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RULES OF ORDER: OR SO TO SPEAK

City University of New York

PH.D.

1980

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RULES OF ORDER: OR SO TO SPEAK

by

ARTHUR E. BLANK

A dissertation submitted to the Graduate
Faculty in Social-Personality Psychology
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy,
The City University of New York.

1980

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This manuscript has been read and accepted for the Graduate Faculty in Social-Personality Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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Abstract

RULES OF ORDER: OR SO TO SPEAK

by

Arthur E. Blank

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How members of a social unit acquire their shared knowledge about the social world was approached in Sherif's (1935, 1936) writings on norm formation and in the phenomenological descriptions of Schutz (1971, 1973) and Berger and Luckmann (1967). Both traditions presume that shared understandings originate in face-to-face encounters, but they diverge in that the phenomenologists argue that talk, and the construction of "typifications," plays a prominent role in the acquisition of shared knowledge. For the phenomenologists, a "typification" enables members to categorize behavior as a known event and permits individuals to consider disparate behaviors as belonging to the same class of events. Furthermore, "types" are presumed to be known to, and useable by, any other member of the social unit even though the details of the original encounter are masked by the "typification."

The research reported here is an attempt to explore the formation of "types," and examine the role that everyday conversation may have in the construction of shared understandings. By varying how members come to acquire their knowledge about the social world--through direct participation or through the words and deeds of others--a series of four studies was conducted. The first part of each study always begins in the same manner: participants are requested to judge how far in front of the screen a figure from a Julesz stereogram appears to be. The later part of each study always has one member who continues to see, or has been told about, the extended figure while (s)he interacts with a partner who views, unbeknownst to the other, a recessed figure. The task to be solved remains the same as that in the first part: to reach a decision about extension. This alteration in perspective was to provide a challenge to the knowledge formed during the first part of the encounter and to make visible any taken-for-granted assumptions that may have been acquired.

Contrary to expectations, in the majority of the interactions, 60.71%, the alteration in perspective was never uncovered. An analysis of the members' talk revealed that during the first part of the study the participants constructed a vocabulary and exchanged a set of expressions with each other that took the meaning and reference of those terms for granted. As there was no challenge to this usage, in the later parts of the study the partner who saw

or was told about an extended figure continued to presume that these words can be re-used unproblematically, and the task was presented to the partner with a vocabulary that masked the exact reference of the expressions. With this vagueness as to reference, the individual who saw recession used the "meaning" of these words to describe the recessed display (s)he saw and successfully concealed the disparity. It is argued that these expressions presumed useable by any other be considered "typifications."

By examining what is concealed and by understanding the role talk plays in this masking, the issue of what members are presumed to "share" is addressed. As the notion of "sharedness" is also at the heart of the concept of norm, some of the implications of this examination for the concept of norm are examined.

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. . . any object which remains uncontradicted
is ipso factor believed and posited as absolute
reality.

William James, 1890
Principles of Psychology
Vol. II, p. 289

There seems to be a single starting point for
psychology, exactly as for all other sciences;
the world as we find it, naively and uncritically.
. . . Most people live permanently in a world
such as this, which is for them the world, and
hardly ever find serious problems in its
fundamental problems.

Wolfgang Kohler, 1947
Gestalt Psychology,
p. 7

. . . the everyday life-world is to be understood
that province of reality which the wide-awake
and normal adult simply takes for granted in the
attitude of common-sense. By this taken-for-
grantedness, we designate everything which we
experience as unquestionable; every state of
affairs is for us unproblematic until further
notice.

Alfred Schutz, 1973
The Structures of the Life-World,
p. 4

INTRODUCTION

Rules of order: Or, so to speak

By choice of words and design, social psychology has positioned the individual in a matrix of social influence and causation. What more appropriate way to reflect this social nexus than through the concept norm, for the term directs our concern to the social sharedness of, and social restraints on, behavior and thought.¹ Out of the array of conceptual expressions available to us as psychologists, what can it mean for social psychologists to have selected that general and abstract constraint on thought and action called norms?

In the mid-30's Muzafer Sherif (1935, 1936) embedded the concept of "norm" in a general problem: if we survey the anthropological literature it is clear that there are various and contrasting immediate and natural perceptions of the social world. These numerous and culturally influenced modes of a "preparedness to see in the nature

¹A cursory glance at introductory social psychology texts confirms this conception of norm--that they are assumed to be socially shared and that they place real or imagined constraints on thought and action (Berkowitz, 1976; Brown, 1965; Hollander, 1976; Newcomb, Turner, and Converse, 1965; Secord and Backman, 1964; and Worchel and Cooper, 1976). Also Rommetveit's (1954) monograph explicitly draws our attention to the presumption that these cognitive and behavioral restrictions are shared frames of reference.

that surrounds us much to what another period would be totally blind" (Sherif, 1936, p. 64) raised a set of intriguing questions. First, how do we account for a particular manner of knowing the world which arises in one social unit² and not in another; second, how do we account for the apparent sharedness of these ways of being prepared to see the world within that social unit; and third, how do we account for the apparent naturalness of these ways of knowing the world? The concept of "norm" assumes that (a) social actors are able to make the appropriate social discriminations, and (b) that these social demarcations are shared and not idiosyncratic: i.e. any other member of that social unit in those particular circumstances should be capable of making similar distinctions.

In part, Sherif sought to link these issues by postulating a psychological need to develop a frame of reference,³ but this leaves vague the specifics of how the

²The use of the term social unit is meant to convey that at any one time within a society and across societies there exists more than one way of knowing the world. The term norm then also relies on an assumption of the social distribution of knowledge. The question of why one form of knowing dominates becomes a critical concern and is artificially separated here. But in claiming that there are different ways of being prepared to see the world, I am not implying that there exist different cognitive processes or capacities (Cole & Scribner, 1974). At any time the depth and breadth of the expression shared is undetermined.

³The research of Alexander, Zucker, and Brody (1970) has critiqued this postulation of a need to develop a stable framework. A reply in support of Sherif can be found in the writings of Pollis, Montgomery, and Smith (1974).

critical components of norms--their reference to an immediate, natural, and shared frame for perception and action--develop. The questions can be rephrased to ask: as members of a social unit, how do we come to acquire the socially shared stock of knowledge which permits us to act and think as recognizably competent adult members of a society?

If we assess the research in social psychology most closely aligned with Sherif's concerns we can determine how these issues have been answered. But when we examine the "arbitrary tradition" literature (Rohrer, Baron, Hoffman, & Swander, 1954; Rose & Felton, 1956; Jacobs & Campbell, 1961; Weick & Gilfillan, 1971; and Moschetti, 1977) it becomes evident that there has been a shift in emphasis. Rohrer, et al., basically replicated the original Sherif research and pursued the question of persistence: how durable is the laboratory induced norm. The authors concluded that an individual will retain the experimentally established norm for a period of at least one year. The research of Rose and Felton utilized Rorschach tests to create an experimental culture, and by replacing subjects to gauge the type of culture formed (open or closed) and the type of cultural transmission which occurred (invention, borrowing, and habit formation).

Citing the original Sherif research, the work of Rose and Felton, and the conceptual arguments of Gerard, Kluckholm and Rapoport (1956), Jacobs and Campbell

formulated their empirical task to be one of understanding "the perpetuation of 'cultural' characteristics that transcends the replacement of individual persons" (p. 649). Guided by Sumner's dictum that the "mores can make anything right," the authors utilized the autokinetic effect to address the question of whether a functionless norm would persist over time. That is, would an experimentally induced norm of 15 inches of apparent motion endure if there was a 'normal' assessment of approximately 8 inches of motion? As with Rose and Felton, persistence was scrutinized by replacing culturally sophisticated subjects with culturally naive subjects. The resulting alteration in judgments of apparent motion would be how the duration of the norm was measured. Under the laboratory constraints provided, the arbitrary norm was not transmitted for more than four or five generations. The authors attributed the brevity of the tradition to: (a) the role of autonomous decline; (b) the role of forgetting; and (c) the influence of new members. Jacobs and Campbell concluded that mores could not adequately account for how traditions were perpetuated. In 1967, Sherif also addressed the persistence of norms and replicated the Jacobs and Campbell study. He concluded that the durability of a norm will deteriorate as its arbitrariness increased.

Weick and Gilfillan (1971) were critical of the concept of arbitrariness employed by Jacobs and Campbell,

and separated "warranted" from "unwarranted" arbitrariness.⁴ The authors argued that the rapid decline of the norm could be explained as a result of the combination of unwarranted arbitrariness and the seemingly unreal assessment of apparent motion--that is, the press of reality was not considered. In contrast to Jacobs and Campbell, and Sherif, Weick and Gilfillan argued that in ". . . a situation where a bit of artificial culture is not blatantly unreal nor unwarrantedly arbitrary, and only a tendency to spontaneous innovations counteracts tradition, we would expect to see adherence increase with age" (p. 181). Thus, if aligned with the "pressures of reality" a warranted arbitrary context was deemed sufficient to account for the perpetuation of a tradition. The results of their game study supported their hypotheses.

The research of Moschetti (1977) criticized the Weick and Gilfillan work on at least two grounds. First, Moschetti noted that a salient aspect of interaction, communication between the subjects, was omitted from the study and suggests that had there been communication the distinction between

⁴"We will use the phrase 'unwarranted arbitrariness' to refer to those situations where real and relevant differences exist among choice alternatives, but these are ignored and the choice is made on a nonevidential basis. A situation of 'warranted arbitrariness' exists when the choice alternatives are equally valid and where real and relevant differences are inconsequential." (1971, p. 180)

unwarranted and warranted arbitrariness would not have held. Second, Moschetti cites the writings of Pareto to argue that the persistence of a norm is due not to its actual and objective effectiveness but to its presumed effectiveness: "the actors can be mistaken concerning the causal contingency between the tradition and the outcomes in the situation" (p. 79). However, as there was no actual transmission of the tradition in this study the claim can not be assessed.

The concern with comprehending why and for how long norms or arbitrary traditions will persist is critical, but it represents a shift in emphasis. To specify the conditions under which norms endure is vastly different from inquiring how some individual(s) acquire social competency--understanding the process by which social knowledge is formed and transmitted. But while these studies do not critically examine this issue, they do rely upon some presumptions about these processes. For in successfully producing something which could be maintained, something had to be formed and transmitted. How has each study accomplished the construction of a social convention, a slice of socially shared knowledge? It was precisely this formation of a socially constructed "preparedness to see"--a norm--which made the autokinetic effect so dramatic. And that a human artifact, a social convention, has been produced in each of these studies should serve to remind us that a notion of "convention" is also at the core of what it means to employ that general

and abstract constraint on human thought and action called "norm."

Sherif's (1935, 1936) reliance on anthropological data brings into relief the argument that the world of "norms," though natural and shared, is an arbitrary world. The social traditions common to one setting are not necessarily common to any other setting. Whatever traditions are involved we are left with the broader task of coming to grips with and displaying how these "norms," "preparedness to see," acquire their apparent naturalness and commonality within some social unit. In that each study in the "arbitrary tradition" literature proposes that a social tradition was generated, each study has let the process of that production pass without comment.

It is incumbent upon the discipline to account for how a particular frame of reference has become common. Indeed, I would maintain that if we do not conceptually and empirically grapple with how social traditions and conventions are formed and become shared the concept of "norm" will have little explanatory value. For all we will know is that members of a social unit have this knowledge and are capable of using it, but we will lack an in-depth comprehension of how that social knowledge was formed.

This request to study the formation of social knowledge is similar to the urgings of Moscovici:

The proper domain of our discipline (social psychology) is the study of cultural processes

which are responsible for the organization of knowledge in a society . . . for the codification of inter-individual and inter-group conduct which creates a common social reality with its norms and values. (1972, p. 55)

and Pepitone:

The third stage of inquiry for a social psychology of normative social behavior is the most important and the most divergent from the way social psychology is organized at the present time. It deals with the origin of normative values and beliefs. (1976, p. 649)

How can we begin to probe the problem as to how that social artifact--a socially constructed slice of life--was formed? Sherif (1935, 1936) did put forth some basic assertions as to how norms came to be formed and shared. Fundamentally the concrete interaction of individuals was considered sufficient to create knowledge, momentarily. And it was further suggested that alterations in the social context would influence the knowledge formed and result, perhaps, in emendations to it.⁵

⁵The durability of this knowledge--its "emergence and standardization" and its "gaining of authority and prestige" (Sherif, 1936, p. 87)--is a process which is extended in time. Though Sherif labeled the knowledge formed during the interactions "norms," I want to reserve that expression for a "preparedness to see" which can be demonstrated to be durable. I will consider what was made known during the encounters a slice of knowledge--a temporarily shared understanding. Obviously, the question of how well what is formed in the experimental encounters persists is the concern which has been addressed by the "arbitrary tradition" literature.

Other presumptions about the conditions of knowledge construction can be explicated by paying careful attention to the experimental constraints reported in the literature. It is apparent that any subject in these experiments was placed in a context where a set of instructions defined a task to be solved. As Sherif originally intimated, this pragmatic involvement with a task at hand would play a role in framing how the social world would be known and what would be shared by the parties to this encounter. But note that what is finally considered to be normative, is not unilaterally invoked. It is a consequence of the members' negotiations with each other, and it is this socially arbitrated and socially constructed artifact which is transmitted to future generations and renegotiated if the knowledge becomes removed from the press of reality (Weick & Gilfillan, 1971).⁶ Is this how some social knowledge comes to be formed, shared, and perceptually natural: that the concrete actions of individuals engaged with the pragmatic and mundane considerations of a task at hand generated a

⁶This process of negotiation is clearest in the studies of Sherif, and Rose and Felton, though it exists in the other studies--especially at the time of replacement. In the Sherif research, individual judgments converge to form a near consensus as to the judgment of apparent motion. In the other studies, a newcomer can alter this assessment--argue about how far it "really" moves. One critical issue here is the equivalent status of the participants. Differing configurations may lead to alternate assessments and the ability to "control" reality.

manner of knowing the world? Sherif's endeavor to demonstrate the formation of a "norm" in an ambiguous context appears to have worked under these constraints, and to have been replicated in the experimental settings of the "arbitrary tradition" research.

At this point it is interesting to proceed to the writings of others who are attempting to elucidate the processes "by which any body of knowledge comes to be socially established as a reality" (Berger & Luckmann, 1967, p. 3). The phenomenological descriptions of Alfred Schutz (1971, 1973) represent an attempt to characterize how the objective world is socially experienced, and how an individual incorporates the existing stock of social knowledge. In explicating these problems, Schutz presents a conception of everyday life which can be heuristically compared with the work of Sherif. Schutz argues that the social world which we encounter daily seems natural and unproblematic for us because it is a social world resting on a circumscribed set of social presuppositions which the member of the social unit can take for granted. The research of Harold Garfinkel (1967) has empirically pursued the writings of Schutz and provides an apt demonstration of the problem.

The term "anthropologically strange" is employed by Garfinkel to indicate that there is a body of taken for granted social knowledge which is presupposed by members of the social unit, and to suggest a manner of displaying that

knowledge--by taking the position of an outsider or by disrupting the social unit. This tactic of disruption makes visible the domain of typically invisible⁷ social rules which we, as members of some unit, must rely upon in order to make recognizable to our self and to others the social world which we naively know. As with norms, it is this reliance on socially shared presumptions which enable the actor to proceed with his everyday life. For example, in one study students were asked to pretend to be boarders in their parent's home. This wrenching of a socially shared assumption--superficially rendered as, that if you left my home this morning as my son, daughter, wife or husband I expect to find you as a member of that same social category when I see you later--created consternation and strain for both the subject and the parent. The parents expended a great deal of effort to restore events to their typical, usual, and recognizable pattern so that the interaction could again proceed normally and naturally. That we can rely on this usual, mundane, pragmatic, uneventful, and remarkably regular world points to its naturalness. That we presume it is shared with others, to its taken-for-grantedness.

⁷Invisible is not to be taken as meaning unconscious. It refers to a domain of behavior and thought called non-conscious by Bem (1967). Bem also uses the concept of taken for granted to refer to a system of social beliefs which inhibit the ability to envision alternate modes of thought and action.

The force of this conjecture can be further demonstrated by noting the tenuous position which a foreigner is placed in when visiting a non-familiar culture. The writings of E. T. Hall (1966, 1973, 1977) relate numerous instances where individuals mistakenly assume that their natural and usually tacit social preparedness to see can be unalterably applied in alien settings. The research on proxemics (Hall, 1966) argues that Americans and Arabs employ different physical distances from their partners when conducting business transactions. The closeness of this distance for the Arab is unsettling to the Americans used to a greater degree of physical separation. What is perfectly "natural" becomes problematic for the actors.⁸ The ability to accomplish a smooth interaction is in jeopardy, and the potential for insult and embarrassment has arisen. In discussing how time is a culturally embedded concept, Hall (1973) provides another example. An American diplomat arrives in the host country and seeks to contact the appropriate diplomatic counterpart. Having made an appointment to meet with the diplomatic representative of the host country, the American arrives at the scheduled time. After waiting for 10 to 20 minutes, the American begins to resent

⁸Problematic is intended to convey that what is usually done or seen uneventfully becomes an issue. The event does not proceed smoothly and the issue of social competency, for self or other, may arise.

the delay and feel insulted. The social assumption which has been unwittingly transported is that there is a "correct" amount of time to keep someone waiting. But the judgment of "correctness" is culturally embedded, and the host's conception of waiting time differs from the visitor's. The possible departure of the American, and his feeling of insult, would not be readily comprehended by the host.

The tactic of disruption and the concept of "anthropologically strange" are useful to demonstrate that the discomfort and social bizarreness are the result of the violation of social conventions automatically employed and culturally shared. The possible estrangement from the context points to the error made and its usually unproblematic, taken-for-granted aspect.

The display of differences is not to raise the issue of how we account for the differences, but to direct our focus to a topic already raised: how do we explain the culturally entrenched and shared procedures for seeing and acting that are present in some social unit. If we can agree that the concept of "norm," and its components of sharedness, naturalness, and convention, refers to what an actor must know in order to be acknowledged as a competent member of a society, then our use of "norm" must account for each of these issues. Given the surface similarity of the taken-for-granted world and norms, can we gain any further directions from the phenomenologists as to how social knowledge is formed?

To describe how the social actor comes to know the social world, Schutz (1973) and then Berger and Luckmann (1967) make use of the concept of "typification." The idea of "typification," or type, refers to the individual's abstraction from detail those ingredients which permit a member to identify a specific event as a socially known type. In a specific interaction, it is assumed that the in-depth details and uniqueness will be subsumed under a broad category. Berger and Luckmann illustrate this concern by noting how social detail is lost when the participants locate the interaction under the broad rubric of "mother-in-law trouble." Aaron Cicourel (1974) is similarly concerned with how a particular incident is recognized as belonging to some general class of events. He draws from the writings of Schutz and Chomsky's theory of generative grammar⁹ to argue that norms are surface elements for which a sense, a meaning, is ascribed by deep structure. Cicourel labels this

⁹Cicourel is in an ambiguous position vis-a-vis Chomsky's theory of generative grammar. He borrows the notion of surface and deep structure, but does not accept the rationalist dimension of the theory. Further, Chomsky is explicit about the nature of the rules which enable one to move from surface to deep structure; Cicourel is not. Chomsky is also hesitant about the applicability of his approach to areas outside of linguistics, but the suggestiveness of the approach is worth pursuing--even if it is discarded later. In addition, the formulation of the problem as one of recognizing a particular event as a member of some broader category permits a tentative link to be made with the research on pattern recognition in cognitive psychology (Neisser, 1967).

assignment of sense "interpretive procedures" and suggests that a particular encounter is identified as an instance of a general class by specification of meaning. The "interpretive procedures" which allow a social member to select from a display those socially germane particulars that will permit the categorization of the event are assumed shared by the members and are, in part, formed prior to language.

Whether or not a generative concept is warranted, the problem of how a member realizes that a specific encounter belongs to some general category is a critical addition in understanding what has to be reckoned with when we attempt to dissect the issue of knowledge acquisition. An example from the research of Latane and Darley (1970) will illustrate the concern. In their explanation of helping behavior, Latane and Darley present a decision tree which has at its first and second nodes the problem of recognition. The authors report an incident--someone lying on the floor, someone who fell from a chair, someone screaming--which must first be categorized as an incident requiring assistance before any other decision as to help or not to help will be implemented. As the Kitty Genovese case documented, this categorization is not straight-forward and the decision is not made with ease. What are the shared procedures that members must utilize so that a unique instance can be recognized as belonging to a general class of events?

Within the framework of "interpretive procedures" or "typification," norm represents a summary term which enables individuals to conveniently categorize an entire range of possibly disparate behaviors as members of the same class.¹⁰ By selecting a category the details and uniqueness of the action are hidden in the dimensions which are shared with other events in the category. To a large extent then the concept of "type," the assignment of sense, the notion of "norms," are assumed to be idealizations of specific incidents. However, Schutz carefully argues that with the process of typification:

It should be emphasized that the interpretation of the world in terms of types, as understood here, is not the outcome of a process of ratiocination, let alone of scientific conceptualization. . . . Thus typifications on the common-sense level--in contradistinction to typifications made by the scientist--emerge on the everyday experience of the world as taken-for-granted without any formulation of judgments or of neat propositions with logical subjects and predicates. (Schutz, 1973, p. 120)

As with norms, typifications appear natural and are presumed shared with others. This assumption of sharedness is expressed by noting that experience is anonymized in a type: any other member of the social unit is thought, in principle, to be capable of recognizing and duplicating the category. It is shared for it is not supposed to be a unique incident tied to the personal biographies of the

¹⁰Mischel's (1973) use of trait as a summary term raises similar issues. However, it must be stressed again that types and norms are not thought of as being equivalent, just analogous.

actors. Given the resemblance with norms, will considering how types are formed offer any more details as to how socially constructed knowledge comes to be acquired and shared?

Schutz, and then Berger and Luckmann indicate that a type evolves from a "situationally adequate solution to a problematic situation" (Schutz, 1973, p. 231) and is taken-for granted-until-further-notice. When a typification becomes problematic, Schutz argues that the resolution will be guided by the principle of "pragmatic motive": the member will question only that knowledge which permits him or her to master the problem. At the time of the disruption, the uncritical attitude toward the taken-for-granted social world may be sustained, modified, or abandoned. But only that knowledge which is called into question by the disruption is challenged. In that a type is formed and altered within and in response to specific contextual constraints another similarity with norm formation is revealed. A further linkage with Sherif's discussion of norms is that typifications are assumed to be shaped within the bounds of face-to-face interactional settings. The writings of Berger and Luckmann, and Schutz, diverge from Sherif in that they claim that talk plays an essential role in type construction.¹¹

¹¹Schutz, and Berger and Luckmann refer to language. I am using the expressions talk, speech conversation, discourse, words, utterances, and exchange of words to follow the accepted linguistic practice that language refers to a grammar and talk to use in context--pragmatics.

While Moschetti (1977) did address how pervasive speech is during interactions, he offered no suggestions as to its possible function on norm formation, maintenance, or transmission.¹² In order to create and sustain cultural products, discourse played an integral part of the Rose and Felton experiments but no systematic, or even cursory, examination of that discourse was provided. Given the prominence of talk in everyday life, it is surprising that social psychologists have not paid more attention to the conditions of its use and its possible contribution to the structuring of shared knowledge.¹³

In the writings of Schutz and Berger and Luckmann, conversations during face-to-face interactions involve: (a) the process of externalization--the placing of subjective intent into speech; and (b) the process of objectivation--by placing my experience in words I make available to myself and others the "elements" from which a common world can be constructed. Discourse is then linked to type construction for it enables the parties to the face-to-face encounter to

¹²Moschetti actually referred to communication. I am concerned with talk. Obviously non-verbal components are an integral part of the communicative picture, and at times may outweigh the verbal message (Argyle, 1967).

¹³The handbook article by Miller and McNeil (1969) and the text by R. Brown (1965) tried to draw our attention to some of the issues involved with speech and language. With the recent upsurge in sociolinguistics (Bauman & Sherzer, 1974, Gumperz & Hymes, 1972, Hymes, 1974; and Fishman, 1968, 1972, 1975), some corrections in this omission have begun.

comment on, comprehend, and categorize their experience for self and others. Out of an exchange of words during an interaction a typification results. But the typification stands in a special relationship to the encounter. For as Schutz asserted, the detailed step-by-step development of the interaction (its "polythetic character") is caught with a theme (its "monothetic grasp"). And it is this thematic grasp which is a type and which is taken-for-granted-until-further-notice.¹⁴

This retention of a sense is assumed responsible for the eventual sedimentation of knowledge and for how specific incidents are recognized as having been previously experienced--as a particular instance of a general class. During face-to-face encounters talk provides the elements from which a shared world can be negotiated and constructed. And what are negotiated and constructed through dialogue and presumably shared and taken-for-granted are typifications.

¹⁴To prevent a possible misunderstanding, I am not arguing that talk is the way knowledge is formed and shared. Obviously, some of the "arbitrary tradition" research succeeded in producing something without speech. Even for Schutz it is in principle possible to construct a type without words. I am only arguing that talk is a prominent means by which such knowledge is formed, shared, and sustained. Furthermore, if the interaction is not novel but familiar the typifications are selected from "a system of relevances and typifications as it exists at any historical moment . . ." which ". . . is itself part of the social heritage as such is handed down in the educational process to the members of the in-group." (Schutz, 1973, p. 120)

The expositions of Schutz, Berger and Luckmann, then raise the phenomenological claim that discourse is influential in coming to know a world that is naively and uncritically shared. Is there any empirical research which can support the theoretical claims made about the role of talk during interaction? The research of J. S. Sachs (1967, 1974) and Bransford and Franks (1971) offer some interesting suggestions that are worth briefly examining. Sachs was concerned with whether subjects would recognize a previously encountered sentence if that sentence had been either semantically or formally (syntactic but not semantic change) altered. The research clearly demonstrated that semantic alterations were readily noted while formal changes were not, and that the loss of detail about the exact wording of the sentences occurred rather quickly--within 27 seconds (1967) and 23 seconds (1974). Sachs concluded that the memory for meaning was retained, and that this memory was not dependent on the original form of the sentence nor was the meaning retained the simple summation of the individual words (1967). In 1974, Sachs noted that the meaning stored did not necessarily correspond to the temporal order of the input.

Bransford and Franks' (1971) research attempted to investigate that memory is "not for individual words or sentences" but for "wholistic semantic ideas." A series of sentences were presented to the subjects, and during the recognition task these original sentences were given to the

subject with a sentence that combined the semantic sense of the original sentence. The subjects had never seen this sentence, but "recognized" it as having appeared more frequently than those sentences which were actually presented. Furthermore, the subjects were very confident that these sentences had been part of the original set of sentences. Bransford and Franks concluded that:

In general, Ss did not store representations of particular sentences. Individual sentences lost their unique status in memory in favor of a more wholistic representation of semantic events. (1971, p. 348)¹⁵

As the unit of analysis in the research cited is sentences and not conversational discourse, the empirical support for Schutz is at best indirect. What is corroborated is the general argument for the retention of some thematic grasp--a construction in which details are lost in favor of a summation, a sense. If these are warranted arguments, typifications should not necessarily be assumed to be direct replicas of the specific ingredients of the conversation. That is, the speech which is being employed for the construction and negotiation of an event need not produce a summary statement that has as its marker any of the specific expressions that went into the evolution of the theme. Or, to paraphrase Sachs and gestalt psychology, the

¹⁵Research by James and Hillinger (1976) severely questioned the results produced by the Bransford and Franks experiment, but leave the general position--a constructivist interpretation--unscathed.

typifications are not the simple summation of individual words.

The connection between talk and typification is then preliminarily construed to be: (a) that talk permits individuals to place their subjective intent into words which are then manipulable for self and others; (b) this objectivation provides the elements from which a common world can be shaped; (c) the selection of elements from the world sustains typifications which have allowed participants to locate the event into either an already existing category or to generate a new category; and (d) these types represent a manner of pragmatically knowing a particular world which is taken-for-granted-until-further-notice. But is this outcome particularly astounding when Posner (1973) notes that:

It has long been known that human memory is not developed for the exact reproduction of previous events, but has rather evolved for the purpose of abstracting the general form of events. (p. 44)

What is striking then is not that a sense is constructed, or that abstraction from detail occurs, but that every interaction has the potentially confining and unintentionally produced social construction of a "preparedness to see." Does the social use of speech have the paradoxical result of constraining knowledge at the same time it is being interactionally employed to create knowledge?

The question frames a dilemma but is overdrawn if it implies that any knowledge can be produced. It has been noted that in the construction of a type, or of a norm, actors are pragmatically engaged. Talk is then assumed to mediate between the task one is involved with and the actor's subjective intent. From the constraints of the task at hand, socially constructed knowledge may be formed or recognized as an instance of the general class. As Berger and Luckmann attest:

. . . most conversation does not in so many words define the nature of the world. Rather it takes place against the background of a world that is silently taken-for-granted. (1967, p. 152)

Yet it seems implausible to argue that the mere use of speech is sufficient to construct a new type or to result in the classification of the engagement into an existing scheme of typifications. Are there any specifiable conditions which can suggest when a thematic grasp will occur? G. H. Mead (1934/1962), W. James (D. Schultz, 1969), A. Schutz (1973) and A. Kaplan (1964) have each commented on the separation between a continuous stream of experience and the reflection on that experience. It seems reasonable that a context which causes the members to reflect on their activity may occasion the grasping of a theme. One possible reading of the "arbitrary tradition" literature is that at the point where information had to be transmitted, the subjects looked back at their prior experience and generated an abstract

schemata. Garfinkel's tactic of disruption and Hall's foreigner examples also suggest that when the context is made problematic, reflection takes place. The research of Sachs, and Bransford and Franks demonstrated that subjects will schematize when presented with a recognition task, but whether the experimentally imposed meanings are the same ones that the Ss would have produced is left open.

It does not appear implausible to suggest that a socially constructed sense, a typification, will occur at points of reflection, and we can argue that a backwards glance at prior activities will come about when (a) a request to transmit information occurs, (b) a disruption in the social context makes the setting problematic, and (c) a natural request for reflection is provided--a probe that requests an explanation of what has transpired.

Given that reflection may happen at any of these prompts it would be incorrect to assume that (1) typifications emerge solely as a summary statement at the end of the conversation, and (2) that a single type is the outcome of a pragmatic encounter with the world. It is assumed that a type or thematic grasp is a backwards, reflective look at lived experience: i.e., it is post-hoc. What remains entirely open are the particular thematic grasps that may evolve in a particular interaction.

While we may suggest that types occur at the point of reflection, it must be apparent that a critical issue is still

unresolved. Specifically, how does any member decide which elements are to form the edifice for the typifications? It can be tentatively proposed that what is selected for the types are the situationally adequate "results" of the pragmatic encounter. Omitted are the non-pragmatically related details and the step-by-step construction of the socially arbitrated locating activity. At the time of reflection the preceding activity becomes known, typified and taken-for-granted, by its "result(s)."

Why presume that typifications are a "result" of pragmatic encounters? There are two reasons: first, Schutz defined types as solutions to a problematic situation and one manner of defining solution is in terms of its outcome, its results; and second, Schutz makes the assertion that it is the result which is objectivated as knowledge. And with the close analytic connection between typification and objectivation, it seems plausible to suspect a similar mechanism for type formation.

The assumption behind the conjecture that the social construction is omitted is the claim by Schutz that typifications are anonymized--the "result" is thought to be any-one's product, and as such doable and recognizable by any competent adult member of the social unit. This process of anonymization loses the social authorship of the construction, for if retained these details would demonstrate that the outcome is highly contextualized, the product of

unique biographies, and not any-one's result.¹⁶ The pragmatic loss of the arbitration provides an event for any-other.

A further aspect of anonymization is pertinent here. As the negotiated "result" is transmitted to others, and then to someone else, the outcome is further removed from the situation of origin. As this distancing from the original situation increases an unembedded result is handed over matter-of-factly, as the way things are. The recipient knows that part of the social world through the situationally detached typifications of others and not through the active constructive work of the original problem solving attempt. It is then apparent that the initial parties to the construction stand in a different relationship to the socially negotiated knowledge than does the recipient. The founding members to the construction know of the results embedded and arbitrated character while the receiver of the transmission may not.

As the recipient is further removed from a knowledge of the "results" construction, what takes place when pragmatic constraints make the types problematic? How readily will the member who knows the world through the talk of others--through second-hand typifications--renegotiate its

¹⁶A joke's failure as noted by the comment 'you had to be there,' indicates the teller's inability to make the joke anyone's.

outcome? To the extent that the recipient has accepted the transmission matter-of-factly, as an outcome doable and recognizable by any-other, and is unaware of the socially negotiated fundament of that "result," it is assumed that it will be harder to reinsert a constructive process: i.e., the outcome will be less readily re-negotiated the further removed the recipient is from the original construction.

Have we progressed in answering the original query: how do we as members of some social unit come to acquire the socially shared stock of knowledge which enables us to think and to act as recognizably competent adult members of a society? Sherif's (1935, 1936) basic formulation has been retained but the function of talk and typification are now affixed as critical dimensions. In assessing how shared social knowledge is acquired, we can now state the following conjectures:

Given a problematic context

- 1a: talk during an interaction provides the elements from which a common world can be constructed;
- 1b: reflection on this preceding talk generates typifications which select from this step-by-step process those elements which permit the grasping of a pragmatic result;
- 2: the transmission of this result to others omits its social construction so the results can look like anyone's;
- 3: as the "knower" of the result is further and further removed from the original situation the harder it is for that recipient to renegotiate the result.

It then appears that the conversational discourse of interacting adults pragmatically engaged with a task at hand will provide the elements for the negotiation and construction of a "preparedness to see"; and which upon reflection produce typifications that shall remain unproblematic until-further-notice.

To empirically address the phenomenological claims about the relation of speech to knowledge construction and type formation, a context must be discovered or created that enables the parties to the interaction to become pragmatically engaged in a problematic situation; to offer the opportunity for reflection; and to allow different stances toward the situationally shaped knowledge. However, any empirical setting that attempts to verify these conjectures amongst interacting adults is methodologically confounded.

For the participants who enter the context are sophisticated adults who are immersed in, and continually rely upon a system of cultural recipes that permit social comprehension and action. In such encounters where there already is the "background of a world that is silently taken-for-granted" (Berger & Luckmann, 1967, p. 152), talk is already presumed to be a system of anonymized typifications, and a type is a "variation on typifications already on hand, however plain and ill-defined they may be" (Schutz, 1973, p. 232).

Though the participants' talk-in-context presumes a world of pre-existing shared knowledge and types, a novel environment can be created and sustained in an experimental setting. The construction of such a context would make the "stock of knowledge" on hand problematic and offer the opportunity to observe the formulation of shared knowledge and the grasping of a theme. The stimulus utilized to support such a context must enable the members to become pragmatically engaged with it, and allow them to come to "know" it in line with some task-at-hand. Yet the members must be surprised by the same stimulus at some future point so what they have come to know through their conversation can be challenged. The stereograms developed by Bela Julesz (1971) are appropriate stimuli.

When seen without a visual aid, the stereogram appears to be a series of dots but when viewed through a set of color-coded goggles a previously hidden figure becomes visible. The figure seen appears to separate from the center of the previously undefined visual field and to either move forward and out (extension) or back and away (recession) depending on the color arrangement of the goggles. The ability to project and sustain an extended or recessed image provides the opportunity for the participants to be engaged with and come to know a particular visual world which can be socially and consensually validated through talk about that world. By exchanging

the goggles this socially formed world can surprise its members. That is, in an experimental setting where each participant begins by viewing an extended figure, it is possible to solve a problem related to that display--how far in front of the pattern of dots is the figure that appears. The next part of the context would proceed by presenting one of the original members or a new partner with a pair of goggles which made recession visible, while the other member continued to view extension. The problem to be resolved remains the same as the one presented earlier, but the alteration in visual alignment disrupts the prior resolution and permits the occasion for reflection on what has been made known and the possible renegotiation of the task. And with such a context and task we can begin to address the conjectures put forth about the consequences of talk.

METHOD

Overview: Four exploratory studies have been devised which can: (a) sustain a novel and problematic context during which an experimental task is to be solved; (b) provide an opportunity to experimentally manipulate the occasion for reflection; (c) offer the chance to renegotiate the initial solution; and (d) manipulate how a member acquires the information about how the task is to be performed. Each study has at least two parts and begins with two (2) subjects viewing an extended Julesz stereogram. The subjects are asked to arrive at a cooperative judgment about how far in front of the pattern of dots the figure that appears is. The ensuing dialogue allows the subjects to consensually validate their judgments, and the manner of knowing constructed in these contexts refers to the derivation of a particular solution to the task at hand. The later parts of each study begin with one member, either one of the original pair or a new member, wearing a set of color-coded goggles which makes the figure in the stereogram appear recessed. The other partner continues to view an extended figure and the task to be resolved remains unchanged. The later part of each study is then shaped so that the manner of knowing which emerged during the initial interaction is made problematic and open to renegotiation. In addition, the new member's stance

toward the negotiated knowledge is such that (s)he is informed about the visual world and the task to be performed either through their own speech and sight or through the talk and explanation of others.

Materials: The stimuli presented in all four studies are Julesz stereograms--either a diamond or triangle. When the stereograms are viewed a set of goggles are worn which have red and green acetate lenses. When the goggles worn have red acetate over the right eye and green over the left, the figure appears to move forward and out from the center of the visual field (extension). If the colors are reversed, the figure appears to have receded back and away from the center of the display (recession). At all times a 3 x 5" unruled index card with the experimental problem typed on it is on the table and in full view of the subjects. Also on the table in front of the participants is a Panasonic RQ-324S cassette recorder with three SONY F-27 microphones attached. The stereograms are projected on an American Optical Hs Opaque Projector 1000.

Study One (The Base):¹⁷

Subjects: Seven teams of subjects from the Brooklyn College

¹⁷The rationale for the first part of each study should be clear, it offers an opportunity to acquire some knowledge about the world. With the variations presented in the second part of the studies we offer the occasion for reflection and/or transmission of the first solution. But most importantly we can ascertain how the stance of the "knower"--the person

subject pool were used for a total of 14 subjects, 5 males and 9 females, ranging in age from 17 to 20.

Procedure: There are two parts to this study and the same two subjects (s1 and s2) participate in each part. In the first part of the design, the Ss are requested to enter the experimental room and to take seats at the table. On the table in front of them are two microphones, a cassette recorder, two sets of goggles, and an index card with the experimental problem typed on it. Behind them is the opaque projector and another table.

The subjects are told that the experiment is concerned with how individuals reach solutions to problems and are read the following instructions:

Let me explain the first part of the experiment in more detail. As I've said we are concerned with how individuals reach solutions to problems. The pattern of dots that is now projected on the wall (screen) provides the problem that you will have to solve. On the table in front of you are a pair of goggles. When you place the goggles over your eyes a figure which is not apparent without the goggles will appear. It may take some time for the figure to become clearly visible. The tape recorder is present to record how you both go about solving the experimental problem.

Once the figure appears the problem that you must solve is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is. This part of the experiment is over when you have cooperatively

whose knowledge will be challenged--influences the ability to renegotiate the results. As such, with the exception of study 1, the names given to each study are meant to evoke how that "knower" acquired what was known--directly through his or her own experience or vicariously, through the experience of others.

agreed on how far in front of the dots the figure is. The problem must be solved jointly, and in no case can the experimenter be asked for help once the experiment has begun.

When the lights are shut off you may place the goggles on. Take a few moments to adjust to wearing them. You can begin to solve the problem as soon as the shape has become clearly visible. So you do not forget what the problem is, it is typed on the index card in front of you. Again, the problem is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is.¹⁸

When the problem is resolved with the first stereogram (a diamond), the subjects are asked to remove their goggles and rest their eyes. During this rest period a second stereogram (a triangle) is projected on the screen. The second part of the experiment begins when the E returns the goggles to the participants. However, as the second part is always constructed to provide reflection on the previous experience, the E randomly selects one of the subjects and presents that subject with a set of goggles whose color arrangement is different than those worn in the first part.

¹⁸The detailed instructions for each of the studies is in Appendix A. As there are different sets of color-coded goggles the subjects stand in a set of possible relationships to each other and to the experimental instructions. The set of possible relations are spelled out in Tables 1 and 2 in Appendix B. But each study proceeds in the first part by having the subjects each wear goggles that enable them to see an extended display--that is the goggles have red acetate over the right eye and green over the left. What the subjects view then matches the experimental task which requires a judgment about extension. The conditions which are omitted provide other interesting twists to what can be accomplished. But they are omitted so that the studies, given their exploratory nature, can be standardized as much as possible.

The other subject is given the set of goggles previously worn. The randomly selected S now views a recessed triangle, while the partner continues to see an extended one.

Before the goggles are put on, the experimenter tells the subjects that:

You can proceed as you did in the first part of the experiment. Your task is again to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is.

Study Two (The Repeater):

Subjects: Seven teams were used for a total of twenty-one subjects, 13 females and 8 males, ranging in age from 17 to 36.

Procedure: As with study number one there are two parts to this study, but there are now three subjects (s1, s2, and s3). Prior to starting the experiment, the subjects are informed that they will be participating in a study which has multiple parts, that they will be randomly assigned to these parts by drawing lots, and that the study is concerned with how individuals reach solutions to problems. Once the part assignment is completed, s1 and s2 enter the laboratory while s3 remains seated outside.

When s1 and s2 enter the room they are read essentially the same instructions provided to the subjects in study number one. The modification made is that they are told that one of them, but not which one, will have to take part in the second phase of the experiment and explain to the person waiting

outside what the experimental task was and how it was solved.

With the resolution of the task the subjects are asked to remove their goggles and one of the Ss--as determined by the initial random selection--leaves the room and asks s3 to enter. This departing S is also asked to remain outside so that (s)he can take part in the debriefing. When the new subject enters, (s)he is told:

As you know the person you are seated next to has participated in the first part of the experiment. This individual will now explain to you what the experimental task was that had to be solved, and how it was solved in the first part. When this is done both of you will have to reach a cooperative solution to the same problem that was solved in the first part. In no case can the experimenter be asked for assistance once the experiment has begun.

The new subject (s3) is presented with a pair of goggles which show a recessed diamond, while the remaining subject (s1 or s2) continues to wear the goggles which show an extended diamond. In this study, and studies three and four, the stereogram viewed in all parts is a diamond.

Study Three (The Watcher-Hearer):

Subjects: Seven teams were used for a total of twenty-eight subjects, 20 females and 8 males, ranging in age from 17 to 53.

Procedure: Though there are still two parts to this study, a team is composed of four subjects (s1, s2, s3, and s4). As with study two, the members are initially introduced to

the study and randomly assigned to the part and role that they will have. When s1 and s2 enter the room they are given the same introduction that the subjects for study one were provided with. In addition, they are informed that another subject, the watcher-hearer (s3), will observe them while they solve the task and that in the second part of the study it is that individual, s3, who will explain the task to the last subject, s4.

After this introduction is given to s1 and s2, the third subject is brought into the room and told:

As the other subjects work on the experimental problem you will watch them and hear them solve it. It is important that you pay attention to their efforts for even though you will not be wearing goggles it is your responsibility in the second part of the study to explain to the subject now waiting outside what the experimental task was and how it was resolved. After you do that you will be asked to solve with that person the same problem that was solved here.

During this part of the experiment you can not offer any advice, nor can the subjects ask for your help. Once they have solved the task feel free to ask them any questions you think are necessary to know for the second part of the experiment.

The major modification that occurs in this study is that one member--the watcher-hearer--observes two members solving the task but has no first-hand knowledge of what they see as (s)he is not wearing goggles. What the watcher-hearer can know is only what (s)he observes or hears. After the first part of the study concludes, it is this third subject who must convey the task demands to a new, and sighted, partner

who views a recessed diamond. When the original pair, s1 and s2, depart and a fourth subject enters, (s)he is told:

As you know the person you are seated next to has participated in the first part of the experiment. This individual will now explain what the experimental task was that had to be solved and how it was solved in the first part of the study. When this is done both of you will have to reach a cooperative solution to the same problem that was solved in the first part. When I shut the lights off you can put on your set of goggles. The other person is not wearing goggles, and can not put them on. In no case can the experimenter be asked for assistance once the experiment has begun.

Study Four (The Hearer):

Subjects: Seven teams were used for a total of twenty-eight subjects, 12 males and 16 females, ranging in age from 17 to 45.

Procedure: While there are still four subjects (s1, s2, s3, and s4) there are now three parts to the study. The subjects are again introduced to the experiment and randomly assigned to parts and roles. The first part begins when s1 and s2 enter the room and are read the same instructions as presented in study number two. At the conclusion of the task, one member leaves and requests another to enter. This new member--the hearer--is told by the remaining subject what the task was and how it was solved. During this explanation, neither member wears goggles, and the hearer only knows about the task through the comments of his or her partner. When the explanation is concluded to the satisfaction of the participants, the remaining member of the original pair

(s1 or s2) departs and asks the last and fourth member to enter the room. When this subject enters, the third part of the study begins with a similar set of instructions as presented in the second phase of study number three. And the hearer who has no visual access to the stereogram explains the task demands to a partner who sees a recessed diamond.

Subjects: Overall a total of 91 subjects, 33 males and 58 females, were recruited from the Brooklyn College subject pool, and each subject was randomly assigned to a study, a part, and a task role. The subjects were all taking introductory psychology courses and ranged in age from 17 to 56.

RESULTS

Two different descriptive approaches will be used to assess the transcripts: one quantitative and the other qualitative. The quantitative analysis seeks only to set a background for the more detailed qualitative description of the conversations. And the qualitative component will attempt to systematically explore the dialogues and sensitize the reader to relevant issues.

I. Quantitative Description

Of the 91 subjects who participated in the studies, four (4) (two in study two and two in study four) could not see both extension and recession. However, three of these subjects took part when it was necessary to see extension, and each of them could see the extended figure. The remaining subject could only see recession, and served in the second part of the experiment when recession was what was supposed to be viewed. All of the subjects who took part in the studies were then able to see what they were intended to see.¹⁹

¹⁹Each subject was asked to describe what (s)he was seeing in as much detail as possible at the conclusion of the experimental chore but prior to the debriefing. The first subject requested to give a description was always the individual who was seeing a recessed figure. After this description the goggles were switched and the same subject was again asked what was seen. After this the partner who

(a): Time to Reach Solution

As the members in the first part of each study begin by seeing an extended diamond they are presented with a straightforward task: to mutually decide how far in front of the rest of the display the diamond appears to be. In that each study begins in the same manner, the time taken to resolve the experimental task during the first part is not expected to vary between the four studies. With the movement to the later stages of the studies, the task becomes more complex and with the discovery of the perceptual alteration more difficult. If we can assume that an increase in task complexity and difficulty will be reflected in an increase in the time taken to resolve the experimental chore, we would expect that the later parts of each study will take longer to complete than the first part. Furthermore, the third conjecture suggests that it will be harder to renegotiate the task the more removed the "knower" is from the original context. As such there is a presumed direction of difficulty as we proceed from Study One (the Base) to Study

had either extension or nothing was asked to describe what (s)he was seeing, beginning with extension. After this description was completed any subjects who were waiting outside were brought in and asked to provide similar descriptions, one at a time and starting with extension. This check enabled us to determine what it was that the subjects were viewing if it was not explicit in talk. Though each subject went through this process even if it was obvious from their discussion what was being seen, this permitted us to verify that the subjects could see both extension and recession.

Four (the Hearer) and we would now expect the times taken to finish the task to vary between the studies--it should take less time to complete the task in the later parts of the first study than the second, third and fourth studies and so on. The times taken by the subjects to conclude the task is shown in Table 3 and the following points emerge:

Table 3

Mean Time (in seconds) Taken
by Subjects to Conclude the
Experimental Task^a

Study	Part 1	Part 2
One	124.13	207.77
Two	270.79	288.24
Three	328.84	345.89
Four	105.80	286.91

a. In order to make the parts comparable, part 1 excludes the time in study 3 when the subject asks questions of the Ss, and part 2 excludes that part of the study 4 which has the old Ss explaining to the new S what has occurred.

First, the first part of the studies show more variability than originally anticipated as studies two and three appear to take considerably longer to conclude than

do studies four and one. A one-way ANOVA on the means for part 1 shows a significant difference ($F_{3,24} = 3.77$ $p < .05$), and a Scheffe test at the recommended level of .10 (Ferguson, 1971) reveals a significant difference for the comparison between the means of studies three and four ($F_{3,24} = 6.99$ $p < .10$). An examination of Study Three shows that there is one interaction which takes quite a while to conclude and which brings up the overall mean for that study.²⁰ If the analysis is adjusted to exclude this interaction, the one-way ANOVA is no longer significant. Yet, there is the suggestion that some differences between the studies may exist as the times taken to conclude studies two and three are still longer than the times taken for studies one and four.

Second, while it seems that the second part of the studies take longer to conclude, with the exception of Study Four ($t = -2.47$ $p < .05$) these differences are not statistically significant. Third, the supposed direction of difficulty in part 2--an increase in time from study One to Four--appears to be only weakly suggested. And fourth, the one-way ANOVA on the means for part two reveals no significant difference so the anticipated variability between the studies has not occurred.

²⁰With this interaction omitted the mean for Study Three becomes 249.20. It should be noted that the time taken to conclude the task is not being considered as a measure of cognitive processes.

However, an important qualification must be made. A task was presumed to be more difficult only when the perceptual anomaly between the parts was discerned. In the majority of cases (17/28 or 60.71%),²¹ the anomaly was never revealed. It then is necessary to separate those cases where it remained concealed. In scrutinizing those cases where a difference was noticed (Table 4), it is clear that the second

Table 4

Time Taken (in seconds) by Subjects to
Conclude the Experimental Task when the
Difference Between the Parts Is Noticed

Study	Part 1	Part 2
One	89.0	305.3
	98.3	153.5
	171.3	221.6
	49.1	198.7
Two	258.5	426.8
	481.8	677.3
	318.4	366.7
Three	806.7	912.7
Four	115.5	243.4
	30.4	399.1
	143.8	617.3

²¹That such a substantial number of teams did not unearth the perceptual differences between the parts is an integral part of the qualitative analysis which follows. The breakdown of those cases which found a difference and those which did not is listed in Table 10.

part of the studies always took longer to complete. But even in this analysis there does not appear to be any strong support for the assumption of increased difficulty as we proceed from Study One to Study Four. If this particular argument is to be maintained we must find support for it elsewhere than the analysis of time.

(b): Distances Reached

Requiring the subjects to arrive at a decision about distance and then having that outcome passed on to someone else is the closest this research comes to replicating the "arbitrary tradition" literature. It is then interesting to probe the data to see if any comparisons can be made.

One initial difference between this work and the earlier research must be elaborated before any similarities are discussed. In the "arbitrary tradition" research the subjects always work with the same task, but in these studies if a disparity is revealed, the different parts take on a radically altered nature. To make the appropriate comparisons at least two criteria have to be met:

- a: that the same figure be seen in both parts;
- b: that the subjects do not realize they have varied relationships towards the stereogram.

Some further criteria need to be specified before we can proceed to contrast the data. These additions are:

- c: that reaching a distance is part of the task conveyed to a new member;

- d: that the earlier decision be given to the new member;
 e: that the task is seen as being a cooperative venture.²²

There are five (5) cases which satisfy the criteria listed above, but before making any statements about what this data represents a further discrimination between this research and the "arbitrary tradition" literature should be made. The studies presented here have a very short life. What is transmitted is done only once or twice, while the earlier work had generational cycles of at least four. Anything that appears to be transmitted should not be thought of as a norm. The five cases are listed in Table 5, and the

Table 5

Distances (in inches) Reached
 Across Parts

Study	Part 1	Part 2
One	-----	-----
Two	9 12 12	8.6 to 9 12 12
Three	2 ^a	2 to 3
Four	5	6

a. The actual responses here were a "couple of inches" and a "few inches."

²²These criteria automatically exclude all of Study One where two different stereograms are viewed, and the eleven

closeness of the distances derived in both parts is suggestive. It seems plausible to propose that what the "arbitrary tradition" research produced is also generated here with talk, though weakly. A previous decision has been created and transmitted, however short-lived.

(c): Talk Assessed

The results presented here provide the first entry into the discourse, and the coding offered should be considered as a preliminary grid--suggestive and descriptive rather than conclusive. Furthermore, as no inter-rater reliability is available for the talk coded here, this analysis of the C-acts should be interpreted cautiously.²³

The coding scheme used was borrowed from Cole, Dore, Hall, and Dowley (1978) and permits the coding of conversational acts (C-acts) into eight broad categories: (1) requests; (2) responses; (3) descriptions; (4) statements; (5) acknowledgements; (6) organizational devices;

cases where a difference was discovered. Criterion (e) is related to (d) in that the remaining S may suggest that it is only the new member who has to provide a distance. In this case the remaining partner does not need to rely on the prior decision and everything is left up to the new subject. In these cases there is then no issue of something being transmitted and maintained.

²³ An additional problem should be indicated: that some of the coded utterances could fit more than one category. That a C-act, or speech act, can serve a multiplicity of functions and can be equivocal is a well recognized problem in the literature (Labov & Fanshel, 1977; and Dore, 1977).

(7) performatives; and (8) miscellaneous utterances. In using these categories a word, phrase, clause, or sentence was assessed to see if it was a C-act. No unit larger than a sentence was coded and the Cole et al. classificatory scheme was abbreviated as we omitted such concerns as topic shifts, grammatical form, illocutionary force, and interactional value as these issues seemed less relevant to the task at hand. The distribution of the discourse is shown in Tables 6 and 7, and in each study the bulk of the

Table 6
 Conversational Act Analysis of Discourse
 by Study for Part One

Category	Study 1	Study 2	Study 3	Study 4
Requests	27.2	21.9	23.3	25.2
Responses	24.0	17.2	13.7	21.3
Descriptions	10.2	14.0	20.9	22.5
Statements	17.8	20.2	19.6	10.6
Acknowledgements	16.3	18.2	17.5	16.9
Organizational	0.0	1.7	0.6	0.0
Performatives	0.0	0.9	1.8	0.0
Miscellaneous	<u>4.5</u>	<u>5.9</u>	<u>2.5</u>	<u>3.5</u>
Total Percent	100.0	100.0	99.9	100.0
Total C-Acts	246	441	755	254

Table 7
 Conversational Act Analysis of Discourse
 by Study for Part Two

Category	Study 1	Study 2	Study 3	Study 4
Requests	22.9	24.6	22.3	26.6
Responses	18.0	15.5	14.6	18.0
Descriptions	16.0	19.2	22.5	16.7
Statements	22.8	22.7	22.0	23.4
Acknowledgements	14.3	13.6	15.3	12.8
Organizational	0.2	0.2	0.0	0.0
Performatives	0.9	1.2	0.1	0.3
Miscellaneous	<u>4.9</u>	<u>3.0</u>	<u>3.2</u>	<u>2.2</u>
Total Percent	100.0	100.0	100.0	100.0
Total C-Acts	449	572	690	718

utterances (75% or more) fall into the first four categories-- requests, responses, descriptions, and statements. While it may not be surprising to find that in this particular context the subjects spend a good deal of their time exchanging information and describing what they see, their restriction to the topic suggests their involvement with the task-at-hand. Indeed that the conversations recorded here seem to minimize small talk, restrict greetings, and downplay the side sequences which occur in other conversational contexts

should serve as a reminder that the conversation is topic constricted and limited in a certain way--it is what can be called task-focused-talk.

As with the description of time taken to reach a solution, we would presume that the talk recorded in the first part would show somewhat similar patterns--with the divergence occurring in the later parts of each study. The first point to note is that if we examine the total C-acts coded for the first part of each study (Table 6) the variability between the studies suggested in the time analysis resurfaces: studies two and three show a higher number of C-acts than do studies one and four. Again, as with the analysis of time, the same interaction in Study Three is inflating the total C-acts. This encounter contributes about 40% of the C-acts (309 out of 755 C-acts), but even if we exclude this interaction the number of C-acts coded for studies two and three remain higher than studies one and four. While it is possible that the increase in C-acts is in part attributable to the presence of an observer in Study Three, this could not be the explanation for Study Two. So again the issue of a possible difference between the initial conditions of studies two and three from those of studies one and four arises.

When we compare the Tables, we can see that with the exception of Study Three the number of C-acts increase from the first to the second part of each study. The higher

number of C-acts is in part a result of the explanation that the members must provide to each other in the later parts of studies two, three, and four. But as no explanation is required for Study One, we can suggest that some of the additional talk is occurring for reasons other than providing an explanation of the task.

Another point can be raised if we compare the first four categories as they appear in Tables 6 and 7. As noted in the analysis of time, there again seems to be less variability in the later part of the studies than in the first part. For example, Table 6 shows that across studies the category of "descriptions" ranges from 10.2% to 22.5% (a range of 12.3%), whereas in Table 7 the range is much narrower (from 16.05 to 22.5%). A similar statement could be made about the other three categories.

While this classification of the discourse raises some concerns about what is happening in the conversations, it does not reveal what we wanted to get at: the construction of typifications. And in a very real sense the heart of the proceedings remains masked--the role that talk may have in concealing the altered visual perspective. A closer, more focused and detailed examination of the transcripts is required.

II. Qualitative Description

It is the burden of the qualitative description to provide a more nuanced and precise formalization of the role

talk may play in developing a shared social world. To begin to move to this detailed examination of the discourse, I want to present, without analysis, the entire first part of two face-to-face encounters which occur in Study One (the Base), and ask some straightforward questions about these exchanges.

Consider first transcript #12:

s1: hum
s2: I would say...a foot...I don't know
it's hard to tell
s1: I know...it's hard to say...I hate things
like this...a half a foot? A foot?
s2: It's really tough. My first impression
was a foot.
s1: A foot?
s2: What did you say?
s1: I don't know. I would think maybe a foot,
or something like that.
s2: uh huh
s1: We could compromise and say three quarters
of a foot.
s2: Yeah, Ok (chuckle)
s1: (chuckle)
s2: Should we put down the same dimensions?
It's about eight or nine inches?
s1: yeah, I guess so
s2: yeah
s1: alright...that was easy
s2: Ok...now what?...now what?
e: Ok, have you reached an agreement?
s1: yeah
s2: yeah

and then transcript #3:

s1: see it?
s2: yeah
s1: how far do you think it is?
s2: mmmmm...mmmm...a foot...what do you say?
s1: it's less...it looks like eight inches,
nine inches. I thought it was a foot first.

s1: you don't think it's any less than a foot?
s2: uh no...I'd say it's really about a foot?
Turn your head a little bit and see if you
can make the background come out before and
then see how much...can you see that?
s1: nno
s1: I still think it's like, you know, a little
less
s2: I'd say 10 inches...is a little less, no
more than, not less than 10 inches
s1: no I think it's like 10
s2: ten inches?
s1: yeah
s2: I'll go along with that
s1: ten inches
s2: yeah

How is it that these numbers, 10 inches, one foot,
and a continual reference to some-thing, "it," are heard as
being germane to the experiment: for the participants, for
E, and for the reader? How is it that these exchanges can
be considered to have reached a satisfactory conclusion
for these parties? Obviously, the appropriateness of the
talk has been shaped and influenced by the experimental
instructions. In these two interactions, the protocols
provided, as Berger and Luckmann noted ". . . the background
of a world that is silently taken for granted." The members'
dialogue is heard as being responsive to the experimental
task and as correctly resolving the problem because each of
the participants, and E and the reader, share the same
instructional set and rely on the presumptions included
within that frame. While this may answer the questions
just posed, it is incomplete for it does not articulate what

that taken-for-granted world is nor specify the precise role that the instructions play.

(a): An Entry Point

To elaborate these issues, I want to connect two topics raised in the introduction--Sherif's discussion of norm formation and the phenomenological concern with the taken-for-granted world--with the concept of figure and ground. In writing about norm formation, Sherif cites Koffka's statement about the basic decomposability of the relationship between figure and ground:

. . . the ground has a very important function of its own. It serves as a general level . . . upon which the figure appears. Now figure and ground form a structure, consequently the former can not be independent of the latter. On the contrary the quality of the figure must be largely determined by the general level upon which it appears. (Sherif, 1935, pp. 37-38)

Sherif then adds:

The ground is especially important in social psychology. Studies in social facilitation would gain much sense if the subtle relationships between figure and ground were taken into consideration. For example, when two people are talking in a public theater their conversation and behavior are tinged by the properties of the whole atmosphere. (1935, p. 39)

Figure and ground relations are then not to be found or presumed only in a perceptual domain but are meant to encompass social relations. Two senses of figure and ground can then be offered: a literal or physical sense, and a metaphoric or social sense.

But in either domain what emerges as "figure" can not be divorced from its relation to some "ground." The issues of norm formation and taken-for-granted make similar points in that what stands forth as figure--normative or culturally appropriate--takes place against some set of social presuppositions which serve as "ground"--"a preparedness to see." Even if these grounds can not be articulated. Within the context of these studies, the instructions provide a detailed and explicit ground from which talk and action can emerge and be "heard" and "seen" as responsive to the task-at-hand. In each study the protocols structure the following grounds:

- i: that there is a non-visible event yet to be seen (FUTURE)
- ii: that with a visual aid the two dimensional display before them will unveil this still non-visible dimension (GOGGLES)
- iii: that this as yet unidentified dimension will be some figure (FIGURE)
- iv: that this figure will stand in a set relation to the visual display seen without the visual aid (RELATION)
- v: that the emerging figure will appear to be in front of the two dimensional display (EXTENSION)
- vi: that the separation between the two figures can be assessed along some scale of distance (DISTANCE)
- vii: that the determination of the distance is to be cooperatively achieved (MUTUALITY)
- viii: that each member will see the same visual display and have the same relationship to it (SAMENESS)
- ix: that one of the members will have to explain the problem to a new member (RIGHTS)

x: that the same problem will be addressed and repeated in later parts of the study (REPEATABILITY)²⁴

During the first part of the experiments the instructions will then accomplish two things. First, they will formulate a set of relevant concerns that will both guide and constrain talk; and second, they will provide the grounds from which the conversation can be "heard" as relevant to the task-at-hand. If the analogy between figure and ground, talk and instructions, is to be taken seriously we need a way to assess these two claims.

If the instructions do orient the participants to the task and do establish an opening set of relevant domains, we can check the first claim by examining each initial query or opening comment. For a question or opening gambit should address one of the ten points listed--either implicitly or explicitly. However, there is one additional tactic that may arise:

xi: that any participant who does not understand the instructions can ask that they be repeated or clarified (CLARIFICATION)

²⁴The instructions obviously present more information than is noted in these ten points. For example, the Ss are told that there is an index card on the table, that the mikes are on, and that E can not be asked for help. These issues will arise in talk and are important, but as they usually arise when trouble occurs in the second part of the experiments they are left out. Also, points (i) through (viii) and (x) are operative in each study, whereas (ix) is not a part of study number one. Furthermore, point (ix) will become an issue in the second part of studies three, four and two.

In examining the opening comments, there are only three instances (3/28) which fall outside these eleven concerns. Of these three cases, two occur between friends who start with "Are you ready, Sal," and "Dirty pictures." The remaining exception is a query to E as to whether the study is going to be timed. It is plausible that this remark can be accounted for by the stopwatch held by E. After this temporary diversion, each of these conversations return to the concerns specified in the instructions.

We can examine the second point by returning to the dialogue previously cited. It must be noted that what is not said is as important as what is said. In each conversation neither member identifies the figure seen (a diamond), and each reference to an "it" works off the instructional presumption that they see some-thing which is the same-thing for each of them. As neither partner objects to this formulation, "it" can stand in place of the more specific designation, diamond. Besides this omission, the partners never clarify the relationship of the diamond to the rest of the display--that it is "in front." And in transcript #3, we find the expression "how far do you think it is?" Again, as there is no protest about this usage by the partner a distance is offered.

As with "it," this less specific phrase takes for granted the presumption that the same-thing is seen and that each partner sees the figure in the same manner--as an extended

image. The presumption that each member sees what the "other" views legitimates their use of synonyms. A variety of expressions, less specific ones, are able to stand in place of "diamond" and "in front" which if unchallenged permits the exchange of numbers and the resolution of the experimental problem. And enables the members to continue believing that the reference and meaning of these alternate designations are unproblematic.

With the emergence of these synonyms we can see how the members heard their talk as germane to the task at hand. But it is not necessary that members remain silent about what is viewed, and we can contrast these dialogues with ones where the presumptions are considered a topic to be discussed. Consider transcript #20, part 1, study 4:

s1: what do you see?
 s2: a diamond
 s1: yeah...it's a diamond. How far in front does it look?
 s2: um...it looks about
 s1: I don't know maybe a foot
 s2: about a foot?
 s1: yeah looks good
 s2: yeah
 s1: that was quick
 s2: fair enough
 s1: Ok...we're supposed to let him know?

and then transcript #17, part 1, study 2:

s2: do you see a figure?
 s1: yeah
 s2: Ok can you tell me what you see?
 s1: it's a diamond shaped square, smaller than the other one, it's in front of the larger one
 s2: now I'm having difficulty because, uh, I don't see that. Are both of your, uh, both of your glasses have a colored

screen, do your lenses have a colored screen?

s1: right

s2: only one of my lenses has a colored screen

s1: what do you see?

s2: as I see it, although you know I, there may be a problem here, cause I have astigmatism and use only one eye. It may require that uh...we need both eyes to uh see that

s1: is the eye with the ast...

s2: Oh now I see, now it's coming into focus. Ok how far away do you assume that it is from the uh...

s1: a foot?

s2: a foot

s1: what about you

s2: well yeah, uh, I...I guess it's a foot. Can you think of any other way of verifying that?

s1: that's what I don't understand, it just seems a foot but I don't know how come it seems a foot

s2: a foot Ok

s1: when I close one eye it disappears

s2: yeah, well that's why I wasn't seeing it for a while, because I was having to focus both eyes...Ok the thing is that this is an illusion anyway

s1: uh huh

s2: and uh whatever we say is incorrect

s1: right

s2: so uh...hum

s1: do we have to know why it appears in front of the other one or do we just have to say how much

s2: ...how far in front...

s1: just how far

s2: in front of it it appears...I find it difficult to say anything...because I know that it's not really from it...I, I, well you want to say a foot?

s1: yeah, that sounds good to me

s2: and uh, my problem is I don't want to say anything

s1: you don't want to say anything?

s2: do you feel that way at all?...any conflict in saying that it's a foot when you realize that it's just an illusion?

s1: you're right about it being an illusion,
it's not really a foot...but it appears
to be a foot
s2: it does?...Ok as far as appearances...
since we can't be sure, I guess...
anything will do. If I said six inches
would you agree with that?
s1: um...it looks like more than six inches
s2: Ok, you're pretty sure that it's a foot
and you're seeing with two eyes and I'm
only seeing with barely two, so...OK
we'll agree then
s1: Ok
s2: Ok, it appears to be a foot
s1: alright
s2: Ok

These two conversations clearly demonstrate that some of the instructional presumptions may be placed in words and evaluated. The shape can be identified and the relationship specified. However, an issue is brought out in transcript #17 which has not appeared before. For the first time "new" topics are placed on the floor and the subjects briefly discuss the color of their goggles, the question of whether the image seen is really an illusion, and how a precise figure can be derived. But note that these topics are placed on the floor for a specific reason: one of the partners, s2, is having difficulty either in seeing or agreeing to a distance. When some problem arises the members can put these difficulties into words for each other, yet these "new" topics are not bizarre. They are related to the task-at-hand and are heard and understood as pertaining to the member's ability to reach some solution to the experimental chore. While the preliminary concerns structured by the instructions constrain the task and what is talked about

they are not binding. In the face of an obstacle whatever is needed to resolve the problem will be talked about.

A further point needs to be addressed, and it is similar to the one raised in the brief examination of transcripts 3 and 12. After the participants conversed about the relationship and shape seen, after the presumption of sameness is verified, the specific designations were replaced by synonyms. We again see "it" employed as a substitute for "diamond," and "far away" sometimes used as a replacement for "in front." The range of synonyms used by the participants in the first part of the study to replace the specific designations are presented in Table 8.

What this table permits us to see is the subtle evolution of a member's vocabulary. As long as these terms go unchallenged, the participants have available to them a variety of expressions, each of which is presumed interchangeable with the more precise designations. For members who rely on the supposition of a shared world, these phrases can be offered and taken as having a clear and unambiguous reference and meaning.

Table 8
Synonyms Employed by the Members in
the First Part of Each Study

Figure	In Front ^a
diamond	far away
it	far forward
small figure	far
little thing in the middle	sticking out
square	further away
pattern of dots	further
dots	away
thing	comes out
box	before
image	out
geometric figure	raised
geometric box	towards me
baseball diamond	far from the screen
triangle	from the dots
shape	front of the dots
	in front of you
	close to us
	far from the dots
	away from the square
	far from the center
	close to the screen
	from the screen
	from the back

a. The issue of synonyms to express the relationship is intriguing. There are a variety of orientations which can be taken. And if we include as synonyms body position we can add such phrases as: close to me, adjusts to us, in front of machine, and moves back with us.

Table 9 allows us to determine the number of conversations which specified the figure seen and its relationship to the rest of the display, and the number of dialogues which employed synonyms.

Table 9

Number of Conversations which use Specific
Terms and Those which use Synonyms^a

Study	Specific Figure	Synonym Figure	Specific In Front	Synonym In Front
One	3	7	3	6
Two	5	7	4	7
Three	6	7	3	6
Four	5	7	4	5
Total	19	28	14	24

a. During any conversation members can use either the specific expression or the synonym.

That the "figure" is more frequently specified than the relationship is clear, but what is interesting is that in 50% of the transcripts the precise relationship of the diamond to the rest of the display is not articulated. And that in some encounters, 4, it is not even expressed with synonyms. However, some comment about the figure is made in each conversation.

All of this may appear a rather tedious way to state the obvious: that the experimental instructions provide the "silent background" for the members' conversation and frame a set of pragmatic concerns. Simply put, the members' dialogue allowed them to complete the task at hand. But more

than this has been accomplished. A vocabulary has evolved which represents a history of the interaction and which depends on the presumption that the members share a common visual world. In knowing in detail the taken-for-granted world and the range of expressions the members use to convey this detail, we can offer a way to see how "new" realities emerge and a means by which the original conjectures can be assessed.

(b): The Presentation of a Problem

With the conclusion of the first part of each study there are two culturally sophisticated members who have developed a vocabulary to express what they know about the figure and its relationship to the rest of the display. In the later parts of each study, one of these members speaks with, or conveys the task demands to a partner whose perception of the stereogram is altered--a recessed diamond is viewed. But as the enculturated member is ignorant of this switch, (s)he enters the other phases of the study initially relying on the presumptions which have worked before and on a vocabulary which takes these suppositions for granted.

The perceptual disparity introduced into the later parts of each study was to provide a challenge to these presumptions, and have the culturally knowledgeable member reflect on his or her prior experience. It was this

backwards glance at lived experience which was to provide the occasion to watch for the formation of a type. The problem to be raised is that in the majority of these conversations (60.17%, 17/28), no disparity was revealed.

That the perceptual modification is systematically concealed represents a surprise and suggests that a critical experimental manipulation failed to work as planned. But before this conclusion is accepted, we need to assess two questions: (1) did something occur between the participants so that their dialogue did not permit the unearthing of this anomaly; and (2) did a member's position--as a direct or indirect knower--towards the display influence the ability to discern a difference?

It is important to note, however, that there are two ways to decide whether or not a difference was discovered. First, we can consider a difference to have been recognized when the culturally knowledgeable member realizes that there has been a shift to recession for the partner. If this procedure is employed, 67.86% (19/28) of the conversations never locate the disparity. The second way of counting differences is to consider that any alteration between the parts which the members argue makes the parts incompatible represents a difference, regardless of the dimension on which the irregularity is noticed. With this method, 60.71% (17/28) of the interactions do not find a difference. Table 10 shows the different methods of counting, and it

Table 10
Number of Differences Found

Study	Difference found for recession	Difference found on other dimensions	No difference found
One	4	0	3
Two	3	0	4
Three	0	1	6
Four	2	1	4
Total	<u>9</u>	<u>2</u>	<u>17</u>

is apparent that differences are not located on the "correct" dimension--recession--only for studies three and four. Furthermore, there is no study where the anomaly is uniformly discovered. Even in study 1, where the same participants serve in both parts of the encounter, the difference remains concealed in three out of seven interactions. Also, if we consider the column which shows the number of differences discovered on the proper variable, the uncovering of a difference appears systematic. The individuals in study 1 were more likely to discover the irregularity than those in studies two, three, and four.

Why is the perceptual alteration so difficult to find? Here for example is the entire transcript (#3) for the

second part of a conversation which occurred in study 1:²⁵

e: Any questions? Just begin whenever
you are ready.
s1*: I'd say a foot and a half
s2**: No it's less...more like
s1: What?
s2: fifteen inches, fourteen?
s1: could be...fifteen?
s2: (to e) fifteen!

It should be noted that the only way a difference can be discovered is if S** mentions it. But would the raising of a difference be sufficient for the disparity to be discovered? Consider, for example, transcript #22 from study 1 which has the following exchange:

s1**: I think, I think we're looking at it
differently
s2*: Wha, I don't think...it makes much of
a difference
s1: I think we're seeing it differently
s2: um, it's definitely a rorschach...I
see a whole bunch of faces in there
...gee...maybe eighteen inches...no
less
s1: eighteen inches...less?

So a difference can be raised by S** but this does not mean that the difference will be heard, or taken as a relevant difference--that the presumption of sameness no longer works. Indeed, in this example the disparity is reworked in a manner that effectively returns the dialogue to the task of finding a distance.

²⁵*: indicates the subject whose perspective is unaltered and whose goggles have red acetate on the right eye
**: indicates the member who sees recession--and for study 1, the member whose perspective is altered between the parts
+: indicates that no goggles are being worn

Has the difference been so easily dismissed because the relevant dimensions of in front and behind have stayed out of their talk? Transcript #29 (study 3, part two) produces the following conversation:

- s3+: Ok, so how far away do you suppose
s4***: uh, it seems to be about...uh...I don't...eight feet from it...it seems to be behind the screen
s3: it seems to be behind?
s4: yeh, behind the screen
s3: cause they kept saying that it was
s4: uh huh
s3: in front of
s4: no, it isn't coming...it's about... it's a foot square
s3: a foot square?
s4: standing on its end, right? directly in the middle of the uh
s3: cause it says here...how far in front... it appears to be
s4: oh, oh
s3: so maybe they were sitting at a different angle?...I don't know
s4: (laughs)
s4: in front? huh...it seems...Oh yeah right. It's in front of the uh...it seems to be a hole, out, out like a diamond shape
s3: right
s4: with the pattern set back
s3: right, so how far is the diamond in front?
s4: from the front of the pattern its uh... it could be about 2 feet
s3: sounds alright, we're finished.

Here the difference always seems to be on the verge of being explicitly formulated, yet the subjects manage to come up with a judgment that satisfies both participants. Is it that the alteration is neatly tucked away by changing in front to from the front?

These examples are a limited set of what happens repeatedly in the talk when the disparity remains hidden,

and on many occasions when it is revealed. But this leaves us at a very simple position, and the attempt is to offer some further discussion so that the conversations can be more carefully scrutinized and more systematically explained. How can we begin this analysis and make the examples noted above and those yet to come more clearly demonstrative as to what talk is accomplishing in these encounters and where it is accomplishing it--what space does talk fill?

(c): Concealing a Disparity

In scrutinizing those transcripts which do not reveal the perceptual alteration, it is useful to clarify whether or not the member has access to the original instructions provided by E.²⁶ This information is displayed on Table 11

Table 11

Members' Access to the Original Instructions^a

Part	Study 1	Study 2	Study 3	Study 4
One	s1+,s2+	s1+,s2+	s1+,s2+,s3-	s1+,s2+
Two	s1+,s2+	s ₋ +,s3-	s3-,s4-	s ₋ +,s3-
Three	(na)	(na)	(na)	s3-,s4-

a. (+) means that there was direct access to the original instructions; (-) means that there was indirect access--through the talk of others; and (na) means that this part was not applicable for that study.

²⁶The expression subtext and text will be used as a substitute for instructions and talk and assume the same relationship: i.e., subtext is a backdrop for text.

and it is clear that in studies 3 (the Watcher-Hearer) and 4 (the Hearer) the last subjects (s3-, s4-) have no first hand knowledge of the original instructions and can only know the task demands from the information conveyed to them. In studies 1 (the Base) and 2 (the Repeater) there is at least one member who always retains access to the original subtext. The studies can then be separated along a dimension of direct versus indirect knowing, and it should be indicated that it is only study 1 (the Base) where no transmission of the original protocols is required. In the other studies, the culturally informed partner's²⁷ instructions will direct and frame the task just as the initial instructions did--regardless of the modifications introduced.

As it is only the first study where no retelling of the task demands occurs, it is instructive to examine those three conversations where the difference remained masked. We can begin with a dialogue already cited (transcript 3, part 2):

²⁷In discussing these transcripts we need a terminology to designate what task the subjects perform. As such any member who sees recession and is presumed to potentially offer a challenge will be called a foil or spoiler and is noted in the transcripts by S**. A member whose perspective remains unaltered and who has actually seen the stereogram (s*) will be labelled an old member, an original member, a culturally informed member or task conveyor. The member in study three who never views the stereogram but who overhears the conversation will be called either the monitor or the abstracter-hearer. And the person in the fourth study who is told about the task demands by an old member, and who in turn relays it, will be labelled a recipient-hearer.

s1*: I'd say a foot and a half
s2**: No it's less...more like
s1: What?
s2: fifteen inches, fourteen?
s1: could be...fifteen?
s2: (to e) fifteen!

The first point to be raised is to again note that for the anomaly to be found, the foil (s2) must place the switch into speech so that the partner (s1) can offer comments and possible corrections. As long as the foil remains silent about the alteration, s1 can continue to silently and unproblematically rely on the presumption that what has worked before works again. Indeed with s2's muteness about the difference, it appears as if both members abide by the supposition that what held sway in the first part does so again. The spoiler's quietness about the change in her perception successfully masks the discrepancy which exists between the partners--that one views an extended triangle while the other sees a recessed one. If we assume that both participants continue to depend on the belief that they see the same-thing an error appears to have been made. But if the spoiler thinks that s1 also sees recession--for this would enable her to suppose that the same image is shared--while s1 believes his partner sees extension, the "error" is visible only from the stance of an E who "knows" that the members "really" view altered stereograms.

As the difference is kept out of words, it is not certain that the foil did see something which was counter to her

previous experience. In the debriefing, however, this member (s2) expresses the disparity and asserts that she knew there had been a change but that she remained silent because it was necessary to reach a mutual decision. So while we can not argue that the foil uncritically invoked the original presumptions, we can indicate that s2's speechlessness about this disparity permitted her partner to trust his previous experience and continue believing that once again they each saw the same visual display. The mistake made, however, remains invisible to s1.

We suggested earlier that comments about the irregularity can be made but that they need not be heard as a correction of the subtext. In Study One, the remaining dialogues where the disparity remained concealed fall into this category. This problem can be illustrated by considering transcript 21, part 2:

s1*: see it?
s2**: yeah, I see it, um
s1: it looks fa, further away than the other one
s2: it looks like that, the image is on the screen and the rest is behind it or something like that like it's behind it
s1: yeah
s2: does it look like it's cut out?
s1: yes
s2: yeah?
s1: it moves with you?
s2: what?
s1: and it moves with you
s2: yeah
s1: this is more like the...um this is further
s2: behind?
s1: do you agree with that?
s2: behind it right? you mean

s1: yeah
 s2: yeah that's what I think too
 s1: it's further away than the other one was,
 right?
 s2: yeah
 s1: so we said fourteen last time...maybe
 eighteen, twenty inches?
 s2: behind, behind the picture right?
 s1: yeah
 s2: um...I guess around eighteen?
 s1: yeah, eighteen
 s2: eighteen?...Ok

It is s1's perspective that is unaltered, and who starts the exchange with previously accepted synonyms--"it" and "further away"--which express what is being seen. While the presumption of a repeatable world lurks beneath these expressions, the foil does raise the salient issue. That the triangle, or more accurately "it," is behind. Yet the person who views an extended display appears to accept a description of recession. How is this possible?

Three answers seem plausible. First, as with the previous conversation, the member whose perspective is unaltered may hear the difference but decide not to voice it because a mutual decision is required. Second, as the dialogue never clearly articulates the exact figure and ground relationship, all that is available in words is that one thing is designated as being behind some other thing. A description whose vagueness can accommodate either recession and extension and enable an agreement to be reached. Or third is the possibility that "behind" is being misheard: it is not taken as indicating a perceptual change, but rather

as a state of confusion. That is, as s1's orientation to the stereogram remains the same, (s)he can rely on the previous and current visual experience and accept that what has been ratified once can be depended upon once more--right now, at this moment. As the foil also participated in the initial interaction which was unproblematically concluded, a dispute which arises over the presumption that the same world can be invoked suggests to s1 that the "other" is confused, not seeing properly, or mislooking. The offering of a correction, "behind," is then not first heard as depicting an altered perspective.

While all three answers work, the third one is supported by s1's remarks during the debriefing. This member maintains that the foil was confused and that "behind" really meant in front. The remaining interaction for the Base (study 1), transcript 22, fits the same pattern in that statements which the foil makes to suggest that the same world can not be relied upon, presumed to be shared, are not taken as corrections (page 68), and are literally talked away by the partner whose perspective is unchanged. At least for study 1, while differences may stay masked because the anomaly is never precisely placed into a comment-able domain, to speak about the disparity is no guarantee that the corrections will be properly heard--that the member who continues to assume a shared visual world should no longer do so.

As we move from the Base study, the original protocols are accessible to new partners only through the details conveyed by the culturally informed member. And this old member has no reason to suspect that the current and prior experience is no longer shared. Like study 1, study 2 (the Repeater) has each individual viewing the stereogram, and transcript 13, part 2, begins with the task-conveyor (s2) separating what is seen with the goggles and what is viewed without them.

- s2*: Ok, here see take them off for a minute...now you see how this here, it's a square, right, you see red and green?
- s3**: yeah
- s2: now, Ok, when you put these goggles on you're going to see another square and it looks like a little, a little square, and it's gonna look like it's projected forward, so what we have to do is figure out together how far away it is from the back square, that little square that's forward. So put on your goggles and stare at it, and then you'll see like it's projected, it's closer to you...do you see it?
- s3: uh hum
- s2: Ok take a look a while...now when you think you can tell me how far away it is...then we'll come to an agreement on distance from it.

The task-conveyor (s2) places into words those aspects of the display which will enable the partner to complete the experimental problem--task demands are conveyed (what to look for and what to do with what is seen). But in the first part of this interaction, no precise figure was identified and the figure to ground relation was never articulated clearly. In

the opening transmission, a similar non-specific vocabulary is again employed, and we see the use of synonyms--little square, far away--which imply that the foil (s3) sees what the culturally informed member views and which assume that these expressions can be unproblematically used again.

Yet as the culturally informed member does not detail what it is that is in front, s2's terminology can be made to fit a display where any two items are separated from each other. The phrases which hint at extension--"projected forward," "closer to you"--are too general and easily adjusted to conform to the recessed stereogram which the foil views. Indeed, s2's request for a judgment about "how far away it is" is carefully answered by the spoiler (s3):

s3: it's about one foot away

And an expression which only requires that one item be at some distance from another is used to conceal the disparity and resolve the task.

I want to argue that the expression "far away" as used by the task-conveyor is not carelessness. It is an expression with a history, and is spoken by the conveyor because it is presumed that the foil has the same orientation to the stereogram as the original member: what is "far away" from what will again have a clear and unproblematic reference and meaning. The spoiler, however, has to take these words and apply them to a visual world where recession is seen. The new member (s3) successfully does this and the task is

resolved. It should be noted that in contrast with the Base study, the spoiler has no access to the original instructions, and to have raised the question of a difference this member would have had to be oriented by the task-conveyor.

The reciprocal use of "away" allows the resolution of the experimental problem and the masking of an anomaly. But this disparity has the potential of being unearthed at some future time, for "away" covers two contrary locations: for the conveyor "away" means "in front," whereas it means "behind" for the foil. The completion of a task where the perceptual irregularity remains cloaked but where the potential for uncovering the disparity remains, I will call a pragmatic agreement. What has yet to be brought out is that the spoiler's muteness about recession catches the transformation, the beginning creation, of a new, but silent subtext.

We can explore this construction in transcript 16, part 2, study 2 (the Repeater), where the use of "away" and the lack of an explicit figure to ground relationship allows the evolution of another pragmatic agreement:

s1*: Ok you're supposed to look through these goggles and you're supposed to, you're going to see a figure in front of this
s3**: yeah
s1: thing on the screen
s3: yeah
s1: and you have to determine how far away it is from the screen, how you know. What's the difference between the screen and the figure you'll see
s2: Ok
s1: alright

s3: alright...I'm not good at that but
 alright...hee hee
 s1: is it comin, now (inaudible) Ok, so
 s3: what is the thing, you mean the box?
 s1: what do ya see, what do ya see?
 s3: I see that red thing
 s1: right, so
 s3: Ok, it's done (???)
 s1: so how far away from the screen does
 it look?
 s3: doesn't look like, like, it's on it
 s1: but doesn't it look, doesn't it look
 closer to you, than...
 s3: than what?
 s1: than the screen? you have to, you
 have to determine
 s3: yeah
 s1: the difference between
 s3: that square in the middle?
 s1: shape, and yeah whatever, the diamond
 shape and, and the whole screen, how
 far apart...
 s3: Oh...about a foot
 s1: Ok
 s3: now is that all we're supposed to do?
 s1: yeah...we're finished
 s3: this is the whole thing?
 s1: ha ha
 e: what did you decide?
 s1: tell him!
 s3: are you, did you look at these glasses?
 s1: at those, no
 s3: alright, a foot
 e: Ok

As with the term "away" the vocabulary which the
 culturally informed member (s1) uses must be heard against
 the details of her previous encounter and her awareness of
 the original subtext. In the first part of the interaction,
 s1 and s2 discussed "how far away it was," "how far away
 from the dots it was," "that it was comin out" and, in
 referring to the figure, "it," "figure," "shape," "something
 like that" and "object." To repeat the point, in that context

it was unproblematic for the participants to use these expressions, synonyms, in place of the more specific words. What was "away" from what and what "it" referenced was clear and presumed shared, and the appearance of these synonyms in the second part of the study are immersed in that presupposition. And as with the conversation just presented (transcript 13) these looser phrases enable the foil (s3) and the task-conveyor to again manage to hide the "fact" that two different displays are being referenced.

The task-conveyor's instructions direct the foil to find some aspect of the stereogram which can satisfy the dimension of "away" and as such s3 is guided by the old member's instructions just as s1 remains directed by the original, but silent subtext. But a critical difference exists between the hearer (s3) and the speaker (s1). For as noted, the speaker can hear himself or herself in terms of the silent subtext--that "away" really means "in front"--but with no access to that mute background the hearer must take the talk-as-heard-as-grounds.

It is not just that the foil remains divorced from the perceptual details of the partner, (s)he is also separated from the history of "away" and takes the expression as offered--as a public word useable and understandable by any other. To accept the talk-as-heard-as grounds is to try to use the words in the spirit they are presented--as public words useable without difficulty by any partner. And it is

the spoiler's attempt to employ the phrase as if it were anyone's that enables s3 to present a judgment about distance.²⁸

That this phraseology is offered as if it were accessible to any-one, and taken on those terms unwittingly lays the foundation for the transformation of the original subtext and the construction of a new version for the foil. The representation of the problem as one of assessing the separation between the diamond and the screen carries for s3 the silent dimension of "behind" and for s1 "in front." With this mutual silence there is also a deafness, for there is no way for s3 to hear that extension lurks behind s1's "away," or for s1 to hear recession. Each remains ignorant about the perceptual depth of the other's use of "away," and there is no knowledge that the other means any-thing else than what is said.

To determine if anything else can be discerned as to why the visual disparity is not discovered and what it is that talk is accomplishing, we need to investigate studies 3 and 4. We can start with study 3 (the Watcher-Hearer) where one member has the opportunity to both see and hear the partners resolve the experimental problem. Consider the entire first part of transcript 7:

²⁸With this recognition that the foil tries to use the words in the spirit presented, we can better grasp the claim made in transcript 13 that the expressions which hint at extension are made to fit recession.

s1: you're ready?
s2: yeah
s1: Ok, I don't see any number, I see uh
e: could you speak a little louder
s1: a box, oh yeah sure, I don't see any
number do you see a number?
s2: a number? no
s1: like you see a geometric box in front
of you, right?
s2: yeah
s1: right...how far
s2: it's all one color
s1: uh huh (inaudible) uh huh how far do
you think it's out?
s2: five inches
s1: uh huh, I'd say like half way between
where the table ends and the screen...
s2: I think it's closer to the screen?
s1: you know
s3+: could you talk louder please
s1: yeah, sure
s2: it gets, I think closer to the screen
s1: excuse me
s2: it gets closer to the screen
s1: you think it's closer to the screen?
yeah, to the screen...uh...it moves
anyway
s2: oh god
s1: if you go more to the side it seems
to go closer towards the screen...
right?
s2: yeah
s1: well, I think it's your guess cause
I figured it out
(reading index card) to mutually come
to an agreement on how far in front
s2: the figure that appears
s1: yes, yeah...in other words, in feet,
inches,...I'd say about twelve, let's
say fifteen inches
s2: from the screen?
s1: yeah...alright, uh a foot is what?
A foot's like this? Fifteen to eighteen?
s2: about fifteen
s1: fifteen?...I say eighteen...wanna
compromise...sixteen and a half
s2: sixteen and a half
s1: Ok that's what I think uh huh...you
know what...you move backwards it goes
further away from the screen right?
s2: uh hum

s1: if you go forward it looks like it's closer so from what position do you want to estimate it? When you're sitting nearer or further?...now it looks as far in front as the table ends...see where the table ends?

s2: yeah

s1: now look up, right, like that, isn't it about even now?

s2: no I still think it's further back

s1: you still think it's further back?

s2: just a couple of inches though

s1: Ok

s2: like

s1: than figure what the screen is from the table is what...2 feet. Twelve wha now twenty inches

s2: yeah

s1: twenty inches uh huh...we've come to an agreement

e: Ok what did you agree to?

s1: twenty inches

There is a great deal of conversation here about the partner's orientation to the screen and the effect that body movement has on assessing the distance. But the full dimensions of the task and the problem are silent for the monitor (s3). Neither member (s1 or s2) finds it necessary to bring these issues into a comment-able domain, and they use a series of synonyms with each other that we've encountered before. What does the abstracter-hearer, who wears no goggles, ask, and how do the other members respond? The next phase of the study continues:

s3+: the goggles help you see anything?

s2: yeah

s1: yes, the goggles take away the green dots, I think, no

s2: it's all one color

s1: it's all one color. but these goggles are green and red...one is green the other is red. The two lenses on the

one eye so, so on one eye you see it
 takes away the green, on the other eye
 you one takes away the red dots...
 that's the only thing I can say, and
 ...and if you move back and forth it
 goes close as you closer and further
 as you go further, if you move sideways
 it moves also

s3: you, you're trying to find out how
 far away, away from you?

s1: yeah...that's it...uh want to add some
 thing?...no? I'll do all the talking

e: do you feel that you have enough
 information to proceed to the next
 part of the experiment?...It's up
 to you.

s3: it's not much, but

e: Ok

It is intriguing that the 3-D effect of the goggles are not clarified for the monitor (s3), for this is the most salient dimension of the task. Instead the subjects who view the display clarify the colors of the lenses. But note the vocabulary that the culturally informed members use when talking with s3: it's the vocabulary which s1 and s2 have unproblematically employed with each other. And the task s3 repeats is responsive to those comments and what was overheard and seen. The entire dimension of some-thing which is being assessed as being in front of some-thing else is omitted from the dialogue. The abstracter-hearer (s3) starts the next part in the following manner:

s3+: Ok what they had to do, they had to
 see how far away this thing was from
 the table right?

s4**: Ok

s3: ...mutually come to an agreement how
 far in front of the pattern...

s4: I can't see it

s3: they had to see how far the dots were from the thing, you know from the outside of the pattern, right, and what they did, they would like move from side to side, and back and forth you know, and they would add inches, they say when they move back with the goggles on that this thing, this thing moves closer you know, move back also when they moved, an, and they moved from side to side also

s4: yes

s3: and they uh star, I don't started adding inches and feet and came up with twenty feet

s4: twenty feet?

s3: twenty inches

s4: twenty inches

s3: that's how they came to uh, you know I couldn't hear them very well, they were mumbling

s4: they were moaning?

s3: mumbling

s4: Oh...so I'm supposed to figure out how far away the dots are

s3: we have to figure out

s4: from us

s3: yeah, the dots are, right...mutually come to an agreement how far in front of the pattern of dots the figure that appears

s4: how far the front of the pattern is? You see...with these things on it's two different things. This is amazing... there's like a...tri...

s3: well I haven't seen through the goggles but I asked them, one's red. What does it look like?

s4: wha?

s3: what does it look like

s4: it's, there's a, there's a triangle, a diamond and um the dots inside the diamond are further away than the outside ones

s3: so then we have to figure out together how far they are

s4: well are we supposed to, we do the inside ones or the outside ones?

s3: well here...this

s4: mutually come to an agreement on how far in front of the pattern of dots... oh alright, Ok

s3: since I'm looking at it with normal
(unintelligible) I don't see it
s4: uh, uh...in front...Ok well it's not
that far...it's only about...
s3: they either said 20 inches or 20 feet
s4: they couldn't have said 20 feet
s3: yeah, I know, twenty, it had to be
twenty inches
s4: I'd say it's about...oh god...I can't
tell in depth, you see it's going in
s3: I can't tell cause it just looks
normal to me you know, like dots...
move back a little, see what it does
...do they move?
s4: yeah they move further away, well this
is supposed to be done from back there
or up here?
s3: well they said you can, you can move
anyway, move to the side and see what
happens
s4: can I, it doesn't matter, this is
amazing. How (unintelligible) I'd
say it's about 10 inches. I don't
know how they got 20 inches
s3: I, ten inches?
s4: yeah, that's what I'd say
s3: we have an agreement
e: Ok

What the monitor (s3) has acquired from the original problem solving team (s1 and s2) is their short hand vocabulary which presumes that the meaning and reference of the expressions are and will again be apparent to any-other. With the introduction of the foil, s3 conveys what is known about the world by offering these public words with the assumption (hope?) that their use will be unproblematic for the foil. But all that the abstracter-hearer knows is what (s)he has heard or seen, and s3 is literally bound by that information and can add nothing else for s4 in the face of a problem.

The shape can not be identified by the monitor, and s3 can only begin to acquire a feel for this from the foil's description. The spoiler (s4) can describe the stereogram on a critical dimension--in depth--but not having been informed of its importance s3 is not clear how to use this information. The only task demand provided was that some-thing must be found which can satisfy an assessment of "far away." And as the foil must rely on s3's words in order to know how to use the stereogram before him, some dimensions of the stereogram are found which can fit the task demands and permit the resolution of the experimental problem.

The foil has accepted the vocabulary from the monitor as it was offered--as public words useable by any-other. So again two disparate displays remain tucked away beneath expressions which presume one subtext but rely on another. The problem encountered in the Repeater study (study 2) has resurfaced here. In accepting the spoken words as ground, the monitor is separated from the details which could explain the origin of the expression and presents these words to an-other who again uses them but quietly slips in different details.

But there is a critical alteration here. With the departure of the original team (s1 and s2), the new members (s3 and s4) are literally caught in a web of words presumed useable by any-one:

s3: well I haven't seen through the goggles but I asked them.

What the unintentional consequences are for these indirect knowers who are captured by a vocabulary assumed useable by any-other, needs to be more forcefully documented. Consider the following dialogue (transcript 6, study 4, part 2) where a culturally informed member conveys to the recipient-hearer what has transpired:

- s2+: Ok what happens is he gives you these goggles that are red on one side and green on the other, Ok? And when you put them on, even though you don't see anything, you only see now, it looks like a diamond, a diamond shape, like this comes out of the screen and comes at you...Ok? And what he asks you is how far in front does that shape appear...to be in front of the screen, Ok? In other words, when you're looking at that thing it just looks like there is one flat surface, right? But...
- s3+: right
- s2: but when you put on the goggles with two different colors it looks like something comes out and is standing right in front of that
- s3: I see
- s2: in front of that! So you see that and you see a diamond shape in front of it
- s3: Ok
- s2: and he wants to know how far away that shape is
- s3: the diamond shape?
- s2: from the screen
- s3: uh huh
- s2: Ok?...and uh I thought it was twelve inches and she thought it was eight so we all, we decided
- s3: yeah
- s2: it was ten inches from the screen. Ok?
- s3: yeah
- s2: got it?
- s2: you say what? He gave you two goggles

s3: one for each
 s2: a red and a green?
 s3: no, one, one pair of goggles with red
 on one side and green on the other
 s3: Ohhh, and green on the other side
 s2: right
 s3: is the glass white, or is it red
 glass
 s2: it's colored, it's red plastic
 s3: ohh, the glass is colored
 s2: right
 s3: with a red plastic and a green plastic
 s2: right
 s3: Ok, and the
 s2: and when you look through it
 s3: when you look through it...at those
 goggles...at those things there, those
 patterns
 s2: yeah
 s3: you saw diamond shapes that were
 s2: one diamond shape
 s3: one shape?
 s2: one shape
 s3: Ohh, only one
 s2: right, one shape
 s3: that came off the screen towards you
 s2: towards us, right
 s3: right...and he asked you how near, how
 far from the screen do you think it
 was?
 s2: right, from the screen, right
 s3: I see...that's all?
 was there any problem in the pattern,
 then? anything to solve, just that
 alone?
 s2: that's it
 e: Ok? you're ready?
 s3: uh huh

Neither participant wears goggles here, and the task
 conveyor tries to lead the recipient-hearer through the
 problem very carefully. The shape is identified, and there
 is an attempt to specify what is in front of what. And we
 see that s3's repetition of the task--...and he asked you how
 near, how far from the screen do you think it was?--is

accepted by the old member. But this terminology is a shorthand and, as we know from the other conversations, contains a possible "error" if it is repeated in that manner to the foil (s4). How s3 transmits the task demands becomes critical and the dialogue begins:

s3+: Ok, um, well you know, you have on the glasses, right?
s4**: yeah
s3: you're looking at those patterns... now what you're supposed to see, you're supposed to see a diamond shape coming off the screen towards you
s4: yeah
s3: right in front of the goggles
s4: yeah
s3: before you had the goggles on you saw a flat screen, didn't you?
s4: yeah
s3: there was no shape, now you have the goggles on you see a diamond shape coming off the screen, towards you, right?
s4: right
s3: now the problem is how far do you think that diamond is from the screen?
s4: how far do I think?
s3: yeah, the diamond shape, how far do you think that diamond is from the screen? twelve inches, ten inches, eight inches how far?
s4: Oh, you're saying from, from the background?
s3: yeah from the background, from the pattern, how far do you think it is?
s4: the diamond is?
s3: right
s4: I would say approximately two and a half feet
s3: (inaudible) two and a half feet? the diamond is towards you two and a half feet?
s4: you're saying how far the diamond is from me?
s3: no, from the screen
s4: yeah, yeah there's a pattern in the back and there's a diamond

s3: right
 s4: in front, right?
 s3: right
 s4: you're saying how far is that diamond
 from the back of the pattern?
 s3: right

What has happened here? As set into words by s3, it seems clear that the diamond shape seen is to be in front. But the foil, s4, "sees" recession yet agrees to a description of, indeed seems to offer a description of, extension. Where we previously had extension called recession, we now have the opposite: recession labelled as extension. To understand what has happened three points must be assessed: (1) the relation of the recipient-hearer to the foil; (2) the perspective of the foil; and (3) the vocabulary utilized.

First, as we've indicated, s3's indirect access to the original task limits what can be known and talked about. We must realize, however, that for this recipient-hearer there is no visually accessible entity that can be used to verify what (s)he has been told. It is literally correct to claim that for this member the three-dimensional world exists in no-place but in-words. Yet this individual must convey and describe a location, must lead this new sightful(1) partner to some-place. A translation problem has emerged. For the recipient-hearer must describe to the foil some location that can satisfy the "seeing" of the new partner and can be considered as meaning the "same" thing which the recipient-hearer knows.

Second, this movement between no-place and some-place must be managed by an exchange of words. And it is s3's offering of a public vocabulary which the foil must use as a guide to the material before him. And it is the spoiler's attempt to use the terms of the task demands in the spirit offered that has led his perception to the wrong-place.

Let me try to demonstrate this by citing two segments of dialogue as evidence. There is the just reported exchange about the stereogram as it arises between s3 and s4:

s4: you say how far the diamond is
from me?
s3: no from the screen
s4: yeah, yeah there's a pattern in the
back and there's a diamond
s3: right
s4: in front, right?
s3: right
s4: you're saying how far is that diamond
from the back of the pattern?
s3: right

and then there is s4's description of the stereogram during the debriefing while wearing the goggles worn above:

s4: what am I seeing?
e: yeah
s4: well, what I'm seeing is a...is a
pattern a square shaped pattern with a...
diamond shaped hole in the middle with
the same pattern in the background you
understand? There's a diamond shaped
hole in certain said square, right? With
the same pattern in the background
e: why don't you take those goggles off and
try these on...and describe to me whether
you're seeing the same thing or not
s4: exactly the reverse, I'm seeing the same
thing but reversed. This time there's a
diamond square coming out and then
there's a square in the background.

The recipient-hearer has presented the foil with the problem of locating some event--a diamond shape--that could be considered as being in front of something else. It is this sighted member's (the foil, s4) task, in part, to take these words and try to manage that seeing and locating, just as it is the recipient-hearer's chore to determine whether the talk and seeing of s4 matches what has been conveyed--whether they are talking about the same-thing.

If we examine the foil's description during the debriefing there is a clear reference to some "diamond-shaped hole," and that it is this "diamond shape" which is viewed as being in front of some-thing else--the pattern in the background. What is this "diamond shape"? When the stereogram is looked at with the visual aid there is a hole in the center which has as a frame, or border, the outlines of the diamond which is extended or recessed. I want to suggest that this is the "diamond-shaped hole" which the foil takes as the place to locate the recipient-hearer's chore: to find a diamond shape which can be considered in front of something else. And when s4 agrees that there is a diamond in front, it is this center frame which is being referenced.

As the recipient-hearer remains located in no-place (only in words), it seems reasonable to accept a current partner's comments about a "diamond shape" as meaning and referencing the same "diamond shape" that the task-conveyor spoke of. With the foil finding some shape which satisfies the recipient-

hearer, "diamond shape" functions just as "far away" did: it enables different perceptual details to be unintentionally substituted behind the "same" phrase.

Once again the perceptual anomaly is masked and a resolution reached. But with the departure of the task-conveyor, there is no way for the foil and the recipient-hearer to realize the alteration which has taken place, now or in the future. Related issues are highlighted in the conversation shown in transcript 9, study 3, where most of the original subtext is not available to the monitor:

s3+: are there dots around it?
s4**: yeah, there's many dots
s3: I think you're supposed to find out how far the dots are from...are they equally around it?
s4: the dots? are they equally around the square?
s3: yeah
s4: there's no real dots, I mean, I mean, I see a lot of just rectangular
s3: red shapes?
s4: types of shapes
s3: how far are they from it?
s4: uh, the, they're right on the outside of it. They're inside of the square and they're outside of it. All around it... anything else?
s3: I think that's it...I don't know
s4: am I supp, it looks like, it's like um, it looks like the square is in the back of...the um...the actual...you know, like you have the face, and then you have like a square in the center, then it looks like that's behind it, like that's almost a window, a square window and behind it I see more of the uh rectangular items
s3: yeah
s4: is that it?
s3: I think so

- s4: what, what's that supposed to, what does that say?
- s3: I don't know...there's no pattern of dots in there?
- s4: I see, um, let me see, I see, yeah I see a pattern...it looks like. What do you mean by a pattern? You mean like a set pattern, where, like you know, like a plaid shirt would have a set pattern throughout the whole entire shirt?
- s3: yeah, only it's a bunch of dots and a figure in the middle
- s4: let me see, I don't, I don't see a set pattern at all, like, like I see you know, it doesn't um it's not like it's uniform, you have a certain pattern repeated many time, it looks just like you know all jumbled up
- s3: is there a distance between the dots?
- s4: between the dots?
- s3: the pattern?
- s4: um, yeah like there are white spaces I don't know if those are supposed to be anything part of the formation or if that, that's supposed to be, I guess the white space you could call, yeah that's the distance between the uh, the uh, diamond and the dots.

With the foil, the monitor tries to accomplish the task demands which the task-conveyor expressed--of finding someplace where distances can be offered. But a problem arises for the foil reports a multitude of possible places where distances can be used. The monitor caught by words presumed useable by any-one can not now obtain those silent, missing details requested by the foil. The abstracter-hearer's problem is that she does not know what place to lead the foil to, nor know whether the things and places described by the foil are the "same" things and places she has heard mentioned. At the same time the foil is immersed in an attempt to use

the words offered by s³ but finds an uninterpretable stereogram. The utterances of s⁴ can be heard as a request for assistance in locating the correct place. Perhaps it can be paraphrased as: "Look, I can tell you what I see, but I need your help to tell me if I'm looking in the right place," or "How do you want me to use what I see before me," or "I need your help, your talk, to put the display in order for me." Or in the language developed here--what satisfies the place you described to me.

With the loss of the subtext but with the knowledge that some task must be completed, the monitor and foil locate some-place that concludes the experimental chore. Yet by not knowing how to hear the many places offered, the task concludes hesitantly and in the wrong place. Once again the disparity between the parts remains hidden from view. And we return to the unintentional consequence mentioned earlier: that the monitor, the recipient-hearer, and foil's efforts to re-use the public words--to take the talk-as-heard-as-ground--let's them slip in a disparate world and unwittingly substitute different perceptual details beneath the "same" terms.

The massiveness of the member's inability to reveal the disparity is a surprise, but it does not represent a "failure" of the experimental manipulation. Rather it

demonstrates a consequence of having taken the transmission²⁹ in the spirit offered--as words whose meaning and reference will again be unproblematic to any-other. In accepting a vocabulary of synonyms, the foil, monitor, and recipient-hearer are caught in an attempt to make the display fit the words. With such an effort, two disparate worlds can rest side by side, unnoticed. And the old member, believing in the repeatability of the task, can find it hard to hear a difference.

These negative cases³⁰ have sensitized us to possibilities which could have remained unseen had only differences been found, and as such represent a discovery. But as it was precisely the finding of the irregularity which was to probe the original conjectures, it is premature to conclude the analysis without examining those conversations. How do they confirm, disconfirm, or modify what has been presented?

²⁹This formulation excludes study 1 where there is no transmission, though the issue of heard differences includes it. Study 1 raises some interesting questions for future research. As the same Ss participate in both parts, what separates those who bring up the disparity from those who don't? What would happen if the disparity were heightened so it could not be avoided? As the results for study 1 are a surprise no probing answer can be given, but I suspect that the presumption that the experience is unchanged is quite strong, and hard to overcome for the member whose vision is unaltered.

³⁰Negative in the sense that they are counter to the presumption that the anomaly would be discovered.

(d): The Revealing of a Disparity

We can begin our analysis of these conversations with transcript 15, study 1 (the Base) after the goggle switch has been made:

s2*: do you see it?
s1**: yeah, it's coming...I don't see it that well though, yeah, now I see it
s2: it's a triangle, right?
s1: right
s2: it's far away, right?
s1: what
s2: it's fa, further away than the other one?
s1: yeah
s2: much further

How are we to take this piece of discourse? The exchange begins with a ratification that the partners again see the same figure--a triangle. S2 uses expressions that have worked in the first part, "far away," and "further away," and carry the implication that the partner's perspective remains unchanged. Yet this presumption is a concern for s1 and she proceeds to place that issue into words:

s1: it looked like it's right on top of it?
s2: you think it's right on top of it?
s1: well, well what does it look like to you?
s2: it looks very far to me
s1: behind it?
s2: behind it? Coming towards me, it looks like it's, the patterns here...and the triangle like out here
s1: so you mean, the triangle closer to, to the thing?
s2: no, it's further, further
s1: it's closer to you?
s2: it's closer to me
s1: it doesn't look that way to me

s2: huh, you want to switch seats again?
 s1: I don't know, wait let me see
 s2: maybe you don't see the right triangle

Two points need to be made about this exchange. First is the careful, almost hesitant, checking which the foil, s1, engages in to ascertain whether her relationship to the stereogram differs from her partner's. And second is s2's continuing reliance on the supposition that this relationship is unaltered. A claim evidenced by "maybe you don't see the right triangle." The final portion of the conversation continues:

s2: maybe it's your glasses
 s1: maybe...are we allowed to switch?
 s2: you want to?
 s1: I don't know
 s2: let's try it
 s1: you sure?
 s2: Oh, no wonder why. It's the glasses.
 Now it's right up, in the pattern
 s1: yeah, uh huh
 s2: ...it's right in the pattern, right?
 s1: so now we don't know what to say?
 s2: the problem has to be solved...depends
 on who's wearing what goggles...
 s1: that's true, that's right. So how do we
 solve it?
 s2: we can't, we, we'll solve it on one
 person's glasses, probably
 s1: that's nice
 s2: hum?
 s1: with those glasses like, I, I even
 thought it was in back of it
 s2: uh hum
 s1: at first
 s2: I see it right...right in the pattern
 s1: right
 s2: know what we'll do? We'll use those
 glasses...both of us...and we'll solve
 the problem
 s1: alright. So I'd say this like...twice,
 twice the distance...like

s2: four feet
 s1: four feet
 s2: yeah, I think it's about four and a half
 feet
 s1: four and a half?
 s2: ha, it's not much closer...so we're using
 my goggles and we
 s1: alright
 s2: we decided it's like four feet
 s1: alright
 s2: Ok?
 e: Ok?
 s2: we've solved the problem

What we could previously raise only as a possibility in the conversations where the disparity remained hidden is visible here: the reworking of a pragmatic agreement. The initial exchange which presumed a continuing, unaltered, and shared perspective could be renegotiated once the foil makes the switch noticeable. But we have something here that has not previously been encountered. With the realization that they no longer see the same-thing, the foil raises a telling point: "So now we don't know what to say."

What has been used as a silent guide for their talk--the instructions, their previous experience and shared vocabulary--can no longer be unproblematically invoked for the major presumption that they have retained the same orientation to the stereogram has been violated. Yet they must find something to say, for the text still demands, as s2 notes, that "the problem has to be solved." And as their speech starts to explore the details of their perspectives, it enables them to place in words--for self and other--

for the first time those dimensions of the world which will enable them to complete the task.

Consider also transcript 11, study 1 (the Base) where the opening remark in the second part is the offering of a difference:

s1*: this one is
 s2*: it's further, it's further
 s1: this is different, you know what I see? I see them in different ways. Sometimes the triangle seems like it's behind...the screen. Sometimes the big...uh...the square seems like it's behind the screen
 s2: I can't see that...it's further out than the first one though, isn't it? It is...definitely.

Again, for the partner whose orientation remains the same and takes the previous encounter for granted, it is hard to hear the difference raised as one that indicates an alteration in that previously shared perspective. Not surprisingly, s2's last comment invokes their previous interaction and reinvokes the claim that they still see the stereogram in the same way--as further out. The spoiler, s1, will continue to assert a difference, but s2 will reply with:

s2: you really can't see it as being, as being further out...than the first time?

Given their prior experience, the experimental protocols, and the current perception of s2, s2 still presumes, though hesitantly, that the foil is having difficulty seeing. Indeed, s2 isn't the only one who makes this assumption:

s1: maybe if I look away from it for a second I'll see it...Ok?

and eventually s2 will ask the foil:

s2: you're not lying?

The issue of veracity brings to the fore the concern with whether the previous and current experience can be relied upon.³¹ We can display this point by paraphrasing the discourse in the following manner: s2: "now look, first we saw the same thing, and now all of a sudden you claim we don't. And what's more, I still see it as in front, just like the instructions say I should. Are you fooling with me?" The foil recognizes the power of the partner's claim--that the shared history they have continues to be shared--in his own attempt to re-examine the stereogram.

Again, a difference in perspectives is hard to hear for the member who remains immersed in an experience which repeats what has come before. As in the previous transcript, the foil will continue to suggest that a disparity exists and

³¹The point of all these analyses is to try and select those aspects of the discourse which seem most germane to the empirical problem. The issue just discussed (veracity) indicates that there are additional topics and issues which can also address what is "really" happening in the talk. For example, we can consider s2's comments as a challenge to the foil's social competency which s1 must re-assert. This will not be achieved until the partners discover that different goggles are worn, and s2 can alleviate the attack by claiming that they were both right.

In addition, we can also examine how members rely on social knowledge they bring into the experiment with them-- e.g., how to bargain and use numbers. Each level of concern will add some further dimension to the analysis, for there is no one thing that is "really" going on.

eventually he will offer the guess that the goggles have been switched. After s1's comments about "looking away" the interaction proceeds:

s2: switch to the, to, to the red side
s1: Ok
s2: is there a red side
s1: yeah
s2: on your goggles?
s1: right, there's a
s2: Ok switch to it, when you switch to
it do you see no triangle at all?
s1: right
s2: just a flat
s1: right, it has to be both of them
s2: Ok the green also?
s1: you have a green side on the right?
s2: on the left
s1: uh huh...ha, ha there's the solution,
that's what it is. They did give us
different goggles
s2: they did?
s1: yeah
s2: they switched the lenses
s1: Ok
s2: that's our solution
s1: Ok, we figured it out, alright
s2: but still that's not really the
solution
s1: you pulled a switch on us, hey
s2: you can't really say it's a
solution because
s1: sure
s2: how far is it from the screen? It
was right near you
s1: Oh
s2: we're both right, ha ha
s1: yeah that's the solution. We both
see it differently so we can't agree
on it
s2: yeah, Ok
s1: Ok

The essential point here is what can be accomplished when the anomaly is discovered. The "knowers'" direct relation to the original subtext and equipment permits all aspects of the

task to be placed before the members. In the face of a disparity a reason can be sought. And by bringing forth what had been previously silent and unproblematic--the effect of the goggles--an answer found.

Contrast this with the following conversation from study 4 (the Watcher-Hearer), transcript 20. First there is the explanation given by the task-conveyor in part two to the recipient-hearer (s3):

s2+: Ok, he has these goggles over there
and when you put one on a figure
shows up in the pattern...and you
have to decide how far in front of
the pattern the figure is
s3+: that's all
s2: that's all
s3: Oh, so now I take the goggles and put
it on, right now?
s2: no, when the other person comes in
s1: so what am I supposed to do right at
this point?
s2: you're supposed to understand what
I'm telling you
s3: take the goggles, put it on, look at
the figures and then you have to figure
out how far in front
s2: in front of the dots
s3: in front?
s2: right
s3: of the goggles it is?
s2: in front of the dots the figure appears
to be

The recipient-hearer, s3, knows that "in front" is a critical dimension of the task and she will take this talk-as-heard-as-ground and offer it to her partner, the foil:

s3+: look with the goggles you're supposed
to look there and see the dots, how far
the dots are in front of the picture...
that's how I understand what I'm

supposed to do. I don't have goggles,
haven't looked at it so I don't know

.
:
: (15.2 seconds elapse here)
.

s4** : what is it they saw?

s3 : how far the dots are in front of the
picture

s4 : um, the dots are not, they're not...
they don't seem to me...in front of it...
they don't seem in front, they're in back
it, it looks like

s3 : she said it was in front to me...she
kept repeating

s4 : she said it was in front of it?

s3 : uh huh...I'm merely repeating what she
said to me...cause I have not put on,
I haven't actually put on the goggles.

The recipient-hearer is right. All she can do is repeat what has been told her. And as what she has been told was stripped of its detailed history, the foil's request for the specification behind those public words can not be provided. But with the unearthing of a difference, listen to the question the foil asks:

s4 : how could one see one in front
and one see one in back? That's
what I'm trying to figure out...
makes one of us wrong.

And who is to answer this question? It is precisely the recipient-hearer's indirect knowing that prevents her from doing anything but "merely repeating." Nothing can help her locate those silent details which the task-conveyor has kept out of talk. Of course, the foil can describe what he is seeing, even misdescribe it, in an attempt to help his partner:

s4 : and then there's a triangle, there's
a kinda like a triangle, you know, in

the dots, right: it has a kind of triangle, it has another surface you know behind it

But again, as s3 notes, she has only one recourse:

s3: I'm taking your word for it...I don't see any of that cause I'm looking with my bare eyes

The participants are caught with a disparity they can not resolve and they begin to seek some alternative resolution:

s3: are we supposed to find out what we see one with goggles and uh the other one without the goggles? Is that what it is?
 e: well
 s3: what I see with my bare eyes?
 e: you resolve the problem according to the information that's been handed, presented to you by the other person
 s3: but it doesn't, but does the problem consist in finding out what that represents say like as a work of art, as a painting, or something, whatever?
 e: I can't help you, you just have to resolve the problem as you see fit

In discovering the disparity, the foil and the recipient-hearer encounter what the task-conveyor has taken-for-granted and stayed silent about: that the meaning and reference of the words would be unproblematic. And with no procedure for uncovering that quiet history, the current partners (s3, s4) are left with public words they can not re-use. The foil and the recipient-hearer are unable to find a reason for the alteration, and can not re-negotiate the problem as can

members who retain access to the full context (the direct knowers).³²

There is another dilemma which has arisen here for either the monitor or the recipient-hearer: whose account is to be accepted in the face of a disparity? It is an interesting question to speculate on and I want to suggest that it is the current partner's description which will be accepted. It is almost as if the recipient-hearer or the monitor will abandon what (s)he is told in deference to the "seeing" of the current partner, the foil. Is this what s3 conveys when she asserts--"I'm taking your word for it"? This conjecture is supported by the exchanges which occur in transcript 8, study 3 (the Watcher-Hearer):

s3+: it's behind?
 s4**: it's behind, right
 s3: you think it's behind, so how far.
 behind is it?

This dialogue concludes a long introduction where the abstracter-hearer has conveyed the information that the diamond is in front of the screen. The monitor readily accepts the foil's description that it is "behind," but she repeatedly requests to use the goggles. All of which the

³²In this encounter the members do proceed to accomplish some task--to describe the stereogram in as much detail as possible. But it is not clear whether this pushing forward on some task is a result of their inability to rework the original problem or an implicit direction given in E's comments. The other encounters seem to conclude when the difference is realized--that is for studies 3 and 4.

foil turns down. During the debriefing, s3 clearly states that her request to use the goggles was because she was confused about the discrepancy between the parts. And that she decided to take the spoiler's "word" for it because he was there, with her.

When differences were concealed our analysis suggested that pragmatic agreements allowed the members to unintentionally combine two disparate worlds. In the conversations where the irregularity was revealed we see support for the rest of the conjecture--that the agreement could be unravelled and reworked if at least one of the participants retained access to the full details of the original subtext. But note that in the Base (study 1) and Repeater (study 2) studies the differences unearthed are always located on the "proper" dimension--noticing the alteration from extension to recession. As we move to the Watcher-Hearer (study 3) and the Hearer (study 4) studies we begin to find that differences found are not necessarily located on the "proper" dimension. Consider, for example, transcript 27, study 3, where the monitor overhears a great deal of the conversation between s1 and s2. However, much of their dialogue was devoted to discussing whether the stereogram was an illusion, and how the movement of their bodies influenced their judgments of distance. Again, what the monitor knows are the public expressions presumed useable by any-other and it is only with what has been caught in words and deeds that the abstracter-hearer can direct the

foil. The introduction given to the foil proceeds as follows:

s3+: well you know, those 2 girls they were seated over here and they saw this and then they put the goggles on and it seems, I didn't have the goggles on, that um, the dots seem to come closer to them, and a distance between the dots and the backwards, you know background. And they were trying to come to a, come to a conclusion about how far away the dots actually were away, from you know, from there, there was sort of a diamond shaped figure that appeared and that you know they were trying just to see how far it was and they tried different angles and they saw from different angles that it appeared different distances, um, it was hard for them to come to a conclusion, but they finally realized that from different angles, it appeared differently and the closer up to it, it seems closer to the background, but the further back you go the dots seem further away from the back, and that's more or less I guess about it, you understand?

After a discussion of the task and what s4 sees, the dialogue continues:

s4**: that's the opposite of what you told me...right? When I go closer the dots come closer?
 s3: it seems further away?
 s4: no, yeah which is the opposite of what you told me
 s3: are you sure? I thought I told you that when you go back it comes closer to you?
 s4: well yeah, that's right, you said when I go back it comes closer to me, it doesn't

For the nth time, the monitor has set-up in words the relevant dimensions which are to orient the foil. Having taken the previous talk-as-heard-as-ground, the monitor has

no way to realize that her rendition has unintentionally constructed a new dimension on which the foil locates a difference. And with no access to the original subtext, there is just as much the introduction of new perceptual details as there was when the disparity was masked.

Being able to find a difference by being located in the wrong-world is a twist introduced in transcript 23, study 4. The recipient-hearer is told that the shape to be seen is a triangle, and so orients the foil:

s3+: now in that square there is a
triangle
s4**: do I have to?...Oh
s3: can't ask him any questions
s4: yeah
s3: in that square there's a triangle
and you, you have to find where
that triangle is
s4: Ok, the (inaudible) where in the
square is the triangle?
s3: it's in the center

a bit later

s4: I see, you know what I see? I see
a, I see a diamond
s3: you see a diamond?
s4: a rhombus. You know geometry?
s3: yeah
s4: it's right in the center...it's a, I,
I, suppose you could call it a triangle
if you divided it into two parts, but
then you'd have two triangles not one
s3: that's right...so then there isn't a
triangle there
s4: I don't see a triangle, I mean, I, I
suppose, I, I, can't even really stretch
my imagination I don't see a triangle...
it looks like there's a rhombus that,
that's cut-out so that there's an
empty space which, which is that shape
you know

s3: could, did you look at it everywhere,
all over the square?

and much later:

s3: what do you see?

s4: nothing

s3: nothing?

s4: not a thing, I can't find the triangle

s3: there isn't a triangle?

s4: no that's right, there isn't a triangle

s3: there isn't any triangle...but there's
a rhombus

s4: yeah

s3: a distinct rhombus

s4: oh, oh it's more like a square really
just turned on end, like a diamond

s3: uh huh

are we done?

s4: yeah, I guess so

s3: I think we're done, hey?

e: Ok?

What has been presented to the recipient-hearer as being in the world can not be located, and with no way to uncover the error the task is finally terminated. And this leads us back to a previous point: while talk can set forth some- place to be located, not any place will work. When no place can be found to satisfy the foil's "seeing" and the recipient-hearer's "hearing" the task concludes and we are again reminded of the translation problem. A point the subjects themselves are keenly aware of (transcript 27, study 3):

s3: right, I understand what you're saying,
I, I really don't understand because I
don't have the glasses

s4: yeah, I'm trying, I'll have to explain
it in the abstract

Regardless of the distinctions which may be made as to how a disparity is revealed, the later part of each study

begins with the same problems. That an old member must be divested of his or her previously ratified presuppositions, and that the vocabulary of synonyms presumed useable by any other must be challenged so what has been kept silent can be put back into speech. But to notice that the same issues arise (synonyms, talk-as-heard-as-ground, pragmatic agreements, translation problem) whether or not a disparity is concealed is to suggest that we are not just engaging in a tedious repetition and confirmation of points already made. It is to advance a much broader claim--that in each encounter talk has been responsible for what is made known and how it is known.³³ And it is to notice that the position of the "knower" binds what can happen when what has been taken-for-granted becomes problematic. For with the departure of the culturally informed member, there is no way to recover what has remained silent and the members are unable to renegotiate the task on its original terms.

³³It is worth repeating a point already made. Questions continually arise as to whether some people are more likely to find a difference than others: whether some people are hesitant about placing differences in words. The point I want to make is broader. There is something that talk is accomplishing in each interaction and this question--as to what is being accomplished--remains even if we knew which members would be most likely to uncover a difference. Indeed, even if the particular analyses used to explain why no differences occur in an encounter suggest some alternative explanation--e.g., cognitive style, demand characteristics, evaluation apprehension, conformity--the problem at hand still remains. The fascinating thing about talk is how it is sensitive to all of the personal and situational concerns while it may also be constructing some-thing else.

(e): Some Further Comments

Let me begin this section by trying to clarify a question which has been bothering me: why do the original pair remain silent about certain details when they transmit the task demands to a new member? More specifically, why are the role of the goggles so infrequently mentioned? We can begin by probing how members decide what to tell and how they tell it.³⁴

How the task-conveyor initially explains the task demands is a point we are familiar with: that the expressions used are presumed to be unproblematic and useable by any other who enters or remains in the same context as the speaker. The members can keep quiet about certain details because what is being referenced and meant is "obvious." In a sense, the details are not worth mentioning. This account is somewhat inadequate and we need to extend our analysis. We can proceed by considering three instances of transmission, each where a difference is found.

First consider transcript 4, study 2 (the Repeater):

s2*: Ok, there's a pattern of dots there, uh, that you'll see the large, the large rectangle is uh (inaudible) of squares what we feel is a square is a pattern of dots that the experimenter has called a pattern of dots and it's large. Now what

³⁴The use of "decide" should not be taken as indicating some active monitoring system or rule which is used to direct talk.

you see in front of you immediately is what we called the diamond or a square on its side on, on one of its corners and that's obviously, that you visually see that in front of the large pattern of dots. Ok? You see that?

then transcript 27, study 3 (the Watcher-Hearer), part 2:

s3+: ah, Ok, well you know those two girls they were seated over here and they saw this and then they put the goggles on, but it seems, I didn't have the goggles on, but it seems that when they put the goggles on that um the dots seem to come closer to them and a distance between the dots and the backwards...you know...the background, and they were trying to come to a come to a conclusion about how far away the dots actually were away from you know there and uh um...first they realized that uh there was sort of a diamond shaped figure that appeared, and that, you know they were just trying to just see how far it was and they tried different angles, and they saw from different angles that it appeared different distances...um...it was hard for them to come to a conclusion but they finally realized that from different angles it appeared differently and the closer up to it it seems closer, the dots seem closer to the background but the further back you go the dots seem closer to you and thus further away from the back...and ...that's more or less...I guess about it...do you understand?

and then transcript 20, study 4 (the Hearer), part 2:

s2*: Ok, he has these goggles over there and when you put one on a figure shows up in the pattern...and you have to decide how far in front of the pattern the figure is...

While what is conveyed may be expressed in terms which conceal details, what is initially placed into words at the time of transmission is what has been previously discussed by the first pair. And when this information is no longer adequate, what has not been spoken about, what has been taken-for-granted, must be put into speech for the first time. When asked to assess the distance in inches, the task-conveyor (s2) in transcript 4, study 2 (the Repeater) responds with: "I, I'm really, we didn't talk about inches."

We need then to assess what was discussed during the first part of the encounter. While the partners may be silent about the specifics of what is viewed, what is spoken about begins with the grounds specified in the instructions: that a figure appears, that it is separated from the rest of the display, and that the members must assess the extent of this separation. But additional topics will be placed into words and for the most part these topics will indicate that the members are having some difficulty in reaching an agreement about distance.³⁵ They will note that the stereogram is "really" an illusion, that their body position influences the distance reported, and that their judgments are arbitrary.

³⁵During the first part of the interaction there are some comments made which are not related to difficulties. They usually are descriptions of the stereogram--oh it's cute, what nice colors--and occur very infrequently. Sometimes these comments are repeated in the next part, but not during the first transmission.

What is added to the conversation are those aspects of the task which the partners find problematic. And it is these issues which may be added to the transmission when the task demands are conveyed.

But look what remains unsaid. When members speak about distance and offer comments about how "far away," "in front" or "further out" the shape appears, the effect of the goggles is silently invoked: the influence of the goggles forms a background from which all talk proceeds. The goggles make the perceptual experience possible, and as there is no reason to suspect that this experience will be altered their influence can remain in the background, silently relied upon to work once more. The rare times that the goggles are referred to is to either note that the figure disappears when one eye is closed, or that each eye is covered with a different color lens. The frequency of these comments is listed in Table 12.

Yet if the anomaly between the parts is revealed, it is precisely what the goggles make possible that becomes problematic. All of a sudden a previously unproblematic aspect of the task becomes troublesome and a taken-for-granted presumption becomes worth mentioning. And for the first time, it becomes necessary to explore the effect of the goggles in words. But what has not been spoken about before, can not be recovered by the indirect knower.

What is it that is told? The task demands and what has been considered worth mentioning. How is it told? In a

Table 12
 Frequency with which the Role
 of the Goggles was Explicitly
 Mentioned During Part One

Study	One-eye closed	Color of lenses	3-D effect
One	0	0	0
Two	2	1	0
Three	2	1	0
Four	0	1	0

n	4	3	0
N	28	28	28

manner presumed useable by any-other. And as we've seen, as long as the task demands are expressed in a vocabulary of synonyms which conceals details and unproblematic presuppositions two unintentional consequences occur: members can fit disparate perceptions under the same terms, and the indirect knower is incapable of finding that silence.

Before we can assess the original conjectures, one additional issue needs to be addressed: the concept of typification. It was suggested that type formation would result from a backwards glance at lived experience--at points

of reflection. We sought to expose this thematic grasp at three locations: (a) with the task's transmission; (b) with the naturally occurring questions; and (c) with the introduction of the perceptual disparity. It was also proposed that a typification would conceal the details of its construction and be offered to another in a public and anonymous fashion--as useable by any-one else. Is there any evidence of type formation?

One suggestive link with the concept of typification is the vocabulary of synonyms which the members use to express their knowledge of the task demands. The later part of the studies begin with the presumption that what has worked before will work again and a range of synonyms are offered which function as we thought a type would--in a public and anonymous manner. But the transmission is only one instance of reflection, and only the task demands--what is seen and what is done--seem to possibly reflect type construction. What occurs when we examine the other times that reflection takes place: where questions were asked and disparities are noticed?

Questions could be asked for many reasons, and in the first parts they generally relate to clarifying distances and topics which are considered problematic. In the second or third part questions still serve to clarify distances, directions, and problems. But when a disparity arises the queries acquire a deeper thrust. Further details are

requested and the public words, the synonyms, begin to unravel. For in seeking reasons for the disparity members must bring into words what has been previously silent. And where possible, this re-examination starts the re-negotiation of the task and brings into relief what was previously taken-for-granted.

The backwards look at lived experience has worked differentially, for it is only the recognition of the perceptual anomaly that causes a world thought to be re-useable by any other to be re-examined. And with this probe what has remained silent becomes visible, and it becomes apparent that the list of synonyms were offered matter-of-factly: as if any other could use them unproblematically. If these expressions which emerged during the initial encounter are offered matter-of-factly are we justified in considering the list of synonyms typifications? And furthermore, if these expressions evolved during the initial encounter, has type formation occurred without reflection?

The discovery of the disparity reinforces the argument that the synonyms are initially offered unproblematically--their meanings and references are presumed obvious and useable by any other who enters the "same" context. As such I would propose that the synonyms which have emerged be considered "types." That a vocabulary thought to be useable by any other has evolved from the mere exchange of words between partners cooperatively engaged with the task-at-hand

further suggests that typifications were produced without reflection.

(f): Assessing the Original Conjectures

The original conjectures set a broad frame in which to explore the consequences of using talk in face-to-face interactions, and we are now in a position to determine how to support, modify, or reject those entering claims. The first conjecture was split into two parts:

Given a problematic context:

1a: talk during an interaction provides the elements from which a common world can be constructed;

and

1b: reflection on this preceding talk generates typifications which select from this step-by-step construction those elements which permit the grasping of a pragmatic result.

If the arguments presented so far carry any weight, (1a) is supported in each study regardless of the "knower's" orientation to the stereogram, while (1b) requires some modifications. While types have been constructed they were not the result of reflection and it is not clear that they represent a "pragmatic result" of the encounter. What has happened is that the members' vocabulary of synonyms expresses what they know and saw while concealing the specifics. And in some cases it conceals details which were built up step-by-step and never spoken of again. This conjecture can then be rewritten as:

1b': during the interaction a vocabulary will emerge which will conceal the details of what the members see and know, and that these words may be typifications.

The second conjecture will also require modification.

Originally it was suggested that:

2: the transmission of this result to others omits its social construction so that the result can look like anyone's.

The term "result" is at issue here, but what is conveyed is presented with a series of expressions which take it for granted that anyone can unproblematically use them. This conjecture should be rewritten as:

2': when the task conveyor presumes that the context is unaltered, the task demands will be expressed by a vocabulary which conceals details but which is presumed useable by any-other.

The third and last conjecture was

3: as the knower of the result is further and further removed from the original situation, the harder it is for that recipient to renegotiate the result.

The same comment about "result" can be made here. But a further specification has to be made as to what it is that is harder to renegotiate. This refers to the distinction we made between the participants who know the world directly or only through the talk of others. It is the indirect "knowers" who are further removed from the initial situation, and as we've seen there is no way to recover what has been left out

of speech. This was true for both the monitor and the recipient-hearer so there does not seem to be any fine distinctions to be made between those two indirect knowers. Neither could renegotiate the task on its own terms--of extension to recession--once the disparity was revealed. The third conjecture should then be modified to read:

3': as the indirect knower is separated from the task-conveyor and handed a vocabulary presumed useable by anyone, (s)he is caught with a public terminology which omits the details of the original situation and unable to renegotiate the task on its original terms when those silent details are requested.

What are the consequences of talk?

DISCUSSION

During the first part of the study the members' speech has taken those "elements" from the world needed to resolve the task-at-hand. And from these initial face-to-face conversations³⁶ an experiential short hand has emerged. The precise details of the partners' relationship to the display (extension) and the figure seen (diamond) are obscured by a vocabulary which presupposes that the meaning and reference of the expressions, e.g., "it" and "away," are understood and shared. With the introduction of a new partner, a stranger, we can see that as the short hand vocabulary forms the base of the transmission the utterances are offered anonymously--as public words useable by any-other who enters the same context--and the history of the encounter is masked. And if the stranger takes the remarks in the spirit offered disparate worlds can remain hidden beneath the "same" expressions. The mundane, ordinary, common-place, and typically unremarkable use of talk-in-context has the

³⁶It is important to re-emphasize our concern with, and restriction to the use of speech during face-to-face interactions. As Sacks, Schegloff, and Jefferson (1974) note, this is only one example of what they call the speech-exchange system. Besides face-to-face encounters, the speech exchange system includes lectures, trials, seminars, press conferences, therapy sessions, etc. The question as to whether speech has the same consequences in those encounters remains open.

consequence of placing an order in the world which is taken-for-granted-until-further-notice.

In that the studies presented here have permitted us to document the formation of an understanding, view the extent to which the history of that understanding was communicated to a stranger, grasp when the history of the initial encounter could be recovered, and suggest when the understanding might be renegotiated or abandoned, we have, in some sense, a verbal analog of the "arbitrary tradition" literature. For we have seen how a history has been acquired and transmitted.

To elaborate and clarify such expressions as order, history, context, consequences, and social construction, it is helpful to recognize and distinguish between two levels of the argument: a context dependent one and a context independent one. That is, we need to understand that in any face-to-face encounter context and interests will influence what is talked about and made known (context dependent), and that conversation is presumed to make something known in any face-to-face interaction (context independent). But it must be stressed that this division is formed for the purposes of analysis only and fragments what is otherwise whole. For whatever is made known, socially created, always occurs in some context.

Before pursuing the context independent arguments, we need to reiterate how the initial instructions sustained

a particular context and formed the background for what was put into words and made known--to self and other. It should be clear that it was the experimental protocols in each of the studies reported here that informed the participants as to the nature of the interaction which would prevail (cooperative), that prepared the members as to what would be seen (extension, figure), and which specified how what was seen was to be assessed (distance).

By establishing domains of relevance--distance and extension--on which to appraise the stereogram, but by not specifying what would be viewed when the goggles were worn and by not detailing what solution should be reached, the initial instructions frame and open a future which only conversation can close. By placing their orientation to the display into words each member to the interaction makes public his or her perspective and permits the other the occasion to comment and co-operatively co-construct, negotiate some resolution to the task-at-hand--e.g., reach a decision about distance. And in each and every interaction, the experimental chore was resolved with an exchange of words.

But note that the partner's use of expressions such as "away," "it," and "further than" do more than describe what is seen. It directs the partner on what to look for and how to use what is seen--as a visual display which is to be assessed in terms of distance rather than color or the number of dots. In designating how the stereogram is to be taken,

we come to an integral part of what it means to "know" the world through talk. We are informed what "elements" are to be selected from the world and how these "elements" are to be used: words order the world for both speaker and hearer.

Yet recall that this use of the stereogram can not be separated from the task specified in the instructions provided by the experimenter. For as noted it is only from this sometime silent subtext that the words and numbers exchanged make sense. And what becomes known here represents a convention just as Sherif's autokinetic effect does: how the stereogram is used and the knowledge formed is a consequence of the purpose-at-hand. As such the stereogram itself contains a future in that the same visual display can satisfy a multitude of purposes and, hence, uses--some of which surface with the indirect knowers (the abstracter-hearer and the recipient-hearer) during the second and third parts of studies 3 and 4.³⁷

Besides providing the background on how to use the stereogram, the protocols also indicate how the interaction

³⁷It is the "norm" of distance which is generally thought of as the convention in Sherif's research. That is not being questioned. What is being noted is that the norms which evolved are dependent on a particular use made of the autokinetic effect--how far the light moves. And as here, the numbers offered by the Ss take this use for granted. One could just as easily have requested judgments about how often the light goes up or down, or how often it moves to the left or the right.

is to proceed--cooperatively. The members' talk is exquisitely responsive to these contextual constraints and the discourse in the first part of each encounter reflects these restrictions--implicitly or explicitly. It should be apparent that an exchange of words under altered controls would change how talk proceeds, what is made known, and what becomes taken-for-granted-until-further-notice. By formulating zones of relevancies and irrelevancies, the instructions define the context and present the members with a purpose at hand--the protocols offer a set of concerns or interests which guide the members' talk.³⁸ And by placing in words how the material before them is to be ordered, we can begin to see what it means to co-construct social reality.

It is from this notion of order and social co-construction that the unintentional consequences of engaging some-one in a dialogue can be brought into relief. The short hand vocabulary which emerged during the first part of the studies assumed that the reference and meaning of the words are clear and held in common. But for the members to rely on this presumption two related points must be made. First, by not

³⁸Using instructions as a substitute for interests--as a way to focus the subjects looking and concerns--is a standard practice in the literature (e.g., Cohen & Ebbesen, 1979; Loftus, 1975; Neisser, 1975, 1976). Indeed I would argue that any set of experimental instructions serve this purpose.

raising a challenge to the use of the world involved in such expressions as "away," the partner has accepted, for the moment, the definition of use offered. And second, as long as the partner presents no evidence to the contrary, "it" ratifies that the same visual world is being viewed and "away" that they have the same relationship to the stereogram. Even in those cases where verification was sought, these terms evolve and become part of the talk and continue to be accepted without further question.

As long as these utterances remain uncontradicted, they are spoken with assurance: in a manner which supposes that their reference is obvious and their applications unproblematic. An unintentional consequence, then, is that the reference and meaning of the vocabulary of synonyms is taken-for-granted-until-further-notice.

Whether members appeared to "trust" the instructions and utilize them as a silent background for their dialogue, or whether members found it "helpful" to first ratify their perceptual sameness, the expectations established by the protocols were confirmed in the first part of the study. With the move to a later part of the study there is no reason to suspect that what has worked before will not work again. And to the extent that one starts where (s)he has previously ended--with the assumption that the task can be unproblematically repeated and that the meaning and reference of the utterances are straight forward--we see

the culturally informed member convey the task demands with typifications--"it," "away," "further out," and "closer to." As the instructions provided by the experimenter framed the task during the first part, the explanation offered by the task-conveyor will so orient the new partner in studies 2, 3, and 4.

Yet an important distinction must be drawn. The first part of the studies begins in a symmetrical fashion--each partner has equal status and rights and each can contribute to the decision. In the later parts of studies 2, 3, and 4 an asymmetry is introduced. The task-conveyor, the monitor, and the recipient-hearer have the "right" to convey the task demands and instruct the foil on what will be seen, and, also, the "right" to suggest that the new member is misperceiving or misunderstanding. But recall that the foil, the new member, is directed by a series of public words: a vocabulary of synonyms which take it for granted that the meaning and reference of the spoken word is unproblematic and useable by any-other. We can now note the unintentional consequences which occur during the later parts of the studies when the disparity remains concealed.

First, when a new partner enters what is thought to be the same context, the culturally informed members speak in a manner which presumes that the synonyms can again be unproblematically re-used by any-other. Second, if the new partner accepts these words as offered, (s)he implicitly

recognizes them as public and anonymous words--that any-other, regardless of their biography, knows what they mean and can use them competently--and attempts to find a way to use the stereogram that fits the initial description. Third, as the terminology provided by the task-conveyor hides the history of the previous encounter, two disparate worlds remain cloaked behind the "same" vocabulary. And fourth, as long as the descriptions offered are not contradicted they too become taken-for-granted-until-further-notice--the reference and meaning of the terms are presumed to be shared and understood.

To bring out the perceptual disparity, the unenculturated member in studies 2, 3, and 4 must, at a minimum, have enough detailed information presented so that the grounds for discovering the anomaly are possible. Or this partner must place into talk enough details about what is perceived so that the culturally informed partner has the possibility of even hearing a difference. With the realization that the partner's relationship to the visual display has been changed, the members in studies 1 and 2 can locate the previously silent presuppositions and resolve the task through a further exchange of words. But in studies 3 and 4, the indirect knower is left only with the public, and short hand, expressions of the old member and we see another unintentional consequence of discourse: that when the informed partner departs, there is no way to recover the missing history and in the face of trouble no way to renegotiate the task-at-hand

on its original, founding concerns. For the resolution demands access to those quiet details.

The later part of each study was introduced because we wanted to see how the taken-for-granted presuppositions acquired in this context would be modified. We know, however, that in the majority of the conversations no perceptual disparity was revealed and three reasons were offered to account for this difficulty: (1) that the anomaly was successfully masked behind ambiguous words such as "away"; (2) that a difference was placed into words but not heard as germane by the culturally informed member; and, most generally, (3) that the new member's attempt to use the vocabulary offered engendered a search to find some way to use the stereogram that could satisfy the task-at-hand. However, because of the asymmetry introduced into the interactional relationship to place the disparity into words is to also: (a) question the culturally informed member's presumption of sameness; (b) question the culturally informed member's assumption that (s)he has the authority to direct the new member's looking; (c) question the direct knower's visual experience; and (d) question the experimental presupposition that the members do continue to see the same thing. To suggest that placing the discrepancy into speech raises numerous questions is to offer two alternative explanations as to why the perceptual irregularity remained hidden.

The first alternative is Goffman's (1959) "modus vivendi" of interaction which proposes that a member of a team will not want to create conflict by challenging the definition of the situation. The second is Orne's (1972) concept of demand characteristics: that a subject will try to cooperate with what are perceived as the demands of the experiment. In the context of these studies, Orne's position suggests that the partners accept and try to behave in accord with the experimental suggestions that they see the "same" visual array, that the culturally informed member does "know" what is being viewed and has the "right" to direct that new partner's looking, that the "same" problem can once more be unproblematically solved, and that cooperation is required.

Goffman's argument, however, informs us about an additional concern. His position implies that the partners are not misled by the short-hand terminology, nor that they actively seek to fit their perception of the stereogram to that vocabulary. Rather the members are thought to be aware of the anomaly but from a desire to avoid creating a conflict they chose to remain silent about the disparity. In this context, it seems plausible to argue that Orne's perspective overlaps with that of Goffman's: For example, it is possible that a member does know about the anomaly but keeps quiet because (s)he seeks to fulfill the task demand of reaching a cooperative solution. An end which may not seem attainable if the altered perspective is put into words. With these

alternative explanations as to why a disparity may stay out of the member's speech, let us re-examine a previously discussed transcript (transcript #3, part 2, Study One, pages 71-73):

s1*: I'd say a foot and a half
s2*: No it's less...more like
s1: what
s2: fifteen inches...fourteen
s1: could be...fifteen?
s2: (to e) fifteen

In this particular interaction, and for all those in Study One (the Base), each participant started by seeing an extended diamond. But in the second part of this study, as told during the debriefing, s2 knew that her relationship to the display had been altered. Yet in the face of a partner whose talk appears to presume an unchanged perspective, and in the face of experimental instructions which support the assumption that the task is repeatable without problems, what was s2 to do? In this encounter, the foil remained quiet. For as she notes a mutual decision is required. To have put the seen disparity into words may have challenged the experimental definition and possibly made s2 appear uncooperative.

By proposing reasons as to why the foils may have "held their tongues" and not forced the issue the criticisms of Goffman and Orne obtain some force. Each of these explanations as to why the disparity remains hidden seems plausible and they may partially explain why a perceptual

anomaly would not be put into speech. What is the consequence of accepting these alternative explanations?

When we examined the conversations, we emphasized how in the second part a new member or foil takes the culturally informed partner's talk as ground, how these comments may conceal the details of what was seen and how one can not know what has been kept out of words. But with the Goffman and Orne position we are forced to recognize the possibility that the foil has also kept silent about the details of what is seen, though for very different reasons: to be a cooperative subject or to avoid conflict. In that the foil is now assumed to be influenced by a set of interests and concerns which are kept out of talk an interesting twist to the analysis is raised. The tables, so to speak, are turned and the culturally informed member has no way to hear this silence as (s)he also has recourse only to what is spoken. Each member then hears and exchanges words which are divorced from their perceptual grounds and guiding concerns, but they are still able to co-construct some resolution to the task-at-hand.

It is important then to recognize that when the thrust of the Goffman and Orne critique are directed to what does not get put into words, each offers a reason why the foil may fail to put the disparity into a public domain. However, these criticisms do not alter the general analysis of what

the conversation has accomplished--that the members' pragmatic agreement with the task-at-hand will enable them to trade words and co-construct some shared reality.³⁹ Nor do these alternative explanations challenge the presumption that the culturally informed member uses terms such as "away," "further than," and "closer to" because there is a continuing assumption that the visual display remains unchanged. In stressing what is kept out of words, the interdependency between context, interest, and speech is again highlighted and we are again reminded of the tenuousness of the agreement reached.

While we've briefly considered why the foil may not speak about the irregularity, we can also ask whether the Goffman and Orne arguments offer a reason as to why the culturally informed partner does not hear the anomaly once it is put into words--made commentable. Again, let's return to a transcript we've already discussed (transcript #21, part 2, study 1, pages 73-76):

s1*: see it?
s2**: yeah, I see it, um
s1: it looks fa, further away than the other
one
s2: it looks like that, the image is on the
screen and the rest is behind it or
something like that like it's behind it
s1: yeah
s2: does it look like it's cut out?
s1: yes

³⁹What it is that is shared will be addressed later.

s2: yeah
 s1: it moves with you?
 s2: what?
 s1: and it moves with you?
 s2: yeah
 s1: this is more like the...um this is
 further
 s2: behind?
 s1: do you agree with that?
 s2: behind it right? you mean
 s1: yeah
 s2: yeah that's what I think too
 s1: it's further away than the other one
 was right?
 s2: yeah
 s1: so we said fourteen last time...maybe
 eighteen, twenty inches?
 s2: behind, behind the picture right?
 s1: yeah
 s2: um...I guess around eighteen?
 s1: yeah eighteen
 s2: eighteen...Ok

Has S1 accepted the foil's description of the triangle as "behind" in order to be a cooperative subject? Or has S1 kept silent because he does not want to challenge the definition of the situation? It's important to realize that in this case both the Goffman and Orne positions need to presume that (a) the foil has placed enough precise information in the conversation for the disparity to be heard, and that (b) the other partner understands the correction being made but in order to avoid raising a challenge and/or to remain a good subject keeps what (s)he really knows--that the members no longer see the same thing--out of words. But recall that S1's comments suggest neither of these tactics, but rather inform us that "behind" was misheard. That is, S1 thought his partner was confused.

Furthermore, if the foil does put the disparity into words explicitly enough for the partner to hear the challenge, the questions and conflicts are already on the floor and the force of the Goffman and Orne arguments appears undermined. For the thrust of their position appears to be that these concerns not be made public.

I want to argue in this case, and in the cases of mishearing in general, that where the disparity remains masked the Goffman and Orne positions are weak alternatives. First, for the most part the foil rarely puts the difference into words in an explicit enough fashion. Next we need to recall that during the first part of the studies, each participant's perception matched the orientation described in the protocols. And it seems reasonable to argue that for those members who do not explicitly verify this orientation, they take it as a silent background for their utterances as long as nothing to the contrary is said. The next part of the studies then begins with the presumption that the experience is repeatable, and for the members whose perspective is unaltered the experience is indeed the same as before. Even with an explicit description, to successfully challenge the presumption of a continuing and repeatable world, the foil must (a) overcome the partner's assumptions that the experience can be done once more and (b) implicitly or explicitly suggest that the partner is

misled by his or her current experience and the experimental instructions.

At this point a critical distinction between the direct and the indirect knower needs to be drawn. The member whose perception is unaltered in Study One (the Base) and Study Two (the Repeater) must hear the corrections while personally immersed in an unchanged visual world. In contrast, the indirect knower of studies three and four (the abstracter-hearer and the recipient-hearer) are never visually engaged and know about the task only through the speech of a now departed member. As such a disparity put into speech may have different obstacles to overcome. The direct knower's current knowledge and engagement as well as the history of the previous encounter must be questioned: the "I" of current experience as well as the "we" of the prior interaction. While the recipient-hearer or abstracter-hearer has no visual immersion or past history to overcome, only a web of words conveyed by a now departed they.

The culturally informed member does not ignore-- mishear--the disparity from a desire to be cooperative or to avoid conflict. The member's difficulty is that (s)he hears and sees from a continuing immersion in a repeatable world and that it takes some effort to bring the member out of this engagement with the world.⁴⁰ The member is involved

⁴⁰This notion of effort is presumed to be different for the direct and indirect knower. We presume it is easier,

with something akin to Neisser's (1975, 1976) concept of selective hearing and looking, and it is from within this preoccupation with a continuing world, and a repeatable one, that a first move is to hear "behind" as really meaning "in front" or to conclude that the partner is confused or misperceiving.

With the argument that the Goffman and Orne critiques are not convincing when applied to the cases of mishearings, we are left with the claim that they do manage to offer a reason as to why the members have chosen to stay silent about the disparity. The question then arises as to whether one of these arguments is better than the other. In Study One, where the same members participate in both parts, it is hard to assess this question directly, but it becomes clear during the debriefings of Studies Two, Three and Four that the members are surprised to learn that their orientation to the stereogram differed.⁴¹ This surprise intimates that the participants did not conceal something they knew, but rather that they were actively attempting to meet the task

less effortful, for the indirect knower to relinquish what has been transmitted by a "they" than for a direct knower who remains enmeshed in the world. Whether this conjecture is reasonable is an issue future research can address.

⁴¹It is unfortunate that a video-tape was not available for then the members' slow pan and looks of disbelief would display this point more forcefully. It does become clear during the debriefing that the partners are surprised to learn and discover that they saw the stereogram differently.

demands specified by their partner and the experimenter. If the members were unaware of the disparity, Goffman's critique is severely curtailed and Orne's explanation seems more plausible. But what can we say when a disparity is clearly revealed?

At first glance it seems that even in these cases the Goffman position is undercut. For it is clear that the members place the issue into a public domain and put the conflict on the floor. It could be reasonably argued that what we are hearing are the consequences of Orne's demand characteristics: that to be cooperative you state what you see in an earnest attempt to solve the task. But the separation is not that neat. Goffman's position has a rejoinder which could claim that the member considered the anomaly a "serious" matter and had to put "it" into words, even if that meant challenging the definition of the situation. Since these claims can not be disentangled in these cases, we can not argue which of these explanations may be better and which is responsible for what the members are placing into words.

Though the Goffman and Orne arguments can not be conclusively discounted, note that their effect in this context is always directed to what is put into speech. So while the general points made about the consequences of talk in a face-to-face encounter remain unscathed, if the critiques are valid they have their influence over what any

partner makes known to any-other partner. And in deciding "what is made known by what is said" (Rommetveit, 1979a) we can move to another question.

When public claims are exchanged it is possible to conceal the details of what is seen and known and make disparate worlds accommodate the same expressions. But though each encounter will vary in the amount of detail provided, each conversation represents some alignment of perspectives which enable the individuals to deal with the task-at-hand. With all the details which are concealed beneath the same expressions what is it that is made known by what is said? What do the partners presumably share with each other?

Rommetveit (1979a, 1979b, 1979c) has addressed these questions and provides a dialogic truth table to explicate the conditions under which discourse may enable the members of a dyad to achieve a state of "perfectly shared actual reality."⁴² His definition can begin the analysis as it will help to elaborate a series of problems.

Some representation R_i of S constitutes part of p_1 's and p_2 's perfectly shared actual

⁴²Rommetveit's truth table is in Appendix D. Briefly there are two levels of falsity: f_1 claims that S is something other than R_i ; while f_2 asserts a question about S with no alternative beliefs offered. In addition I and U are values in the table. U refers to an undetermined state as to what S is or is not, and I means that p_2 is ignorant about which value, t , f_1 , f_2 , or U exists for p_1 . This is obviously abbreviated but it does carry the gist of the table.

reality if and only if both of them believe that S is Ri and each of them assumes the other to hold that belief. (1979a, p. 11)

The statement that S is Ri represents the basic unit of analysis for which "truth values" are assigned and is "...an individual state of belief concerning some fragment of the social world" (1979a, p. 11). While we have no data which explicitly assess both members' actual and assumed beliefs, we will proceed as if we had access to such data. To make the analytic task easier and more manageable we will only consider the second part of studies one and two and omit the question of social control that Rommetveit raises. We will act as if a symmetry between p1 and p2 prevails: listed as p1=p2(III(2); IV(6)) in the dialogic truth table.

For the purposes of analysis we can use a bit of dialogue already reviewed (transcript #15, part 2, study 1, page 99):

- s2*: do you see it?
s1**: yeah it's coming...I don't see it that well though. Yeah, now I see it
s2: it's a triangle right?
s1: right
s2: it's far away right?
s1: what?
(1) s2: it fa, further away than the other one?
(2) s1: yeah

and concentrate on the lines marked (1) and (2). We can complicate the analysis by considering both levels of falsity, f1 and f2, but it seems adequate to concentrate just on falsity f1 and modify line (1) to read as: the triangle is fa, further away than the other one. We then

take the assertion (A), S is R_i, to mean that THE TRIANGLE IS FURTHER AWAY THAN THE OTHER ONE, and we can proceed by constructing the following abbreviated version of Rommetveit's dialogic truth table.

Table 13
Simplified Dialogic Truth Table

Case	I Actual Beliefs		II Assumed Beliefs	
	old member p1 in w1 ^a	new member p2 in w1	old member p2(p1 in w1) ^b	new member p1(p2 in w2)
One	t	t	t	t
Two	t	f1	t	t
Three	f1	f1	t	t

a. p1 in w1 represents the old member's actual beliefs about assertion (A), while p2 in w1 refers to the foil's, or remaining members in study 1, actual beliefs.

b. p2(p1 in w1) represents the new member's belief about what the old member thinks of assertion (A); while p1 (p2 in w2) represents the old member's assumption about what the new member believes.

A (t) means that the belief is assumed to be true, while f1 assumes that S is not R_i but something else.

Recalling the as if nature of the argument and the simplifying assumptions, Case One represents an approximate version of the argument assumed in the results section.

The partner whose perspectives is unaltered believes assertion (A) as does the foil, as evidenced in line (2). As there is no evidence to the contrary each participant temporarily believes that the other also accepts S is Ri and (t) is listed under the assumed belief column. Case Two joins the arguments made by Goffman and Orne. The partner who remains immersed in an extended perspective offers assertion (A) as a statement of his perspective, and while the foil can accept this description the more detailed, but silent, and actual belief is that S is not just away it is in back (S is Rm, in back, not Ri, away). F1 is then listed under the actual beliefs of p2. As this detail is never mentioned, the old member incorrectly believes (t) for p1 (p2 in w2). The foil however correctly assumes that (A) is (t) for p2(p1 in w1). Case Three represents the possibility that while assertion (A) can be accepted by each partner neither really believes that S is Ri is an adequate description. Rather they each believe that something else is true of S--S is Rk (in front) and S is Rm(in back)--but manage to hide these details from the other. So f1 gets listed under each member's actual belief but as neither partner informs the other about these issues, for whatever reason, each "incorrectly" assumes that the other believes assertion (A) as it stands and a (t) is listed under assumed beliefs.

As the conjunction of p_1 in w_1 ; p_2 in w_2 ; $p_1(p_2$ in $w_2)$; and $p_2(p_1$ in $w_1)$ is true only for Case One only it is considered as an example of a "perfectly shared actual reality." The other cases are imperfectly shared as there are "errors" made about what the actual beliefs are. The problem with all this is what represents an adequate account of a person's actual beliefs? In a very real sense an answer to this question complements the issue of what members make known to each other and share. For it asks how much detail needs to be placed into the dialogue for an other to make a "correct" assumption about the actual beliefs of their partner.

Consider the first case. The "old member" uses the term "away" but remains silent about the details--that "away" is a short-hand version of "in front." If these specifics need to be brought into a public domain for us to argue that we "know" p_1 's actual beliefs, then Case One is not perfectly shared but is better represented by the imperfectly shared Case Three. If, however, it is not necessary to place these silent presumptions into words, Case One can be considered an instance of "perfectly shared actual reality."

It is apparent that a more plausible, and intuitively satisfying example of a "perfectly shared" reality is found in those cases where differences are found. For here the participants were able to proceed from the initial assertion that S is R_i to the realization that S is not R_i , but

rather that S is Rk and S is Rm. Each member recognized that they have incorrectly assessed their partner's beliefs, and through further talk modify their assumptions about what the other's actual beliefs are. This seems to be a clear instance of what Rommetveit's concern with how members of a dyad, through sustained discourse, overcome their private interests and temporarily achieve that "perfectly shared" reality. The question remains, however, whether given the simplifications made about Case One, and the analytic outsider's stance which permits us to see that an "error" has been made, can we assume that it too fits Rommetveit's definition?

Once we raise the issue as to how much detail needs to be placed into words before we can say that members share a reality we broach an important issue. For if we accept the assumption that individuals live in a pluralistic and fragmented social world, it seems that more detail and more history can always be provided. We face an infinite regress and need some way to cut this problem off so that we can agree that enough detail has been presented.

The difference between Cases One and Two, and those instances where disparities are discovered reside in what the members take as being adequate to resolve the task-at-hand--even if this manages to gloss issues and leave the future open to the types of problems we've seen with pragmatic agreements and the indirect knowers. The critical

point here is that the other is not thought to mean anything else than what is said, and neither partner is aware that the other has glossed details and left a potential for trouble. I want to suggest that Rommetveit's definition can be redrawn, and that the definition of shared reality should address only assumed beliefs. The definition could be rewritten as:

Some representation R_i of S constitutes part of p_1 's and p_2 's shared reality if both of them believe the other to hold to the belief that S is R_i .

With this definition Case One is represented as a case of shared reality even though the members can be considered to be mistaken about the other's "actual beliefs." Four points about this redefinition should be noted. One is that it is the participant's decision about the level of detail-- what they take as adequate to resolve the task-at-hand-- which is given priority. It is critical to realize, both in the case of pragmatic agreements and in the examples which Rommetveit cites, that the members are not aware that their agreement masks a problem. The person who is aware of this is the analyst who somehow acquires access to what the members "really" know. Two, while there is no explicit notion of sharedness in the "arbitrary tradition" literature, I think that the research presumes a similar definition. I don't think this is surprising since social psychology has consistently argued that imagined beliefs about others have

real consequences for our own beliefs and actions. Three, that what is shared or made known will vary in content during any interaction. And four, that this definition may be too weak--it may include cases we would obviously want to exclude. Rommetveit's original definition demonstrates a set of problems that should not be lost sight of and which are repeatedly found in the notion of pragmatic agreement and Goffman's "modus vivendi" of interactions.

So what is made known by what is said? What is it that the members share? As long as neither partner has any reason to presume that another means anything else than what is said, and as long as the talk exchanged is perceived as being sufficient to resolve the task-at-hand a shared belief is held for all practical purposes and is taken for granted until further notice--even if the "actual beliefs" are misrepresented. On the basis of this definition each case describes some shared reality about each other's belief about assertion (A):
THE TRIANGLE IS FURTHER AWAY THAN THE OTHER ONE.

We need now to move to the issue of context independency and see how the results described here fit into an expanded perspective. To make this transition we need to clarify some presumptions about what it means to be a member of a social world, and what it means to talk about that world.⁴³ The

⁴³These claims about membership are not meant to be exhaustive. We are setting up beginning arguments so that the function of talk can be put into perspective.

basic argument about membership is simply that a person's interests⁴⁴ influence how the world before him or her will be used. Bartlett's (1932) assertion is interesting to cite in this regard:

We may consider the old and familiar illustration of the landscape artist, the naturalist, and the geologist who walk in the country together. The one is said to notice and recall beauty of scenery, the other details of flora and fauna, and the third the formation of soils and rocks. In this case, no doubt, the stimuli being selected in each instance from what is present are different for each observer, and obviously the records made in recall are also different. Nevertheless, the different reactions have a uniformity of determination, and in each case spring from established interests. (p. 4)

as is the claim by Schutz (1971):

As we stated before, this world is to our natural attitude in the first place not an object of our thought but a field of domination. We have an eminently practical interest in it, caused by the necessity of complying with the basic requirements of our life. But we are not equally interested in all the strata of the world of working. The selective function of our interests organizes the world in both respects--as to space and time--in strata of major and minor relevancies. (p. 277, Vol. I)

⁴⁴While it may be useful to attempt to discriminate between interests, beliefs, attitudes, schemas, intentions, plans, engagement, set, attention, and purpose the terms are used interchangeably here. I take it that Neisser's (1975, 1976) argument about attention, Markus' (1977) self-schemata, Goffman's (1974) notion of frame, and Rommetveit's (1979a) assertion about engagement and perspective make the same point.

To have some "established interests" in the world along "strata of major and minor relevancies" is to propose not only that our concerns influence what we take from the world, but to argue that our use of the world cannot be divorced from our interest in it. At least not without risk. For to make such a separation is to leave only the public mark accessible. The finding of a knife in a tree presents an observable and verifiable event for every passer-by, but what is lost are the guiding interests and history of the person(s) who put the knife in the tree.⁴⁵ If a question arises as to how that knife is to be understood, it is those silent grounds we seek to retrieve. For we attempt to rejoin the subject with his or her object to find out how the knife was used and should be taken--as indicating hostility, forgetfulness or target practice. If we stay only with the knife and accept it as a public and anonymous expression, the risk is that the knife, as the word, will be fit to the possibly disparate world of

⁴⁵Rommetveit (1979) and Menzel (1978) present an example of a man mowing a lawn and cite it as an example of a "trivial minimum." It is something that any passer-by can agree to but leaves open whether the lawn is being mowed to keep up community standards, annoy the neighbors, exercise his muscles, or avoid his wife. Obviously, to the extent that our purpose is to keep a record of whether the lawn is mowed, or how many knives are found in trees, the "trivial minimum" suits our purposes and is adequate for it. It should also be noted that to seek the person's reasons is not to give a priority to that account, we can argue with it and assume that there are "hidden" motives. We are just noting that there is an interest which guides.

the passer-by. And if the knife was left as an object presumed useable by any-other in an unproblematic manner, again as with the word, the same "error" is made.

What does it mean then to talk about the world? It is to place our previously silent interests into a public and (ac)countable domain--what Berger and Luckmann have called externalization and objectiviation. So, in speaking we have temporarily transformed the world, for our utterances catch our use of the world and order it into "flora" and "fauna."⁴⁶ To talk about the world is to snare it, to catch it in words for self and others, and convey what elements are to be pulled from the ground--how the world is to be ordered.

Everyday speech repeatedly warns us, especially at times of anger or in the face of authority, to be careful about what we put into words and make public. Such phrases as "don't say something now you'll be sorry for later," "be careful what you say, it'll come back to haunt you," and "I knew that once I said it things would never be the same" indicate that one is not being warned about semantic niceties. You are being warned to keep quiet about "what's on your mind," to keep your rendition of the world off the

⁴⁶Consider Rommetveit (1979a): "What is easily overlooked in such an analysis (of understanding what is meant by what is said), however, is the 'innocence of silence' and the subtle transformation of knowledge which at times seems to be part and parcel of the very act of verbalization." (p. 25)

floor, to keep silent about your interest in and use of the material before you. To use "away" or "in front of" is the same as using "flora" and "fauna"; our use of the world is displayed for others. Expressions such as "away" manage to accomplish the same thing, but in their mildness we lose sight of it.

But do these other words also function as "away" did? Are they offered as public words--as types--presumed useable by any-other in the social unit, and as such conceal a situational history and personal biography? To the extent that they do, we are left with a figure separated from its ground--with the knife in the tree--offered as re-useable by any-other. And to the extent that we take the words as offered discrepant perspectives can be tucked beneath the same term.⁴⁷

One possible misunderstanding should be considered before proceeding. Though the experimental context severely constrains the members' activities and defines their concerns, interests and contexts are not always known in advance. For words can, as G. H. Mead (1935/72) argued, work to form them:

⁴⁷It is interesting to examine in this light the disputes that have taken place over the uses of Ms. or Miss, Black or Negro, Boy or Man, Girl or Woman. The expressions represent not a linguistic argument, but a social and historical one. They are fights over how the world should be ordered and attempts to make visible what has been concealed.

Language does not simply symbolize a situation or object which is already there in advance, it makes possible the existence or appearance of that object, for it is part of the mechanism whereby that situation or object is created. (p. 78)

and Merleau-Ponty:

The search for the 'appropriate word' in order to make something known to somebody else may often, in authentic speech, actually serve to make that something known to the speaker himself. The latter does not know precisely what he intended to say until he 'hits upon' some word or expression by which his thought can be completed. (Rommetveit, 1974, pp. 22-23)

But whether the interests are constrained in advance or gradually emerge, if to talk is to order or create an object, what does it mean to exchange words with someone--to engage in a face-to-face interaction? If we grant the premise that no two individuals occupy the same temporal or spatial location (Schutz, 1973; Rommetveit, 1974, 1979a), nor have identical interests in the world, to participate in a dialogue is an attempt to arrive at some mutually agreed upon version of reality which can temporarily transcend our private perspectives and engagements with the world (Goffman, 1976; Mead, 1934/72; Rommetveit, 1974, 1979a).⁴⁸

⁴⁸First there is Mead (1935/72) ". . . objects are constituted in terms of meanings within the social process of experience and behavior through the mutual adjustment to one another of the responses or actions of the various individual organisms involved in that process, an adjustment made possible by means of a communication which takes the form of a conversation of gestures in the earlier evolutionary stages of the process, and of language in its later states." (p. 77)

As William James (Rommetveit, 1979a) asserted: "You accept my verification of one thing, I yours of another. We trade on each other's truth." And by trading words we are engaged in an eminently social, and pervasively mundane enterprise. This ordinary, routine, and unremarkable activity allows us to temporarily move beyond our private perspectives and achieve some co-ordinated and shared reality integrally connected to the purpose-at-hand.

But not every conversation proceeds with such equanimity. For when two people speak, different orders of reality are placed on the floor and the issue of social control--whose claim to reality will be temporarily accepted--

And then there are the comparable claims of Goffman and Rommetveit:

Goffman (1976): "What then is talk viewed interactionally? It is an example of that arrangement by which individuals come together and sustain matters having a ratified, joint, current, and running claim upon attention, a claim which lodges them in some sort of intersubjective, mental world." (p. 328)

And finally Rommetveit, 1974: "Once the other person accepts the invitation to engage in that dialogue his life situation is temporarily transformed. The two participants leave behind them whatever their preoccupations were at the moment when silence was transformed into speech. From that moment on they are jointly committed to a shared here and now established and continually modified by their acts of communication." (p. 23) . . . and . . . "Message structure must then be explored within the conceptual framework of the spatial-temporal interpersonal coordinates of that act of speech: whatever is made known is made known by an I to a you whose different though partially shared worlds are temporarily brought into some state of intersection by virtue of the intersubjectively established here and now of their dialogue." (p. 39)

surfaces.^{49,50} But whichever reality claim is accepted, or fought over, some use of the world is being brought into relief in any face-to-face encounter.

And from this co-ordinated dialogue a manner of knowing the world adequate to resolve the purpose-at-hand will emerge.⁵¹ The positioning of the world according to interest

⁴⁹The issue of social control and its conversational implications has been discussed by Rommetveit (1979a, 1979b, 1979c) in great detail. His dialogic truth table attempts to specify what is meant by what is said under varying levels of social control. The critical question, in part, then becomes how to understand how to achieve a shared reality. "The basic problem of human intersubjectivity is . . . a question concerning in what sense and under which conditions two persons who engage in a dialogue can transcend their different private worlds." (1979a, p. 7)

⁵⁰Consider the claim that Goffman (1959) made: "Each participant is allowed to establish the tentative official ruling regarding matters which are vital to him but not immediately important to others, e.g., the rationalizations and justifications by which he accounts for his present activity. In exchange for this courtesy he remains silent or non-committal on matters important to others but not immediately important to him. We have then a kind of interactional *modus vivendi*. Together the participants contribute to a single overall definition of the situation which involves not so much a real agreement as to what exists but rather a real agreement as to whose claim concerning what issues will be temporarily honored. Real agreement will also exist concerning the desirability of avoiding an open conflict of definitions of the situation. I will refer to this level of agreement as a 'working consensus.' It is to be understood that the working consensus established in one interaction will be quite different in content from the working consensus established in a different type of setting." (pp. 9-10)

⁵¹For simplicity's sake, I am assuming that the encounters are cooperative ones. When issues of competitiveness, and questions of honesty arise other problems arise as to how the talk will be heard. These concerns can be temporarily omitted, but even then some rendition of the world is being offered. Even if it is not to be believed.

and purpose is what it means, here, to refer to a socially constructed reality. Constructed because some aspect of the material available is selected, "flora" and "fauna," and social because the arbitration is a joint venture--by trading on the "elements" placed into talk a shared world can be temporarily attained. But there is a price to pay for this construction. Consider Schutz (1971):

. . . it is characteristic of the natural attitude that it takes the world and its objects for granted until counterproof imposes itself. (p. 228, Vol. I)

and:

To take the world for granted beyond question implies the deeprooted assumption that until further notice the world will go on substantially in the same manner as before; that what has proved valid up to now will continue to be so, and that anything we or others like us could successfully perform once can be done again in a like way and will bring about like results. (p. 231, Vol. 2)

Then there is the argument of William James (1971):

To continue thinking unchallenged is ninety-nine times out of a hundred our practical substitute for knowing in the completed sense. (p. 39)

and:

. . . any object which remains uncontradicted is ipso facto believed and posited as absolute reality. (p. 289, Vol. II)

And what is made as a broader claim, that any uncontradicted experience becomes taken-for-granted, works for a conversation. A world ordered by speech, which snares self and others, becomes taken-for-granted as long as it

remains uncontradicted. What has been made known with work, is presumed known, natural, and obvious to any-other in the same social unit. But even though what is made known is taken-for-granted, that it suits the here and now of the participants' interests and purpose-at-hand is a way to remind us that it is a convention. For with other purposes-at-hand the material before us can be utilized differently, and previously "hidden" aspects become visible for the first time. The social world that we live in is composed of fringes (James, 1890) and horizons (Schutz, 1971, 1973): what is in focus at one time leaves out of focus something else which with a turn of our head becomes clear. What exists as a socially co-constructed reality is then located neither "out there" in the world, nor "in the head" of the individual. It is created and sustained in the inter-relationship between the members and their purposes-at-hand (Dewey, 1929/60; James, 1971; Mead, 1934/72).

In any face-to-face encounter talk mediates between the purpose-at-hand and the context and provides the material from which a shared world can be co-constructed. And if what is made known continues to go unchallenged, it is taken-for-granted-until-further-notice. The dialogues reported here all fit within this broad framework, but the details of the analysis enable us to gauge the specifics of the process.

From their engagement with the task the members begin to unproblematically employ a terminology which obscures the precise details of what is seen. Yet these expressions presuppose a mutually shared and understood use of the world, orientation to the stereogram, and interactional relationship. That the transmission starts with, or that the monitor may overhear, this short hand version of the world suggests that the utterances are offered as typifications of that encounter and what was made known-- as anonymous public words useable by any-other in the same context. And in the foil's effort to use the words as offered, disparate worlds remain unexposed and an agreement is reached which works for all practical purposes.

In seeing how a history is acquired, how it is taken as natural and obvious, how it is represented to a stranger, and the possible consequences of this transmission we approach the concerns of the "arbitrary tradition" literature, and have, in a sense, a verbal analog of the autokinetic effect.

With the mention of the autokinetic effect, we can return to our starting point: the concept of "norm." How do we relate what talk has accomplished to the formation of norms? In watching how the participants' pragmatic engagement with the task allowed them to form, share, and take-for-granted an understanding, we recover and begin to answer a series of questions which prompted the analysis:

(a) accounting for how a manner of knowing arises in some social unit; (b) accounting for how this manner of knowing comes to be shared; and (c) accounting for how this manner of knowing acquires its apparent naturalness.

Yet the problem of what is shared between the members is troublesome. For as we've seen from Rommetveit's dialogic truth table, and with the notion of pragmatic agreement, disparate, even conflicting, perspectives can be concealed beneath what members take to be shared agreements. As the presumption that members of some social unit share some common frame of reference for their thought and action is central to the concept of "norm," we can not just assume that some standard is held in common. For to do so begs the questions that we need to ask. When we assert that members share a norm, what is it that they are thought to have in common and what is the level of detail--how specific is the thought or behavior shared--that norm is intended to account for?

Let me try to clarify this concern by presenting a hypothetical case. We undertake a survey and inquire whether people believe that "help should be offered to someone in need." We find, for the convenience of the example, a unanimous yes. Within some social unit people appear to share a standard of thought and behavior, and we may argue that a norm exists. But as a norm is always invoked in some context, what is it that this statement of unanimity

makes known? Do we assume that the members of the unit agree how to offer help, who to offer help to, or how to recognize a person in need? Imagine that we return to these members and request more information: have they ever given help to someone in need; what do you consider to be an offer of help; are there situations you can think of when you wouldn't offer help; are there people you wouldn't help even if they were in need; and how do you know that some one is in need of help?

I don't think any one would be surprised if the answers encompassed a rather broad and diverse range of responses. Indeed our original question would probably have prompted the comment, "well, it depends." In any case, we would agree that our initially broad base of agreement has been narrowed, and explain this narrowing by indicating the consequence of making the request more specific--of contextualizing it. How broad do we need the base of agreement to be before we consider it normative, and what is the level of detail that the members of a social unit are presumed to share?

Figure 1 represents a schematic of the problem being addressed, and we can consider the hypothetical unanimity as occupying space (g)--there is a large base of agreement but there is a low level of detail presumed to be shared. As we obtain more information we moved from space (g) to

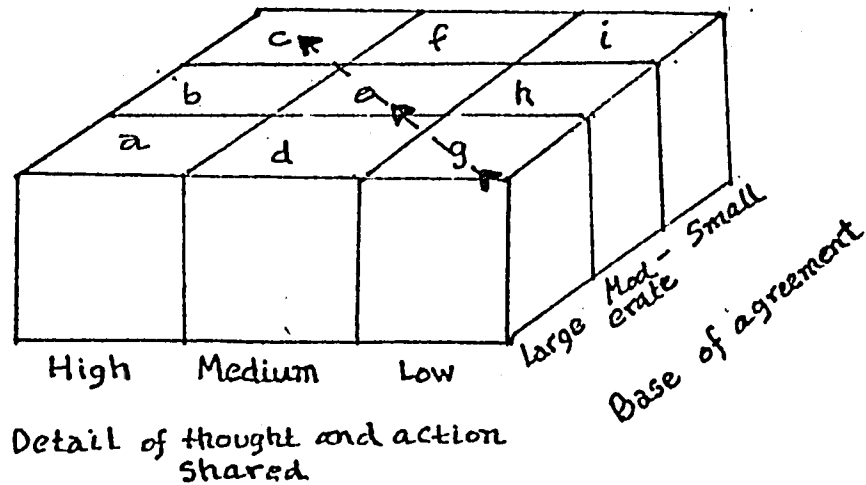


Figure 1. A schematic of the Base of Agreement and Level of Detail Shared

(e) and then (c)--as the arrow indicates. The base of agreement is a critical issue as norm has its force as an explanatory concept precisely because of its assumed ability to account for the behavior and beliefs of a large number of people. If we argue that the base of agreement is not an essential component of norm, we are reduced to suggesting that two people who share some reality share a norm. At this level norms cannot be distinguished from such concepts as attitudes and beliefs and its force as an explanatory term is severely diminished. We may then want to be cautious

about claims which argue that spaces (c), (f), and (i) represent norms.⁵²

What about the level of detail that is presumed shared? We can use the concept of pragmatic agreements as an analogy. If we suggest that the agreement is what the members take as adequate for the task-at-hand, and if we accept that some event can be considered shared by p1 and p2 as long as both of them believe the other accepts the assertion that S is Ri, we can pack a great deal of widely disparate, even conflicting experiences under the same rubric. And if divergent experiences can be called the same thing for all practical purposes, the base of agreement is increased to a magnitude useful for the concept of "norm" though we can not set a numerical figure for this base. Many members with varied experiences can then agree that "it's nice to offer help to someone in need." There is an important implication in arguing that norms may have low specificity, and I want to bring this out from another direction.

⁵²This classification of norms by base and detail should be considered suggestive. For example, is a professional argot to be considered normative--it has a small base but high detail (c). Is the fact that most Americans write from left to right, high detail and high base (a), normative? Perhaps it is misleading to suggest that norms fall in only some spaces, perhaps they can occur at any point and all that we need to know, at any point, is what level of detail and base that particular norm is to account for. Though as we begin to talk of universal norms as contrasted with particularistic ones, I think we are more likely to be in space (g).

Sherif's discussion of norm formation offered the proposition that a norm was a "preparedness to see in the nature that surrounds us much to what another period would be totally blind" (1935, p. 64). As no one in the "arbitrary tradition" literature appears to question this supposition, I will assume that they have accepted it. And it is not a bad assumption to entertain, but it leaves open the issue of what a "preparedness to see" is intended to convey.

I want to propose that the expression should be considered as something akin to a social expectation, a social preparation. As all of the research in the "arbitrary tradition," as well as the current work, has enabled the members to come to know something about the context they are immersed in; and as in each of the studies it is the experimental instructures which influence what use is to be made of the world before them, they each set up a "preparedness to see." It becomes interesting to, again, consider the experimental protocols for this research to assess what it is that is "prepared."

Simply put the instructions open a future which the participants close. The expectations, the "preparedness to see" did not provide a detailed map as to how to proceed, but rather presented a broad frame within which the members had to temporarily align the "here" and "now" of their interests. Whatever was finally shared and made known was an achievement, a consequence, of people interacting in

context and concert. For members the experiences which come to represent the details of that "preparedness" are not known until the task is completed. And as I read the "arbitrary tradition" literature this process operates in each experiment reported.

What then does it mean to consider norm as a "preparedness to see"--as a social expectation? It is first to return to a point introduced earlier: that the concept of norm represents a summary term. That many members with widely divergent experiences can accept the broad claim that "it's nice to offer help to some one in need." And next it is to suggest that norms are social ideals precisely because they enable the members of a social unit to categorize a wide range of disparate instances under the same rubric. To consider norms as a "preparedness to see" is to indicate that they function as a frame whose details are temporarily filled within some context.

And in that context it is a member's continuing and repetitive problem to determine the appropriateness or inappropriateness of the linkage between action and thought and norm--between context and ideal. There is then an inherent vagueness with "norms," for any context contains the possibility that members will argue about how to use the particulars before them. And in this argument "norms" are bandied about as are words: to select and order the material in the world. For talk is being used to make sense of the

context as it describes it--"the coherent, organized and meaningful sense of the environment is contingent upon the 'describing' that members do" (Wieder, 1974). As Garfinkel and Sacks (1970) note, maintaining a recognizable order is through and through a member's accomplishment.⁵³

And for all practical purposes these summary terms, ideals, are offered as adequate descriptions of what has been seen or done--e.g., I offered help. But in that these pronouncements gloss the details of the specific encounter, they function as did the synonyms that the members developed in these studies--as public terms assumed useable and comprehensible by any-other in the social unit regardless of their biography. And as what is known is not specified in advance, it is managed in retrospect.⁵⁴

⁵³Two senses of order have slipped in with this account. One is how the members use and select the material before them, while the other is how their talk makes the environment appear orderly--coherent and rational. Talk manages both senses, but we've been primarily concerned with the first sense. This is probably closer to what Garfinkel and Sacks (1970) have called formulating: "saying in so many words what we are doing." I think there is a subtle, but real difference between order and formulating, for with order we don't tell you what we are doing, we assume you know.

⁵⁴This point can be made in a number of ways and occurs all the time. We can consider a case where talk is not involved. There was the recent boxing fatality, the Classen case, in New York City where an entire audience witnessed the death. The question asked was when should the fight have been ended. The outcome made it clear that what was originally taken as a trading of blows should have been considered as something else--a trading of fatal blows. At what point was the alteration in the nature of the punch to be noticed? Each blow as it occurred "appeared" to be like

What is concealed beneath the summary term are the specific elements of the world used, and it is these details which stand for the ideal, the norm, until further notice. As such a future is left open: when trouble arises the use of the world, the details of the encounter, are open to reformulation. To say that the members share a standard of thought and action is to suggest that they share summary terms--ideals, types--which for any particular context leaves open how the material will be ordered. It is a sharedness for all practical purposes which cloaks an essential fragility about the social world.⁵⁵

any of the preceding blows. Yet when the fight was over, "everyone" saw that this was not how the blows should have been seen. The outcome influenced what had come before. The same issue arises in child abuse issues--when is a bruise an indication of parental neglect and when an accident? Again, many times we can not know until some future opens which enables us to re-evaluate the first bruise.

Consider again the Kitty Genovese incident for the party who is listening to the screams before the death occurs. What does the first scream represent? It can still be a fight between friends that is very loud, it could be a prank, or it could be serious. Once the event ended it was clear that the screams should have been taken as serious cries for help. I would suggest that to the hearer in context this was not at all clear. And the common expressions such as "you had to be there" repeatedly point to this pervasive problem.

"Life can only be understood backwards; but it must be lived forwards." Kierkegaard

⁵⁵Wilson (1970) has called this approach to norms an interpretive view: "It is apparent that in the interpretive view of social interaction, in contrast with the normative paradigm, definitions of situations and actions are not explicitly or implicitly assumed to be settled once and for all by literal application of a preexisting culturally

This claim about the fragility of the social world enables us to introduce some remaining concerns. Can we assume that the understanding which individuals form during an experimental encounter is an adequate representation of norm formation? It is the presupposition of the "arbitrary tradition" literature, and the research presented here, that it is. Yet it is just this presumption that we should be concerned with.

Each of the studies in the literature, including this one, proceeds by having some number of individuals interacting with each other, and by replacing culturally smart members with cultural naifs. What they come to share may be known in greater or lesser detail, but have we accounted

established system of symbols. Rather, the meaning of situations are interpretations formulated on particular occasions by the participants in the interaction and are subject to reformulation on subsequent occasions." (p. 69) The normative view which this is contrasted with states: ". . . the normative paradigms require an empirical assumption of substantial cognitive agreement among interacting members." (p. 61) In our consideration of the base of agreement and detail specified, it is this presumption of substantial agreement that is at question. And from the perspective taken here it is a presumption assumed but never documented.

Zimmerman and Wieder (1970) also express this interpretive view: ". . . the ways that members employ rules requires that they continually develop what a rule means when they come to treat actual cases and when they find that they must defend the rationality of their choices. . . . The work of making and accepting such descriptions of conduct makes social settings appear as orderly for the participants, and it is this sense and appearance of order that rules in use, in fact, provide and that ethnomethodologists, in fact, study." (p. 292)

for norm formation? Perhaps we have just witnessed how members categorize an event or form an attitude. Moscovici (1972) addressed a similar concern when he inquired whether the research in social psychology had an adequate conception of social if that term was always employed to represent one person in interaction with another.⁵⁶

One wants to examine, for example, "social movements" and "intergroup conduct." But the move to this level of social is with the same intent pursued here:

The study of cultural processes which are responsible for the organization of knowledge in a society . . . which creates a common social reality with its norms and values the origins of which are to be sought again in the social context. (1972, p. 57)

Whatever is known and shared is still constrained and managed by some social context, but the situation is expanded beyond that of face-to-face encounters.

There is another side to the question about the adequacy of the context employed here. Even if we can demonstrate the formation of some shared reality as a consequence of people interacting, can we account for the presumed durability of norm?⁵⁷ It is here that our notion of "social" may be

⁵⁶"When the 'social' is studied in terms of the presence of other individuals or of 'numerosity' it is not really the fundamental characteristics of the system that are explored, but rather one of its subsystems--the subsystem of inter-individual relationships." (p. 55)

⁵⁷Rommetveit (1979a) raises the interesting hypothesis that the achievement of a perfectly shared actual reality will result in a more enduring reality. This claim is worth considering as a topic for future research.

impoverished and require elaboration. Moscovici's warning about the level of social utilized, suggests that we should be wary of presuming that the understandings displayed here adequately represent "norm" formation. It is a point well taken, but we should note that even when we expand our horizons,

Culture is created by and through communication, and the organizing principles of communication reflect the social relations which are implied in them (1972, p. 57)

we are re-introduced to the issues already discussed: what is it that members have in common; what level of detail are they presumed to share? What is it that these other modes of communication--e.g., media, theater, and books--make known? Indeed, I want to suggest that the question of durability may be misleading. If we assume that there is a "substantial cognitive agreement," we have to account for a sameness in detail which appears to me and to others as brute facts, the same for all of us over time. If we challenge that substantial agreement, and consider what we agree to is an agreement for all practical purposes what is shared are labels, public typologies, under which disparate specifics are concealed. And with that wide range of varied behaviors lumped under the same topic, "norms" may only appear as durable because we have glossed the changes which have taken place. One interesting area for future research are those durable, expanded contexts

where the members are continually informed about how to use the world before them: family, school, and work.⁵⁸

It is important to realize that the thrust of these concerns is directed to the issue of how much we can come to know about the social world if we restrict our attention to face-to-face encounters. It is not a criticism of how these interactions influence what the members come to know. And if we assume that what members share is not identical in detail, but rather represents an amalgam of behaviors and thoughts what is achieved in face-to-face encounters may take us further than we think. Furthermore, as it is words which will be exchanged in those broader contexts, we can anticipate consequences similar to what has been displayed here on a small scale.

But the point must be made that it is an interpretive paradigm which is assumed operative. Whatever the context,

⁵⁸Halliday (1978): "in the development of the child as a social being language has the central role. Language is the main channel through which the processes of living are transmitted to him. Through which he learns to act as a member of society--in and through the various social groups, the family, the neighborhoods, and so on--and to adopt its 'culture,' its mode of thought and action; its beliefs and values." (p. 9)

Bandura (1977): "It should be emphasized again that most rules of action are conveyed by instruction rather than discovered by direct experience." Bandura qualifies this argument to assert that what is directly experienced is more durable than what is learned verbally. Again another research area is to consider behavior accompanied by talk and that which is not. Which is more durable?

and however "norms" are acquired the members will still have to decide how any particular context represents the ideal.⁵⁹ As it relates to conversation, the task, in part, remains as Rommetveit (1979a) described it: to understand ". . . in what sense and under what conditions two persons engaged in dialogue . . . transcend their different private worlds." And it is necessary to repeat that while any context influences what is made known and shared, it is talk-in-context which will offer the "elements" from which a common world can be constructed. For in mediating between interests and context, talk pulls some figure from the ground and offers it to self and others for comment.

Yet the "elements" offered for comment in these studies occurred in highly restrictive environments. The members were told how to interact, and how to use the visual world before them. The results need to be heavily supplemented, and numerous studies and analyses conducted to probe in more detail the work begun here. For example by using Tables 1 and 2 in Appendix B we can ascertain what transpires when the original members begin by being differently oriented to the display. Will a difference be more readily unearthed

⁵⁹If we begin to argue that there is a separate norm to account for all of the details, and that all of this is substantially shared and known in advance of a context, the argument begins to become perverse and reminiscent of McDougal's instincts. Why did he help, because there is a norm. How do you know that there is a norm, because he helped. And so on and so on.

in this case? Will less be taken for granted when a new member enters the room? What occurs when both members have the same orientation, but differ from what they have been led to anticipate? How will they convey this information to a new member who will see what they could not? We can repeat the same studies, but use a confederate to make sure that the disparity is made public. We can also alter the interaction so cooperation and agreement are not forced. A fifth study can be added: the task-conveyor in the second part will not see the display, but speak with a foil who does. How easily will this task-conveyor relinquish what has been previously and directly experienced? And to make sure the difference is made known, we can use a confederate. Another possible way to bring out the disparity is to let the foil describe it, before (s)he is told what is being seen.

We can also begin to collect additional data on what each member's actual beliefs are, and what (s)he assumes the partner believes. We can also obtain the member's degree of confidence in these beliefs about the others. In addition, we may want to consider altering the stimulus material. Is a short hand vocabulary used to convey what has occurred only because the visual display has very few items to be separated? If more objects were present and had to be described, would the transmission rely less heavily on synonyms? Perhaps the stereogram is not social enough?

Rommetveit (1954) has suggested that the autokinetic effect was not an effective "social" stimulus. What would be made known under more "social" conditions could provide an interesting contrast, but Rommetveit's (1954, 1979a) own research with more social material suggests findings that are quite similar to what has occurred here. Indeed, even more appeared to be masked. An essential issue for further research is that of the pragmatic agreements and what Goffman has called "working consensus." Is it the case that most interaction proceeds by keeping a variety of topics off the floor, and as such shared realities are constructed which hide essential details from the members?

But words should be kept in perspective, and pointed out that they are only part of the communicative picture, even in a face-to-face encounter. Dore and McDermott (1980) show how easily non-verbal behavior can contradict a verbal claim and be taken by the participants as the claim to be "listened" to. And as Goffman notes:

Words are a great device for fetching speaker and hearer into the same focus of attention and into the same interpretation schema that applies to what is thus attended. But that words are the best means to this end does not mean that words are the only one or that the resulting social organization is intrinsically verbal in character. (1976, p. 309)

So in studying what any member knows and assumes shared, we need to step beyond an exchange of words.

But in inquiring what it is that talk manages in a face-to-face encounter, we have started to probe the question which "haunts" social psychology:

How can the individual be both a cause and consequence of society? That is to say: how can his nature depend indisputably upon the prior existence of cultural design and upon his role in a pre-determined social structure, while at the same time he is clearly a unique person, both selecting and rejecting influences from his cultural surroundings, and in turn creating new cultural forms for the guidance of future generations? (Allport, 1968, p. 9)

For we have acquired a beginning grasp of how members engaged with the pragmatic and mundane considerations of the task-at-hand have developed a manner of knowing the world: with an exchange of words they order the world, and construct an experiential short hand which expresses what is known by presuming a history of the encounter. And in watching how that history is represented to a stranger, we've seen how disparate worlds are concealed beneath the same rubric and how another, new, layer of the social world has emerged. And in indicating the unintentional consequences of speaking with an-other, we've displayed how words used to create knowledge order the world in a manner which becomes taken for granted if not challenged, and how the indirect knower is left without access to the history of the encounter when the founding member departs leaving only a public word presumed useable by any-other.

After examining what is an exceptionally common and pervasively routine activity, we can re-ask the "oldest" question in social psychology: ". . . how does one generation impose its thought forms upon the next?" (Allport, 1968). With words.

Appendix A: The Experimental Instructions

STUDY #1 (Instructions)

Part I

Hi. I'd like you to take a seat at the table and listen to a short description of the experiment which you'll be engaged in. I would appreciate it if you would not touch the equipment until you are told to, and if you would hold all your questions until this description is over.

In this experiment we are concerned with how individuals reach solutions to problems. The experiment has two parts to it. In the first part you will be asked to cooperatively solve a problem that will be projected on the wall (screen) in front of you. The second part of the experiment will have you coming to a cooperative solution about the same problem but with a different projected image.

Let me explain the first part of the experiment in more detail. As I have said we are concerned with how individuals reach solutions to problems. The pattern of dots that is now projected on the wall (screen) provides the problem that you will have to solve. On the table in front of you are a pair of goggles. When you place the goggles over your eyes a figure which is not apparent without the goggles will appear. It may take some time for the figure to become clearly visible. The tape recorder is present to record how you both go about solving the experimental problem.

Once the figure appears the problem that you must solve is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is. This part of the experiment is over when you have cooperatively agreed on how far in front of the dots the figure is. The problem must be solved jointly, and in no case can the experimenter be asked for assistance once the experiment has begun.

When the lights are shut off you may place the goggles on. Take a few moments to adjust to wearing them. You can begin to solve the problem as soon as the shape has become clearly visible. So you do not forget what the problem is, it is typed on the index card in front of you. Again, the problem is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is.

DO YOU HAVE ANY QUESTIONS?

If there are no questions I will shut the lights off and you can put your goggles on. Begin whenever you are ready.

Part II

At the point of solution: Why don't you remove your goggles and give your eyes a few minutes of rest.

E: Place the second image on the projector and project it on the wall. When this is done return the goggles to S1 and S2 but give to the subject who has seated himself/herself in the chair with the yellow index card on the bottom a pair of goggles that has green acetate on the right eye. The other S retains the goggles with red on right.

You can proceed as you did in the first part of the experiment. Your task is again to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is. The experiment is over when you have both agreed on a solution.

ANY QUESTIONS?

O.K. I'm going to shut the lights and you can begin when you are ready.

Part I: both Ss wear red over right eye.
Part II: the S who sat in the chair with the yellow index card fastened to the bottom now gets goggles with green on right and the other S retains the original pair of goggles.

STUDY #2 (Instructions)

I appreciate your participating in this experiment. The research is concerned with how individuals reach solutions to problems and is run in two parts. The first part of the experiment is conducted using a pair of subjects, and the second part is set up so that one of the subjects who has taken part in the first half of the experiment will be replaced by a third subject who has remained here in the waiting area. This third subject will then participate in the second half of the study with one of the subjects who has already gone through part I of the experiment.

As the experiment is run in parts it is necessary to assign subjects to different parts. We can determine which part of the research you will participate in if you would each select one of the colored toothpicks. (E places down three toothpicks on the table and asks each S to select one.)

O.K. The people who have selected the yellow and red toothpicks will participate in the first part, and the person who has chosen the blue will take part in the second part of the study. You may have to wait outside for about 15 minutes. At that time one of these two subjects will return here and ask you to come to the experimental room.

Part I.

I'd like you to take a seat at the table and listen to a short description of the experiment that you'll be engaged in. I would appreciate it if you would not touch the equipment until you are told to, and if you would hold all your questions until this description is over.

As I have told you, we are concerned with how individuals reach solutions to problems. The experiment has two parts to it. In the first part you will be asked to cooperatively solve a problem that will be projected on the wall (screen) in front of you. The second part of the experiment will have one of you explain to a new subject--the person sitting outside--what the problem was that you had to solve, how you solved it, and then solve the same problem that you had in this part of the experiment with that person.

Let me explain the first part of the experiment in more detail. As I have said we are concerned with how individuals reach solutions to problems. The pattern of dots that is now

Study #2

projected on the wall (screen) provides the problem that you will have to solve. On the table in front of you are a pair of goggles. When you place the goggles over your eyes a figure which is not apparent without the goggles will appear. It may take some time for the figure to become clearly visible. The tape recorder is present to record how you both go about solving the experimental problem.

Once the figure appears the problem that you must solve is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is. This part of the experiment is over when you have cooperatively agreed on how far in front of the dots the figure is. The problem must be solved jointly, and in no case can the experimenter be asked for assistance once the experiment has begun.

When the lights are shut off you may place the goggles on. Take a few moments to adjust to wearing them. You can begin to solve the problem as soon as the shape has become clearly visible. So you do not forget what the problem is, it is typed on the index card in front of you. Again, the problem is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is.

DO YOU HAVE ANY QUESTIONS?

If there are no questions I will shut the lights off and you can put your goggles on. Begin whenever you are ready.

Part II

At the point of solution: Why don't you remove your goggles and give your eyes a few moments rest. I'd appreciate it if the person with the yellow toothpick would go outside and ask the subject sitting there to enter the room. Please do not tell him/her about the experiment and please wait outside until this part of the study is completed. When it is over I will ask you to come back so I can answer any questions you may have and explain the reason for the experiment.

NEW S ENTERS

E addresses S3: As you know the person you are seated next to has participated in the first part of this experiment. This individual will now explain to you what the experimental task was that had to be solved, and how it was solved in the

Study #2

first part of the study. When this is done both of you will have to reach a cooperative solution to the same problem that was solved in the first part. In no case can the experimenter be asked for assistance once the experiment has begun.

DO YOU HAVE ANY QUESTIONS?

O.K. I'm going to shut the lights and you can begin when you are ready.

E: E has returned the same pair of goggles to the subject who has remained from part I--red on right. The new S has been given a pair of goggles with green on right.

The subjects who participate in part I are those who have selected the yellow and red toothpicks. In this part both Ss are presented with goggles that have red acetate over the right eye and green on the left. At the solution, E asks the S with the yellow toothpick to leave and ask the other S (blue toothpick) to enter the lab. After S is introduced, E provides the new S with a set of goggles which have green acetate on the right eye. The old S retains the same set of goggles.

STUDY #3 (Instructions)

I appreciate your participating in this experiment. The research is concerned with how individuals reach solutions to problems and is run in two parts. The first part is conducted by having two subjects solve a problem while a third person watches them. The second part of the research requires the two individuals who have solved the problem leave the experiment and be replaced by the subject who has remained here in the waiting area. This subject will then participate in the second part of the study with the subject left in the room.

As the experiment is run in parts it is necessary to assign subjects to different parts. We can determine which part of the research you will participate in if you would each select one of the colored toothpicks. (E places down four toothpicks on the table and asks each S to select one.)

O.K. The people who have selected the yellow and red toothpicks will solve the problem in the first part, and the person with the blue toothpick will watch them solve the problem. The individual with the green toothpick will participate in the second half of the study. I'd appreciate it if the individuals with the yellow and red toothpicks would enter the experimental room with me. In a few minutes I'll come back and ask the person with the blue toothpick to enter the room. The subject with the green toothpick may have to wait about 15 minutes before part II begins.

Part I

I'd like you to take a seat at the table and listen to a short description of the experiment that you'll be engaged in. I would appreciate it if you would not touch the equipment until you are told to, and if you would hold all your questions until this description is over.

As I have told you we are concerned with how individuals reach solutions to problems. The experiment has two parts to it. In the first part you will be asked to cooperatively solve a problem that will be projected on the wall (screen) in front of you. The second part of the experiment is set up so that the person who has watched you solve the problem is required to explain to another subject what the problem was that you had to solve and how you went about solving it. This person

Study #3

is then required to solve the same problem that you have solved here with a new S.

Let me explain the first part of the experiment in more detail. As I have said we are concerned with how individuals reach solutions to problems. The pattern of dots that is now projected on the wall (screen) provides the problem that you will have to solve. On the table in front of you are a pair of goggles. When you place the goggles over your eyes a figure which is not apparent without the goggles will appear. It may take some time for the figure to become clearly visible. The tape recorder is present to record how you both go about solving the experimental problem.

Once the figure appears the problem that you must solve is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is. This part of the experiment is over when you have cooperatively agreed on how far in front of the dots the figure is. The problem must be solved jointly, and in no case can the experimenter be asked for assistance once the experiment has begun.

When the lights are shut off you may place the goggles on. Take a few moments to adjust to wearing them. You can begin to solve the problem as soon as the shape has become clearly visible. So you do not forget what the problem is, it is typed on the index card in front of you. Again, the problem is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is.

DO YOU HAVE ANY QUESTIONS?

O.K. If there are none I will ask the subject who is to watch you solve the problem to enter.

(E goes and recruits S3)

E to S3: As the other subjects work on the experimental problem you will watch them and hear them solve it. It is important that you pay attention to their efforts for even though you will not be wearing goggles it is your responsibility in the second part of the study to explain to the subject now waiting outside what the experimental task was and how it was resolved. After you do that you will be asked to solve with that person the same problem that was solved here.

During this part of the experiment you can not offer advice, nor can the subjects ask for your help. Once they have solved

Study #3

the task feel free to ask them any questions you think are necessary to know for the second part of the experiment.

DO YOU HAVE ANY QUESTIONS?

O.K. If there are no questions I will shut the lights off and you can put your goggles on. Begin when you are ready and in no case can the experimenter be asked for help.

Part II

At the point of solution: Why don't you remove your goggles and give your eyes a few moments rest. To S3: are there any questions you would like to ask these subjects?

After questions are asked, or if there are none: I'd appreciate it if the individuals with the yellow and red toothpicks would leave the room and ask the subject waiting outside to come in. Please do not tell him/her about the experiment and please wait outside until this part of the experiment is completed. When it is over I will ask you to come back so I can answer any questions you may have and explain the reason for the experiment.

NEW S ENTERS

E addresses S4: As you know the person you are seated next to has participated in the first part of this experiment. This individual will now explain to you what the experimental task was that had to be solved and how it was solved in the first part of the study. When this is done both of you will have to reach a cooperative solution to the same problem that was solved in the first part. When I shut the lights off you can put your set of goggles on. The other person is not wearing, and can not wear, the goggles. In no case can the experimenter be asked for assistance once the experiment has begun.

DO YOU HAVE ANY QUESTIONS?

O.K. I'm going to shut the lights off and you can begin when you are ready.

E has given to S4 a set of goggles with green over the right eye. S1 and S2 had goggles with red on the right eye.

The subjects who participate in part I are those who have selected the yellow, red, and blue toothpicks. Red and yellow

Study #3

enter the room first and are explained the problem. Blue then enters, is seated behind S1 and S2, is explained his/her role and the experiment begins with S1 and S2 wearing goggles with red on right. At the task's conclusion S3 is given the opportunity to question these Ss. After this the original pair leave and S4 enters. This S is the one who had selected the green toothpick and is given a pair of goggles with green on the right. S3 and S4 sit at the table where S1 and S2 sat.

STUDY #4 (Instructions)

I appreciate your participation in this experiment. The research is concerned with how individuals reach solutions to problems and is run in three parts. The first part is conducted using a pair of subjects, and the second part is set up so that one of the subjects who has taken part in the first third of the experiment will be replaced by a third subject who has remained here in the waiting area. The third and last part is run by having one of the subjects from the second part of the experiment leave and ask the remaining subject to enter the laboratory and participate in the study with one of the subjects who has taken part in the second part of the research.

As the experiment is run in parts it is necessary to assign subjects to different parts. We can determine which part of the research you will participate in if you would each select one of the colored toothpicks. (E places down four toothpicks on the table and asks each S to select one.)

O.K. The people who have selected the yellow and red toothpicks will participate in the first part, the person who has selected blue in the second, and the person with green in the third. The people with the blue and green toothpicks may have to wait about 10 to 20 minutes before it is their turn to participate.

Part I

I'd like you to take a seat at the table and listen to a short description of the experiment that you'll be engaged in. I would appreciate it if you would not touch the equipment until you are told to, and if you would hold all your questions until this description is over.

As I have told you, we are concerned with how individuals reach solutions to problems. The experiment has three parts to it. In the first part you will be asked to cooperatively solve a problem that will be projected on the wall (screen) in front of you. The second part of the experiment will have one of you explain to a new subject--the person sitting outside with the blue toothpick--what the problem was that you had to solve and how you solved it. The third part will then have this new subject explain to the remaining subject, the one with the green toothpick, what the problem was, how it was solved, and then solve the same problem you had in this part of the experiment.

Study #4

Let me explain the first part of the experiment in more detail. As I have said we are concerned with how individuals reach solutions to problems. The pattern of dots that is now projected on the wall (screen) provides the problem that you will have to solve. On the table in front of you are a pair of goggles. When you place the goggles over your eyes a figure which is not apparent without the goggles will appear. It may take some time for the figure to become clearly visible. The tape recorder is present to record how you both go about solving the experimental problem.

Once the figure appears the problem that you must solve is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is. This part of the experiment is over when you have cooperatively agreed on how far in front of the dots the figure is. The problem must be solved jointly, and in no case can the experimenter be asked for assistance once the experiment has begun.

When the lights are shut off you may place the goggles on. Take a few moments to adjust to wearing them. You can begin to solve the problem as soon as the shape has become clearly visible. So you do not forget what the problem is, it is typed on the index card in front of you. Again, the problem is to mutually come to an agreement on how far in front of the pattern of dots the figure that appears is.

DO YOU HAVE ANY QUESTIONS?

If there are no questions I will shut the light off and you can put your goggles on. Begin whenever you are ready.

Part II

At the point of solution: Why don't you remove your goggles and give your eyes a few moments rest. I'd appreciate it if the person with the yellow toothpick would go outside and ask the subject sitting outside with the blue toothpick to enter the room. Please do not tell him/her about the experiment, and please do not talk to the remaining subject about the experiment. Wait outside until the research is completed. When it is over I will ask you to come back so I can answer any questions you may have and explain the reason for the experiment.

NEW S ENTERS

Study #4

E addresses S3: As you know the person you are seated next to has participated in the first part of this experiment. This individual will now explain to you what the experimental task was that had to be solved, and how it was solved in the first part of the study. This part of the study is completed when you think that you understand the experimental task and could explain the task to the subject still waiting outside and then solve the problem with him or her. The only constraint in this part of the experiment is that neither of you can wear goggles.

DO YOU HAVE ANY QUESTIONS?

O.K. If there are none begin when you are ready. This part of the experiment is over when S3 feels he can complete the task required in part three.

Part III

At the completion of Part II: I'd appreciate it if the person with the red toothpick would go outside and ask the subject sitting outside with the green toothpick to enter the room. Please do not tell him or her what the experiment was about, and please wait in the waiting area until the experiment is over. When it is completed I will ask you to come back so I can answer any questions you may have and explain the reason for the experiment.

NEW S ENTERS

E addresses S4: As you know the person you are seated next to has participated in the second part of this experiment. This individual will now explain to you what the experimental task was that had to be solved and how it was solved in the first part of the study. When this is done both of you will have to reach a cooperative solution to the same problem that was solved in the first part of the study. When I shut the lights off you can put your set of goggles on. The other person is not wearing, and can not wear, goggles. In no case can the experimenter be asked for assistance once the experiment has begun.

DO YOU HAVE ANY QUESTIONS?

O.K. I'm going to shut the lights off and you can begin when you are ready.

Study #4

E has given to S4 a set of goggles with green over the right eye. S1 and S2 had goggles with red on the right eye.

The subjects who participate in part I chose red and yellow toothpicks and wore goggles that had red acetate on the right eye. In part II the subject with the yellow toothpick is asked to leave and S3, blue, enters. Neither S is wearing goggles in this part of the experiment. For part III S2, red, is asked to leave, and S4 enters, green. S4 is given goggles contrary to that of S1 and S2--green on right. The third subject still does not wear goggles.

Appendix B: Tables of Possible Relationships

Table 1: Interactive Relationships
Between the Subjects

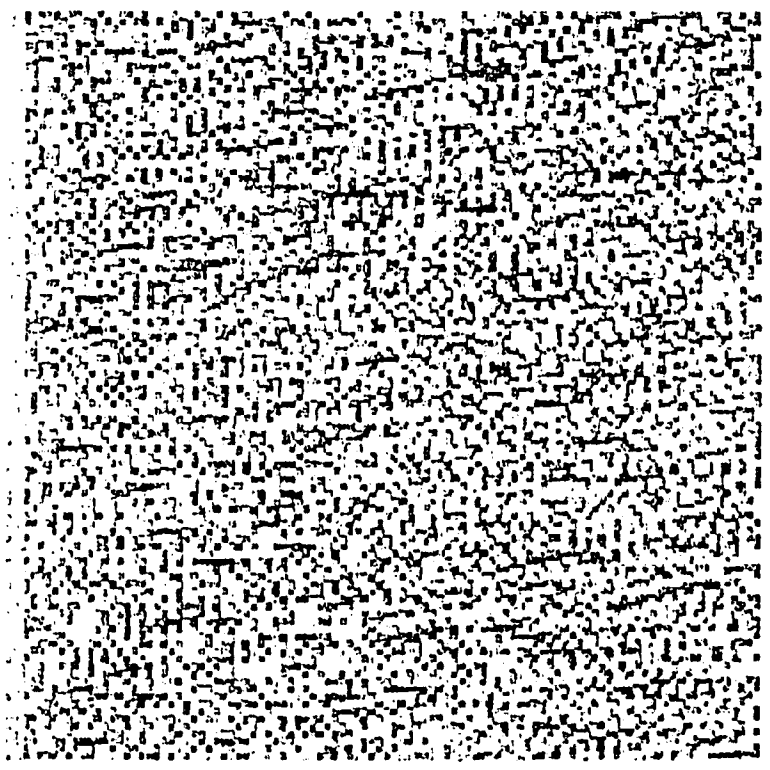
		Subject # _____ <u>IMAGE DISPLAYED</u>	
		Extended	Recessed
S u b j e c t #	I M A G E D I S P L A Y E D	Extended	Recessed
	Extended	HARMONIOUS	ANTAGONISTIC
	Recessed	ANTAGONISTIC	HARMONIOUS

Table 2: Subjects relationship to the image displayed by the instructional set.

		<u>Subject #</u> <u>IMAGE DISPLAYED</u>		
		Extended	Recessed	
S u b j e c t #	I M A G E D I S P L A Y E D	Extended	MESH	SPLIT
	Recessed	SPLIT	CLASH	

Instructional Set: How far in front of the pattern of dots is the figure that appears.

Appendix C: The Julesz Stereogram



2-D JULESZ STEREOGRAM

(Diamond)

Appendix D: Conversational Act Analysis

Codes, Definitions, and Examples of Conversational Acts Identified on the Basis of Grammatical Form, Illocutionary Function, and Conversational Contingency^a

Codes	Definitions and examples of conversational acts
	REQUESTS solicit information, action, or acknowledgment.
RQYN	<i>Yes-No questions</i> seek true-false judgment about propositions: "Is this an apple?"
RQWH	<i>Wh-questions</i> seek specific factual information (include either-or and fill-in-the-blank question forms): "Where's John?"
RQCL	<i>Clarification questions</i> seek clarification of the content of a prior utterance: "What did you say?"
RQAC	<i>Action requests</i> solicit a listener to perform (or cease to) an act (or process): "Give me some juice!"
RQPM	<i>Permission requests</i> solicit a listener to grant permission to the speaker to perform an act: "May I go?"
RQRQ	<i>Rhetorical questions</i> seek an acknowledgment from a listener to allow the speaker to continue "You know what I did?"
	RESPONSES provide information directly complementing prior requests.
RSYN	<i>Yes-No answers</i> supply true-false judgments of propositions: "No."
RSWH	<i>Wh-answers</i> supply the solicited factual information: "John's here."
RSCL	<i>Clarifications</i> supply the relevant repetition: "I said no."
RSCO	<i>Compliances</i> verbally express acceptance, denial, or acknowledgment of a prior Action or Permission request: "Okay, I'll do it."
RSQL	<i>Qualifications</i> supply unsolicited information in relation to the soliciting question: "But I wasn't the one who did it."
RSRP	<i>Repetitions</i> repeat part of prior utterances.
	DESCRIPTIONS express observable (or verifiable) facts, past or present.
DSID	<i>Identifications</i> label objects, events, etc.: "That's a house."
DSEV	<i>Events</i> describe acts, events, processes, etc.: "I'm making pizza."
DSPR	<i>Properties</i> describe traits or conditions of objects, events, etc.: "That's a red house."
DSL0	<i>Locations</i> express direction or location of objects, events, etc.: "The zoo is far away."
	STATEMENTS express facts, rules, attitudes, feelings, beliefs, etc.
STRU	<i>Rules</i> express rules, procedures, definitions, facts, etc.: "You have to share your things with others."
STEV	<i>Evaluations</i> express attitudes, judgments, etc.: "That's nice."
STIR	<i>Internal Reports</i> express emotions, sensations, mental events, etc.: "I like to play." (also include intents to perform future acts).
STAT	<i>Attributions</i> report beliefs about another's internal state: "He doesn't know the answer."
STEX	<i>Explanations</i> express reasons, causes and predictions: "It will fall."
	ACKNOWLEDGMENTS recognize and evaluate responses and nonrequests.
ACAC	<i>Acceptances</i> neutrally recognize answers or nonrequests: "Yes," "Oh."
ACAP	<i>Approvals/Agreements</i> positively recognize answers, etc.: "Right," "Yes."
ACDS	<i>Disapprovals/Disagreements</i> negatively evaluate answers or nonrequests: "No," "Wrong," "I disagree."
ACRT	<i>Returns</i> acknowledge rhetorical questions and some nonrequests, returning the "floor" to the speaker: "What," "Really."
	ORGANIZATIONAL DEVICES regulate contact and conversation.
ODNM	<i>Boundary markers</i> indicate openings, closings and changes in topic: "Hi," "Bye," "By the way."
ODAG	<i>Attention-getters</i> solicit attention: "Hey," "John," "Look."
ODSS	<i>Speaker selections</i> explicitly label speaker of next turn: "John," "You."
ODPM	<i>Polliteness markers</i> indicate ostensible politeness: "Thanks," "Sorry."
ODAC	<i>Accompaniments</i> maintain verbal contact, typically conveying information redundant with respect to context: "Here you are."
	PERFORMATIVES accomplish facts by being said.
FFPR	<i>Protests</i> register complaints about the listener's behavior: "Stop."
PFJO	<i>Jokes</i> display nonbelief toward a proposition for a humorous effect: "We threw the soup in the ceiling."
	CLAIMS establish rights by being said.
PFCL	<i>Claims</i> establish rights by being said: "That's mine," "I'm first."
PFWA	<i>Warnings</i> alert the listener of impending harm: "Watch out!"
PFTE	<i>Teaser annoy, taunt, or playfully provoke</i> a listener: "You can't do it."
	MISCELLANEOUS CODES
NOAN	<i>No answer</i> to questions (after two seconds of silence).
UNIP	<i>Uninterpretable</i> or unintelligible, incomplete, or ambiguous utterances.
EXCL	<i>Exclamations</i> express emotional reactions and other nonpropositional information.

Appendix E: Some Selected Transcripts

Transcript #1
Study 1

E: You can put your goggles on and begin whenever you are ready.

s1: See it?

s2: yeah

s1: How far do you think it is?

s2: mmm...mmmmm...a foot...what do you say?

s1: Less...it's like eight inches, nine inches? I thought it was a foot first

.

s1: you don't think it's any less than a foot?

s2: Uh...no...I'd say it's really about a foot?...turn your head a little bit and see if you can make the background come out before and then see how much... can you see that?

s1: Nnnno

.

s1: I still think it's like...you know, a little less

s2: I'd say ten inches...is a little less, no more than, not less than ten inches

s1: No, I figure it's like ten

s2: ten inches?

s1: yeah

s2: I'll go along with that

s1: ten inches?

s2: yeah

e: Ok?

s2: yeah

s1: uh hum

e: why don't you take your goggles off

introduction, part two

e: any questions? Just begin whenever you are ready.

s1: I'd say a foot and a half.

s2: No it's less...more like

s1: What?

s2: Fifteen inches, fourteen?

s2: Could be...fifteen?

s2: yeah...fifteen?

s1: (to e) fifteen!

Transcript #2
Study 2

E: Why don't you put your goggles on and just begin whenever you're ready. If you wear glasses, those will fit over your glasses because you won't be able to see without your glasses.

s1: you want to know it in feet?
e: that's up to you...just talk amongst yourselves.
s1: What do you say? It's a couple of feet
s2: I don't think it's more than a foot
s1: it matters how far you're back
s2: Ok...is he talking about all those dots in the white paper or that little thing in the middle?
s1: how far the little thing in the middle
s2: oh
s1: is from the back
s2: from
s1: yeah
s2: as you move back it goes further back
s1: oh...a foot?
s2: Ok
s1: Ok (inaudible)
s2: what are we supposed to say
e: excuse me?
s2: we came to an agreement

instructions, part 2 begins

e: do you have any questions?
s3**: no
e: Ok, you know what you're supposed to do? Let me give you your goggles back, put them on, and just begin.
s1: you see the triangle? It's like a triangle, a diamond, whatever, right in the middle?
s3: yeah
s1: well, we had to find out how far the diamond is from the back
s3: from the back of what?
s1: (at the same time) you understand?
you know the background...uh how far it is front of it
s3: uh, I get it
s1: we came to an agreement that it was like around a foot how do you feel
s3: how far in front it is?
s1: yeah, when you look at it
s3: yeah I know

Transcript 2, page 2
Study 2

s1: it's not like right on top of it
s3: yeah, I know...it looks it, it's in back of it
s1: no, how far the diamond is in front of it
s3: yeah, I know
.
.
s3: doesn't it look like it's cut out? and it's in back
of the background?
s1: the diamond's in back of the background?
s3: yeah
s1: not really
s3: it does to me
s1: you saying the diamond's in back of the background?
the background's in front of the diamond? With a hole
(inaudible) to see the diamond?
s3: yeah
.
.
s3: don't it look like that?...it does to me.
.
.
s3: maybe it's these glasses?
.
s3: the diamond ain't in front of it, it's in back of it
.
.
s3: how far in front? (looking at the index card)
s1: I'd say you're off
s3: I'm telling ya...ha ha
s1: let me see...you still don't see it?
s3: It's not in front of it
I know why. The red and the green on the glasses
are messed up.
s1: (laughs)
s3: it's on different sides...it's not in front of it.
.
.
s1: can I try these?
.
.

Transcript 2, page 3
Study 2

s3: that's the way I see it

.

.

s3: can we switch glasses

e: I'm sorry, I can't give you any information. Try and reach a decision

s1: switch glasses

s3: we can't

e: do you both agree?

s3: he agrees that the diamond's in front of it, I think it's in back of it.

e: what do you want to do?

s1: want to switch glasses?

e: do whatever you want to reach a solution

s3: check it out with these

s1: that's right

s3: now it's in front

s1: I see it in back

s3: the glasses are mixed up

.

.

s3: so we can't reach a mutual decision

s1: I say it's a couple of feet in back

s3: yeah, like a hole is cut out, right?

s1: yeah

s3: now, this looks in front

.

s3: we mutual on that?

e: whatever you want to do. It's up to you

s1: we can't really

s3: it's the glasses

.

.

s3: we figured out its problem

s1: yeah, now this way it's the same thing

s3: we figured it out

e: what?

s3: we decided that it's different, the glasses, it matters on the glasses you use

e: Ok, did you decide that you can't reach a decision?

s3: yes

Transcript #29
Study 3

e: do you have any questions about what you have to do?
If there are no questions I'll ask the next person to
come in, Ok?

e: (instructions to s3)...do you have any questions about
what you have to do?

s3: No, I got it.

e: Ok, so you can start whenever you're ready, just put
the goggles on and begin...if you wear glasses you'll
need to continue wearing the glasses the goggles will
fit over them

.

.

s1: you understand the problem?

s2: yeah right in the middle, a diamond

s1: a diamond?

s2: yea

s1: it's like in a square?

s2: yes

s3: could you speak up

s2: but it's turned at an angle

s1: yes, yes, it's more like a uh diamond

s2: yes

.

s2: we're judging distances...Ok it does not seem to be
more than a foot, does it?...does it to you?

s1: yes it does
it's more than a foot?

s2: more than a foot?

s1: no, more like ten inches

s2: Oh, Ok

s1: we're saying that it's the shape of...it looks like
uh...a diamond...and it's almost about a foot away

s2: approximately, I'd say that

s1: yes

.

s2: Is that all we have to do?

s1: is that all we have to do?

e: did you reach a decision...um...what did you decide?

s2: it's about approximately a foot away from the dots.

s1: yes

e: Ok...do you have any questions you'd like to address
to them?

s3: well, what, what did you have to decide?

Transcript #29, page 2
Study 3

s1: well, we see a shape like a square, a diamond shape,
and we have to decide how far it is from the dots and
it's about a foot away, we said it's about a foot away

s3: is that it

e: Ok, if you feel you have enough information to carry on
the next part of the experiment, that's it.

s3: I have to tell what they were discussing?

e: what the experimental task was and how they solved it

s3: I know what the task was, but I don't know how they
solved it

e: Ok, do you want to ask them?

s3: what were you discussing between you?

s2: we were discussing the fact that this diamond shape
or the thing that moves toward you, the square remains
back there, what's the distance between

s3: right

s2: and we decided it's about approximately about a foot

s1: about a foot

s3: Ok

s2: Ok

e: Ok

instructions, part two

e: Ok, why don't you start whenever you're ready

s3: Ok you should put them on first right?
now supposedly there's some sort of a diamond shaped
object

s4: yeah

s3: somewhere in the middle of those dots, I don't see it
because

s4: right

s3: and two people had to decide how far away from the
dots it was

s4: uh huh

s3: and they, they, they started to wait for it to come
towards it, it's supposed to, is it coming towards you

s4: No

s3: Or is

s4: No it's stationary right now

s3: it's not? It's stationary right now.

s4: yeah

s3: and they were discussing how far away it was

s4: uh huh

s3: and...I don't know

Transcript #29, page 3
Study 3

s4: what do we have to do, we have to decide

s3: we have to, I think we have to

s4: how many inches?

s3: we have to discuss the same thing but...I can't see it obviously and uh

s4: Ok, hold that well Ok it's a

s3: but I think we have to...I think we have to, I'm supposed to, we have to figure it out...but you understand what they had to do?

s4: yeh, yeh

s3: do I get a pair of goggles in the next part, or

e: Once the whole experiment is over

s3: so I have to help him decide without seeing it, right?

e: just solve the problem however you see fit, I can't offer any help

s3: Ok so how far away do you suppose

s4: uh, it seems to be about uh...I don't...eight feet from the...it seems to be behind the screen

s3: it seems to be behind?

s4: yeh, behind the screen

s3: cause, they, they kept saying that it was

s4: uh uh

s3: in front of

s4: no, it isn't coming out...it's about uh...it's a foot square

s3: a foot square

s4: standing on it's end, right?...directly in the middle of the uh

s3: cause it says here...how far in front...it appears to be

s4: oh oh

s3: so, maybe they were sitting at a different angle. I don't know

s4: laughs

s4: in front? huh...it seems to...wait, oh yeah, right it's in front of the uh...it seems to be a hole cut out, like a diamond shape

s3: right

s4: with the pattern set back

s3: right, so how far is the diamond in front?

s4: from the front of the pattern it's uh...it could be about two feet

s3: sounds alright...we're finished

e: Ok?

s3: yeah

e: did you reach a decision

s3: about two feet

Transcript #6
Study 4

e: Do you have any questions about how to proceed? Ok,
why don't you put the goggles on and start whenever
you're ready.
Ok, if you wear glasses the goggles should fit over
your glasses.

s1: What do you see? I see a triangle

s2: what?

s1: I said you see a triangle?

s2: yeah

s1: right?

s2: not, not a triangle, a, a diamond?

s1: right, that's a diamond...right in front of the big
square picture

s2: right

s1: right?

s2: uh huh

s1: and it's very much above, I mean before

s2: uh huh

s1: the uh...square picture, right?

s2: uh huh

s1: and it has the same exact pattern?

s2: uh hum

s1: I think...as...the big picture, right?

s2: yup

s1: now, how far would you say it is?

s2: uh, I don't know about a foot?

s1: maybe a little less, I think?

s2: a little less?

s1: yeah. You think so?

s2: yeah, Ok

s1: so we, around eight.

s2: if you close one eye it goes away, so?

s1: around eight to ten inches?

s2: Ok

s1: yeah, I think so

s2: ten inches

s1: ten inches? alright?

s2: Ok

s1: Ok

e: Ok?

s1: Uh hum

instructions, part two

Transcript #6, page 2
Study 4

e: do you have any questions about how to proceed?
s2: no, do you?
s3: yeah, I have a question. You mean that I will understand from what she will tell me, and from what she will tell me?
e: right
s3: this other person coming in? Is this the person who was in the first part of the experiment, too?
e: No, the person who will come in
s3: yeah
e: after she finishes her part
s3: yeah
e: will be the other man sitting outside
s3: and I will have to tell him what the experiment
e: right
s3: how it was solved
e: what the experiment was, how it was solved
s3: tell him what she told me?
e: right, what the problem was, how it was solved, and then help that person solve the problem
s3: right
e: Ok do you
s2: yeah this has nothing to do with the solution to the problem, just tell him what was done?
e: what it was, what, how it was done, and if you want tell him how you solved it
s2: Ok,...I can tell him what the answer was?
e: sure
s2: Oh, Ok
s3: yeah, tell me everything
s2: (laughs) Ok
e: Ok, whatever, and you proceed as long as you want until you feel that you know enough to go on
s3: yeah Ok
e: Ok? So just begin whenever you're ready
s2: Ok
s2: Ok, what happens is he gives you these goggles that are red on one side and green on the other, Ok? and when you put them on...even though you don't see anything, you only see one figure now, it looks like a diamond, a diamond shape, like this comes out of the screen and it comes at you...Ok? And what he asks you is how far in front...does that diamond shape appear... to be in front of the screen Ok? In other words, when you're looking at that thing right it just looks like there is one flat surface, right, but, but...
s3: right
s2: when you put on the glasses with two different colors

Transcript #6, page 3
Study 4

it looks like something comes out and is standing
right in front of you, like that

s3: I see

s2: in front of that! So you see that and you see a diamond
shape in front of it

s3: Ok

s2: and he wants to know how far away that shape is

s3: the diamond shape?

s2: from the screen

s3: uh huh

s2: Ok?...and uh, I thought it was twelve inches and she
thought eight so we all, we decided

s3: yeah

s2: it was ten inches away from the screen. Ok?

s3: yeah

s2: got it?

s3: you say what? he gave you two goggles

s2: one for each

s3: a red and a green

s2: no, one. One pair of goggles with red on one side and
green on the other

s3: Ohh, and green on the other side

s2: right

s3: is the glass white, or is it red glass

s2: it's colored, it's red plastic

s3: ohh the glass is colored

s2: right

s3: with a red plastic and green plastic

s2: right

s3: Ok and the

s2: and when you look through it

s3: when you look through it...at those goggles...at those
things there, those patterns

s2: yeah

s3: you saw diamonds shapes that were

s2: one diamond shape

s3: one shape?

s2: one shape

s3: Ohh, only one?

s2: right, one shape

s3: that came off the screen towards you

s2: towards us, right

s3: right, and he asked you how near, how far from the
screen do you think it was?

s2: right, from the screen, right

s3: I see that's all?

s2: that's all

Transcript #6, page 4
Study 4

s3: was there any problem in the pattern then?...anything to solve, just that alone?

s2: that's it

e: Ok? You're ready?

s3: uh hum

e: fine

instructions, part three

e: do you have any questions?

s3: could you repeat that again?

e: yeah. Your task in this part is to explain to him

s3: yeah

e: what the experimental problem was

s3: right

e: in the first part, how it was solved, once you do that you're to help him

s4: solve the

e: solve the problem

s4: following problem

s3: Ok

e: the problem that's projected on the screen

s3: So I tell him everything I know

s4: yeah

e: right, you tell him what you know

s3: I see

e: Ok, why don't you put the glasses on and take a few minutes to adjust to wearing them, just look at the center and you begin whenever you're ready.

s3: Ok, um, well you know, you have on the glasses, right?

s4: yeah

s3: you're looking at those patterns...now what you're supposed to see, you're supposed to see a diamond shape coming off the screen towards you

s4: yeah

s3: right in front of those goggles

s4: yeah

s3: before you had the goggles on you saw a flat screen didn't you?

s4: yeah

s3: there was no shape, now you have the goggles on you see a diamond shape coming off the screen towards you, right

s4: yeah

s3: now, the problem is how far do you think that, that diamond is from the screen?

s4: how far I think

s3: yeah

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Study 4

s4: the diamond is from the screen?
s3: yeah, the diamond shape, how far do you think it's from the screen, twelve inches, ten inches, eight inches, how far do you think it is?
s4: the diamond is?
s3: right
s4: I would say approximately about two and a half feet
s3: Two and a half feet? The diamond is towards you two and a half feet?
s4: you're saying how far the diamond is from me?
s3: no, from the screen
s4: yeah, yeah there's a pattern in the back and there's a diamond
s3: right
s4: in front, right?
s3: right
s4: you're saying how far that diamond is from the back of the pattern
s3: right
s4: I'd say about two and a half feet
s3: that it you're saying it is...thirty inches, right? thirty inches?
s4: uh...that's...
s3: two and a half feet is thirty inches
s4: yeah thirty inches
s3: so you're saying it's thirty inches away from the screen?
s4: I'm not sure, but that's what it looks, it seems about
s3: yeah
s4: about that far. I mean I don't think I'm sure
s3: yes, well you said thirty, well I guess that's that's it
s4: that, that's what I think it is...something like thirty inches away
s3: Ok
e: Ok you agree that it's thirty inches?
s4: right
e: Ok
s4: I mean you agree with me?
s3: well I never look at it, they told me, the people
s4: I see
s3: in the last,
s4: I see, I see
s3: well they said, well they didn't say thirty, one said twelve, one said eight and they agreed to ten.
s4: Oh, I see

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Study 4

s3: I mean and you have twenty inches more than they do
s4: yeah I know...it doesn't seem to be that close...it's
ten inches you know...it depends how you look at it
from what angle I guess....
e: Ok

Appendix F: Rommetveit's Dialogic
Truth Table

From a binary TRUE/FALSE in an unequivocal monistic world
to 19.200 states of dyadic social reality.

I Actual		Beliefs		III Actual	Control	
p_1 in w_1	p_2 in w_2	II Assumed		p_1/p_2	IV Assumed	
		$p_2:(p_1 \text{ in } w_1)$	$p_1:(p_2 \text{ in } w_2)$		$p_1:(p_1/p_2)$	$p_2:(p_1/p_2)$
(1) t	t	(1) t	t	(1) $p_1 > p_2$	(1) $p_1 > p_2$	$p_1 > p_2$
(2) t	f_1	(2) t	f_1	(2) $p_1 = p_2$	(2) $p_1 > p_2$	$p_1 = p_2$
(3) t	f_2	(3) t	f_2	(3) $p_1 < p_2$	(3) $p_1 > p_2$	$p_1 < p_2$
(4) u	u	(4) t	u		(4) $p_1 > p_2$	t
(5) f_1	t	(5) f_1	t		(5) $p_1 = p_2$	$p_1 > p_2$
(6) f_1	f_1	(6) f_1	f_1		(6) $p_1 = p_2$	$p_1 = p_2$
(7) f_1	f_2	(7) f_1	f_2		(7) $p_1 = p_2$	$p_1 < p_2$
(8) f_1	u	(8) f_1	u		(8) $p_1 = p_2$	t
(9) f_2	t	(9) f_2	t		(9) $p_1 < p_2$	$p_1 > p_2$
(10) f_2	f_1	(10) f_2	f_1		(10) $p_1 < p_2$	$p_1 = p_2$
(11) f_2	f_2	(11) f_2	f_2		(11) $p_1 < p_2$	$p_1 < p_2$
(12) f_2	u	(12) f_2	u		(12) $p_1 < p_2$	t
(13) u	t	(13) u	t		(13) t	$p_1 > p_2$
(14) u	f_1	(14) u	f_1		(14) t	$p_1 = p_2$
(15) u	f_2	(15) u	f_2		(15) t	$p_1 < p_2$
(16) u	u	(16) u	u		(16) t	t
		(17) t	t			
		(18) f_1	t			
		(19) f_2	t			
		(20) u	t			
		(21) t	t			
		(22) t	f_1			
		(23) t	f_2			
		(24) t	u			
		(25) t	t			

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