presence of another may be communicative, "behaviour has no opposite...there is no such thing as nonbehaviour" (p. 48). This presents the first problem of a reductionistic approach. If individual behaviours are important, then all behaviours have to be studied. But if analysis starts with counting and measuring individual behaviours, then the context of these behaviours is lost. Where do they occur in the interaction and what is their function? In this study the eye contact and smiling measures could be used as an example of the problems of reductionistic methods. Duration of eye contact and smiling was measured when subjects first encountered each other. However, when people begin to talk, their eye contact is tied to their turn-taking in the conversation (Duncan and Fiske, 1977) and cannot be meaningfully isolated. In normal conversation the listener looks at the speaker more than the speaker looks at the listener. Smiles are also used by the listener to signal attentiveness to the speaker.

A holistic approach is more conducive to the earliest stage of understanding a phenomenon. Once the phenomenon is understood then it can be studied more microscopically (that is, by reductionistic methods) to reveal all the subtleties of its parts and in this way to identify the molecules that together form the molar phenomenon. In this study,

analysis began holistically. The tapes were watched over and over again until a typical pattern of behaviour began to appear. After this, it was possible to say that there were certain behaviours that were directed to the other person and other behaviours that were just as likely to be engaged in when a person is alone. At this point it was appropriate to look at the behaviours directed to the other person by microanalysis. The information at this level illuminates the fine details of the pattern discovered earlier through the holistic approach. For example, the average amount of time that subjects in the Timed condition looked at each other was .3 second. We now have a number for something that we previously had been only intuitively aware of. Thus, a reductionistic method provided the detail that made the patterns discovered by a holistic approach more vivid.

Possible Further Studies

The purpose of this study was to discover whether or not the patterns would be different for three unique conditions, what the patterns were, and how they differed. Therefore, there were other aspects that had to be ignored. There are many other studies that would be interesting to do, given the results of this experiment. Beyond the obvious extensions of this study such as cross-cultural or cross gender experiments there are several dimensions of this particular design that could be explored.

Pairs in this study were both given the same definition of the situation, or an expectation of the same relationship so the pattern of a "normal negotiation" could be studied. Often, however, in real life we are negotiating situations with others where the expectation of the

degree of relationship is different. Incongruent expectations by the two interactants could be experimentally induced. Or, a more ambiguous situation, one in which there is no obvious task or structure could be used; for example, two people could be asked simply to wait in the room for the experimenter. Which relationship would most commonly be negotiated?

We have seen in this study how the alpha phase looked, further study could explore its analogic aspect systematically. If an alpha phase interaction is an analogic display of the subsequent interaction (that is, like it but not the same), then naive subjects watching the videotapes should be able to match up alpha phase interactions to subsequent interactions in the same condition (but not the same pair).

Finally, it is obvious from the review of the literature that many of the aspects of and variations in the first few seconds of an interaction have not been explored. Even in the restricted category of greetings the advantages of modern video technology have not been applied. As Eibl-Eibesfeldt put it:

> A person interested in greeting would like to find in one place films dealing solely with the activity he is interested in. This type of film library, containing documents on the social behaviour of man, still does not exist and, worse still, most of the social behaviour patterns have not even been documented cross-culturally. This is to be deplored, since social behaviour leaves no fossil tracks. (1972, p.298)

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APPENDIX

Appendix: Subjects' Permission Form

How Do We Begin Interactions?

Jennifer Mullett

Please indicate below the way(s) in which we may use the videotape made during this experiment. You may select some and not others -- or none at all. Your experimenter will explain in detail what each might consist of.

Your tape would be identified only by subject number. The sheet that connects your name with this subject number will be kept separately in a secure place. Obviously, however, videotapes are not anonymous to anyone who knows you.

analysis by the research team (Dr. Bavelas and her assistants)

playing as an example for a professional audiences (e.g. at a presentation at another university.)

playing as an example for classes at U.Vic.

still photgraphs in journal articles or books.

all of the above

none of the above; please erase the tape

Signature

Date

Experiment Number

Subject Number

Appendix: Instructions to Subjects

Timed

1: (a) Please sit here at the table. (Indicate chair facing door)

(b) Your task is to work on this puzzle and try and complete it within 3 minutes. I'll tell you when to start. The instructions are on the back.

(c) There will be someone else coming into work (i) on this other puzzle. They will also be under a time pressure but will not be competing with you in any way.

(d) While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

(e) Start now. (Press button on stopwatch to start timer and leave the room.)

2: (a) When you go in the room I want you to sit down at the table.

(b) Your task will be to work on a puzzle and try and complete it within 5 minutes. The instructions are on the back of the box.

(c) There is someone else in there already working on a different puzzle. They are also being timed but are not competing with you in any way.

(d) While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

(e) You will be timed as soon as you enter the door. (Have stopwatch ready, press start button as soon as subject reaches for door.) Okay go ahead in the room.

Untimed

1: (a) Please sit here at the table. (Indicate chair facing door)

(b) Your task is to work on this puzzle. The instructions are on the back.

(c) There will be someone else coming in to work (i) on this other puzzle. They will not be competing with you in any way.

(d) While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

(e) Start anytime. (Leave the room.)

2: (a) When you go in the room I want you to sit down at the table.

(b) Your task will be to work on a puzzle. The instructions are on the back of the box.

(c) There is someone else in there already working on a different puzzle. They are not competing with you in any way.

(d) While all of this is going on I'll be videotaping so you'll get to see all of it on TV afterwards.

(e) You can start anytime. Okay go ahead in the room.

Shared

1: (a) Please sit here at the table. (Indicate chair facing door)

(b) Your task is to work on this puzzle. The instructions are on the back.

(c) There will be some one else coming in to work on it with you, so you'll be doing it together.

(d) While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

(e) Start anytime and the other person will be here in a minute or two. (Leave the room.)

2: (a) When you go in the room I want you to sit down at the table.

(b) Your task will be to work on a puzzle. The instructions are on the back of the box.

(c) There is someone else in there already who will be working on it with you, so you'll be working on it together.

(d) While all of this is going on I'll be videotaping, so you'll get to see all of it on TV afterwards.

(e) You can start anytime. Okay go ahead in the room.

Appendix: Rules for Scoring

Score S1 first.

- Begin the timing with when the door opens.

- play in real time a couple of times to locate and approximate times.

- then use slow motion (or slightly speeded up) and the noise of the door as a guide.

Every behaviour that S1 does that might be related to S2 is to be recorded.

--Things that DO NOT need to be recorded are behaviours that might be typical of a person working alone on a task such as----moving pieces of the puzzle, moving closer to the table to get a better angle for the puzzle, or gestures that are related to the frustration of working on a puzzle.

Examples of behaviours to record:

-looking up at the other subject

-looking away from S2 or S1

-onset of a smile

-offset of a smile

-onset of talking and what is said

-onset of a laugh

Recording behaviours for S2

- "face available" is timed from the moment that all of the face is visible in the doorframe IoI

(this time is important because it is used later to determine mutual eye contact. That is, as soon as S2's face is in the doorframe and facing S1 she is available for eye contact. Most S's will be looking forward as they open the door but be aware that some might not-----the face IS NOT AVAILABLE if when the door opens the subject is looking to the side or down. the term FACE AVAILABLE refers to available for eye contact and facing towards S1.

-the rest of the instructions are the same as the scoring for S1 with the exception of the timing of the subject sitting or going off camera.

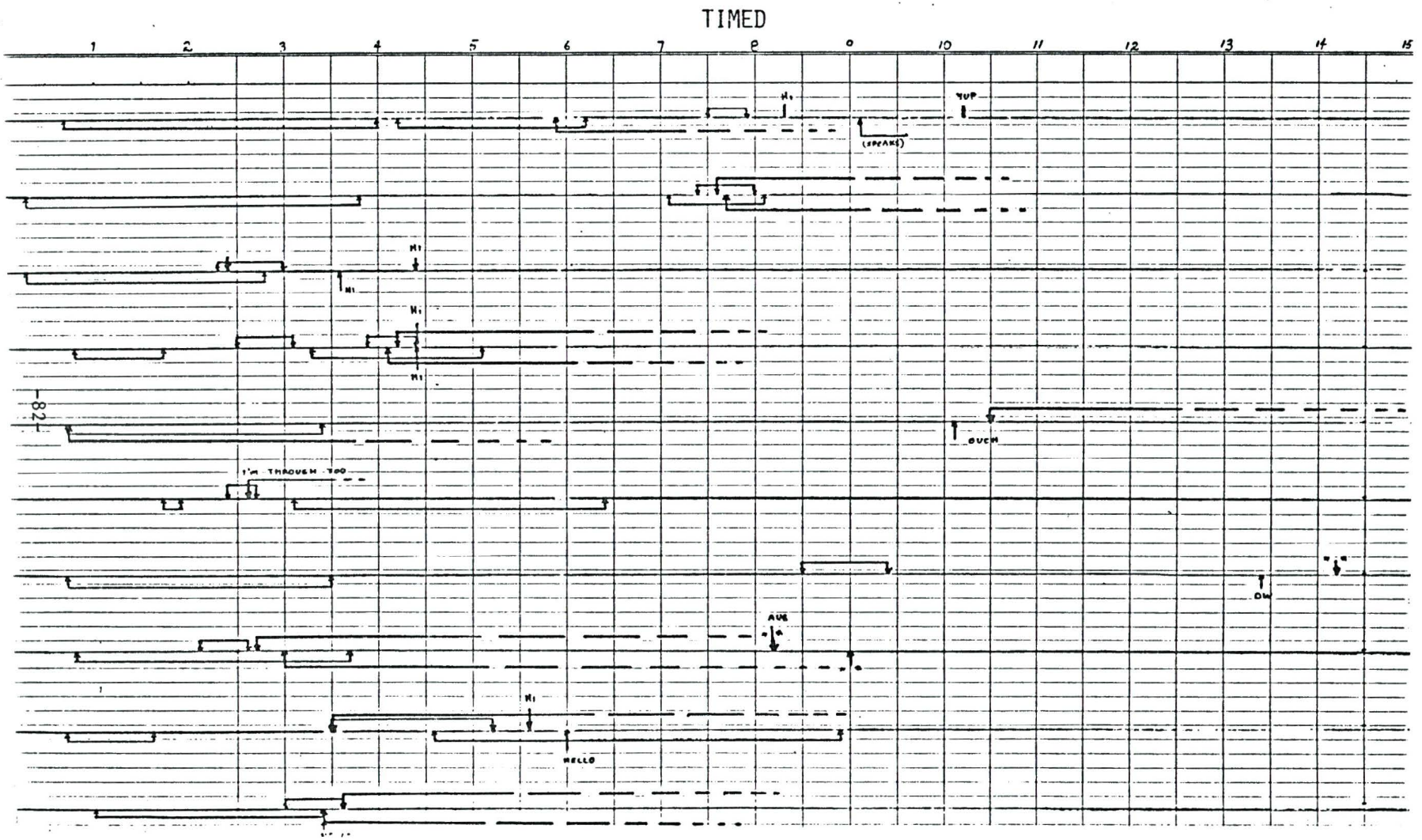
-time the subject sitting when their body is bent over the chair and/or their hands are on the arms of the chair.

-if the subject goes off camera (or blocks the face of S1) record the time that they go off and the behaviour they were doing at that time e.g. S was smiling as they went off camera-- not smiling and looking down as they came back on camera with times of both recorded.

Decision about talking

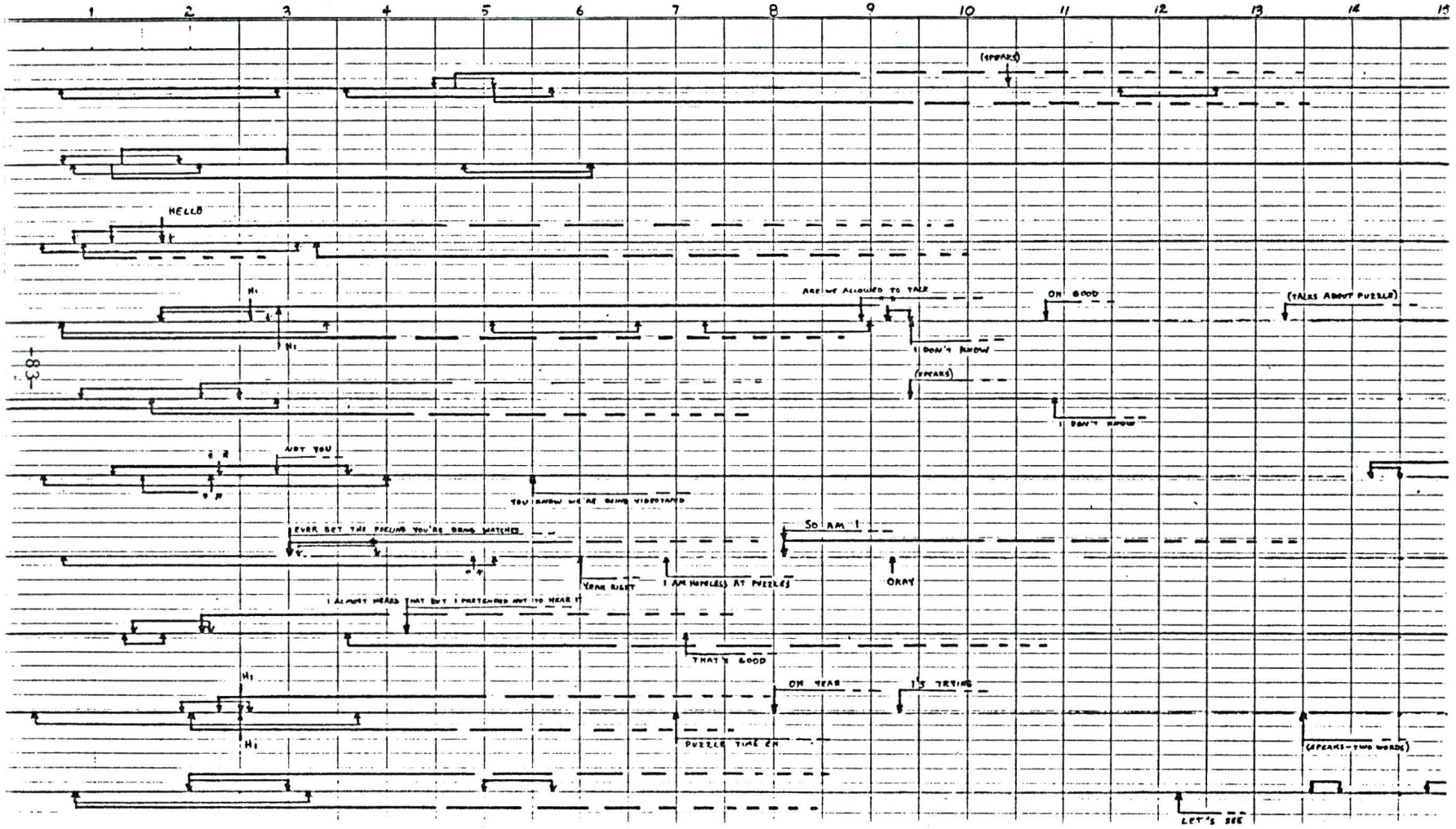
It is important to record the time of the first few statements and what the actual words are. When the conversation all begins to sound the same, that is, when it seems like they are no longer greeting but have settled in to the task just say ---conversation continues the same from

here---if there are long silences with short bursts of talking these should be recorded however.

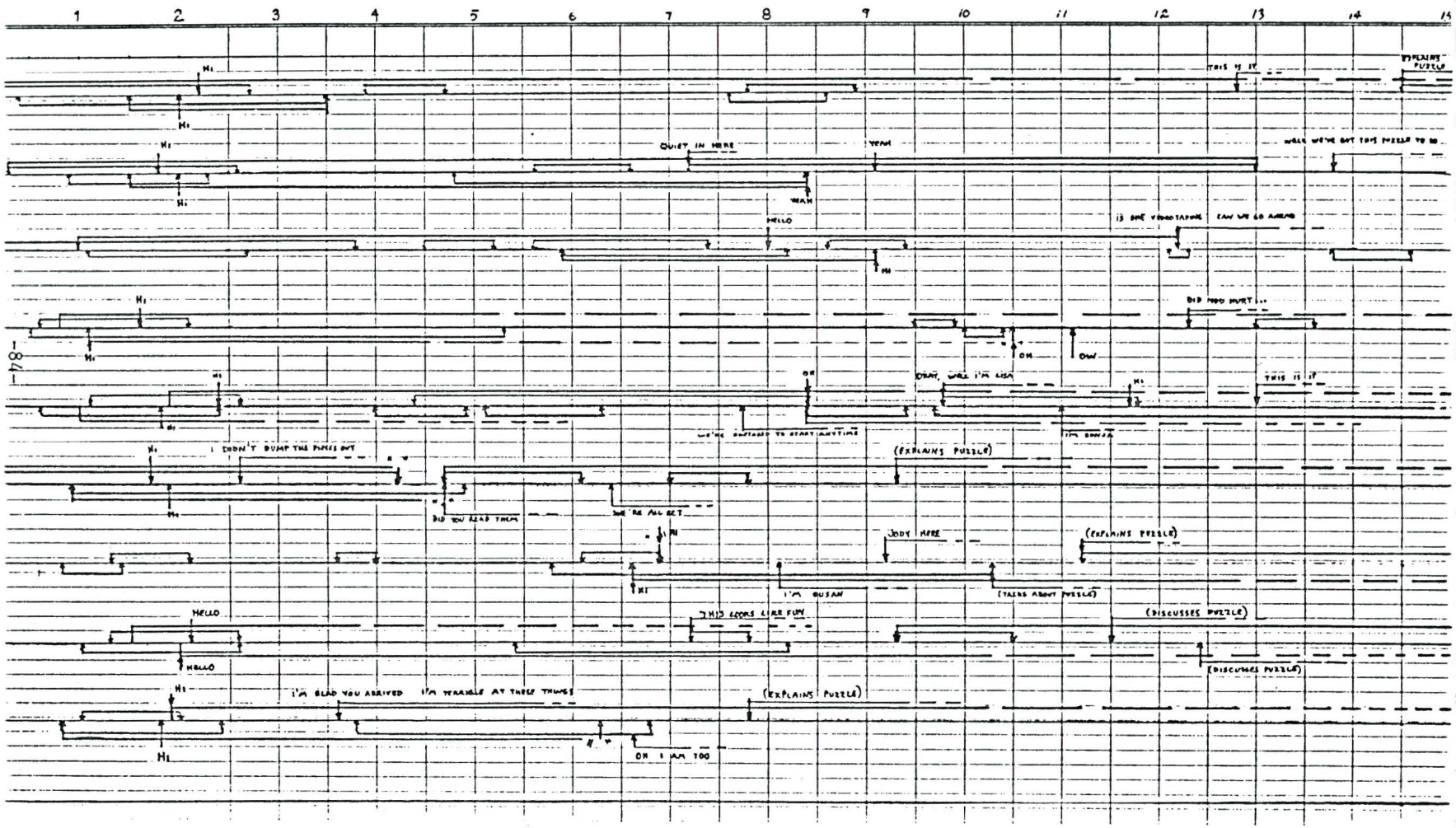


Graph with words transcribed.

UNTIMED


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
(SPEAKS)
HELLO
HI
HI
ARE WE ALLOWED TO TALK
OH GOOD
(TALKS ABOUT PUZZLE)
I DON'T KNOW
(SPEAKS)
I DON'T KNOW
-83-
HOT YOU
YOU KNOW WE'RE BEING VIDEOTAPED
EVER GET THE FEELING YOU'RE BEING WATCHED
SO AM I
YOUR RIGHT
I AM HOPELESS AT PUZZLES
OKAY
I ALMOST HEARD THAT BUT I PRETENDED NOT TO HEAR IT
THAT'S GOOD
HI
HI
OH YEAH
IT'S TRYING
PUZZLE TIME EH
(SPEAKS - TWO WORDS)
LET'S SEE

SHARED

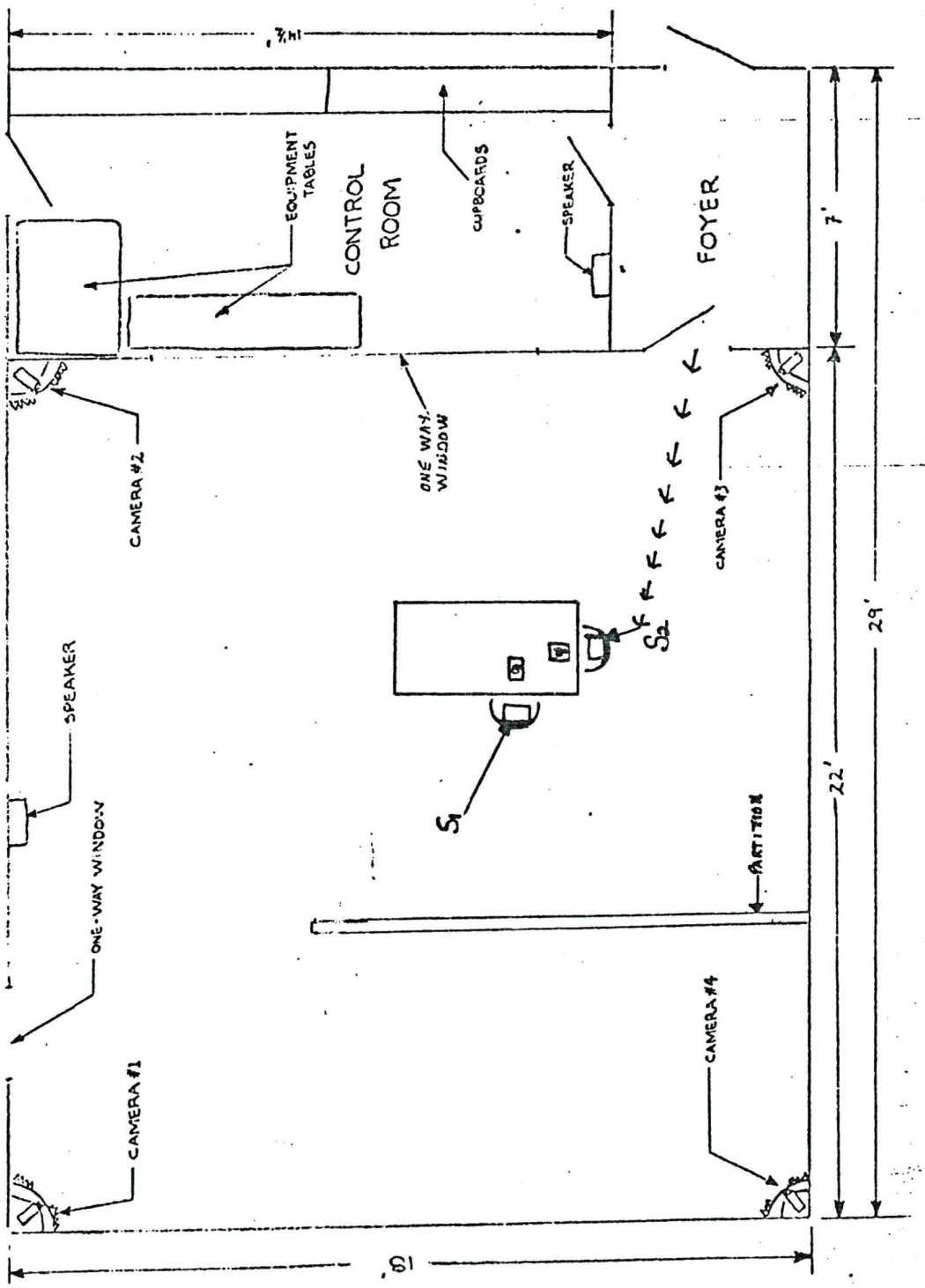

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
HI
HI
HI
HI
QUIET IN HERE
WAH
WAH
HELLO
HI
HI
HI
OH
OW
OR
I DIDN'T BUMP THE PIXIES OUT
DID YOU READ THEM
WE'RE ALL SET
HI
HELLO
HELLO
HI
I'M GLAD YOU ARRIVED
I'M TERRIBLE AT THESE THINGS
OH I AM TOO
I'M SUSAN
THIS LOOKS LIKE FUN
JODY HERE
(EXPLAINS PUZZLE)
(TALKS ABOUT PUZZLE)
(EXPLAINS PUZZLE)
(DISCUSSES PUZZLE)
(DISCUSSES PUZZLE)
(EXPLAINS PUZZLE)
THIS IS IT
DID YOU HURT...
THIS IS IT
(EXPLAINS PUZZLE)

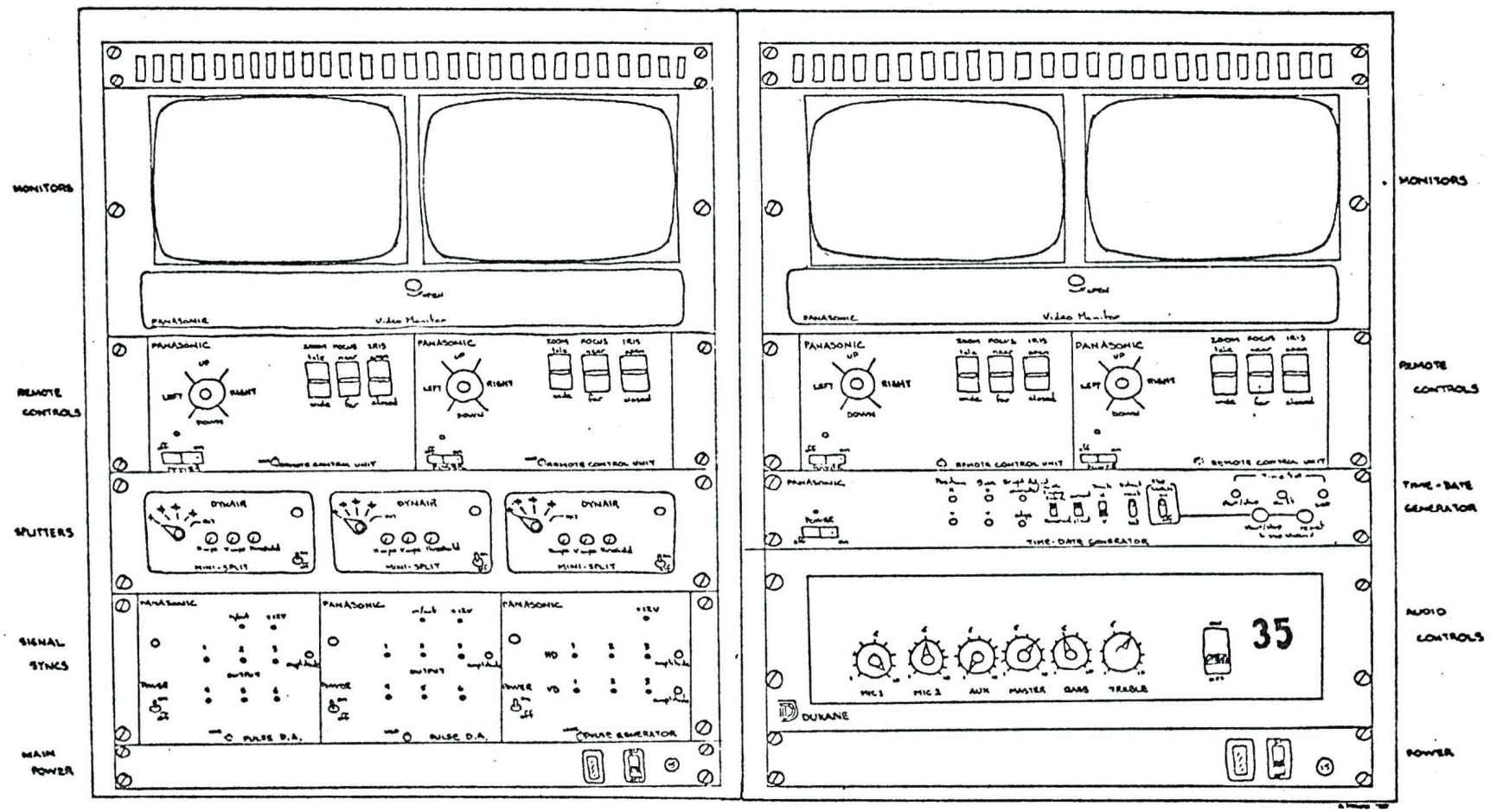
QUANTITATIVE RESULTS

Means	Condition		
	Timed	Untimed	Shared
Number of utterances	1.4	2.7	5.4
Number of turn-takings	.4	1.0	2.3
Duration of 1st eye contact	.3 sec	1.28 sec	1.63 sec
Time before S1 looks at S2	4.35 sec	1.38 sec	.62 sec
Time of onset of 1st smile	4.85 sec	2.6 sec	2.06 sec
Length of alpha phase	7.52 sec	15.2 sec	12.12 sec

Note: All ANOVAs on the above sets of means were significant at $p < .05$ or smaller.

Human Interaction Laboratory Setup





HUMAN INTERACTION LABORATORY
MAIN CONSOLE

VITA

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		to	

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UNIVERSITY OF VICTORIA GRADUATE FELLOWSHIP 1984

Publications:

Bavelas, J.B., Black, A., Lemery, C.R., and Mullett, J. (1986). "I show how you feel": Motor mimicry as a communicative act. Journal of Personality and Social Psychology, 50, 322-329.

Publications (continued)

Bavelas, J.B., Black, A., Lemery, C.R., and Mullett, J. (1986). Motor mimicry as primitive empathy. In N. Eisenberg and J. Strayer (Eds.), Empathy and its development. Cambridge: Cambridge University Press (in press).

Bavelas, J.B., Black, A., Lemery, C.R., MacInnis, S., and Mullett, J. (1986). Experimental methods for studying motor mimicry. Journal of Nonverbal Behavior, in press.

Bavelas, J.B., Black, A., Chovil, N., and Mullett, J. (1986). Equivocal communication. (In preparation, under contract with Sage Publications.)

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Title of Thesis

THE ALPHA PHASE: WHEN AND HOW INTERACTIONS ARE INITIATED, LIMITED, OR AVOIDED.

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JENNIFER MULLETT

MAY 21, 1986