

Decision-Making as a Social Process

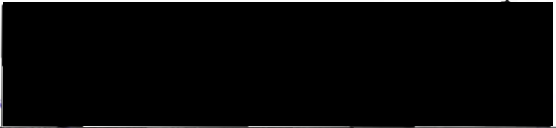
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MASTER OF ARTS

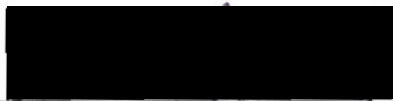
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## ABSTRACT

North American social psychology has evolved within a culture that values an individualistic ideology. Therefore, when investigating social phenomena, the social psychologist rarely looks past the individual(s) involved to social processes. As a result, actual social processes have seldom been studied. For example, in the classic studies performed by Sherif (1935) and Asch (1958) social influence was investigated exclusively through the behavioural products of the individual. In this thesis social influence was studied as an intrinsic social process. Twenty-two dyads completed a stimulus task wherein they made a joint decision about 12 simple stimuli. In order to have empirical access to the social processes involved, the participants were allowed to talk freely with each other. As a result, the discourse that was generated provided the data for the investigation. In other words, the interactions were the objects of investigation. Examination of the dialogues in terms of the function of the talk revealed a process that resembled scientific fact construction (Latour & Woolgar, 1979; Latour, 1987). That is, the discourse moved through a continuum of "facticity" identifiable by the following functions: Statements of Hypothesis (wherein the interlocutors tentatively introduced a stimulus to be discussed), Statements of Individual Fact (where the participants offered their own assessments), and Statements of Social Fact (in which the participants agreed or disagreed about their individual assessments). Quantitative analyses of

the dialogues showed that certain patterns emerged with respect to these functions. There were differences in how the talk progressed when participants agreed with each other and when they disagreed. These differences provided a basis of comparison for subsequent analyses. For example, the frequency and order of the three functions differed for agreements and disagreements. There was also a combination of certain utterances that functioned as grounding or summarizing places for the participants during the task. These differed in structure from both agreements and disagreements, and tended to occur later in the dialogues.

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Table of Contents

iv

Title Page.....i

Abstract.....ii

Table of Contents.....iv

List of Tables.....vi

Chapter 1 Historical Background.....1

    Individualism.....2

    Knowledge Products.....4

    Conformity Research in Social Psychology.....10

Chapter 2 Process versus Product:

Methodological Implications.....23

    A Shift from Product to Process.....24

    Methodological Implications.....26

    Description versus Explanation.....27

    Conformity Research.....29

    A Discursive Approach.....33

    Developing a Method of Analysis.....37

Chapter 3 Rationale and Research Design.....41

    Research Design.....42

    The Social Construction of Facts.....50

Chapter 4 Method and Analysis.....55

    Method.....55

        Subjects.....55

        Stimuli.....56

        Procedure.....57

    Analysis.....58

        Statement of Hypothesis.....61

Statement of Individual Fact.....62

Statement of Social Fact.....63

Reliability.....67

Chapter 5 Results and Interpretation.....72

Decision Units.....73

Analysis of Functions.....80

Summary.....87

Chapter 6 Discussion.....88

References.....98

Appendix A Instructions for Identifying Functions.....106

## List of Tables

Tables

5.1 Decision Units with H, I, and S in Any Order.....	81
5.2 Decision Units Containing H and I, in the H->I Order.....	83
5.3 Decision Units Containing I and S, in the I->S Order.....	84
5.4 Decision Units with H, I, and S, in the H->I->S Order.....	86

## CHAPTER 1: HISTORICAL BACKGROUND

While the roots of social psychology lie in the intellectual soil of the whole Western tradition, its present flowering is recognized to be characteristically an American phenomenon.

(Allport, 1954/1985, p. 2)

As an offspring of North American experimental psychology, social psychology has inherited certain characteristics from its parent discipline. Throughout the ongoing development of both psychology and social psychology, the historical environments wherein the disciplines grew were instrumental in shaping them. "Our concepts and ideas reflect our own times, and they also reflect the history which has produced these current moments" (Billig, Condor, Edwards, Gane, Middleton, & Radley, 1988, p. 3). In North America, certain sociohistorical trends and cultural traditions have moulded an individual psychology and, therefore, a social psychology of a distinct tenor. These same factors have been a major influence in the development of what has become accepted as the predominant social psychology of the present.

### Individualism

[Western psychology] was a relatively late product of an individualistic civilization that had long cherished the ideal of the independent individual for whose encapsulated qualities all social relations were external. (Danziger, 1990, p. 186)

As a result

the work of psychologists [has] represented a kind of celebration of the myth of the independent individual in its pure form. (Danziger, 1990, p. 186)

Modern psychologists continue to espouse the metaphysical stance of the British Empiricists and "the individual is given explanatory priority over the social" (Tolman, in press, p. 2). Therefore, it is the isolated individual who has come to be the venerated basis of North American psychological investigative practice.

Being embedded within an individual psychology that itself developed and is perpetuated within an individualistic hegemony, social psychology has defined its object of knowledge in a similar fashion:

social psychology is above all else a branch of general psychology over the social" (Tolman, in press, p. 2). Therefore, it is the isolated individual who has come to be the venerated basis of North American psychological investigative practice.

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social psychology is above all else a branch of general psycholividualism and metaphysical individualism within social psychology have different historical developments and are manifested in different ways; however, each has served to reinforce the existence of the other (Danziger, 1992). As a modern day discipline, social psychology has been required by its sociohistorical roots to begin and end the investigation of social psychological phenomena with the individual and to cast social processes as extensions of the properties of the individual mind (Deutsch, 1954). Specifically, this has created a highly limited paradigm in the study of social influence, and

the choice of methodology limits the kind of reality that can be represented in the products of scientific investigation. (Danziger, 1992, p. 310)

It is the unilateral influence of other people on a single individual's behaviour that has emerged as the basis upon which social psychologists build their research questions.

English-language social psychology has been dominated by an individualistic, stimulus-response conception of interpersonal relations. (Tolman, in press, p. 1)

This is obvious in the well-known definition of social psychology provided by Allport (1954/1985):

Social psychologists regard their discipline as an *attempt to understand and explain how the thought, feeling, and behaviour of individuals are influenced by the actual, imagined, or implied presence of others.* (p. 3, italics original)

#### Knowledge Products

Throughout its development, psychology's main goal as a discipline has been to establish itself as both a meaningful and accepted scientific endeavour--

meaningful in the sense that it would develop socially useful tenets of human behaviour and accepted in the sense that it would be regarded by the "professional environment" as true science (Danziger, 1990, p. 7). Experimental psychologists looked to and embraced the positivist philosophy of Auguste Comte and, as a consequence, psychology's knowledge product was required to meet two major and sometimes conflicting demands: it had to be practical and it had to be directly observable (Danziger, 1990). As a consequence, psychologists have attempted to model psychology after the more firmly ensconced natural sciences.

To generate a practical knowledge product, psychologists in the United States were compelled to investigate areas that would be pertinent to the administrative establishment, education, the military, and the corporate establishment--all institutions immersed within the hegemonic individualism of North American culture.

Those with sufficient social power to have an input into this process [of producing scientific knowledge] are likely to get the kind of knowledge

products that are compatible with their interests.  
(Danziger, 1990, p. 182)

More specifically, social psychologists have been seeking answers to questions about social control that are in demand by the major capitalistic and institutional forces of the times (Allport, 1954/1985; Danziger, 1990). For example, studies conducted for the American military were to focus, not on the army as a social group, but on the army as

collections of socially atomized individuals . . . characterized statistically by means of the categories used by the highly centralized army administration. (Danziger, 1992, p. 322)

The empirical demand of positivism led psychologists to develop a research paradigm that would allow them to observe objectively the phenomenon of interest. Using the early natural sciences as their model, experimental psychologists have striven to create a research paradigm that will allow them to make empirical observations and ultimately to quantify the products of their investigative practice. This methodological model has resulted in a reductionistic approach. "Atomism in particular tends to be generated

by the scientific outlook" (Taylor, 1991, p. 98). The research situation must maintain a high level of control over the variables of interest and keep out unwanted influencing factors. This is and continues to be best attained in the laboratory setting. Therefore, the experimental design used by the psychologist is one where the researcher observes and makes interpretations about a single individual's behaviour or internal processes in the highly controlled setting of the psychological laboratory:

Experimental methods isolated individuals from the social context of their existence and sought to establish timeless laws of individual behavior by analogy with the laws of natural science. Shared social meanings and relations were automatically broken up into the properties of separate individuals and features of an environment that was external to each of them. The functional relationships established in this way presupposed an individualistic model of human existence. Anything social became a matter of external influence that did not affect the identity of the individual under study. (Danziger, 1990, p. 187)

The primacy of the individual basic to the ontology of what should constitute the basis upon which to build psychological knowledge and theory has been useful to social psychologists in their adaptation of the experimental paradigm used in individual psychology. The issue of experimental control, which is central to this particular research paradigm, has led social psychologists to sacrifice "some degree of realism" (Aronson & Carlsmith, 1968, p. 7) in order to attain and maintain control in the research situation. Under these circumstances, the individual as the experimental subject and the behaviour of the individual as the unit of analysis present a more manageable alternative than does an interacting group of individuals with their own various behaviours. What makes the research "social" are merely the social parameters that are defined as independent variables or a group setting (real or simulated) wherein the individual subject acts and reacts. Experimentation in social psychology is based on "the view that interaction among individuals is basically identical to person-object relations" (Tolman, in press, p. 7). As a result, the experimental setting is designed around

the measurement of a dependent variable that has been operationally defined as some behavioural outcome produced by an individual subject.

Aside from reasons of control in the experimental situation, the research methods employed by psychologists require the strict definition of the factors under investigation and provides the researcher with a knowledge product that is quantifiable and, therefore, "scientific" (Danziger, 1990). Individual psychology and social psychology both rely on statistical methods to enhance their scientific status in the research community:

[Social psychological] investigators used quantitative measures . . . that had been developed in the field of educational testing or in the experimental laboratories of "natural science psychology". (Jones, 1985, p. 60)

Consequently, experimentation in social psychology is oriented to quantitative products. To accommodate statistical methods, researchers often measure some kind of static, pre-defined outcome to the exclusion of other possible influences or outcomes. The research design, therefore, precludes any outcomes other than

one(s) of interest.

Social psychological experimentation was [and is] based on an understanding of social situations as the sum of distinct possibilities of manipulation. (Danziger, 1992, p.322)

The risk, of course, is that the experimental outcomes might be an artifact of the experimental design itself.

#### Conformity Research in Social Psychology

Social psychology's current theories and research involving group processes and social influence stem from most of the social sciences: psychology, sociology, anthropology, economics, and political science (Allport, 1954/1985; Collins & Raven, 1968). However, the emphasis here will be on conformity research, and as this is primarily the domain of social psychology, therefore, it will be the social psychological roots of social influence studies that I will outline and tie in with the sociohistorical aspects of social psychology discussed in the previous section.

The process of social influence has been considered one of the central problems for social psychologists in their quest for understanding social

phenomena.

Social psychologists are required to explain the overwhelming fact of social conformity in human behavior . . . No problem in social psychology is more insistent. (Allport, 1954/1985, p. 14)

Just a glance at the literature shows social influence to be one of the most prevalent topics in the discipline. If we include the different rubrics under which social influence is also studied (such as group mind, risky shift, group polarization, conformity, etc.) its predominance in the literature is almost overwhelming; "in fact, it has been proposed that social psychology is the study of influence" (Jackson, 1988, p. 19).

Historically, long before the emergence of social psychology, the social nature of humans presented itself as a puzzle to scholars (as it continues to do). "The field of social psychology grew out of the recognition of human diversity within cultural uniformity" (Jones, 1985, p. 53). There is the undeniable fact of the regularity of social life (Moscovici, 1985), but there is also the fact of the unruly mob. The regularity of social life has been

taken for granted, the pervasive theme in Western culture has been the negative aspect of social interaction, thus creating the paradox that

taken singly, all individuals are rational in their behaviour, but taken collectively, they cease to be rational. (Moscovici, 1985, p. 347)

Within Western culture, there has long been a trepidation about the behaviour of people in groups (Allport, 1954/1985). This suspicion of collectives of all sizes, from civilizations down to small groups, has generated and maintained the presumption of the well-balanced, self-controlled individual and the deleterious, even deranged collective. The modern hegemony of individualism has concluded that collectivism implies some necessary degree of conformity, which, in turn, will undermine the ideal of the individual achieving and maintaining his or her own "self-determining freedom" (Taylor, 1991, p. 68). And, as a result, social psychology has "produced and refined the concept of humanity as autonomous, rational, self-directed individuals" (Moscovici, 1985, p. 347). This attitude has led to the presumption that individual psychological processes provide the

basis for explanations of social behaviour, and society is seen merely as playing a secondary role. The theme of the supremacy of the individual is one well-suited to the individualistic orientation of the Western world. Within this setting, it is not surprising then that in social psychology "group influence studies became enmeshed in an implicit (American) ideology which often went beyond the available evidence" (Fraser, 1978, p. 207).

Specifically, the emergence of social psychology as a subdiscipline of individual psychology evolved from the crowd psychology developed in Europe in the late nineteenth century. This historical period was marked by an increased interest in social order and the problems therein, and with this interest came the desire to discover universal laws of society and social history (Gigerenzer, Swinjtink, Porter, Daston, Beatty & Kruger, 1989). This preoccupation permeated the clinical or abnormal school of psychology in France, and, as cited in most historical reviews (e.g., Allport, 1954/1985; Moscovici, 1985; Jackson, 1988; Danziger, 1992), it was from here that crowd or mass psychology materialised through the theoretical work of

Tarde and Le Bon undertaken in the mid to late 1800's. These men worked under the "simple and sovereign theory" (Allport, 1954/1985, p. 4) of suggestion-imitation and used, as the basis of their theorizing, their knowledge of hypnotic suggestion. They were fascinated by the contrast between what they saw as the rational conduct of individuals on their own and the irrational behaviour of masses and crowds. (Danziger, 1992, p. 313)

The theory of suggestion explained the irrationality of group behaviour as an abnormal and hysterical phenomenon (Jackson, 1988), but it could not account for the rational regularity of social life (Moscovici, 1985). Imitation, however, proved to be the more adaptable of the two concepts and was incorporated into the behaviourist school of twentieth century psychology (Jackson, 1988).

The theoretical social psychology of the crowd served as a basis upon which to build an experimental social psychology. Walter Moede has been credited with undertaking this task in the early twentieth century, although it was not the purpose of his investigations at the time (Danziger, 1992). He began by

investigating the differences in intraindividual processes in isolated versus group conditions:

Moede's use of experimental methods artificially created the contrast between individual and group behaviour that the crowd psychologists had believed to exist in natural situations. By this means some of the psychological speculations of crowd psychology might be subjected to direct investigation. (Danziger, 1992, p.313)

Both the crowd psychologists and Moede set the stage for an individualistic social psychology where "social life was defined in terms of the influence of individuals on one another" (Danziger, 1992, p. 313).

According to Danziger (1992), the nature of the "individual-society relationship" (p. 325) presumed by social psychological experimentation at a given time in history both created and perpetuated this linear, atomistic approach to human social behaviour. The North American individualistic ideology and social psychology have both been well-served by the theories of irrational crowd behaviour in the explanation and the exploration of historical events of the twentieth century. The Nazi and Fascist movements in Europe and

the atrocities that were inflicted upon human beings by other human beings throughout those regimes further perpetuated the image of the irrational collective. This, in turn, further perpetuated the myth of the heroic, rational individual and pitted him or her against the evil and corrupt group. Social psychologists in North America valiantly undertook the task of trying to provide an explanation (which, of course, would have to fit the prevailing view of the individual as superior to the collective) for such abominable behaviour by individuals acting within these societies under the direction of tyrannical dictators (Moscovici, 1985). (It should be noted here that the conformity and social influence studies undertaken during this time were in direct reaction to the Nazi movement in Europe (Cartwright, 1979; Moscovici, 1985; Jackson, 1988). Many of those famous for their work in this field (e.g., Asch, Lewin, Festinger) were refugees relocated in the United States before or during World War II.)

According to Moscovici (1976), most traditional researchers of conformity adopted a functionalist model that viewed social influence as one-sided, that is,

from the majority to the minority, and "indeed, most experimental studies on conformity are designed so that this *must* be the case" (Tanford & Penrod, 1984, p.189, italics original). For research in social influence, this has meant that the individualistic ontology to which social psychology has subscribed, as well as past and current historical circumstances, such as the need to be scientific, which envelop the theoretical and methodological features of the discipline, have come to prescribe what an acceptable knowledge product should be. The object of knowledge should be (a) of practical concern or use to the public, (b) of interest to the professional community, (c) empirical and quantitative so as to be considered scientific, and (d) based upon the individual to meet the theoretical expectations determined by a system that values individualism.

As mentioned earlier, the compulsion to be a "scientific" discipline drove social psychologists, as it did experimental psychologists, to perform product-oriented research. The definition of the group as reducible to a collection of individual elements influencing one another was easily applicable in the predominant research paradigm of social psychological

research:

Direct and immediate interpersonal influences were precisely the kinds of processes that could be observed under the limited conditions that had come to define a psychological experiment . . . This involved some attempt at isolating and controlling specific conditions. (Danziger, 1992, p. 314)

In terms of conformity research, this has meant ascertaining and operationally defining the specific factors that the researchers thought would have an impact on the individual subject in the experimental situation.

The standard research design used in social psychology has precluded the examination of anything other than the reactive behaviour of the individual, that is, the final behavioural product. Specifically, in social influence and conformity studies, the researchers have been interested in discovering whether the individual changed his or her opinion or decision to be like others. "Social influence in the group is identified with the individual's conformity to the group" (Moscovici, 1985, p. 349). Factors such as

group characteristics or type of task are varied through experimental manipulation, but the final product that is measured is whether and to what degree the individual subject alters his or her opinion from some original or correct state of belief toward an opinion stated by others who are present. The classic studies of Sherif (1935) and Asch (1958) have provided the paradigm for almost all other investigations of social conformity (see Allen, 1965; Allen, 1975; Moscovici, 1985; Nail, 1986; and Wood, Lundgren, Ouellette, Busceme, & Blackstone, 1994, for detailed reviews of this research).

Sherif (1935) was interested in norm formation and found that, in a situation where a group of individuals were confronted with an unstable stimulus about which they were each asked to make a decision, the group established a collective frame of reference. The individuals moved towards this collective norm from their individual positions and maintained it when alone in later trials. Some key aspects of the research situation are worth mentioning. As in the earlier research of Moede, Sherif examined similarities and differences between the performance of the individual

alone and the individual in the group. The evidence of the formation of a norm was operationalized as the difference between the responses of the individual when alone and the responses of the individual when the responses of others were available. In the original study, Sherif (1935) used a confederate (a practice that has continued in the majority of conformity or social influence studies) but in later studies he had similar results with naive group members (Sherif, 1937). One last characteristic of Sherif's norm formation research that is worthy of note was the nature of the group interaction. Participants were not allowed to discuss the matter freely among themselves; they could only announce what they thought to be the answer. In other words, only the final behavioural product was examined. A little more than a decade later, Asch (1958) conducted his famous experiments, following closely the paradigm used by Sherif but with stable perceptual stimuli. Although his original purpose was to show that individuals would behave as rational, independent beings and would not succumb to group pressure, he found that about one-third of the people did yield to group pressure when faced with a

unanimous majority (Asch, 1958). Again the research situation was one where (a) the group consisted of confederates who acted as the majority, and (b) the participants only stated their decisions (i.e., there was no group discussion). Almost all of the research in conformity has continued to use the Sherif and Asch studies as the basic research paradigm in the investigation of the different factors that affect the conformity phenomenon.

The current trend in the study of social influence has moved away from conformity research (which concentrated on the influence of the majority on a minority-of-one) to the investigation of social change. In the late 1970's, Continental social psychologists began to investigate the influence of the minority on the majority as a vehicle for social change (Moscovici, 1985). Since then, North American social psychologists have shifted their focus in a similar manner. Although this is a different theoretical approach, the basic research paradigm discussed above has been adopted as the investigative tool. The investigators are interested in the different conditions under which minority influence does or does not occur, and although

discussion is allowed in some cases, it is the final behavioural product that is of interest. Confederates are often used, and in some instances, the entire group, except the individual subject, is simulated by computer (see Nail, 1986; and Wood et al., 1994 for a review).

I propose a more extreme shift than the one advanced by Moscovici and adopted in North American social psychology, where the positive side of social processes be examined; the regularities of human social life are as ubiquitous or even more so than are the irregularities attributed to crowd behaviour. It may be that, if we examine the processes as they occur the majority of the time, we will be better equipped to understand the irregularities of human social behaviour when they occur.

## CHAPTER 2

## PROCESS VERSUS PRODUCT: METHODOLOGICAL IMPLICATIONS

During the 1970's, social psychology reached a point in its history where many working within the field thought it necessary to perform a serious critical self-examination; social psychology was in a "crisis of confidence" (Elms, 1975; Solano, 1989). Although the crisis has not yet been resolved, merely shelved for the time being, all is not lost for social psychology as a discipline:

Another interpretation of the role of social psychology . . . is more positive. In this view, the unique contribution of social psychology is its ability to investigate person-to-person interactions. . . . Unfortunately, social psychology [in the United States] has not chosen to undertake the study of interaction. (Solano, 1989, p. 35)

This is not to say, however, that this alternative focus does not already exist, however minimally, within the discipline or that it cannot be integrated into North American social psychological practice.

### A Shift from Product to Process

As described in Chapter 1, the experimental paradigm used in social psychology has created a product-oriented research practice. Any social process through which the final measured product is attained has been rendered unavailable for investigation both by the methods used and by the theoretical bias towards the individual. Because the ontological basis of psychological investigation in North America holds the individual as its central theme, "there has been no successful theoretical integration of individual and collective concepts [in North America]" (Jackson, 1988, p. 50). Therefore, interpersonal or social processes have generally been ignored as such, being overshadowed by the all-encompassing individual. And, because of the stringent control of behaviour demanded by social psychology's research paradigm, the social level of human activity in social psychological experimentation has been regulated almost completely out of existence:

Experiments normally take place in social psychological laboratories; the experimenter sets up a scenario within the laboratory for the subjects who are asked to respond to it in a way

which can be numerically quantified. . . . The subjects' reaction to the situation must also be constrained as far as possible if the experiment is to be successful. (Potter & Wetherell, 1987, p. 39)

The success of the experiment is given priority over questions regarding the nature of social psychological phenomena and, consequently, social processes have been overlooked as possible "objects" of study in and of themselves. Specifically, social psychological research practice has mostly ignored the interactional or interpersonal level of social relations. More importantly, this practice has presumed that social processes are indistinct from processes that operate at the individual level. As a result, the research focuses narrowly on the behavioural products of the individual while the dynamic nature of interpersonal interaction remains a relatively unstudied phenomenon. There is even the attitude among some in the field that "the reason that social psychologists have not focused very much on interaction per se is because it is not very interesting" (Hendrick, 1989, p.130). This attitude is a direct reflection of the individualistic

hegemony, as the same author makes apparent in a later statement: "Interaction is behavior, but it has little directly to say about the capacities of the organism" (Hendrick, 1989, p. 131).

#### Methodological Implications

In general, "psychologists have been singularly unimaginative in devising methods to study collective behavior" (Milgram & Toch, 1968, p. 583). In social psychology, the picture has not been any brighter:

The favorite haven of the social psychologist is the one-way observation room, where conditions can be controlled and effects noted and precisely observed. (Milgram & Toch, 1968, p. 581)

If the social psychologist wishes to investigate social processes at the social level where they occur, then he or she must give serious thought to the kinds of questions asked, the appropriate method(s) through which the questions can be investigated, and how to define a relevant unit of analysis. If we move away from the traditional focus on the individual level of functioning and ask questions about phenomena that emerge at the social level, then it follows that the methods used should be ones which allow these phenomena

to manifest themselves at all stages of investigation. In other words, the experimental situation, the unit of analysis and the method of analysis should all retain the dynamic social nature of the processes under study throughout the entire research process.

#### Description versus Explanation

Lewin (1931) outlined the differences between scientific investigative styles based on the phenotype and genotype of phenomena, and discussed the need for a shift from the investigation of static products to the investigation of dynamic processes. Psychology has generally been in the practice of

classifying whole groups of processes according to the value of their products, instead of according to the nature of the psychological processes involved. (Lewin, 1931, p. 143)

Vygotsky (1978) borrowed heavily on this distinction in his own critique of the methods employed by psychological researchers. Dealing only with the effects or products of a process (i.e., its phenotype) holds the research at the level of description, whereby an experimental outcome is defined according to its appearance, not on how or why it came to be. What we

are left with then is only a superficial understanding of psychological phenomenon. The dynamics and underlying meaning of the phenomenon itself are not represented at the phenotypic level, where the analysis "begins directly with an object's current features and manifestations" (Vygotsky, 1978, p. 62). To take the investigation of social processes to the level of explanation, it is necessary to examine the genesis of a phenomenon "wherein a phenomenon is explained on the basis of its origin rather than its outer appearance" (Vygotsky, 1978, p. 62). Researchers must discover how a certain outcome is achieved and for what purpose in order to gain a clear understanding of the nature of both the process and the outcome.

Most researchers in the field have overlooked the fact that "the meaning of the overall effect of a group decision depends upon the nature of the process itself" (Lewin, 1958, p. 197). It is not until the process itself is examined that investigators will be able to understand or possibly even be able to identify a final product of social interaction. In order to examine social processes at the phenotypic level it is necessary to implement an investigative style that will

capture the essence of the phenomenon of interest. To achieve this end, social psychologists must change the unit of analysis from one that operates at the individual level to one that operates at the social level. That is, the social psychological researcher will have to make his or her observations, not of the reactions of the isolated individual to certain stimuli, but of the interactions themselves. From there, investigators will be able to discover what it is that the phenomenon accomplishes at the social level, and this, in turn, will reveal the nature of the final outcome.

#### Conformity Research

The investigative paradigm that has been used in conformity research has been limited to measuring the degree to which a minority defers to some majority (or, as in more current research, a majority defers to some minority). It would seem, however, that the outcome, in this case conformity, presupposes the process. The question investigated is based upon the final product; that is, does an individual conform under certain prescribed circumstances, and to what degree? The process by which the outcome is attained is not

considered at this stage of the investigative procedure. Nor is the process included in the actual investigation. As mentioned in Chapter 1, the conformity effects attained through the traditional style of research may be little more than an artifact of the experimental situation itself. It may even be that researchers have defined their knowledge product before actually having enough information with which to make an informed decision as to exactly what that product is.

"Most models of interpersonal persuasion presuppose a one-way channel from speaker to audience" (Solano, 1989, p. 39), and although some researchers include audience behaviour in their investigations, this approach "still does not examine the process of persuasion" (Solano, 1989, p. 39). There is a general lack of research on social influence where people are allowed to interact and communicate freely with each other in a social setting. But, if we are going to study social influence,

it is important [to recognize] that a social standard to be changed [or created] does not have the nature of a "thing" but of a "process".

(Lewin, 1958, p. 207)

This requires a move away from the individual level of investigation where the concern is limited to the individual behaviour or reaction to certain variables that have been designated as "social" by the researcher. In the case of conformity research, social usually means nothing more than the presence of the opinions of other people. To bring conformity research to a level where the social nature of the process can be examined, it is necessary for social interaction to occur. This means that, instead of the manipulation and examination of a predefined experimental outcome, the investigation will be a procedure of discovery whereby the social process itself is examined; that is, the investigation will operate at the level of explanation rather than description.

Although classic conformity research has bypassed the process through which social influence occurs (in preference for a measurable final product), the existence of a process of social influence has gone unquestioned. The fact that a group exerts influence on an individual to conform so that a uniform decision or statement is achieved is a generalization that is

"hardly newsworthy" (Kelley & Thibault, 1968, p. 71). The generation of what has come to be defined as social influence, however, is achieved through interactive processes. In order to understand the process, there must be a way to observe it, and this can best be achieved by examining the discourse of people creating or changing a social standard together. The nature of the research must, therefore, be one where the interactional nature of the process is maintained so that the interaction itself, rather than the superficial characteristics of the final product, can be examined. In interpersonal interaction the participants usually engage in some means of communication in order to share ideas, opinions and/or information. In face-to-face interaction the discursive process most often used is that of conversation or dialogue. If social psychological researchers were to allow people to discuss their decisions freely with each other, we would better understand exactly what is occurring at the social level. I propose a move away from the standard, non-communicative paradigm used in conformity research to one where we can rediscover the phenomenon of interest:

the process of social influence. The research to be described here approached the issue of social influence from a perspective which focused on the process of interaction and not on the final behavioural product.

#### A Discursive Approach

A central assumption of the present thesis is that the obvious way to move away from such a narrow and limited focus and take a broader, more dynamic approach, is to examine language as it operates in social interaction:

It is important to realize that language is a very distinct, very specifically patterned means of communication. All known human societies have been found to possess such means (Fraser, 1978, p. 128).

Because language is such an exceptional feature of human life in societies, it must surely follow that interpersonal communication is an inherent part of human social life.

It is paradoxical, then, that modern social psychologists have paid so little attention to language use. . . . The study of language has been left mainly to cognitive and developmental

psychologists . . . but because they aren't social psychologists, they have largely neglected the social bases of language--how it is instrumental in social processes and how it is shaped by those processes. (Clark, 1985, p. 179)

The investigation of communicative practices in mainstream psychology has remained largely at the individual level through the study of language itself (as opposed to communicative or discursive processes). Interest in intraindividual processes of language production and comprehension and the rules of syntax have occupied centrestage (Clark, 1985; Edwards & Potter, 1992).

The investigation of the discursive process as a means of understanding other social processes "is a relatively new approach in social psychology" (Potter & Wetherell, 1987, p. 7) and, as such, has not yet been given much consideration in the mainstream. In other words, discourse--one of the most important social processes that connects individuals to one another--has been virtually ignored:

In . . . social psychology, understanding of everyday practices has been deformed by a

combination of methodological prescription and a failure to theorize language as the primary mode of social activity. (Edwards & Potter, 1992, p. 12)

As well as the sociohistorical reasons already mentioned, this failure may be due in part to a longstanding attitude that "scientific principles in the field of communication are not sufficiently developed to provide clear-cut answers" to questions about interpersonal interaction (Hovland, 1958, p. 137). Another possible reason for the widespread neglect of discourse as an analytical tool is that

language is so central to all social activities it is easy to take for granted. Its very familiarity sometimes makes it transparent to us. (Potter & Wetherell, 1987, p. 9)

Recently, however, some researchers have recognized the importance of discourse as an area of study and have put their research energies into developing principles of communication and social interaction (e.g., Duncan & Fiske, 1985; Potter & Wetherell, 1987; Middleton & Edwards, 1990; Clark, 1992; Edwards & Potter, 1992).

In reaction to some of the major research issues

already discussed, Edwards and Potter (1992) have proposed an outline for a qualitative discursive psychology. Their discursive action model is an attempt to amalgamate and integrate a body of research that has investigated certain intraindividual processes through the analysis of discourse. "The focus of discursive psychology is the action orientation of talk and writing" (Edwards & Potter, 1992, p. 2).

Theoretically, this means a move away from the focus on individual cognitive functioning. What this group of researchers intend is a marriage between a social, interactive perspective and a cognitive psychology of which "discourse . . . has to be the unifying theme" (Edwards & Potter, 1992, p. 15). More specifically,

The principle tenet of discourse analysis is that function involves construction of versions, and is demonstrated by language variation. (Potter & Wetherell, 1987, p. 33)

Their approach can be easily and appropriately extended to the areas of study covered in social psychology. In fact,

the study of language is particularly vital to social psychology because it is simply the most

basic and pervasive form of interaction between people. (Potter & Wetherell, 1987, p. 9)

To achieve this in the research setting, the discursive interaction itself must be defined as the unit of analysis. The discourse that occurs between people can be used as an observable account of how certain social processes proceed.

#### Developing a Method of Analysis

The previous sections have dealt with the way in which data appropriate to the investigation of social processes should be generated. Another important consideration is how the data, once obtained, should be analyzed. A process-oriented approach to social psychological experimentation that operationalizes interaction as discourse leaves the researcher with a set of qualitative data that requires a different kind of analysis from that which is normally used in quantitative research:

The research questions discourse analysts do focus on are broadly related . . . to construction and function: how is discourse put together, and what is gained by this construction. (Potter & Wetherell, 1987, p. 160)

Research that has approached interpersonal processes from a dynamic, genotypic perspective begins with a setting where individuals or groups of individuals have the opportunity to interact with each other. This opportunity may be incorporated into an experimental setting or it may exist naturally as some real life event. For example, Clark and Wilkes-Gibbs (1986) were interested in whether people collaborated to create a shared system of reference and, if so, how. In this case, the method that best served the investigators was one that had the potential to generate the phenomenon of interest without interference. And, because the dynamics of the process were also of interest, the research had to be conducted in such a way that there would be a permanent record of the interaction for intensive analysis. For these reasons (and for reasons of historical dominance within the discipline), the investigation was conducted in a laboratory setting and the kind of task employed was prescribed by the researchers. Albeit, this scenario does not seem far removed from the traditional style of research, there are some major differences. First and foremost, the participants had the freedom to talk with

each other in whatever manner they chose. (I use the word "talk" here specifically because they were separated by a partition and, therefore, could not communicate with each other nonverbally). Secondly, the unit of analysis was the collaborative discourse generated within each interaction. Other researchers have taken a more ethnographic approach and turned to events that occur in everyday life (e.g., Potter & Wetherall, 1987; Middleton & Edwards, 1990; Edwards & Potter, 1992). In these cases the researchers examined phenomena at a broader social level than the one described in the first example. They established how certain interindividual processes operated at the level of society, as well as how processes that have been considered only at the intraindividual level operated interindividually.

The present research is concerned with the process through which people make decisions interactively, or how the people collaborate to reach some decision. The available means for conducting qualitative analyses are not extensive, and are more or less in the early stages of development. Analyzing the content of discourse as it occurs in natural conversation is a painstaking

process where there is no widely developed and accepted system of analysis; each individual research project must develop a system of analysis that is appropriate to the project-at-hand. Taking into consideration the negative aspects of traditional social psychological theories and research and implementing the alternative style of discourse analysis, I examined the process through which two people come to agree (or to disagree) about some basic perceptual stimuli. Whether or not this is considered conformity is secondary to this thesis at this stage of the investigation.

## CHAPTER 3: RATIONALE AND RESEARCH DESIGN

Chapters 1 and 2 outlined some concerns and considerations with respect to North American social psychology. A major factor is the North American hegemony of individualism reflected in social psychological theory and methodology. This subsequently limits social psychological investigative practice through the kinds of research questions that are asked, the research designs and analyses that are employed, and the results that can be obtained. It is necessary for social psychologists to recognize the limitations of the traditional mainstream approach and to attempt to move beyond those boundaries. One way of achieving this is to always begin the investigation at the social level of human functioning. In this thesis, I propose such an alternative method and system of analysis; one that will investigate how people interact through their discourse to collaborate in a simple decision-making process. I intend a shift away from the individualistic, phenotypic orientation of traditional research to one that is based upon the social interconnectedness of individuals and the processes through which this connectedness occurs.

### Research Design

In designing the present research, my first concern was with how to generate data that would capture the dynamic nature of a social process. The research had to reach beyond the individual level of functioning and beyond static, individual behavioural products. Previous research (e.g., Clark & Wilkes-Gibbs, 1986; Schober & Clark, 1989; Brennan & Clark, 1991; Bavelas, Chovil, Lawrie, & Wade, 1992; Chovil, 1992; Coates, 1991; Bavelas, Chovil, Coates, & Roe, in press) has successfully studied unregulated interaction between two or more people in an experimental setting as the vehicle through which social processes are manifested. In order to uncover the social process through which people collaborate to make simple decisions (such as the kinds made in traditional conformity research), they should be allowed to do just that; that is, the participants must be given the opportunity to interact and to discuss the subject matter freely with each other. I began my investigation, therefore, at the social level of interpersonal interaction, with real dyads (no confederates) in face-to-face interaction.

My next consideration was how to observe the phenomenon of interest. That is, the selection of a unit of analysis through which the decision-making process would most clearly manifest itself within the interaction. Traditional social psychological research has generally focused on some pre-defined outcome or product where the meaning is derived from its superficial characteristics and not from its genesis. Applying the basic tenet of the discursive action model (Edwards & Potter, 1992), I looked to the discourse that was generated within the interaction for evidence of the social process that emerged. This approach is based on the premise that the dialogue produced between people is not merely the transmission of information. Rather, it functions to achieve some purpose at the social level, ranging from simply greeting someone to recreating a shared experience to solving a complex problem together. If we examine the function of the talk that is generated within a certain kind of interaction, the social processes that emerge can be traced and identified.

After having selected the unit of analysis as dialogue rather than outcome, the next problem to be

addressed was how to ensure that the interactants would produce dialogue that would show, for the present case, how simple decision-making is achieved collaboratively. In order to investigate a specific kind of social process, the basis upon which the dialogue is generated (i.e., the task given to the participants) can be chosen in advance by the researcher so that the process of interest will in fact occur. For example, in her investigation of spontaneous irony in dialogue, Coates (1991) employed a series of tasks (e.g., planning a dinner party of disliked foods and inviting appropriate guests) that would be likely to generate instances of irony in the discourse. With respect to the present research, a pilot study (Coughlan & Johnson, 1991) had already shown that when both stable stimuli (scent mixtures) and unstable stimuli (the autokinetic effect) were presented to two people, they would generate dialogue about those stimuli. More specifically, when two people were in a room together and were presented stimuli about which each was asked to make a simple decision (i.e., what the scent mixture consisted of and how the light moved), all of the participants chose to discuss the stimuli with their partners in order to

make their decisions. In the present study, I used stable perceptual stimuli somewhat analogous to the kinds used in traditional conformity research, such as Asch (1958).

The selection of an appropriate sample size for the analysis of discourse is also different from the norm in mainstream social psychological investigative practice:

Discourse analysis, at least at present, is an extremely labour-intensive approach. . . . There is a danger here of getting bogged down in too much data and not being able to let the linguistic detail emerge from the mountain of texts. (Potter & Wetherell, 1987, p. 161)

In this style of investigation, therefore, too large a sample can actually be detrimental to finding meaningful results because the necessary intensive and complete analysis becomes impracticable. Therefore, I used a relatively small sample (24 dyads) who completed four tasks. Each of these tasks generated two or more minutes of dialogue which, in terms of discourse analysis, is an adequate amount; a mere minute of dialogue can provide a rich source of information. In

the final analysis, I examined only one of these tasks, again to avoid losing the detail of the process of interest in vast quantities of text.

As mentioned previously, the stimulus and the task were provided by the researcher. However, how the interactants accomplished this task was not regulated or interfered with in the experimental setting. One might assume, then, that each dyad would simply use whatever means these particular participants wished to complete the task-at-hand, so that the discourse within each interaction would be completely dependent on who produced it and would not be comparable across dyads. This is not a reasonable assumption. In everyday social life, people continuously and efficiently interact and communicate with each other in a huge range of circumstances, and about an infinite number of issues. Is it plausible that, for each different kind of encounter, we develop, on the spot, some completely unique approach for each new situation-at-hand? Superficially, at the phenotypic level, it could appear that the dyads were all doing something completely different because the words they used were different. But, according to the discursive action model (Edwards

& Potter, 1992), it is the patterns in the discourse that must be recognized. This pattern is revealed not by the appearance of the dialogue, but by its function-  
-by what is being accomplished through the interactants' discourse. If we can identify the functional pattern in the dialogue, we can discover what is occurring at the social level.

The lack of a standard methodology and the general lack of research employing a discursive model in social psychology presented the problem of how to conduct the actual analysis. Traditionally, psychologists have relied heavily on a deductive approach in the investigative process (this, no doubt, being seen as one way to satisfy the requirements of a scientific approach). The exploratory nature of the present research, however, required that the identification of the process be the first order of business. In other words, because there is no pre-defined product about which to make predictions, the deductive method was not a plausible approach to use. On the other hand, a purely inductive approach was not appealing because, given enough time and imagination, I could always find a (spurious) pattern in the data. I therefore used an

analogue of a statistical cross-validation strategy (e.g., McNemar, 1969, p. 208), adapted for my data. In the first phase, a random subset of 4 dyads were analyzed intensively for patterns in these dyads' discourse. My discoveries in this phase then led me to a literature relevant to my data (see below), from which I constructed a model for the process the dyads seemed to engage in. Based on my observations and the model, I then developed formal analytical rules for identifying key functional aspects of the discourse. I established reliability for these rules with an independent analyst and then applied them to the remaining dyads.

Thus, I chose an approach which did not require that constraints be placed on the investigation before the actual analysis had begun, but which permitted confirmation of subsequent hypotheses empirically. Through induction I was able first to identify, from the data themselves, the emergence of the social process within the discourse. Specifically, after initially viewing the random subset of dyads, I recognized that the pattern that emerged was similar to that of the social construction of scientific facts

described by Woolgar and Latour (1979) and Latour (1987). From that point, I was able to apply their outline of the construction of a scientific fact to my data; this process will be explained more fully in the next section. In general, then, I began the overall analysis inductively and, during the analysis, found and applied what I considered to be a relevant framework.

As mentioned previously, I began the actual analysis by viewing a random subset of the data themselves. In the initial inspection of the data, I decided that, because of the nature of discourse analysis, it would be best at this stage of the investigation to focus on dialogue that appeared to be the simplest in form. Of the four tasks used in the present study (see Method and Analysis), the one that involved the least complicated stimuli also produced the least complicated dialogue, so I chose it for the analysis in this thesis.

The next major step was to develop a method of analysis with which to examine the phenomenon. Again, there is no one method prescribed within the discipline that is applicable to this particular kind of

qualitative data. Traditional social psychological research generally produces some kind of quantitative data for which there is a well-established set of analytical tools that can be readily applied. Typically, the research adopts a paradigm that is prescribed by the standard analytical (statistical) tools. For example, independent variables are defined and manipulated in a controlled situation so that some pre-defined dependent variable can be measured and compared across conditions. This approach, however, is inappropriate for the analysis of discourse:

There is no discourse equivalent to feeding results into a computer and then making sense of a limited pattern of significant and insignificant differences. (Potter & Wetherell, 1987, p. 161)

Here, it is imperative that the researcher remember the essence of the social process and in no way interfere with its dynamic nature. The specific discourse analysis and any statistical analyses are generated by the data. Again, this is why an inductive approach to these data was necessary.

#### The Social Construction of Facts

Discourse is not a random arrangement of

utterances. It takes on a specific form suited to the task-at-hand, and the utterances therein function to take the participants from one place to the next, in this case, from some notion of what is possible to the notion of what is.

The constructive processes are to be found in the organization of talk, and the situated ordinary reasoning it embodies. (Edwards & Potter, 1992)

The conversations produced by the dyads in my random subset appeared to follow a pattern that resembled a kind of hypothesis-testing procedure. One or both of the interactants would offer a possibility or an opinion--an hypothesis--that the dyad would eventually either accept or reject. As mentioned above, the organization of the discourse in these data resembled, at a much less complex level, the process outlined by Latour and Woolgar (1979) and Latour (1987) through which scientific facts are constructed by working scientists. Therefore, these findings will be briefly described here.

A fact is generally conceptualized as dichotomous; either something is a fact or it is not. In contrast, Latour and Woolgar (1979) suggested there is a

continuum of factness that moves through a series of social and discursive processes (Edwards and Potter, 1992, p. 106, refer to this continuum as a "hierarchy"). Initially, something is presented as a non-fact in the form of an hypothesis or a proposal to be considered by those involved or interested; then, social and communicative processes move the non-fact further toward being established as a fact.

The constant fluctuation of statements' facticity [allows] us approximately to describe the different stages in the construction of facts. (Latour & Woolgar, 1979, p.236)

Through their investigation of scientific inscription practices (i.e., journal publications) and the activities and discourse that took place in a laboratory setting, Latour and Woolgar (1979) identified a hierarchy of statement types that reflected the construction of a scientific fact. Like the discursive action model outlined by Edwards and Potter (1992), the stages of scientific fact construction were identified according to how changes in the language altered the function of the discourse. At the lowest end of the continuum were conjectures and

speculations that could be subsequently altered to become tentative suggestions to be investigated further. The mid-range of facticity included claims about other statements (e.g., "X is reported to be true/false"). From this level, a statement could move toward being a fact when it was explicitly expressed as a statement of fact (e.g., "X is true/false"). And finally, at the highest end of the continuum, a fact can simply be taken for granted within a series of surrounding statements. "The result of the construction of a fact is that it appears unconstructed by anyone" (Latour & Woolgar, 1979, p. 240).

Ultimately, the construction of scientific facts allows both individual researchers and the scientific community to create order from what began as disorder. "A fact is what is collectively stabilised from the midst of controversy" (Latour, 1987, p. 42). At a more micro-level, the discourse that was examined in the present research also allowed the participants to create some kind of order out of disorder collaboratively through their co-construction of facts. It is this process of the co-construction of fact that I identified and examined in the discourse generated

for this thesis. I did not seek to apply all of Latour's (1987) findings to my data. However, in their principle of degree of facticity in the social construction of scientific facts (Latour & Woolgar, 1979; Latour, 1987), I recognized that a similar process was unfolding in the dialogue being examined here.

## CHAPTER 4: METHOD AND ANALYSIS

In the co-construction of social facts, individuals work collaboratively to come to a joint decision and create some truth about which they agree. This social process manifests itself discursively and can, therefore, be observed objectively through dialogue. As discussed in Chapters 2 and 3, it is imperative that the methodological procedures used to generate data and subsequently to analyse these data are appropriate for the investigation of social processes that are inherently qualitative in nature. In this Chapter, I will describe in detail the method I developed and applied to investigate the co-construction of social facts.

## Method

Subjects

Fifty-four subjects were recruited from Psyc100 classes for research credit and from the Psychology Department's volunteer subject pool. None of the subjects who participated were, to their knowledge, colour-blind, had any serious food allergies, nor did they have any serious olfactory problems. These subjects were formed into 27 dyads according to the

schedules of the subjects.

Three of the dyads could not be used and were subsequently replaced because of some irregularities in the instructions. Two other dyads did not approach the task according to the instructions (i.e., they performed a different task) and were, therefore, excluded from the analysis. This left a total of 22 analyzable dyads.

The dyad members were strangers in all but one of the dyads. This dyad was not discarded because their relationship did not seem to affect the completion of the tasks.

### Stimuli

The stimuli were selected so as to be somewhat analogous to the kinds of perceptual stimuli used in traditional conformity research and also for their similarity to situations that could be encountered in everyday life. There were four different stimulus tasks presented; two tasks involved visual perception and the other two involved olfaction. The visual stimuli were two collections of different shades of paint chips (i.e., the small cards available in paint stores). One collection consisted of eight chips that

were shades of white and the other consisted of 12 shades of blue. The task was to order each set from lightest to darkest. The olfactory stimuli were two different mixtures of extracts and syrups that are used to flavour food. One mixture combined maple, almond, and peppermint extracts and the other mixture consisted of coconut and strawberry syrups, and peppermint extract. The task was to identify the ingredients of each mixture.

#### Procedure

The order of the stimulus tasks was counterbalanced with the constraint that neither the two olfactory stimuli nor the two visual stimuli were presented contiguously. There were, therefore, eight different orders of presentation, and each dyad was randomly assigned to one of those orders.

The instructions explicitly directed the participants to discuss the stimuli with each other until some conclusion or conclusions could be reached. Each dyad was instructed as follows:

I am looking at how people work on perceptual problems together. I would like you to work together (a) to decide how these shades of colour

should be ordered from lightest to darkest, or (b) to figure out what three ingredients make up this particular scent. You don't have to agree however. Just let me know when you're finished. (A pilot study by Coughlan and Johnson, (1991) showed that tasks such as the ones used in the present study should generate an adequate amount of discourse for the ensuing analysis: approximately 2 minutes per stimulus.)

The dyads were videotaped in split screen format with the knowledge and permission of the participants, in the Human Interaction Lab at the University of Victoria. Videotaping occurred only while the dyads were performing the task. After viewing the tape, each of the participants signed a permission form stating who could view his or her own videotaped session.

#### Analysis

Four dyads were randomly chosen for preliminary examination by the researcher. The dialogue generated during the blue task was transcribed first. This task appeared to be the least complicated for the dyads to complete and to generate the least complicated dialogue of the four tasks.

Extensive examination of the discourse generated in the blue task showed that the participants worked together until they created a list or lists of the different shades of blue that they agreed upon. To create a final list(s), the participants discussed all of the paint chips until they established where to place each colour in the order.

I examined the dialogues with respect to how the talk therein functioned to advance the task-at-hand. In general, I found that the dialogue could function to (a) introduce the next item to be discussed, (b) present an individual opinion or assessment, (c) acknowledge agreement at the individual level, (d) present the final (joint) decision, (e) summarize the list-so-far, (f) provide a grounding place (Brennan & Clark, 1991) in the task when the participants became confused, or (g) validate that a final decision had been reached. These functions could be accomplished by means of both verbal and nonverbal communicative acts (see below for examples). There were also areas of the dialogue that operated at a more meta-communicative level (e.g., comments about the task itself or about the research situation). Because these utterances were

not directly related to the completion of the task, they were not included in the analysis of function and were considered non-scorable for the purposes of this thesis.

As noted in Chapter 3, analysis of the random subset suggested that the discourse through which the completion of the task progressed resembled the process of establishing scientific facts (Latour & Woolgar, 1979; Latour, 1987). The seven functions listed above parallel the different statement types that produced the hierarchy of factness outlined by Latour and Woolgar (1979). In the dialogues generated for this thesis, there seemed to be a similar process of social construction which moved along a continuum of factness that ranged from the statement of a non-fact through to an accepted (social) fact. In other words, what came to be accepted by the participants as a fact at the social level usually began as an hypothesis or suggestion and then moved along the continuum through individual statements or assessments of fact until, finally, a decision acceptable to both was achieved. I identified specific functions in the discourse that were analogous to the continuum of facticity

represented by the statement types distinguished by Latour and Woolgar (1979): Statements of Hypothesis, Statements of Individual Fact, and Statements of Social Fact. Different combinations of these functions in the discourse led to the development of a final list(s) and the completion of the task.

#### Statement of Hypothesis

One or both of the participants could introduce an item or items for consideration (i.e., the next item to be discussed), but with some degree of uncertainty. This kind of utterance functioned like the conjectures, speculations, and tentative suggestions that represented the low end of the continuum of factness described by Latour and Woolgar (1979). The speaker only suggested a possibility without displaying any commitment to the item's placement in the order. The speaker used tentative language (e.g., "looks like", "I think", "should be", "I guess", "I would say") or used intonation patterns that indicated uncertainty (e.g., a rise in intonation at the end of a statement that made it sound like a question, or holding part of a word longer than usual as in "ssseven" or "elevennnn"). These functioned as implicit requests for the other

person's opinion. The speaker could also show uncertainty by comparing items (e.g., "it's either", "it's between") or by directing the other person to compare items (e.g., "check twelve and three"). Finally, the speaker could explicitly request the other person's opinion by asking direct questions, such as "should six be next?" or "what do you think?".

#### Statements of Individual Fact

This group of utterances functioned to allow one or both of the participants to communicate what each individual knew to be true about the item; that is, what each person's individual assessment of what the next item actually was, from his or her own perspective. These kinds of utterances functioned in the mid-range of facticity of the Latour and Woolgar (1979) model, where a claim is reported as a fact by someone, but there is not a consensus as to its truth. The speaker did not use tentative language here; he or she stated outright an individual fact or assessment (e.g., "the next one is six"). These utterances could: (a) function to introduce the next item on the list (e.g., "and then two"), by-passing the Statement of Hypothesis, or (b) provide individual opinions about

the item that had been proposed or introduced (e.g., "yeah, that one's next"). Often, Statements of Individual Fact looked like simple agreements (e.g., "yeah", "mhm", "ok", or nodding), but they always referred to the item being discussed. In other words, a simple display of agreement at the individual level would translate as "yes, I agree, that is the next on the list". Also included as Statements of Individual Facts were utterances that showed the individual did not have his or her own individual assessment of the next item (e.g., "I don't know) or questions related to the other person's individual assessment, usually implying disagreement (e.g., "You think five's next?").

#### Statements of Social Fact

These utterances functioned to confirm the participants' joint acceptance of the individual assessments about where an item or group of items would be placed in the list. That is, Statements of Social Fact functioned to show consensus about the previously presented individual fact at the social level or to state the established social fact(s). These utterances were comparable to the high end of the continuum of factness in the Latour and Woolgar (1979) model, where

something was explicitly stated as a fact or was taken for granted as such. In the discourse examined here, there were several ways that this could be accomplished.

(i) The easiest Statement of Social Fact to identify was a summarization of the social facts that had been established so far. The summaries were offered in one of two ways: (a) by reciting the list of the identifying numbers of the items they had agreed upon so far (e.g., "ok so we've got seven, four, three, eight and ten" meant that these items were established as social facts), or (b) by tallying the quantity of items agreed upon so far (e.g., "one, two, three we've got four so far").

(ii) The two points above could also be achieved nonverbally. One person had the pen and paper and wrote down the list of items. This was understood as the establishment a social fact although no utterance had been made.

(iii) Related to the summarizing of social facts was a return to or a restatement of the last established social fact (e.g., "ok well we agree on three anyway"). This usually occurred when the

participants were having trouble deciding on or agreeing about which item should be next on the list, and it functioned as a grounding place (see Brennan & Clark, 1991) in the task from where they could start again.

(iv) Some of these utterances resembled Statements of Individual Fact, especially those utterances that appeared to be simple agreements. At the social level, displays of simple agreements could be understood to show that the participants had moved beyond stating individual assessments and were coming to a consensus about the placement of an item (i.e., a simple agreement, "yeah", meant "yes, we agree that item is next"). These utterances functioned to formulate a social fact from the individual assessments. These utterances were not related to the item itself, but to the acceptance of the individual opinions about the item; that is, they operated at an interactional or social level and were informationally redundant. (N.B. These usually appeared to be redundant agreements.)  
For example:

A: "Twelve's lighter than two"

B: "Yeah"

A: "Ok"

B: "Yeah twelve"

The first two statements present each speaker's individual assessment that twelve should be next. The final two utterances go on to confirm that they both agree that twelve is next and establishes a consensus of those individual facts. "Ok", although it looks like a simple agreement, can be understood to mean "Ok, we agree that twelve is next". And, "Yeah twelve" is informationally redundant with the first two utterances and, therefore, functions at the social level showing that a social fact has indeed been formulated.

(v) A restatement of what had already been presented as an individual fact could function to show that a fact was accepted by the dyad as a social fact. For example:

A: "six is next"            "six"

B:                            "yeah"

In this example, Both A and B present their own individual assessments first, and then A repeats "six". Note that this is informationally redundant with the two utterances already made.

(vi) Another function of agreement-like utterances

at the social level was the validation that a fact had been established by both the participants. Unlike the function described above in (iv) where the utterance was actually formulating a fact at the social level, these utterances were final comments about the already-established social fact. For example:

A: "So we've got four next" "Yeah"

B: "Four...Yeah"

First, speakers A and B state the social fact that four is next. Then, they both go on to re-affirm or validate that decision by uttering "yeah". Here, "yeah" functions as an agreement about a social fact at the social level (i.e., that they both have agreed and established that four is next). It translates as "Yes, we have established that as a fact between us".

#### Reliability

A system of rules for identifying the functions was developed. These rules were then tested for reliability by a new, independent analyst on 18% of the data (four dyads). One dyad from each of the orders of presentation (i.e., first, second, third or last) was selected; these ranged from a medium to a high degree of scoring difficulty (in fact, none of the dialogues

were easy to analyse).

The second analyst was provided with transcripts of the conversations to accompany the videotapes and was instructed to use the rules to decide whether an utterance functioned at the hypothesis level, the individual level, or at the social level, or if was not considered to be part of any of the levels identified here; see Appendix I for the full set of rules. It was pointed out to the analyst that one speaking turn could include more than one function, depending on what was being said and what it was intended to do within the dialogue. For example,

A: Which is the darkest? Two or Ten? Ten. [nods]

In this example, the first part of speaker A's utterance functions as a Statement of Hypothesis when she requests an opinion ("Which is the darkest? Two or ten?"). The second part of the utterance functions as a Statement of Individual Fact when she answers her own question ("Ten. [nods]"). (There were no explicit rules for sub-dividing the utterances according to changes in function and, as noted below, the reliability for identifying changes in function was calculated separately.)

After a training session using the dialogues generated by the original four dyads from which the rules were developed, the analyst independently applied the scoring system to the four dialogues selected for the reliability check. He marked his final decisions by underlining with different coloured pens (to represent each of the functions) the areas of talk that functioned at each of the three levels.

The reliability was initially calculated according to how often the independent analyst's underlining of the functions agreed with my underlining of the functions. In other words, the underlining was compared and an agreement was defined according to the utterances that were identified as executing the same function. Using this method of calculation, the reliability was 81.89%. Although many researchers are content with much lower reliability, I felt this percentage of agreement was somewhat inadequate. To find an explanation, I re-examined how the reliability was calculated and discovered that there were actually two different kinds of decisions being made. One decision involved the recognition of a change in function within the dialogue (i.e., dividing an

utterance into more than one function) and the other decision involved the identification of the (new) function of the dialogue. I am, at this point, interested in the latter; therefore, first I calculated the reliability separately for identifying a change in function (87.4%) and then, from those agreements, I calculated the agreements that concerned the function of the talk (i.e., what level the talk functioned at). This method is analogous to the psychometric practice of factoring out different sources error variance from reliability coefficients (see Anastasi, 1982, pp. 117-120). The reliability for identifying the function of the dialogue was 90.01%.

Further comparison of the two sets of analyzed transcripts showed that most disagreements occurred in the identification of Statements of Individual and Social Facts. The discrepancies were in the identification of individual functions as social functions or vice versa. One possible explanation for this would be the similarity of the words used to accomplish both of these functions. For example, simple agreements (i.e., "yeah") could operate at either level and had to be explicated with respect to

the surrounding talk, according to what they accomplished within the dialogue. Another source of disagreement at the individual level, although minimal, was the identification of a Statement of Individual Fact as being a Statement of Hypothesis. These disagreements could be attributed to differences in the scorers' decisions as to whether the speaker's intonation was rising (which would make the utterance function at the hypothesis level) or was relatively stable (which would make the utterance function at the individual level).

## CHAPTER 5: RESULTS AND INTERPRETATION

Examination of the functions that were reliably identified in the original analysis revealed that there were clear patterns in the dialogues. First, the nature of the task seemed to lead to a relatively standard procedure through which the dyads progressed to complete the task. They had been instructed to list the stimuli in order from lightest to darkest, and so the dyads discussed each stimulus in turn until both participants were satisfied with their decision. Further, the format for discussing each stimulus often began with a Statement of Hypothesis, followed by Statements of Individual Fact by one or both of the interactants, and ended with an acceptance of the individual assessments, Statements of Social Fact. In some cases, the Statement of Hypothesis was replaced by an immediate Statement of Individual Fact, followed by Statements of Social Fact. Overall, these discussions were succinct and straightforward. This format, however, did not hold when the interactants were having difficulty deciding which stimulus was next or when they did not agree on which was next. These discussions were much longer and the dialogue contained

many more changes in function. The interactants often repeated Statements of Hypothesis and Statements of Individual Facts several times before they could reach some kind of agreement. In some instances, the participants could not agree on a stimulus at all, but they did compromise and agree to disagree. In other parts of the dialogues, the interlocutors confirmed with each other where they were in the task so far and this served as a calibration point from which to continue. These sections of the discourse were very short in terms of function and only used Statements of Social Fact. Based on the above apparent regularity and patterns contained within the dialogues, I conducted the following quantitative analyses to confirm my observations. The quantification of the above pattern will constitute the remainder of this chapter.

#### Decision Units

I began this part of the analysis by separating the dialogues into what I will call decision units. The nature of the task created natural decision units based on each stimulus. A decision unit was defined as the discourse leading to and including the decision

made about a particular item. These units were identified according to the simple content of the discourse. For example,

A: Eleven?

B: Eleven's lightest

A: Okay [writes it down]

B: Which one's the darkest? Two or ten? Two  
[nods]

A: I think two. Okay, I'll put two over here  
[writes]

B: Yuh [nods]

In this example there are two decision units. The first one concerns the placement of item number 11 and begins with speaker A offering it as a possibility ("Eleven?"). This decision unit ends when speaker A writes it down as their final decision and they move on to the next item. The second decision unit begins with the suggestion that they look for the darkest shade ("Which one's darkest?") and ends when speaker A writes down their final decision and speaker B validates the final decision ("Yuh [nods]").

Decision units could consist of different frequencies and combinations of the three functions

(Statement of Hypothesis, Statement of Individual Fact, and Statement of Social Fact). Here, and for the remainder of this Chapter: H represents a Statement of Hypothesis; I represents a Statement of Individual Fact; S represents a Statement of Social Fact; {ns} denotes a part of the dialogue that was considered non-scorable; and / marks where a decision unit ends. An example of what a conversation could look like in terms of its functions, after dividing it into decision units is

I/HISSS/{ns}/HHISS/IIS/HI/IISSS/H{ns}I/HIS{ns}SSS/  
IHIHISSS

The average number of decision units per dyad was 13.54 and the average number of functions per decision unit was 3.78.

An agreement was a decision unit where both participants concurred about the placement of an item. It is interesting to note that, of the 22 dyads that were analyzed, 16 dialogues contained decision units where the participants disagreed with each other or had difficulty coming to an agreement. For example:

A: I think four is darker than twelve. What do  
you think?

B: No

A: You don't think so?

B: I think twelve is darker

These dyads, however, were still able to create a final decision list, either through the negotiation of an agreement about the placement of an item or through an agreement to disagree. An example of a negotiation to agree is:

B: One

A: Do you think? I think nine's lighter than one

B: Oh yeah

B: Yeah nine

A: [writes] Nine then one

(Note that not all negotiations were this efficient). Even when the interactants could not agree about the item placement, they did come to agree about disagreeing, and then adjusted their final list accordingly. For example,

A: I think it's four

B: Oh I'll say twelve

A: You say twelve or four?

B: I'd say twelve but I'm not sure

A: Oh do you? Okay I still think four

A: {Do you want to do two different ones there?}

B: {Sure} `cus I think twelve is a bit lighter

A: Okay well we'll just go four, twelve [writes]

A: So this can go

B: Either way

A: Yeah

While disagreements did occur in 16 of the 22 dialogues, there were many more agreements than there were disagreements in the dialogues (232 agreement units vs. 19 disagreement units), and these two different kinds of decision units were examined separately in subsequent analyses.

Overall, there was a difference between the length of the decision units when the participants agreed with each other versus when they disagreed with each other. The disagreement units contained almost three times as many functions (i.e., frequency of H, I, and/or S) on average (mean = 9.63) as the agreement units (mean = 3.68). A dependent-measures  $t$ -test showed this difference to be significant,  $t(15) = 8.83$ ,  $p < .000001$  (2-tailed). This reflects the fact that disagreements were more complicated in that the interactants used more dialogue to reach a decision.

One other kind of decision unit was identified that was not definable as either an agreement or a disagreement. This decision unit served as a grounding or summarizing place for the dyad as they progressed through the task of ordering the stimuli. An example of grounding is,

A: And then I would say           three

B:                                   three [nods]

A: And then twelve?

B: YYYeah...yeah

A:               No...oh

A: Yeah three\*

B: What about four?

A: Three, twleve and four?

A: Ok, well we agree on three\*

The two utterances marked by an asterisk function as grounding places. In the first two utterances of this example, both interactants agree where to place number three, but then have trouble deciding on which stimulus should come next, twelve or four. They return to number three as the last stimulus they both agreed on as a social fact and continue to work from there.

Summarizations functioned in a similar manner

throughout the completion of the task and were often used at the end of the task as a final statement of the list of social facts. For example,

A: Ok, we've got them all anyway

B: Ok so eleven, six, seven, five,

A:                    six, seven, five, nine,

B: nine, one,            eight, three

A:            one, eight,                    twelve

B: twelve yeah, four, ten, and two            yuh

A:                    four, ten, and two

(Note how, in this example, the participants collaborated on the summarization.)

Grounding/summarizing units occurred in 16 of the 22 dyads and accounted for 47 (15.8%) of the total decision units. This kind of unit consisted exclusively of Statements of Social Facts, and the average frequency of this function was 1.77 per grounding/summarizing decision unit.

The specific functions of the grounding/summarizing units led me to examine their placement within the dialogues. Almost half (48.9%) occurred within or immediately after a disagreement (grounding), or at the very end of the task

(summarizing). The interactants used this kind of decision unit to calibrate with each other where they were in the task, especially when they had difficulty agreeing on a the placement of the next stimulus. Their proximity to disagreements further confirmed the collaborative function of grounding/summarizing units within the interaction. I also expected that grounding/summarizing units would occur later in the task as more items were placed on the list and found that this was indeed the case. The average position of the grounding/summarizing units within the dialogues occurred at a significantly later serial position (mean = 11.15) than did all other kinds of decision units (mean = 6.76),  $t(15) = 13.06$ ,  $p < .000001$  (2-tailed, dependent-measures).

#### Analysis of Functions

Within each decision unit, there were many different possible combinations of the three functions (both in the number of functions present and their order). I looked first at how often all three functions (H, I, and S, in any order) were present within one decision unit. There were seven possible combinations altogether: HIS, HI, IS, HS, H, I, or S

(where each function could appear more than once; for example, IHHISSS was considered an HIS, because all three functions were present at least once). The percentage of decision units that included all three of the functions regardless of their order of appearance was 44.3%. This was a significant number of decision units with respect to the other six possibilities, Chi-square(1) = 219.18,  $p < .001$ .

Table 5.1 shows the difference between the frequency of three-function decision units for the total agreement units and the total disagreement units.

Table 5.1

Decision units with H, I, and S in any order.

	% of Total Decision Units	% of Total Agreements or Disagreements
Agreements	86.4	49.1
Disagreements	13.6	94.7

A possible explanation for the difference between these two kinds of decision units is that, in agreement units the interactants could easily drop one of the functions, especially the Statement of Hypothesis, without affecting the outcome of the decision unit.

Therefore, it is not surprising that only about half of the agreement units included all three functions. On the other hand, all three functions were present in almost all of the disagreements and this can be attributed the fact that the interactants were negotiating their differences and had to continuously check possibilities with one another (H) and offer individual assessments (I) until they were satisfied with their decision or decisions (S). (It is interesting to note here, that, in the one dyad where the participants knew each other, there was only one decision unit that contained all three functions. The hypothesis function was more or less completely dropped.)

(All of the Tables include a breakdown of the total decision units into percentage of agreements and disagreements. These percentages have been included merely for informational purposes. We would expect these large differences between the two kinds of units because the majority of the decision units were agreements, therefore, disagreements could only account for a small percentage of the total.)

Next, I examined the order in which the functions

appeared within the decision units. Because of the nature of the task, I assumed that a Statement of Hypothesis would generally precede a Statement of Individual Fact and a Statement of Individual Fact would generally precede a Statement of Social Fact. Indeed, this was often the case. Of the total decision units that contained both an H and I ( $n = 152$ ), 94.7% were in the order H->I. Of the total decision units that contained both an I and S ( $n = 177$ ), 82.5% were in the order I->S.

Table 5.2 and Table 5.3 show how many of the total agreement and disagreement units contained the H->I and the I->S orders, respectively.

Table 5.2

Decision units containing H and I, in the H->I order.

	% of Total Decision Units	% of Total Agreements or Disagreements
Agreements	90.3	97.7
Disagreements	9.7	73.7

When the interlocutors had problems agreeing upon which stimulus should be next, they often went back and forth between Statements of Hypothesis and Statements of

Individual Fact; in other words, the disagreement units usually started with some kind of I->H->I->H order. Although the decision unit may have ended with a Statement of Social Fact, the Statements of Individual Fact were generally followed by a Statement of Hypothesis. Alternatively, the agreement units progressed in a relatively standard format (H->I and I->S).

Table 5.3

Decision units containing I and S, in the I->S order.

	% of Total Decision Units	% of Total Agreements or Disagreements
Agreements	98.6	90.6
Disagreements	1.4	11.1

It is interesting to note that there were fewer units overall that contained H and I in any order than there were containing I and S in any order. This suggests that, of the three functions, the Statement of Hypothesis was most likely to be dropped. This reflects the idea, introduced in Chapter 4, that a Statement of Individual Fact could also function to introduce a new item and suggests that, as the dyads progressed through the task, they became more efficient

or more comfortable with each other.

I then limited my analysis to the three-function units and looked at the order in which all three functions occurred within each decision unit. There were six possible combinations: H->I->S, H->S->I, I->H->S, I->S->H, S->I->H, and S->H->I. (Recall that H->H->I->I->S->S->S would be counted as an H->I->S order.) For this particular task, the order H->I->S was of the most interest. It is reasonable to assume that the interlocutors would first tentatively introduce an item, then proceed to offer their individual assessments of the item, and finally move on to the social level and come to some agreement about the individual assessments. Overall, I found that in 80.3% of the three-function decision units, the functions appeared in an H->I->S order. Decision units that contained all three functions and were ordered H->I->S accounted for 35.6% of the total decision units. This represented a significant amount of the total decision units (as compared to the other five possible orders mentioned above), Chi-square(1) = 71.3,  $p < .001$ .

Of the total disagreement units (n = 19) that were

present in the dialogues, only two (10.5%) of these units contained the H->I->S order, and, of the total agreement units (n = 232), 34.9% contained the H->I->S order. Table 5.4 further distinguishes the differences between agreement and disagreement units.

Table 5.4

Decision units with H, I, and S in the H->I->S order.

	% of Total Decision Units	% of Total Agreements or Disagreements
Agreements	98.1	91.2
Disagreements	1.9	11.1

Most of the agreements that contained H, I, and S were in the H->I->S order. On the other hand, few of the three-function disagreement units contained the H->I->S order. These results show that disagreement units were less likely to take on a standard form, such as H->I->S, than the agreement units. The H and I functions often had to be repeated alternatively in the disagreements (e.g., I I H I H H I I S S).

Finally, I examined the placement of the H->I->S ordered decision units with respect to all other possible function orders. The H->I->S order represented the most complete, straightforward, and

formal way the dyads could co-construct a social fact. I, therefore, expected to find those earlier in the dialogues, when the participants were becoming accustomed to both the task and each other. The average serial position of the decision units that contained the H->I->S sequence (mean=5.66) was significantly earlier in the dialogues than were the average serial position of all other decision units (mean=8.15),  $t(20) = 5.33$ ,  $p < .00003$  (2-tailed, dependent-measures). This may reflect, among other things, the dyads dropping the Statement of Hypothesis as the interaction became more familiar and less formal.

#### Summary

The observations that I made initially in my inductive analysis of the emergent patterns within the dialogues were confirmed by the full quantitative analyses reported above. These analyses illustrated some of the regularities that occur in discourse; that is, that the dialogue that was generated in this investigation contained orderly qualities that held across the dyads.

## CHAPTER 6: DISCUSSION

The results confirmed that the discourse, even when generated between different people, proceeded in a recognizably systematic manner. In other words, although the dialogues may have appeared to be different at the phenotypic level because the different interlocutors used different words, they all progressed in a similar fashion in terms of the function of the talk. Specifically, when the participants agreed with each other, the dialogue generally progressed from Statements of Hypothesis to Statements of Individual Facts to Statements of Social Facts, especially early in the task. This suggests that, as the dyads proceeded through the task, they became more efficient at making their joint decisions and/or they became more comfortable with the interaction itself. Disagreements, on the other hand, did not follow such a pattern, but were predictable in the sense that they contained many more functions than did agreements and the functions did not occur in the same order as in agreements. This reflects the complicated nature of disagreeing with someone in face-to-face interaction (especially when the interactants are strangers).

Finally, grounding/summarizing units differed from both agreements and disagreements in that they contained only one kind of function (Statements of Social Facts) and were much shorter in length. The collaborative function of these units and the fact that they consisted only of social facts reflected the co-constructive nature of the task. Grounding/summarizing units occurred later in the dialogues and during or immediately after disagreements--places where the interactants needed to calibrate with each other in order to complete the task. Summarizing units could also be used at the end of the task to ensure that the participants had included all of the items and that they still agreed on the the final list(s).

The results also suggested that, of the three functions, Statements of Hypothesis were the most likely to be dropped. This was particularly apparent in the dyad where the two interlocutors knew each other. The inclusion of Statements of Hypothesis created the most formal kind of decision unit. As the interactants became more comfortable with each other and with the task itself, they would simply replace Statements of Hypothesis with Statements of Individual

Fact. This supports the notion that, as people engage in face-to-face interaction over time, they become more efficient and try to "minimize [their] *collaborative effort*" (Clark & Wilkes-Gibbs, 1986, p. 26, italics original).

Overall, these data permitted a reasonable adaptation of the model for scientific fact construction outlined by Latour and Woolgar (1979) and Latour (1987). The functions that were identified in the dialogues analyzed here (Statements of Hypothesis, Statements of Individual Facts, and Statements of Social Facts) fit the concept of a continuum of facticity and were representative of the varying degrees of facticity that the discourse progressed through in the social construction of scientific facts. I found that, in a dyadic situation, interlocutors' utterances progressed through a continuum of factness, often beginning with speculations, to reach a joint decision that was ultimately expressed as a social fact. The discourse that was generated by the dyads revealed the process of co-construction through which people progress when creating and coming to accept certain information as fact or truth. The results of

the present investigation also correspond with the social construction of facts where people co-construct, through their discourse, certain memories or realities (e.g., Middleton & Edwards, 1990; Potter & Wetherell, 1987), attributions (Edwards & Potter, 1992), or systems of reference (e.g., Clark & Wilkes-Gibbs, 1986).

The application of the discursive action model (Edwards & Potter, 1992) in the present research provided a comprehensive framework within which to conduct the analysis at a genotypic level; at a level where social processes were being generated and applied. The product-oriented research that social psychologists generally subscribe to results in a reductionistic linearity where some stimulus is presented to an individual who, in turn, reacts to it in some measurable way. This has allowed the categorization of certain behavioural products of the individual to be made, and subsequently, a categorization of the individual. Social processes, such as the ones examined in the present thesis, however, are not static, one-way events, but have instead, dynamic emergent qualities that traditional

psychological methodology cannot capture.

The model developed in this thesis provides an alternative explanation for a phenomenon that has long been viewed as social influence. As discussed in previous chapters, traditional conformity research has viewed the process of social influence from the perspective of simple, individual decision-making. This, of course, reflects the hegemony of individualism that permeates both the metaphysical and methodological aspects of the discipline. Moving to a social level in both theory and method, however, the process of what is generally considered to be one of influence takes on an entirely different meaning. Instead, of an individual being influenced to think and/or behave in a certain way, people engage in a collaborative process of decision-making that is achieved through the co-construction of facts. The processes of negotiation and co-construction as alternative objects of investigation were not empirically available under the traditional model of conformity research.

If we view the results of traditional conformity research in terms of the collaborative model developed here, we can account for the kinds of interpretations

that have been made. The participants were not allowed to discuss their decisions with each other, but could merely announce his or her own decision after hearing the decisions of others. The resulting talk, therefore, appeared to be nothing more than a series of Statements of Individual Fact which, in turn, were interpreted in terms of individual psychological functioning. (Notice that these interpretations were based on the appearance or phenotype of the behavioural products.) Only the final answers of the subjects were taken into account and their movement either towards or away from the assessments of the others was defined as conformity or non-conformity. The researchers, however, did not consider that certain social processes may have been in operation at an implicit level. It may not be reasonable to assume that, because the particular paradigm used limited the dialogue to individual answers, social processes of co-construction were not in operation to some extent. In other words, the subjects were not allowed to discuss their assessments openly and, therefore, there was no empirical evidence of negotiation or construction. However, because in everyday life we use other people

as references and co-construct truths, facts and realities, it would follow that when given information from others (even in such an unnatural setting as an experiment), individuals may proceed in their decision-making as if they were in a regular social interaction.

In terms of theory, it is important that researchers who intend to examine social processes take the social level of human activity as the ontological basis of their enquiry and not treat social factors merely as some external stimuli to which an individual responds. This means that interactions generated between individuals become the focus of enquiry. It is within the interaction that social processes emerge and are manifested. Traditionally, the methods used in social psychological research have prescribed the kinds of research questions that have been asked and have regulated the investigative situation to a point where social processes could not manifest themselves as such. It is, therefore, important to liberate social psychological research from the current methodology so that different levels of human activity can be examined. In other words, social psychologists must move away from the rigidity imposed by the

individualistic perspective and the "natural scientific approach" and take their enquiry to levels of social functioning. Once here, the processes themselves will suggest the kinds of methods best used in the investigation.

In general then, I have illustrated that social psychological investigators can, in fact, gain access to actual social processes, and that this kind of approach provides a more holistic and parsimonious explanation of social phenomena. Human social interaction, whether observed in face-to-face situations or through our cultural products, is the arena where social processes occur. Social phenomena emerge and are concretized at the social level of human functioning; researchers must, therefore, regard them as truly social activities. Otherwise, if social phenomena are treated merely as the behavioural products of separate individuals, all that remains of the social process is some abstract conceptualization of what is really occurring. In this thesis, however, I have shown that if we wish to avoid this trap of abstraction in social psychological investigative practice, communicative activities can serve as an

empirical medium wherein social processes are manifested. The discursive approach applied here allowed qualitative data to be observed objectively and described quantitatively, satisfying the requirements set forth by the discipline.

The implications for social psychology as a whole lie in the application of this kind of social approach to other objects of investigation that have been deemed central to the discipline. Attribution theory could move to a new dimension if approached from a truly social perspective. Researchers would have to move away from their intraindividualistic approaches and seek answers to questions that deal with interindividual levels of human functioning: how attributions are generated socially in interaction and what kinds of attributions are made in real social interactions. Current theories of attitude change could also be drastically altered by moving from away from the confines set by individualistic metaphysical and methodological practices. The investigation of individuals to gain information about social processes, although insightful to some degree, is an insufficient approach overall. By their very nature,

individualistic, product-oriented approaches do not permit the investigation of emergent, dynamic social phenomena. If social psychologists can recognize human social interaction as a viable object of investigation, I am sure they will come to consider the theories of individual reaction that have been overwhelmingly subscribed to in the mainstream as inadequate for the explanation of truly social phenomena.

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## Appendix A

## Instructions for Identifying Functions

## Introduction

I am examining how people collaborate to make decisions about perceptual stimuli. The dialogue that you will be looking at is generated by dyads who have been asked to order a series of 12 paint chips of different shades of blue from lightest to darkest. In general, each paint chip is discussed by the participants as to its placement in the list until a satisfactory order (or orders) has been established. The conversation appears to construct a series of social facts, where each item is introduced and discussed as a proposition to be considered or as a fact at an individual level and then moves on to a final decision about the item at a social level (i.e., collaboratively) until it is accepted as a social fact by both of the participants.

I have found that the dialogue generated in the undertaking of this task consists of some specific functions. These functions are: (a) Statements of Hypothesis, which introduce the next possible item to be discussed, (b) Statements of Individual Fact, which

allow one or both of the participants to offer his/her own assessment of what is the next item on the list, and (c) Statements of Social Fact, where the individual facts are accepted by the dyad and/or the final decision of the dyad (a social fact) is stated. These functions will be discussed in more detail below.

#### Definitions and Identifying Characteristics

The identification of functions is based mainly on how an utterance works within the dialogue to advance the task-at-hand; how a social fact is constructed from some proposed non-fact(s) and/or individual assessment(s). I cannot stress enough that, in order to identify the function of an utterance, each utterance MUST BE CONSIDERED IN RELATION TO THE SURROUNDING TALK!

A) Statements of Hypothesis: one or both of the participants are introducing an item for consideration (i.e., the next item to be discussed), but with some degree of uncertainty. The speaker is only suggesting a possibility and is not displaying any commitment to an item's placement in the order. The speaker uses tentative language (e.g., "looks like", "I think", "should be", "I guess", "I would say") OR uses

intonation patterns that represent uncertainty (e.g., a rise in intonation at the end of a statement that makes it sound like a question, or holding part of a word longer than usual as in "ssseven" or "elevennnn"). These function as implicit requests for the other person's opinion. The speaker may also show uncertainty by comparing items (e.g., "it's either", "it's between"), or by directing the other person to compare items (e.g., "check twelve and three"). The speaker may also explicitly request the other person's opinion by asking direct questions, such as: "should it be ----?" or "what about ---?". When a direct request is connected to (added on to the end of) the introduction of the next item, these (i.e., both utterances) function as a Statement of Hypothesis (e.g., "eleven, what do you think?", "the next one is four, isn't it?"). In other words, if an utterance appears to be a statement of fact but is followed by a request for an opinion, it is a Statement of Hypothesis.

B) Statements of Individual Fact: one or both of the participants are communicating what each individual knows to be true about the item. It is each person's

individual assessment of what the next item is from his/her own perspective. The speaker does not use tentative language; he/she is stating outright an individual fact or assessment (e.g., "the next one is --"). This phrase can: (a) function to introduce the next item on the list (e.g., "and then ---"), or (b) provide individual opinions about the item that has been proposed or introduced (e.g., "yeah, that one's next"). Often, these utterances look like simple agreements (e.g., "yeah", "mhm", "ok", or nodding), but they always refer to the item being discussed. In other words, a simple display of agreement would translate as: "yes, I agree, the next one is number --". The speaker may also deliver an individual assessment or fact by using a simple agreement statement followed by an utterance that uses tentative language (e.g., "yeah I'd say three is next"). This whole phrase is a Statement of Individual Fact because it functions to communicate an individual assessment.

IT IS IMPORTANT TO TRANSLATE OR INTERPRET THE MEANING AND FUNCTION OF AN UTTERANCE WITH RELATION TO THE SURROUNDING TALK!

It is interesting to note that the person who

actually requested an opinion or presented an hypothesis will sometimes go ahead and provide their own individual assessment. For example: "what about four?... no" or "the next one looks like four...yeah" (the same person is speaking both parts).

Also included as a Statement of Individual Fact are utterances that show the individual cannot decide about the next item (e.g., "I don't know), or questions related to the other person's individual assessment, usually implying disagreement (e.g., "You think five's next?).

C) Statements of Social Fact: the participants are confirming their acceptance of the individual assessments where an item or group of items that has been presented will be placed in the list; that is, the talk functions to validate the previously presented individual fact at the social level or to state the established social fact(s). There are a few ways that this can be accomplished.

i) The easiest to identify is a summarization of the social facts that have been established so far. The summaries can be offered in one of two ways: (a) the list of the items they have agreed upon so far (i.e.,

items that have been established as social facts) is presented (e.g., "ok so we've got seven, four, three, eight and ten"), or (b) the number of items they have agreed upon so far is tallied (e.g., "one, two, three we've got four so far").

ii) The two points above can also be achieved nonverbally. One person has the pen and paper and writes down the list of items. This can be translated as establishing a social fact when it is visible (either totally or partially) although no utterance has been made.

iii) A restatement of the proposal without the use of language or intonation patterns that signal uncertainty (e.g., "I think four is darker" becomes "four is darker"), or a restatement of what has been presented as an individual fact can both function to show that a fact has been accepted by the dyad as a social fact.

iv) Related to the summarizing of social facts is a return to or a restatement of the last established social fact (e.g., "ok well we agree on three anyway"). This usually occurs when the participants are having trouble deciding on or agreeing about which item should be next on the list, and it functions as a grounding

place in the task from where they should start again.

v) Some utterances in the social phase resemble those in the individual phase, especially those utterances that appear to be simple agreements. AGAIN, IT IS IMPORTANT TO TRANSLATE OR INTERPRET THE MEANING OF THE UTTERANCE IN TERMS OF HOW IT FUNCTIONS WITH RELATION TO THE SURROUNDING TALK! At the social level, these utterances can be translated to show that the participants have come to a consensus about the placement of an item (e.g., "we agree on this one"). It can be inferred from these utterances that the dyad will formulate a social fact from the individual assessments. These utterances are not related to the item itself, but to the acceptance of the individual opinions about the item; that is, they operate at an interactional or social level and are informationally redundant.

N.B. These usually appear to be redundant agreements.

vi) Another function of agreement-like utterances in the social phase is the validation that a fact has been established at the social level. These are final comments about the established social fact(s); for example:



[nodding.....]

The words are proposing the next item, while the nodding can be translated to mean "Yes, twelve is next", which is providing an individual assessment.

e.g., "And then twelve"

[nodding]

The words are providing an individual assessment. The nodding is informationally redundant with the words, and is therefore indicating acceptance of his/her own individual assessment; the nodding is moving towards establishing "twelve" as the next item at the social level.

4) How something is phrased (i.e., the speaker pauses between words) can be an important factor in deciding whether an utterance functions at the individual level or at the social level. For example, if a person has made a proposal or an individual assessment, and the other person says "yeah", showing that he or she has made the same assessment, this utterance is clearly functioning at the individual level. However, if the speaker utters "yeah" and follows it with a repetition of the item that has been decided on (e.g., "yeah

four"), it may be difficult to distinguish if both both words are functioning to achieve the same thing or if they function at different levels. This is where the phrasing can be of help. If the two words are uttered together and not separated by a pause (i.e., the words seem to be part of the same utterance), then they both function in the same way.

e.g., A: "I think four is next"

B: "yeah four"

B's entire utterance would be a Statement of Individual Fact.

If the words are uttered as two separate phrases (i.e., the words are separated by a deliberate pause), then they may not function in the same way.

e.g., A: "I think four is next"

B: "Yeah---four"

Here, "yeah" functions to show that B's individual assessment is that four is next; "four" is uttered after a pause as a separate idea that is informationally redundant with the preceding "yeah", and is, therefore, functioning at a social level.

Dialogue NOT to be Scored

1) Discussions about how to proceed with the task.

e.g., "ok let's start with the lightest"

e.g., "I'll read them and you keep track"

2) Justifications or explanations about a decision or an opinion.

e.g., "it looks lighter beside these ones"

e.g., "this one has a greenish tone"

3) Descriptions or general comments about the colours.

e.g., "they look the same"

e.g., "they look layered"

4) Discussions about where they are in the task.

e.g., "do we have eight yet? No"

(N.B., in this example, if the answer was yes, it would be a social fact)

5) Unfinished statements where you cannot tell what would be said next.

e.g., "so four comes--"

6) Comments about the task itself.

e.g., "I think this is a trick"

#### **Summary Checklist**

If an utterance has one or more of the characteristics listed under one of the function descriptions, it should be scored as belonging to that phase. If an item does not have any of the characteristics listed

below, check the list of dialogue NOT to be scored. And in the case of total confusion, start again and recheck everything.

A) Statements of Hypothesis

- speaker introduces the next item to be discussed
- speaker uses tentative language and/or intonation patterns showing uncertainty (i.e., the speaker is not displaying any commitment to that item)
- speaker is comparing items or is directing the other person to compare items
- speaker makes a direct request for the other's opinion (N.B. if an individual assessment is followed by a request for the other's opinion, BOTH utterances are included as a Statement of Individual Fact)

B) Statements of Individual Fact

- provides an individual assessment; what the individual knows to be true about the item (no tentative language or intonation)--includes statements that show that the person clearly does not know and disagreements with the other person's opinion
- introduces a new item without using tentative

language or uncertainty

-is not redundant with previous talk about a specific item

-simple agreements belong to this phase when they can be translated as an individual acceptance of a proposed item or as an individual agreement with the other's opinion that is being stated by the individual FOR THE FIRST TIME--they refer DIRECTLY to the item being discussed

(N.B. when a simple agreement is immediately followed by an utterance using tentative language the whole utterance is a Statement of Individual Fact)

C) Statement of Social Fact

-anything that moves beyond individual assessments  
-confirmations or validations of previously presented individual assessments

-speaker is showing acceptance of the individual assessments at the social level (INTERPRET MEANING of simple agreements)

-speaker summarizes social facts so far

-writes down the decision agreed upon

-speaker returns to the last established fact

-speaker's display of agreement is redundant with

previously stated opinion of that individual; the utterance is informationally redundant with what has already been presented

-the utterance functions to show that a consensus has been reached by the participants as to which item is next

-speaker is validating an established social fact (INTERPRET MEANING of simple agreements)

-speaker is stating a social fact through restating the proposal or the individual assessments.

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