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Acquaintance And Person Knowledge: A Study Of Naturalistic Person Perception

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ACQUAINTANCE AND PERSON KNOWLEDGE: A STUDY OF NATURALISTIC PERSON PERCEPTION

by

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Submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy

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ABSTRACT

This thesis investigated naturalistic person perception. The purpose was to explore how impressions of another are affected by ongoing, dynamic interaction and by a number of "social relationship" variables.

Two studies of person perception were conducted. In Study 1, subjects produced written descriptions of two real acquaintances: one whom they recently met (unfamiliar target) and one whom they had known for some time (familiar target). These target acquaintances were further specified by orthogonal manipulations of interdependence (subordinate vs. equal status vs. superordinate) and spacing of interactions (massed vs. spaced, e.g., everyday vs. once a week) within which the target and subject-perceiver interact. In Study 2, an elaboration of Study 1, randomly paired strangers of the same gender met face-to-face in problem-solving work-sessions. The interdependence of the dyad members was manipulated by varying the extent to which each member's outcomes depended upon the other member (i.e., members were either equally or unequally dependent on each other). The spacing of interactions was manipulated by having subjects meet either once per week or approximately every two days. In addition, different dyads met varying numbers of times (i.e., members met once, twice, or three times), which constituted a manipulation of "objective familiarity". At the end of the final meeting, each dyad member produced a detailed oral description of his or her partner.

Analyses of variance procedures were used to assess the structural nature of person knowledge as a function of interdependence, spacing of

interactions, and "familiarity", in terms of five major dependent measures derived from the free-response descriptions. These measures were the number and kind of person concepts used to describe the referent person (i.e., differentation), the degree of informational integration, the level of complexity, the degree of abstraction, and the evaluative tone represented in the description.

The results revealed robust effects for "familiarity" on all but the evaluative tone measures. Specifically, knowledge constructs for familiar acquaintances were more elaborated (e.g., more differentiated and abstract) than for less familiar acquaintances. The findings concerning the interdependence and spacing manipulations were mixed and generally weak. Specifically, interdependence affected differentiation of structure in ways opposite to predictions, but did not affect the evaluative tone of descriptions (which had been expected). The spacing of interaction variable unexpectedly influenced the evaluative measures, but not the structural measures.

Discussion of the results emphasized the importance of "objective familiarity" for the structures and processes of person knowledge, especially under naturalistic conditions. The unexpected findings for the interdependence manipulation were discussed in terms of the possible importance of stereotypical behaviour patterns in "unequal" relationships. The unexpected spacing effects were discussed in terms of how spacing may affect the consolidation and polarization of information within the perceiver's impression of the referent person.

Finally, recommendations for future research were offered, and several limitations of the present research were discussed. In general, the importance of "familiarity" and "relationship" variables

for naturalistic person perception was stressed. Consideration was also given to the usefulness of an integrated social relationship/social cognition approach for the study of social knowledge.

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For my parents, Yvonne and Angelo, for all their love and care yesterday, today, and tomorrow, I hope I have made you proud of your boy.

Finally, I dedicate this thesis to Laurelin, Bevin, and especially to Gloria, whom I love with all my heart.

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INTRODUCTION

Overview and Purpose

Bertrand Russell (1948) distinguished between two general forms of personal knowledge about objects in the world, which differ in how they are obtained (i.e., which differ in their "mode of acquisition"). These forms are "knowledge-by-description" and "knowledge-by-acquaintance" (see also Baron, 1980). With respect to knowledge about another person, "knowledge-by-description" would be based upon indirect experiences with the referent person. The information in this "description" mode is, in a sense, second-hand. It is gained from conversations with other people about the referent person, from gossip and rumour, and from sources such as biographies, resumes, personality inventories, and other assessment devices. "Knowledge-by-acquaintance", on the other hand, derives from the perceiver's direct experiences with the referent person. In this mode of knowledge acquisition, one becomes acquainted with the referent person through personal observations and/or face-to-face interactions with him or her. Both resulting forms of knowledge contribute in important ways to one's stored representation of the referent person.

Experimental studies of person knowledge, however, typically use paradigmatic approaches that lead predominantly to "knowledge-by-description", although there are some exceptions in person perception (e.g., Radke-Yarrow & Campbell, 1963), clinical psychology (e.g., Sloane, Staples, Cristol, Yorkston & Whipple, 1975), and social relationships research (e.g., Kelley, 1979). Even though "acquaintance" modes of knowledge acquisition are very prevalent in our day-to-day

dealings with others, person perception research often has subjects give their impressions of a hypothetical stimulus person following receipt of an orally presented or written behavioural sketch, characterological profile, or trait-adjective list that purportedly describes the stimulus person. One consequence of the pervasive use of "description" paradigms in person perception research has been an overemphasis on molecular and intrapersonal processes (e.g., information processing, inferential, and attributional processes) in the study of social knowledge, with a relative neglect of more molar and interpersonal influences (e.g., perceptual, contextual, and relationship influences -- Weary, Swanson, Harvey & Yarkin, 1980).

The present research attempts to redress this imbalance by adopting an "acquaintance" approach to studying person knowledge, rather than a "description" approach. The focus is on the phenomenology that one has of another person as a result of direct, face-to-face interactions. It is suggested, furthermore, that the process of acquaintance between two persons typically occurs within the "context" of the pair's relationship (hereafter referred to as the "relationship-context"), which is characterized by an explicit or implicit state of interpersonal interdependence and an identifiable and relatively fixed schedule of face-to-face contacts (these points are expanded below).

The purpose of the research is to provide a controlled examination of the effects of (a) selected "relationship-context" factors and (b) the length of acquaintance on the structure of one's knowledge about another person (as opposed to the specific content of the representation). To this end, two studies of person perception are reported in this thesis. In Study 1, subjects are asked to write

comprehensive, impressionistic descriptions of two real acquaintances: one person whom they recently met, and one person whom they have known for some time. These target acquaintances are further specified by variables that define the relationship-context within which the target and the subject-perceiver interact. These descriptions are content-analyzed to derive indices that reflect the structural nature of the subjects' stored constructs representing the target persons.

In Study 2, which is an elaboration of Study 1, a more controlled, experimental investigation of person perception is undertaken. Using a novel methodology, randomly paired strangers of the same gender meet face-to-face in problem-solving, work sessions. The relationship-contexts of different dyads are experimentally manipulated along dimensions that are conceptually similar to those investigated in the first experiment. In addition, in Study 2, different dyads meet varying numbers of times (i.e., the members meet once, twice, or three times), which constitutes a manipulation of "objective familiarity" (Moreland & Zajonc, 1982). At the end of the final meeting, each member of the dyad is asked to give a detailed description of their partner. As in Study 1, measures of the structure of person knowledge are derived from these descriptions.

Thus, the two studies in this thesis attempt to provide an experimentally controlled investigation of naturalistic person perception. Overall, the thesis tries to identify, operationalize, systematically manipulate, and discuss the implications of some "molar and interpersonal influences" on the structure of person knowledge.

Background and Theory

1. Assumptions about the cognitive structure of "person knowledge"

Two assumptions about the development of knowledge structures (or cognitive representations) have guided the conceptualization of "person constructs" (representations of other people) in psychological research. First, it is assumed that, in general, knowledge structures tend toward increasing abstraction as a function of increasing familiarity with exemplars or instances of the knowledge referent (see Posner & Keele, 1968, 1970). For instance, with respect to one's cognitive representation of another person, stored behavioural instances may become, with increasing information load (i.e., repeated exposures to similar instances), more schematically and thematically represented (Bartlett, 1932; Hamilton, Katz, & Leirer, 1980; Hastie, 1981; Ostrom, Lingle, Pryor, & Geva, 1980; Wyer & Srull, 1981). In fact, the "mere thought" hypothesis (see Tesser, 1978) suggests that the passage of time alone may increase the schematic organization of one's knowledge about another person.

Secondly, it is assumed that knowledge structures, including constructs that represent other persons, change as a result of the interplay of assimilation processes and accommodation processes during the acquisition of new information pertaining to the knowledge referent (Brainerd, 1978; Piaget, 1952). Assimilation occurs when new information is encoded or interpreted in terms of the existing cognitive structure; whereas, accommodation occurs when the existing structure is modified, reorganized, or in some way changed by new informational input. The actual processing of stimulus information presumably occurs both passively (i.e., automatically) and actively (i.e., with conscious

effort on the part of the "learner") (Higgins & King, 1981; Posner, 1978).

In light of these assumptions, it has been useful to conceive of the knowledge construct for another person as a configuration of informational material that describes the salient and characteristic attributes and features of the referent person (Rosch, 1978; Wyer, 1980; Zajonc, 1960). This informational material would include behavioural, skill-related, dispositional, appearance, and background data (Higgins & King, 1981; see also Fiske & Cox, 1979). At any given point in their development, the defining characteristics of such knowledge structures will include informational material represented at various levels of abstraction and integration. That is, material in the configuration will include both concrete details and instances (e.g., appearance concepts and behavioural descriptions) as well as more abstract, thematic, or generic concepts (e.g., attitudinal and dispositional concepts), with a certain degree of logical or psycho-logical interweaving of the information (integration of content). Of course, the amount of informational material (or the degree of differentiation) in the knowledge construct would also vary at different points in its development. For example, more kinds of information would be expected in a cognitive representation of a friend one has known for some time than in a representation of a new acquaintance (Fiske & Cox, 1979).

In social psychology, the structural nature of one's knowledge about other persons has traditionally been the concern of impression formation researchers. Beginning with Asch's (1946) initial work on impressions and impression formation, the focus has been and continues

to be the organization of person knowledge in "getting to know another person" (Schneider, Hastorf, & Ellsworth, 1979, p. 152).

Social cognitivists have recently re-emphasized the central role of "impressions" in their models of social information processing (see Hastie Ostrom, Ebbesen, Wyer, Hamilton, & Carlston, 1980; Higgins, Herman, & Zanna, 1981). Hamilton and his associates (Hamilton et al., 1980; Hamilton, 1981), for example, have explicitly defined an "impression" as referring to "a perceiver's organized cognitive representation of another person" (Hamilton et al., 1980, p. 123). In accordance with these precedents, it is assumed in the present thesis that the structural nature of person knowledge is represented in the perceiver's overt impression or description of the referent person.

A taxonomy of "person concepts" developed by Fiske & Cox (1979) will be used in the present research to classify the content of obtained descriptions into various categories.[1] Once the information in a description has been so classified, several properties of "structure" can be derived. These are general properties of form and organization, which do not necessarily rely upon the the specific content in a description. They include the number of different person concepts used (i.e., differentiation), the level of integration of the information (see Radke-Yarrow & Campbell, 1963), the complexity of the structure (which takes into account both differentiation and integration), the level of abstraction represented in the description, and the overall evaluative tone of the description. The evaluative tone of the description, of course, depends quite directly upon the content of the impression; nevertheless, it is still meaningful to talk about "extremity" or "polarization" in evaluation without focusing on specific

content items. These structural characteristics are expected to be sensitive to changes in person knowledge that occur during the process of acquaintance. For instance, the more interactions there are between two persons, the more acquainted (familiar) they are likely to become with each other, and the more it is expected that their knowledge of one another will be differentiated, integrated, and abstract -- having many different person concepts, but including fewer concrete appearance or behavioural descriptions and more abstract dispositional, trait-like concepts (see Duck, 1973; Fiske & Cox, 1979; Kuiper & Derry, 1981).

In sum, person knowledge is assumed to be subject to the same processes of abstraction, assimilation, and accommodation as are other, non-social constructs. In addition, since impressions and descriptions of others may be considered representative of a perceiver's stored knowledge of the referent person, they can be used to study the structural properties of person knowledge.

The rest of the Introduction considers, in some detail, the relations between acquaintance and person knowledge. First, the significance of an "acquaintance" approach to the study of person knowledge is discussed. Next, several interpersonal and interaction factors relevant to the "context" of acquaintance are considered. Finally, some exploratory hypotheses concerning the effects of several variables on the structure of person knowledge are presented.

2. Acquaintance and Person Knowledge

Often, one's knowledge about another individual comes from direct experiences with that person in day-to-day living. Information is acquired from both personal observations of behaviour and from

face-to-face interaction. Thus, the acquisition of knowledge about another by "acquaintance" is very prevalent.

In addition to its everyday prevalence, "knowledge-by-acquaintance" appears to be the kind of knowledge about another that most people typically prefer. People often feel that they know best those others with whom they interact directly, i.e., with whom they have personal, continuing relationships -- workmates, business partners, colleagues, close friends, spouses, and lovers. People seem to feel that "knowledge-by-acquaintance" is more veridical and reliable than "knowledge-by-description". The ubiquity of the personal interview in the employment domain is a case in point. Very often, the impressions derived from interviews determine, in large part, the success or failure of a job candidate.

Why might "knowledge-by-acquaintance", especially from face-to-face interaction, be thought of as more valid and reliable than other forms of person knowledge? Several properties peculiar to direct personal contact suggest some possible explanations. Most straightforwardly, direct experience with the referent person may simply provide more information, which gives the perceiver a sense of greater familiarity with the person. Similarly, direct experience may increase the perceiver's awareness of how s/he "feels" about the referent person (Fazio & Zanna, 1981). Certainly, nonverbal sources of information, such as gestural and kinesic cues (e.g., proximity and interpersonal spacing during interaction) and odours, are going to be more salient in actual interaction than in "description" or even "observation" modes of knowledge acquisition. Direct involvement in face-to-face interaction may also foster a kind of "ownness bias" (Perloff & Brock, 1980) for the

shared events and transactions, which could increase the salience, apparent importance, and later memorability of "acquaintance" information. Perhaps, along these same lines, face-to-face interaction enhances the personal relevance of another's interpersonal actions and influences the perceiver's interpretations and explanations of those actions (cf. Hastorf, Richardson, & Dornbusch, 1958; Higgins, Kuiper, & Olson, 1981; Jones & Davis, 1965; Kelley, 1971, 1979; Shrauger & Patterson, 1974) in ways that increase the prominence of the information due to its self-reference.

Knowledge based upon direct interaction with another also might differ from knowledge based upon direct, but non-interactive, observation of another. Radke-Yarrow & Campbell (1963), for example, noted that children in their study of person perception who were actually involved in playing with the referent child tended to have clearer and more complex impressions of the referent child than did children who were more passively involved (i.e., those who watched from the sidelines).

The "dynamic" nature of face-to-face interaction, because it involves processes of mutual interpersonal influence, also may enhance personal relevance and affect person perception. Knight and Vallacher (1981), for example, demonstrated differences in causal attribution as a function of varying levels of actor/observer "engagement". Subjects observed a male actor respond to interview questions on a prerecorded videotape. Depending upon their "interpersonal engagement" condition, subjects believed either that they were watching a prerecorded videotape, that they were watching a videotape but would interact with the actor in the immediate future (i.e., anticipating future

interaction), or that they were actually interacting with the actor over a video hook-up. Half of the subjects in each condition were exposed to an actor who was abrupt, critical, and obnoxious (negative actor condition), and half of the subjects were exposed to a pleasant (positive condition) actor. In the "anticipated interaction" condition, subjects tended to make situational attributions for the negative actor's behaviour, presumably in the hope that the person would be pleasant when it was the subject's turn to interact with him. When subjects believed that they were already interacting with the actor via a video hook-up, they tended to manifest the reverse attributional pattern for positive and negative behaviours. Subjects appeared to be protecting their self-esteem by taking credit for pleasant actor responses, but not for negative actor responses. Presumably, these different interpretations of behaviour would also affect the perceivers' impressions of the actor. Thus, these findings suggest that person perception is likely to be affected by whether a perceiver believes s/he is dynamically or non-dynamically involved with the perceived person, i.e., by whether or not the pair is actually "engaged" in ongoing interaction.

The hypothesized preference for "knowledge-by-acquaintance" is not meant to imply that knowledge about others from indirect sources (i.e., description) necessarily has less impact on person knowledge. To the extent that stimulus information, either through "acquaintance" or "description", is encoded and represented in relation to the referent person, it will, by definition, affect the perceiver's knowledge construct for that person. Yet, in everyday situations,

"knowledge-by-acquaintance" is likely to be preferred when getting to know another person.

The importance of an "acquaintance" paradigm to study social knowledge derives in large part from these characteristics of everyday prevalence and preference. In addition, an "acquaintance" paradigm based upon face-to-face interaction highlights some "molar and interpersonal influences", such as the continuity of interactions and the dynamic involvement of the interactants, which are ecologically intrinsic to "natural" person perception.

3. The use of "acquaintance" paradigms to study person perception.

Despite the ecological importance of direct interpersonal contact for the processes and structures of person knowledge, social psychological research has rarely employed an "acquaintance" approach, especially involving actual, face-to-face interaction (although video monitoring and taping equipment have increased the popularity of "observation" paradigms and "indirect interaction" paradigms, such as the one used by Knight & Vallacher, 1981). Nevertheless, studies do exist that are relevant to understanding person perception from an "acquaintance" perspective.

Clinical studies of the relation between psychotherapeutic process and outcome, for instance, are typically characterized by actual, face-to-face interaction between therapists and clients. Excellent examples are studies concerned with the interpersonal experiences and impressions of the therapy participants (see Orlinsky & Howard, 1978). For example, client perceptions of the therapist's warmth, positive regard, positive valuing, and respect have been related to successful or unsuccessful therapy outcomes (e.g., Barrett-Lennard, 1962; Martin &

Sterne, 1976). More general perceptions of the therapist's personal attributes, such as how "genuine" and "self-congruent" s/he is perceived to be by the client, have also been obtained and related to therapy outcome (e.g., McClanahan, 1974; Sloane et al., 1975). Reciprocally, therapists' perceptions of clients' attributes, such as the latter's skill in the patient role (e.g., Prager, 1971; Sloane et al., 1975) and how "interesting" a person the client seems to be (e.g., Sloane et al., 1975), have also been obtained in process-outcome evaluation studies.

The face-to-face interaction that is characteristic of psycho-therapy process studies exemplifies a relatively direct "acquaintance" approach to person knowledge. As the cited examples indicate, however, the kinds of social judgements and impressions that are examined in these studies tend to be limited in scope. The investigators are dealing with very specific kinds of person knowledge, within the context of a very special kind of interpersonal relationship. Clinical researchers interested in the relations between process and outcome in therapy typically focus on particular styles of therapy or therapeutic techniques (e.g., Rogerian client-centered therapy). Consequently, they specifically request participants in studies to make judgements about those personal attributes of each other that the relevant theory would predict are important for effective therapy. For example, in relation to a Rogerian approach to therapy, the therapist's "warmth" and "positive valuing of the client" are theoretically important aspects of the client's perception of the therapist (see Rogers, 1957). Such specific attribute appraisals, however, do not necessarily represent person knowledge that is immediately salient or

even pertinent to the client's natural conception of the therapist (although it may indeed be important for effective therapy).

In sum, psychotherapy research often employs a face-to-face interaction, "acquaintance" paradigm and occasionally examines aspects of person knowledge. These perspectives on person knowledge, however, are restricted, usually deriving from a therapy-evaluation rationale, which necessarily focuses interest upon particular person knowledge content that may or may not be relevant to the way each participant in the therapy relationship "naturally" views the other. This focus on specific content is also of limited value in assessing more general, structural aspects of one's representation of another person.

"Acquaintance" paradigms used in social psychology can be divided into three, basic classes: face-to-face interaction, observational methods, and indirect interaction approaches. Indirect interaction refers to interpersonal situations where communication between interactants is not mediated by natural language. Interaction characterized by mechanically mediated light and/or sound signals (e.g., Skrypnek & Snyder, 1982), "trucking games" (Deutsch & Krauss, 1960), and two-person matrix games (McClintock, 1972) are instances of indirect interaction. Let us briefly consider observation and indirect interaction paradigms first.

Observation paradigms are the most common form of an "acquaintance" approach to social perception and social judgement (e.g., Allan & Ebbesen, 1981; Knight & Vallacher, 1981; Newtson, 1973; Storms, 1973). Generally, these studies employ audio and/or visual recordings of the target person(s). Although observational methods provide a greater degree of "directness" in experience with the stimulus person than do

written or oral presentations of social stimulus information, they still lack the contextual influences and (interpersonal) subtleties of actual interaction between the perceiver and the perceived.

"Acquaintance" paradigms employing indirect interaction methodologies also lack the contextual and behavioural complexities of face-to-face interaction, but do provide some degree of interpersonal immediacy for the participants. Two-person matrix games, for example, were specifically developed to incorporate properties of interpersonal interdependence into studies of social exchange and social perception (see Kelley, 1979; Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). The "theory of interdependence" developed by Kelley & Thibaut (1978; see also Kelley, 1979) is concerned, in part, with the ascription of specific dispositions to others, based on causal attribution theory (Heider, 1958; Kelley, 1967). This perspective is relevant to the study of person knowledge because it relates important intrapersonal processes to the derivation of content in one's knowledge structure for another.

The present focus, however, is on the structure or form of the perceiver's representation of another person, rather than the specific representational content. Thus, while Kelley's (1979) perspective on interpersonal attribution is certainly relevant to understanding person perception, it is not directly pertinent to the concerns of the present research. What is pertinent is that Kelley's perspective identifies interdependence between persons as an important, interpersonal influence in person perception. (Interpersonal interdependence will be discussed in relation to the structure of person knowledge in the next section).

The interaction simulations provided by "indirect interaction" methods (such as two-person games) typically consist of a single

encounter between the interactants. Thus, any interdependence that exists between the participants is restricted both in behavioural scope and in duration. Further, each interactant's behavioural repertoire usually reduces to two alternatives. This simplification of interaction in two-person "game" paradigms has been heuristic in studying basic interpersonal orientations (e.g., cooperation vs. competition) within the relationship analog (McClintock, 1972). Although there are important, long-term implications of knowledge about others' social orientations (Kelley & Stahelski, 1970; Miller & Holmes, 1975), and although two-person, "game" simulations may have some limited generality for understanding other facets of person knowledge, such studies have low ecological validity and seem only indirectly relevant to issues regarding structure in person knowledge.

Other research in social psychology has had perceivers actually engage in face-to-face interaction with the perceived. Usually, however, direct interaction has been employed as a way of assessing the impact of prior information that was presented descriptively. In other words, interaction has been used as a vehicle for measuring dependent variables rather than for manipulating independent variables. Kelley's (1950) examination of the warm-cold variable in impression formation, and some of the studies on self-fulfilling prophecies in social interaction (e.g., Rosenthal, 1969; Snyder & Swann, 1978; Snyder, Tanke & Berscheid, 1977; Word, Zanna & Cooper, 1974), are relevant examples. Also, the target persons in these studies have typically been strangers, and the interactions have been limited to a single encounter. Thus, they have excluded the subtle and interesting influences of personal

involvement and increasing familiarity, which occur as a relationship develops.

Two studies of person perception in children (Dornbusch, Hastorf, Richardson, Muzzy, & Vreeland, 1965; Radke-Yarrow & Campbell, 1963) provide early precedents for an "acquaintance" approach. Especially laudable is the use in these studies of face-to-face interaction in a real-life situation as the primary mode of acquiring person information. The major aim of both investigations was to assess the relative influence of perceiver vs. target characteristics on the content and organization of children's impressions. There were also secondary interests in the effects of increasing familiarity on children's cognitive appraisals of others.

Both studies involved samples of initially unacquainted children at summer camps. The basic units of interaction were groups of five to six tent-mates in the Dornbusch et al. (1965) study, and cabin-mates in the Radke-Yarrow & Campbell (1963) study. During nondirective interviews, the investigators obtained children's free descriptions of one or two of their mates a few days after arriving at the camp and again just before departure for home; an interval of about 10 days in both studies. Although interpersonal perceptions were obtained at the beginning and end of the children's period of acquaintance with camp-mates in order to allow some assessment of the effects of increasing familiarity between perceivers and perceived, no systematic attempt was made in either study to have perceivers describe the same target-child on both occasions. Thus, the focus was not on the effects of increasing familiarity within specific personal relationships.

Children's free descriptions were content-analyzed to determine the content and complexity of their impressions of others. Results in both studies indicated greater consistency and stability in impressions of different targets by the same perceiver than in impressions of the same target by different perceivers. This seems to indicate that perceiver characteristics may be relatively more important than target characteristics in the construal of others, at least in children. The effects of increasing acquaintance on person descriptions, although limited in generalizability because of changing targets across impressions, was toward increasing thematic organization and complexity (Radke-Yarrow & Campbell, 1963).

Generalizations about the nature of person representations in adults from data on children must be made cautiously, however. It appears in Radke-Yarrow and Cambell's data, for example, that there was little correspondence between the adults' reports of the children's behaviours and the behavioural categories represented in cabin-mates' impressions of these target children. The extent of noncorrespondence suggests the possibility of fundamental differences in the interpretations of behaviour by children and by adults. Alternatively, the values of adults as "scientist-observers" in the investigation may have differed from the values of children as "participant-observers" (cf. Knight & Vallacher, 1981).

In any case, the current research has methodological antecedents in the studies by Dornbusch et al. (1965) and Radke-Yarrow and Campbell (1963), primarily with respect to the use of a face-to-face interaction "acquaintance" paradigm. The current research differs, of course, in many other respects: subjects are adults instead of children;

familiarity is objectively manipulated; and the influence of important contextual and interpersonal (i.e., relationship) variables on the nature of person knowledge structures is studied.

Group dynamics research is another area in social psychology where methodologies often involve subjects in face-to-face interaction. Once again, however, the interactions are usually of short duration and involve only a single encounter among the interactants (e.g., laboratory group members). Also, in most cases, the research is unconcerned with the interactants' cognitive representations of each other. For example, "group polarization" research usually involves having subjects discuss the Kogan & Wallach (1964) choice dilemma problems in a face-to-face setting (e.g., Vinokur, Trope, & Burnstein, 1974). Measures of person perception, impression formation, or attributions, however, are rarely obtained. An exception is Duck's (1973; see also Duck & Spencer, 1972) research on acquaintance. Duck had subjects who were strangers to each other discuss choice dilemma problems as a means of insuring that each member of the group was at least minimally exposed to the verbal behaviour of each of the other members. Duck found that subjects in his study tended to construe their new acquaintances predominately in terms of "interactive" behavioural constructs (e.g., dominance, assertiveness, conformity). This indicated to Duck that "knowledge" of an initially unfamiliar individual is, indeed, based upon one's early, face-to-face exchanges with him or her.

In the area of emergent leadership, investigators usually look at perceivers' judgements of the leadership characteristics of other individuals with whom they have just "interacted" in a group problem-solving situation (see Hollander & Julian, 1976). The focus in

leadership research is on theoretically specified "leadership" attributes of others, which is reminiscent of the content-specific orientation of clinical researchers studying the interpersonal experiences and perceptions of persons in therapeutic relationships. Also, as exemplified by a study by Sorrentino & Boutillier (1975), where subjects' judgements of the leadership ability of an experimental confederate were obtained, interaction between persons is often not face-to-face. That is, subjects frequently interact with each other indirectly via an audio or audio-visual intercommunication system.

Thus, it appears from this admittedly selective review of the social psychological literature that general properties of the form and structure of person knowledge have rarely been investigated as a function of naturalistic, face-to-face acquaintance. Even when such paradigms have been used (e.g., Dornbusch et al., 1965), important contextual and interpersonal influences on person knowledge have received little systematic study.

4. Relationship-context and Person Knowledge

Overview. The "acquaintance" approach, with its emphasis on dynamic, face-to-face interaction, suggests that "relationship" factors are very important in naturalistic person perception. In this section, the notion of "relationship-context" is proposed as a way of conceptualizing "molar and interpersonal influences" on person knowledge that are of theoretical and practical significance. First, an interpersonal aspect is proposed, which describes the nature of the interdependence between two interacting persons (Kelley, 1979; Wish, Deutsch, & Kaplan, 1976). The influence of this aspect of "relationship-context" on person knowledge is hypothesized to be

primarily evaluative in nature. Second, a nonpersonal aspect of "relationship-context" is also proposed, which describes the continuity of interaction between persons in terms of such features as contact rates and settings (Allan, 1979). Nonpersonal properties are hypothesized to regulate exposure to new stimulus information about a person and thereby influence the organization and consolidation of knowledge. In addition to the conceptual elaboration of these aspects of "relationship-context", the impact of the length of acquaintance, or familiarity with the referent person, on person knowledge structure is discussed.

Relationship-context. The major theoretical perspectives on the acquaintance process argue for the fundamental and ecological inseparability of (a) person knowledge, and (b) what may be seen as the "relationship-context" shared by two persons. The few studies that have directly studied the acquaintance process (Allen, 1979; Duck, 1977; Newcomb, 1961) all attempt, in some measure, to understand one's knowledge of another individual within the development of stable interpersonal relationships.

Acquaintanceship is also an explicit part of most models of relationship development (see Huston & Burgess, 1979, for a discussion of several stage models of relationship development). Scanzoni (1979), for example, identifies three stages in the development of a dyadic relationship -- exploration, expansion, and commitment -- based upon changes primarily along a dimension of outcome interdependence. Interdependence in this model is defined in terms of both structure and process, or "structure-in-process" (p. 61). Each stage in the model reflects the type of social exchange processes within the relationship's

evolving interdependence structure. Exploration, for example, is seen as a time when the relationship is very tentative and fragile. It encompasses the first meetings between two persons and is characterized by mutual efforts to uncover relevant information about each other. During exploration, partners are "engaged" in a process of acquaintance upon which the continuation or termination of the relationship depends.

In terms of an "acquaintance" perspective, the context of a relationship may be seen as an important determinant of "molar and interpersonal influences" on person knowledge, such as the nature of dyadic interdependence. How might "relationship-context" be defined in order to identify potentially important variables? It is proposed that two basic aspects of "relationship-context" can be distinguished: an interpersonal aspect, and a nonpersonal aspect.

The interpersonal aspect of relationship-context. The nature of dyadic interdependence may be regarded as an important interpersonal aspect of the context of a relationship (see Huston & Burgess, 1979; Kelley, 1979; Wish, et al., 1976). Social interdependence, however, is not a unidimensional construct. Indeed, theory (Kelley, 1979; Kelley & Thibaut, 1978) and research (Markwell & Hage, 1970; Triandis, 1972; Triandis, Vassiliou, & Nassiakou, 1968; Wish et al., 1976) both suggest that there may be as many as four, relatively independent dimensions of social interdependence.

Wish et al. (1976) had subjects rate 20 personal relationships (e.g., between you and your spouse) and 25 typical or role relationships (e.g., between husband and wife) on numerous bipolar scales. These data were submitted to a multidimensional scaling analysis, which revealed four primary dimensions underlying interpersonal relations. The first

dimension was basically evaluative, but was interpreted as "Cooperative/friendly vs. Competitive/hostile" because the scales with the highest weights referred to the degree of conflict in the relationship ("always harmonious vs. always clashing", "compatible vs. incompatible goals and desires", "very friendly vs. very hostile"). The second dimension was defined as "Equal vs. Unequal" and was principally described by the scales "exactly equal vs. extremely unequal power", "very similar vs. very different roles and behaviour", and "very democratic vs. very autocratic". The third dimension was defined by the scales "active vs. inactive" and "intense vs. superficial interaction with and feelings toward each other" and was interpreted as "Intense vs. Superficial". The final dimension was interpreted as "Socioemotional/informal vs. Task-oriented/formal" and was defined by scales dealing with social purpose and formality ("pleasure-oriented vs. task-oriented", "informal vs. formal").

Kelley (1979) interpreted the dimensions of interpersonal relations identified by Wish et al. (1976) according to his own conceptualization of the varieties of social interdependence. The "equal-unequal" dimension corresponds closely to a "mutuality of dependence" dimension, since differences in the mutuality or unilaterality of dependence are likely to be associated with differences between persons in power or status. The "cooperative/friendly-competitive/hostile" dimension clearly describes "correspondence vs. noncorrespondence of outcomes" (i.e., "compatible vs. incompatible goals"). The "intense-superficial" dimension corresponds to what Kelley describes as the "degree of interdependence" between persons. The remaining dimension, "socioemotional/informal-task-oriented/formal", does not correspond

easily to any of Kelley's hypothesized properties of interdependence. Kelley suggests, though, that it may reflect the degree to which personal attributes and dispositions are involved in the relationship, or the degree to which the relationship is an intimate and personal one (1979, p. 36).

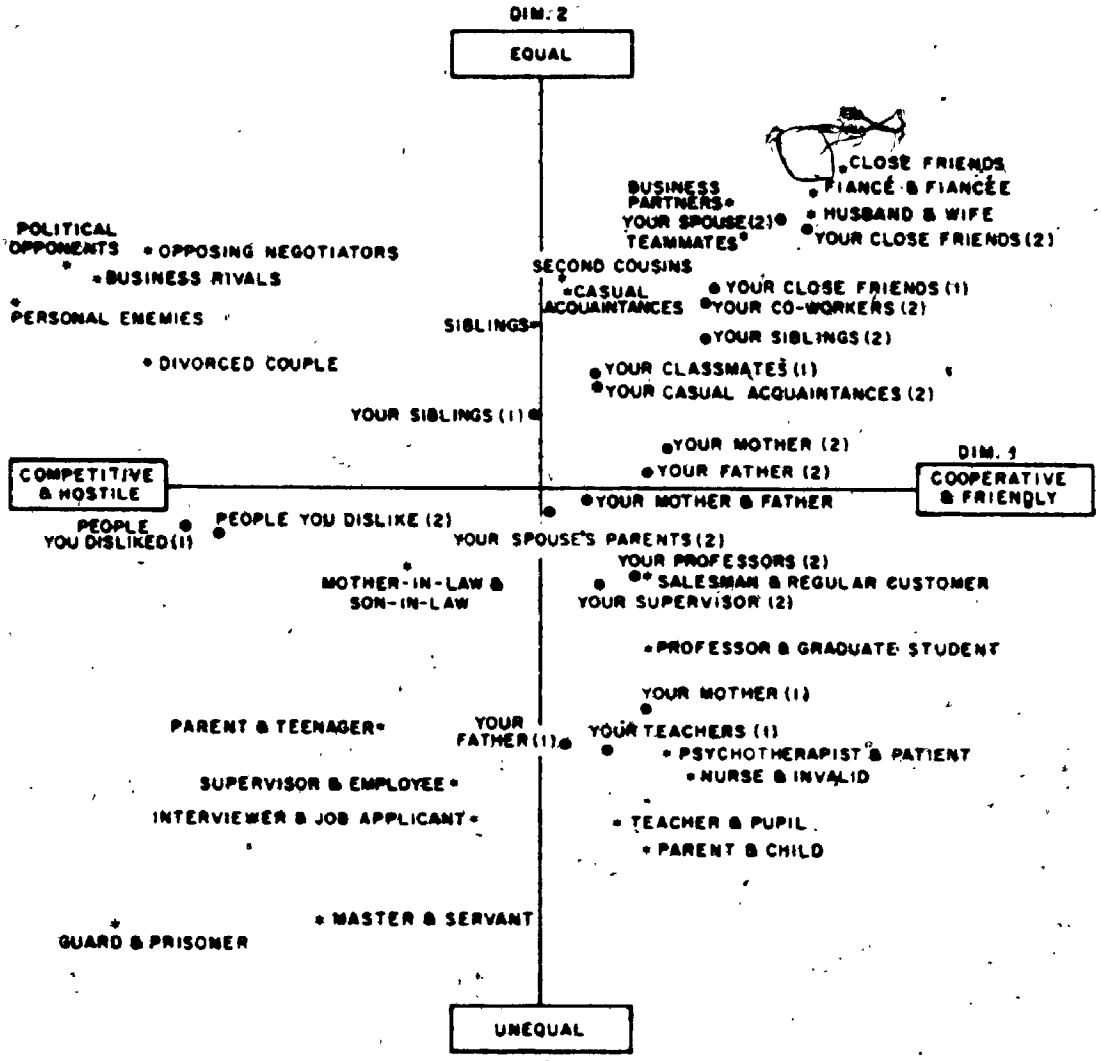
The "socioemotional/informal-task-oriented/formal" dimension also may distinguish intentional and incidental processes of acquaintance. The "socioemotional/informal" pole describes relationships in which "getting-to-know" each other is the primary goal of the partners. This kind of intentional acquaintance is characteristic of such situations as courtship. The "task-oriented/formal" pole describes relationships in which other goals are more important than "getting acquainted", such as when co-workers are working together toward a common goal and where learning about each other is incidental to the task. Although the major perspectives on interpersonal acquaintance (Allan, 1979; Duck, 1977; Newcomb, 1961) acknowledge that acquainting occurs in all interactions between persons, the distinction between intentional and incidental acquaintance seems to be a useful one.

The present research focuses on incidental acquaintance. This was done primarily for methodological reasons, specifically to minimize active impression formation sets, experimental demand, and "unnatural" rehearsal of early impressions of the other person between meetings. Thus, in the main experimental study reported in this thesis, subjects were not informed that they were in an acquaintance study (see the Method section of Study 2). Instead, members of the experimental dyads interacted with each other to solve problems and to receive performance-based rewards (in the form of public recognition) rather

than to intentionally "learn" about each other or to obtain socioemotional rewards of friendship.

In the Wish et al. (1976) multidimensional scaling solution, the "equal-unequal" and the "cooperative/friendly-competitive/hostile" dimensions appeared to be the dominant ones. Thus, in terms of Kelley's reconceptualization of these dimensions, "mutual vs. unilateral dependence" and "correspondence vs. noncorrespondence of goals" are probably important dimensions of dyadic interdependence. Examining the location of typical, personal relationships within the space defined by these two dimensions (see Figure 1) leads to the hypothesis that these characteristics of interdependence are likely to have important evaluative implications for person knowledge. For example, recall that "correspondence vs. noncorrespondence of outcomes" (reflected by the "cooperative/friendly-competitive/hostile" dimension) involves the degree of conflict between persons. To the extent that conflict is high, each person's impression of the other is likely to be unfavourable; whereas, if conflict is low, then impressions are likely to be favourable.

In the present research, however, interdependence in terms of the "equal-unequal" dimension will be the focus, and variation along the dimension of "cooperation-competition" will be minimized by looking at relationship-contexts that are predominantly characterized by correspondence of outcomes (cooperation). It is felt that the "equal-unequal" dimension of interpersonal interdependence has both practical and phenomenological relevance to the study of naturalistic person perception. Practically speaking, status and power differences are important features of relationships across a wide variety of life



* DENOTES A TYPICAL DYADIC RELATION BETWEEN THE DESIGNATED INDIVIDUALS.

● DENOTES A RELATION BETWEEN THE SUBJECT AND THE DESIGNATED INDIVIDUAL. THE SUBJECT'S CHILDHOOD RELATIONS ARE INDICATED BY A (1), WHILE THE SUBJECT'S CURRENT RELATIONS ARE INDICATED BY A (2).

FIGURE 1

Perceived Dimensions of Interpersonal Relations, from Wish, Deutsch, and Kaplan, Journal of Personality and Social Psychology, 1976, 33, p. 413.

domains, including family, school, and work. Most interpersonal relationships are defined, to a significant extent, by their respective degrees of dependence between the individuals. Furthermore, in terms of phenomenological importance, people appear to be very sensitive to differences in equality or inequality in their personal relationships (Wish et al., 1976).

Even holding constant the correspondence or noncorrespondence of outcomes, the mutuality vs. unilaterality of dependence between two persons might be expected to have evaluative consequences for person knowledge. In "unequal" relationship-contexts, where one person has more power or is of higher status (and therefore is less dependent upon the other person), latent scenerios of interaction based on power and status differences may be manifested (Kelley, 1979). This could result in the display of stereotypic patterns of submissiveness/dominance, as well as stereotypic biases in the perception of interpersonal behaviours. In "equal" relationship-contexts, on the other hand, where both persons are of the same status or power (and mutually dependent on each other), interactive behaviours are less likely to be governed by "stereotypic" scenerios. As a consequence, interpersonal behaviours are open to a wider range of interpretations, which are relatively free of the limitations imposed by the perceivers' preconceptions of high or low status persons and which may therefore result in the perception of a more equal distribution of both positively and negatively valenced information. Thus, person knowledge structures might be expected to vary in their overall evaluative tone as a function of "equal vs. unequal" interdependence, with more evaluatively neutral impressions of partners arising in "equal" relationship-contexts than in "unequal"

relationship-contexts. In addition, the potentially wider range of behaviours and interpretations of behaviour in "equal" relationship-contexts may increase the number of different person concepts associated with the referent person, making differentiation of knowledge greater in "equal" than "unequal" relationship-contexts.

The hypothesis of an inverse relation between differentiation and evaluation in impressions is consistent with a recent model of the social appraisal process for ingroup and outgroup persons. Linville and Jones (1980) hypothesized that general knowledge structures for ingroups are more complex and differentiated than knowledge structures for outgroups. This is presumably because persons have richer background experiences with ingroup than outgroup members, since they have dealt with the former in a larger collection of diverse circumstances.

According to Linville and Jones (1980), with more complex knowledge structures, a larger number of attributes or dimensions will be used to encode stimulus information, making it more likely that both "good" and "bad" things will be perceived. Consequently, judgements about ingroup persons are more likely to be evaluatively mixed, resulting in less extreme appraisals; whereas, judgments about outgroup persons will tend to be more evaluatively extreme, since fewer dimensions are used in interpreting stimulus information and the evaluative implications of these dimensions carry more weight. Similarly, with respect to knowledge structures for a relationship partner, if actual or perceived diversity of social information is enhanced in "equal" interdependence circumstances, then impressions of such relationship partners should be more differentiated and less evaluatively polarized than when diversity is inhibited (in "unequal" interdependence circumstances).

Of course, in "unequal" relationship-contexts, one person is unilaterally dependent upon an essentially independent person. As a consequence, the two partners in such relationships may not develop entirely similar knowledge structures of one another, although both of their structures are likely to be less differentiated and more evaluatively polarized than those developed by partners in an "equal" relationship-context. For example, within an "unequal" relationship, the dependent (or subordinate) person may tend to be more continually persuasive in his or her interactional style, perhaps by adopting various ingratiation tactics with respect to the independent person (Jones, 1973) in order to gain control over desired personal outcomes. Independent (or superordinate) persons, on the other hand, may behave in stereotypically condescending or patronizing ways toward their dependent partner. Thus, dependent and independent (or subordinate and superordinate) persons are not necessarily going to evaluate their relationship partners in the same way, even though they are both in an "unequal" relationship-context. Consequently, it will also be of interest to compare the person knowledge structures of dependent and independent partners within "unequal" relationships.

To summarize, the interpersonal aspect of relationship-contexts involves the nature of the interdependence between two persons. It is speculated that "equal vs. unequal interdependence" might affect the evaluative nature of individuals' impressions of their relationship partners, as well as the degree of differentiation of their person knowledge structures. More specifically, "equal" and "unequal" relationship-contexts refer to interpersonal situations where partners are either mutually dependent or dependent and independent,

respectively. It is hypothesized that "equal" relationship-contexts will produce more differentiated and less evaluatively polarized impressions than will "unequal" relationship-contexts.

The nonpersonal aspect of relationship-context. A second proposed aspect of "relationship-context" is essentially nonpersonal, as opposed to interpersonal, in nature. The nonpersonal aspect includes properties such as the spacing of encounters between persons, and the place or settings of encounters. These properties manifest themselves in terms of relatively fixed patterns of contact rates between persons and typical locations of contact. Most relationships in one's social network can be defined in terms of how frequent, or temporally spaced, the meetings between oneself and one's partners typically are, and where interaction usually occurs (Allan, 1979).

Research suggests that nonpersonal properties of relationship-context do affect person perception. Allan (1979) hypothesized that variety in the settings in which people interact allows the relationship to "flower out" along many dimensions and each interactant to learn more diverse things about each other. He conducted a sociological analysis of friendship and kinship patterns in middle-class and working-class acquaintanceships from a symbolic interactionist perspective. Allan (1979) noted that middle-class friendships "flowered out" more than did working-class friendships. Middle-class persons, it seemed, were motivated to interact with any given other across a wide variety of social settings. The multi-setting nature of middle-class relationships resulted in interactants' characterizations of each other being composed of generic, cross-situationally applicable terms such as "active" and "congenial".

Working-class friendships, on the other hand, tended to involve interaction with another that was more or less restricted to particular environments and settings (e.g., at work; meeting the boys in the pub; talking to the neighbour across the fence). This lack of variety in settings within any given relationship, according to Allan, tended to have a narrowing effect on subjects' definitions of their relationships with one another. It appeared that these subjective definitions, including the perceiver's conception of the other, were highly associated with the specific settings (e.g., "Bill is a drinking buddy").

It is perhaps not surprising that variety in interaction settings affects person perception. Certainly, variety in the settings in which people meet will necessitate diversity in interpersonal behaviour, which will affect the content, quantity, and perhaps the quality of information exchanged between interactants (cf., Linville & Jones, 1980).

A more interesting nonpersonal property of relationship-context is the "spacing of interaction" between two persons. "Spacing of interaction" is defined by the length of time that typically separates the encounters between interactants. Relationship-contexts that are characterized by frequent interaction involve repeated encounters that are separated by brief intervals of time, and may be described as having relatively massed encounters. Relationship-contexts that are characterized by infrequent interaction involve repeated encounters that are separated by long intervals of time, and may be described as having relatively spaced encounters.

Regularity in the spacing of interaction is a prominent distinguishing property of real world relationship-contexts. A general perusal of one's own repertoire of relationships with others will reveal much variation with respect to spacing of interaction. One's relationships with one's spouse, children, workmates, and colleagues are typically characterized by interactions that are relatively massed. Children's relationships with teachers are similarly massed, as are their relationships with their parents and siblings during elementary school years.

On the other hand, superordinate and subordinate persons in a work environment typically interact under more spaced circumstances, although within these status categories, encounters are probably more massed. A familiar example might be the relationships of most graduate students and their advisors, which tend to be relatively less frequent (i.e., more spaced) than either interfaculty or interstudent relationships.

Relationships in other life domains can also be classified with respect to a broad dichotomy of massed versus spaced encounters. One's interactions with various professionals are often spaced, such as encounters with family physicians, dentists, attorneys, and auto mechanics. Therapeutic relationships could be considered to involve massed encounters relative to encounters with one's family physician (e.g., once a week vs. two or three times a year), but in relation to encounters with one's spouse, the relationship-context in therapy involves much more spaced interactions.

Relationship-contexts can also <u>change</u> with regard to the spacing of interaction. A classic example is the change from relatively massed to

relatively spaced encounters between parents and their children when the latter leave the family milieu to begin their adult lives.

With respect to the present concern with incidental acquaintance processes, however, many relationships that do not have "getting-acquainted" as a primary goal, such as those in the work domain, are fixed (i.e., unchanging) in their interaction frequency. Secretaries and their bosses, or coworkers on the line, for example, see each other under relatively massed and fixed conditions (i.e., every day). Other kinds of relationships involve much more spaced encounters which are also relatively fixed. Some examples might be car owners and mechanics, one's interactions with the weekly newspaper vendor, and one's interactions with the landlord.

The question of interest for the present research is whether differences in the spacing of interaction will have a significant impact on person knowledge structure. Spacing of interaction is likely to have a basic, regulatory influence on the input of new stimulus information about another person. To the extent that interaction encounters are massed together, new person information is being obtained on a rather continuous basis; whereas, encounters that are more widely spaced result in more discrete or interrupted input of new person information. Whether new stimulus information about a target person is being obtained in relatively continuous or interrupted fashion seems likely to affect how it is processed by the perceiver in relation to pre-existing knowledge about the referent person. For example, the continuity of information input could affect whether new information is assimilated with existing knowledge or produces accommodation of the knowledge structures (see Higgins et al., 1981, for a related discussion).

When encounters in a relationship-context are relatively massed, interactants must continually retrieve their cognitive representations of the other person to facilitate ongoing interaction, which will increase the accessibility and salience of those representations. As a result, interactants may become more aware of differing facets of the referent person's behavioural styles and orientations. That is, there may be a greater probability of perceiving new and conflicting dispositional information, resulting in a more differentiated impression.

In addition, though, the constant impingment of new person-relevant information may hinder integration and crystalization of the existing structure. That is, there may be less internal organization and integrity within the impression.

When successive encounters between two persons are relatively spaced, on the other hand, less frequent interaction reduces the necessity of continuous access to existing knowledge structures. As a consequence, there may be less awareness of the dimensionality of the other's character, and perceivers may focus only on very salient personality themes in organizing their representation of the perceived person. The longer intervals between encounters may also lead to more self-generated polarization in one's impression of the other in terms of salient personality themes or schemata (Tesser, 1978). These "autistic" organizing processes could enhance integration and crystalization of knowledge structures and result in the assimilation of new information during subsequent interactions between persons.

Thus, spaced versus massed encounters may have some important consequences for the way person knowledge is structured. Greater

accommodation of new information when encounters are massed suggests that each person's representation of the other will be more differentiated (include more different person concepts) than will representations that develop on the basis of spaced encounters. Greater assimilation of new information when encounters are spaced, on the other hand, suggests that interactants' impressions of each other will be more integrated than impressions that develop on the basis of massed encounters. That is, impressions based on infrequent, or spaced, interaction will involve greater interweaving of behavioural themes and dispositional attributes, with clearer explanations or rationalizations of conflicting and contradictory information about the referent person.

A third structural property of person knowledge also needs to be discussed in this context. Specifically, the "complexity" of structure in person knowledge is conceptually related to basic structural properties such as differentiation and integration. Thus, it is of interest to consider how the spacing of interaction in a relationship-context may affect the overall complexity of impressions. Complexity has been conceptualized in a number of different ways, however, so the impact of spacing of interaction on complexity will obviously depend on how the concept of complexity is defined.

First, there are simple conceptualizations that equate complexity either with differentiation (e.g., Crockett, 1965; Rosenkrantz & Crockett, 1965) or with integration (e.g., Radke-Yarrow & Campbell, 1963). If the hypothesized relations between spacing of interaction and either differentiation or integration of person knowledge are tenable, then different conclusions about the impact of "spacing of interaction" on the complexity of person knowledge will be reached depending upon

which simple conceptualization is preferred. For instance, if "complexity-as-differentiation" is endorsed, then frequent, or massed, interactions would be expected to increase complexity, relative to infrequent, or spaced, interactions. If, however, the "complexity-as-integration" conceptualization is preferred, then spaced interactions would be expected to increase complexity more than massed interactions.

More sophisticated definitions of complexity are also possible. In most of these conceptualizations, complexity involves some combination of both the differentiation and integration properties of person knowledge (cf., Streufert & Streufert, 1978). Unfortunately, the assessment of impression complexity using such combinatory approaches is time-consuming and methodologically complicated (e.g., Zajonc, 1960). Consequently, for the present, exploratory purposes, and for the sake of simplicity, "complexity of structure" in person knowledge will be defined by the additive combination of differentiation and integration of structure, with equal weight given to each component.

Conceiving of complexity in this way emphasizes equally the important influences of how <u>much</u> one knows about another and how that knowledge is <u>organized</u>. Thus, the most complex person knowledge structures will consist of many different pieces of information (highly differentiated), which are highly integrated; conversely, the least complex structures will be those that loosely integrate very little information.

It is, however, the cases in which differentiation is high, but integration is poor, and vice versa (differentiation is low, but integration is high) which illustrate best how complexity of person

knowledge may be affected by the spacing of interaction. Specifically, high differentiation and poor integration of person knowledge would be expected when encounters tend to be massed together; whereas, low differentiation and high integration of person knowledge would be expected when interactions are spaced apart. In either case, though, the present combinatory model of complexity predicts that equally "complex" representations of another will be achieved, despite basic structural differences. In other words, complexity of structure in person knowledge, and its phenomenological manifestation -- how well one "knows" another -- may be based upon fundamentally different representational structures, either highly differentiated or highly integrated. Thus, spacing of interaction is not expected to influence directly the overall complexity of person knowledge structures, although this factor is expected to affect the underlying components of complexity (i.e., differentiation and integration). Its hypothesized effects on these components are in opposite directions with respect to complexity (e.g., increasing differentiation while decreasing integration), which are expected to maintain relatively constant overall levels of complexity irrespective of the spacing of interactions. Rather, it is probably the overall amount of interaction between persons which will directly influence the complexity of their knowledge of each other (by increasing both differentiation and integration).

In sum, the nonpersonal aspect of "relationship-context" involves properties associated with the location or settings of interaction and the spacing of interaction between two persons. Nonpersonal properties of relationship-context are probably mediators of the amount and diversity of person-relevant information available during interaction,

as well as how that information is processed. The nonpersonal variable of primary interest here is the "spacing of interaction", which is defined in terms of the temporal spacing of encounters between persons -- whether encounters are massed or relatively spaced.

The spacing of interaction is hypothesized to have a basic regulatory effect on the input flow of new person information, which might influence processes of knowledge consolidation. It is expected, for example, that massed encounters may facilitate the "accommodation" of new information and thereby produce more differentiated representations of another person; whereas, spaced encounters are expected to facilitate "assimilation" of new information into the existing knowledge structure and thereby produce more integrated representations of another person. Differences in the spacing of interaction in relationship-contexts are not expected to have a direct influence on the complexity of structures in person knowledge.

5. Familiarity and structure in person knowledge.

In addition to dynamic, face-to-face interaction, an "acquaintance" approach inherently involves repeated interaction between two persons. It is repeated interaction, of course, which underlies the general concern with acquaintance and person knowledge, as well as the interest in specific factors such as the spacing of interaction.

The constructs of "length of acquaintance" and "familiarity" are directly dependent upon repeated interaction. "Length of acquaintance", or the amount of time two persons are interactively engaged, can be conceptualized as either the duration of exposure to the referent person or the number of separate encounters. Although these two aspects of "length of acquaintance" are operationally confounded, so long as the

duration of exposure is held constant within each encounter, the total number of encounters may be taken as a reflection of "objective familiarity" (Moreland & Zajonc, 1982). Thus, length of acquaintance and familiarity can be treated isomorphically. Moreover, since objective and subjective (or perceived) familiarity are highly related (Moreland & Zajonc, 1982; see also Newcomb, 1961), all of these factors can be considered to form a single, underlying dimension of "familiarity".

Previous research and theory does, in fact, indicate that the more encounters there are between two persons, the more they report being "familiar" with one another. More importantly, abstract and complex (differentiated and/or integrated) structures are more likely as familiarity increases (e.g., Duck, 1973; Fiske & Cox, 1979; Kuiper & Derry, 1981; Pryor & Ostrom, 1981; Pryor et al., 1983; Radke-Yarrow & Campbell, 1963; see also Posner & Keele, 1968, 1970). These effects presumably occur because repeated exposures increase the perceiver's supply of information about the referent person. Repeated exposures to information that is <u>similar</u> to existing structures should induce representations of the information in terms of abstract, generic, or trait-like concepts (cf., Bartlett, 1932; Hamilton et al., 1980; Hastie, 1981; Hastie & Kumar, 1979; Ostrom et al., 1980; Posner & Keele, 1968, 1970; Wyer & Srull, 1981). For example, repeated exposure to several behavioural instances of "generosity" would ultimately lead to a representation of the referent person as "generous", "charitable", or "altruistic".

Repeated exposure to information that is <u>different</u> from existing structures, on the other hand, is likely to produce more differentiated

representations of the person. Thus, since both "similar" and "different" pieces of information are likely to be encountered over time, objective familiarity should increase both differentiation and integration in structure. Given the previously-presented definition of complexity, therefore, well acquainted persons should also have relatively "complex" person structures for each other.

Finally, repeated encounters between individuals also may influence affective dimensions of person knowledge. The "mere exposure" effects of repeated interaction, for example, may be expected to increase liking for the referent person (Moreland & Zajonc, 1982; Zajonc, 1968). On the other hand, given the possible inverse relation between differentiation and impression polarization discussed earlier (cf., Linville & Jones, 1980), one might expect more neutral or moderate (i.e., less polarized) evaluations as familiarity increases. Which of these "evaluation" effects is more likely to occur as a function of familiarity is, at this point, an empirical question.

In the two studies reported in this thesis, familiarity (or the "length of acquaintance") between the perceiver and the perceived is treated in two different ways. In Study 1, length of acquaintance is operationalized as simply the "length of time" that the perceiver has been acquainted with the perceived. In Study 2, length of acquaintance is objectively manipulated by varying the number of encounters that partners engage in, with the duration of each encounter held constant.

6. Individual differences in cognitive complexity.

Complexity of structure in person knowledge is likely to be affected by individual differences in cognitive complexity, as well as by the kinds of "situational" factors that have been discussed thus far.

There is evidence that, within the domain of person perception and impression formation, individual differences in complexity of thought are important determinants of the structure of a perceiver's conception of another person (Crockett, 1965; Radke-Yarrow & Campbell, 1963; see also Streufert & Streufert, 1978). It is of theoretical interest, therefore, to assess the impact of cognitive complexity on impression formation.

Since the variables of central interest to the thesis are not individual difference variables, but rather the situational variables associated with "relationship-context" and "familiarity", cognitive complexity will be treated as a covariate in this research. To assess perceivers' cognitive complexity, the Role Category Questionnaire (Crockett, 1965; Rosenkrantz & Crockett, 1965) will be used (see Appendix C). This instrument produces a numerical index that reflects the degree of "differentiation-like" complexity specific to the domain of person perception and impression formation (see also Zajonc, 1960).

Conceptual Summary, Operational Overview, and Hypotheses

1. Summary and Overview

This thesis is an investigation of naturalistic person perception. An "acquaintance" approach is adopted, involving repeated, face-to-face interactions between two persons as the primary mode of "acquiring" person information (as opposed to a "description" approach, which involves the indirect acquisition of person information). The use of an "acquaintance" approach to person perception changes the typical research emphasis from a concern with "molecular and intrapersonal processes" to a concern with "molar and interpersonal influences". Since there is relatively little in the way of systematic study of "molar and interpersonal" factors in person perception, the notion of "relationship-context" is introduced in an attempt to identify some of the more obvious and relevant variables.

Two basic aspects of "relationship-context" are proposed: an interpersonal aspect and a nonpersonal aspect. The interpersonal aspect encompasses those properties of relationships that have to do with the nature of outcome interdependence between two persons. One important dimension of interdependence is "mutual vs. unilateral dependence", or the equality vs. inequality of status and power relations. This interpersonal relationship-context variable is expected to affect evaluation in impressions of another, as well as the amount of knowledge one has about another (i.e., differentiation), through its mediation of the interactive styles and orientations adopted by the interactants. The nonpersonal aspect of relationship-context encompasses such factors as the typical settings and contact rates of the interactions. The

nonpersonal variable of interest here is the "spacing of interaction" (massed vs. spaced) between persons. The spacing of interaction is expected to affect how new information about a person is consolidated with respect to the perceiver's existing knowledge construct (i.e., whether the new information is assimilated or accommodated). In addition, the "length of acquaintance" (or "familiarity"), an inherent aspect of any "acquaintance" paradigm, is expected to have important structural consequences for person knowledge.

The independent variables. In the present research, the major independent variables are "equal vs. unequal interdependence", "spacing of interaction", and "length of acquaintance" (or "objective familiarity") between the perceiver and the perceived. In Study 1, "equal vs. unequal interdependence" is operationalized by having subjects describe acquaintances with whom they interact as either a "superior", an "equal", or a "subordinate". In Study 2, members within dyads either are made "mutually dependent" on each other for task performance scores or one member of the dyad is made "unilaterally dependent" upon the other member for his or her scores. Thus, dyads are composed of either "equally" or "unequally" interdependent persons. This produces three types of persons: independent ("superior"), equal, and dependent ("subordinate").

The second factor, "spacing of interaction", is operationalized as the length of time separating successive encounters between the two persons. In Study 1, perceivers describe others with whom they interact either relatively frequently (i.e., massed encounters -- more than twice a week) or relatively infrequently (i.e., spaced encounters -- not more than once a week). In Study 2, encounters between dyad members in

multiple session conditions (involving two or three meetings) are experimentally massed or spaced. In massed conditions, all of a dyad's sessions occur within 5 days; whereas, in spaced conditions, each session is separated by at least 7 days.

The factor of "familiarity" is operationalized as the "objective length of acquaintance" between the perceiver and the perceived in both studies. In the first study, perceivers are asked to describe a person they have known for more than three months (an "old" acquaintance") and another person whom they have known for less than three months (a "new" acquaintance). In Study 2, dyad members (who were initially strangers) interact with each other on either one, two, or three separate occasions.

In both studies, factorial analysis of variance designs are employed, with preliminary analyses using individual differences in cognitive complexity as a covariate. For Study 1, the design constitutes a 2 (massed vs. spaced encounters) x 3 (superordinate, equal, or subordinate status of referent person) x 2 ("new" vs. "old" acquaintance -- familiarity) design. In Study 2, the design is somewhat more complicated. Subjects are nested in a "dyad member" factor (member 1 or member 2), which is nested in 2 (equal vs. unequal interdependence) x 2 (massed vs. spaced encounters) x 3 (one, two, or three encounters) experimental conditions. In both studies, gender of subject is also included as a factor in the analyses.

The dependent variables. All participants in both studies produce detailed, free response descriptions of other persons. In Study 1, they provide impressions of two personal acquaintances, whereas in Study 2, they provide an impressionistic description of their dyad partner.

The acquaintance approach adopted in this research, because it revolves around actual, face-to-face interaction between individuals, eliminates the possibility of experimenter control over the specific content of the stimulus information. As a consequence, properties that reflect the structural form of person knowledge, and which do not necessarily rely upon the specific informational content, are the focus of this research. The nature of person knowledge, as a function of "relationship-context" and "objective familiarity", is examined in terms of five major dependent variables: the number and kind of concepts used to describe the referent person (i.e., differentiation), the degree to which the description integrates different and possibly inconsistent person information, the overall level of complexity of the structure of the person knowledge, the degree of abstraction represented in the knowledge structure, and its evaluative tone.

A word about the definitions of integration and abstraction is in order. Integration is operationalized as a subjective judgment of the overall description, in terms of how "unified" a picture it paints of the referent person. The important criteria in making this judgment include the extent to which the perceiver has attempted to rationalize or explain the co-occurrence of different attributes of the referent person, and/or the perceiver's attempt to resolve inconsistent and contradictory information (see Radke-Yarrow & Campbell, 1963). In contrast, abstraction is operationalized as the extent to which the perceiver employs generic, trait-like concepts to describe the referent person. It would be possible for an impression to be high in abstraction but low in integration, or vice versa. Specific details about these measures will be provided in the Method sections.

2. Hypotheses

The present research is a preliminary and exploratory excursion into the study of naturalistic person perception. The following list of tentative hypotheses is intended to serve as a guide and framework for sorting through and interpreting the data and for discussing the implications of these findings for the relations between "molar and interpersonal" factors and person knowledge. The hypotheses are organized in terms of the independent variables.

Hypothesis 1a (Interdependence). The interpersonal aspect of relationship-contexts (i.e., equal-unequal interdependence) is expected to influence primarily the evaluative tone of the person descriptions. Specifically, "unequal interdependence" between the perceiver and the perceived is expected to produce descriptions that are significantly more or less favourable (i.e., more polarized) than when there is "equal interdependence" between the perceiver and the perceived. Thus, the descriptions of "superordinate" and "subordinate" referent persons are expected to be evaluatively different from the descriptions of "equal" referent persons, and possibly from each other.

Hypothesis 1b (Interdependence). Equal-unequal interdependence is also expected to affect the number of different person concepts used to describe the referent person (i.e., differentiation). Specifically, descriptions of "equal" referent persons are expected to be more differentiated than descriptions of "unequal" referent persons.

Hypothesis 2a (Spacing of Interaction). Differentiation is also expected to be higher when encounters between persons are "massed" (frequent) than when encounters are "spaced" (infrequent).

Hypothesis 2b (Spacing of Interaction). The "spacing of

interaction" factor is expected to have the reverse effect on integration of person descriptions. Integration will be lower when encounters are "massed" than when encounters are "spaced".

Hypothesis 3 (Length of Acquaintance). The "length of acquaintance", or "objective familiarity", with the referent person is expected to affect all of the structural properties of person descriptions to some extent. The basic effect of "familiarity" is hypothesized to be one of increased information. Thus, descriptions of "familiar" persons should be more complex (differentiated and/or integrated), more abstract, and possibly more favourable or unfavourable (evaluatively polarized) than descriptions of "less familiar" persons.

Hypothesis 4a (Length of Acquaintance x Interdependence). "Length of acquaintance" may be expected to interact with each of the properties of relationship-context to affect person descriptions. The interaction of "familiarity" with "equal vs. unequal interdependence" should result in more evaluatively polarized descriptions of "superordinate" and/or "subordinate" referent persons (relative to descriptions of "equal" referent persons) when the perceiver is familiar with the referent person than when the perceiver is relatively unfamiliar with the target.

Hypothesis 4b (Length of Acquaintance x Spacing of Interaction). The interaction of "length of acquaintance" with "massed vs. spaced interactions" should result in (a) even more differentiation in "massed" encounters and (b) even more integration in "spaced" encounters, when the perceiver is familiar with the referent person than when the perceiver is relatively unfamiliar with the target.

STUDY 1

Method

1. Subjects and Design

Sixty undergraduates at the University of Western Ontario, 36 males and 24 females, participated in the study as part of their introductory psychology course requirements. Ten subjects were randomly assigned to each condition of a 2 ("massed" vs. "spaced" encounters) x 3 ("superordinate", "equal", or "subordinate" status of referent person) design. In addition, all subjects were exposed to both levels of a "length of acquaintance" factor ("old", more than three months, vs. "new", less than three months), which produced a mixed design of two between-subjects factors and one repeated-measures factor. Finally, the inclusion of subjects' gender as a fourth factor produced an unbalanced design, with cell n's ranging from 3 to 7. Subjects were mass-tested in a large room with rows of tables and chairs, in groups of sizes 22, 16, 14, and 8. Every experimental condition was represented at each testing session. A session lasted approximately one hour.

2. Procedure

Subjects volunteered to participate in an experiment entitled "Writing descriptions of persons". Upon arrival at the laboratory, subjects were met by a male experimenter and were asked to sit at one of the seats where there was a pencil and a questionnaire booklet. Subjects were separated from one another by an empty seat.

Subjects were told that the experiment was composed of two parts, a practice phase and a testing phase. During the practice phase, which

would take about 25 minutes, subjects were to write detailed descriptions of a "mechanical device" (10 speed bicycle) and two persons "whom they really knew". The experimenter suggested that they spend about ten minutes writing each of the practice person descriptions. The practice phase, subjects were told, was to prepare them for the testing phase, in which they would be writing eight different person descriptions in rapid succession under time constraints; only 2 minutes would be allowed for writing each description.

The experimenter's instructions clearly implied that the testing phase was the important part of the study. This, however, was not the case. In actuality, it was subjects' descriptions of the two persons in the practice phase that provided the dependent measures. The testing phase was really the administration of Crockett's Role Category Questionnaire (RCQ) for assessing cognitive complexity with respect to impression formation. Subjects' scores on the RCQ were obtained so that, in an analysis of covariance, any effects of individual differences in cognitive complexity on person knowledge structure could be controlled statistically. The reason that subjects were led to believe that their practice person descriptions were relatively unimportant was to reduce performance anxiety and to minimize interference with their introspections about the referent persons. This, it was hoped, would facilitate comprehensive and complete free-response person descriptions.

After the experimenter's brief overview of the procedure, subjects were told to begin the practice phase. They were told that the instructions for each practice item were self-explanatory and that they should read them carefully before starting to write. They were

encouraged to ask questions if there was anything that they did not understand. None of the subjects asked any questions.

In the questionnaire booklet, the two practice-person items always followed the "bicycle" item. During the practice phase, the experimenter casually mentioned after 5 minutes that subjects should probably start on the first "practice person". Ten minutes later, the experimenter again interrupted subjects and suggested that they go on to the second "practice person" if they had not already done so.

The experimenter conducted the testing phase immediately following the practice phase. Subjects completed the RCQ by writing descriptions of eight acquaintances. Each of these target persons fit one of the 8 sets of characteristics defined by the complete crossing of "male vs. female" by "peer vs. older" by "like vs. dislike the person" (e.g., "describe a female, older than yourself, whom you dislike"). The experimenter, using a stop watch, allowed subjects exactly 2 minutes to write each description, with a break of 10-seconds between each one. With the conclusion of the testing phase, the questionnaire booklets were collected, subjects were thanked, provided with a written debriefing about the experiment, and dismissed.

Manipulation of the independent variables. The independent variables were manipulated in the written instructions for each "practice person" item. The specific kinds of persons subjects were asked to describe were defined by the complete crossing of the two relationship-context variables, "spacing of interaction" and "equal-unequal interdependence" (status). This produced six different sets of instructions identifying "practice persons". These were (1) for "superordinate/massed" - "you interact with this person as a subordinate

(that is, you are lower status or less powerful)" and "you interact with this person reasonably often (at least twice a week); (2) for "equal/massed" - "you interact with this person as an equal" and "you interact with this person reasonably often (at least twice a week)"; (3) for "subordinate/massed" - "you interact with this person as a superior (that is, you are higher in status or more powerful)" and "you interact with this person reasonably often (at least twice a week)" (4) for "superordinate/spaced" - "you interact with this person as a subordinate that is, you are of lower status or less powerful)" and "you do not interact with this person very often (less than once a week)"; (5) for "equal/spaced" - "you interact with this person as an equal" and "you do not interact with this person very often (less than once a week)"; and (6) for "subordinate/spaced" - "you interact with this person as a superior (that is, you are higher in status or more powerful)" and "you do not interact with this person very often (less than once a week)".

Both "practice persons" described by any given subject fit the same "relationship-context" condition, but varied in how long subjects had known them. Subjects were to write about one "old" acquaintance (someone they had known for at least 3 months) and one "new" acquaintance (someone they had recently met, i.e., in the last 2 or 3 months). Thus, "length of acquaintance" was manipulated within-subjects, and the order of presentation of this factor was randomized across subjects. Subjects were also required to describe persons of their own gender. Additional instructions for each "practice person" included a request that descriptions be detailed and comprehensive, and a list of examples in order to facilitate subjects' choices of persons to describe. To illustrate, subjects in the "massed

interaction, superordinate other" condition were presented with the instruction sheet shown in Appendix A prior to writing their "practice person" description. An identical instruction sheet with the "b" characteristics changed to "you have known this person for some time (more than 3 months)" would be used to specify the second "practice person" to be described by subjects in this condition.

3. Dependent Variables

Several measures of the structural aspects of subjects' cognitive person constructs were derived from subjects' free response descriptions of the referent persons. The same indices of structure are used here and in Study 2, so the procedures for obtaining these measures will be described in detail at this time.

First, each description was content-coded using a taxonomy for person concepts developed by Fiske & Cox (1979). This classification scheme allows categorization of terms and phrases within a description into one of six concept types: "appearance" concepts, "behaviour" concepts, "relationship" concepts, "context" concepts, "origin" concepts, and "personal properties" concepts.

Based upon Heider's (1958) assumption that perceptions of objects and people are basically similar in structure, Fiske and Cox (1979) devised a taxonomy for categorizing person concepts by adapting Anglin's (1977) work in the area of object perception. Specifically, each of the "person concept" categories identified by Fiske and Cox corresponds conceptually to one of the six categories for describing objects identified by Anglin. These are, "what the objects look like" (appearance), "what they do" (behaviour), "what one does with them" (relationship), "where one finds them" (context), "where they come from"

(origin), and "what the objects are like internally" (personal properties). In order to facilitate the coding of person descriptions, each concept category is subdivided into smaller units (see Appendix B).

The classification scheme developed for person concepts appears to have adequate interscorer reliability. On a randomly selected sample of 22 out of 138 descriptions, Fiske & Cox (1979) report little variation in scoring between different judges. In the present experiment, the interjudge agreement in classifying attribute terms and phrases into concept subcategories was 82% on a random sample of 15 out of 120 descriptions.

An interesting feature of this taxonomy is the relative abstractness of the various concept categories. "Appearance" concepts, for example, describe directly observable and concrete attributes of the referent person; whereas, "personal properties", which involve inferred dispositional characteristics such as attitudes and personality traits represent nonobservable and relatively abstract attributes of the referent person (Fiske & Cox, 1979). "Behaviour" concepts may be placed somewhere in between the concrete and abstract extremes of "appearance" and "properties" concepts, since observable actions often require some degree of elaboration before they can be articulated, such as, for example, when metaphorical descriptions of behaviour are used -- "she moves like the wind".

It is proposed that the following order of the six concept categories is a reasonable representation of their relative positions along a dimension of increasing abstractness: (1) appearance, (2) context, (3) origins, (4) behaviour, (5) relationship, and (6) personal properties. This ordinal ranking is based on the present author's

intuitions. Some post hoc support for the ranking, however, was obtained from a sample of 58 male and female undergraduates in introductory psychology. These students were presented with a booklet containing 72 descriptive terms and phrases (twelve from each of the six concept categories), which were randomly selected from 50 person descriptions that were themselves randomly selected from all of the descriptions obtained in Study 1 and Study 2. The students were asked to indicate which of the six category names best defined each descriptive item, and then to rate the item on a six-point scale ranging from "highly concrete" to "highly abstract". The instructions to subjects included definitions of "concrete" and "abstract" (Paivio, Yuille, & Madigan, 1968), as well as how these terms can be applied to person attributes (see Appendix D). Across all 72 items, the mean agreement between the respondents' classifications of the items to the six categories and the experimenter's classifications was 84%. This provides some additional support for the reliability of the Fiske and Cox taxonomy. Further, subjects' ratings of the 72 items on the concrete-abstract dimension tend to support the proposed abstractness rankings of the concept categories. In Table 1, it can be seen that the proposed order of categories is generally preserved in the means, modes, and ranges of subjects' abstractness ratings for the items within each category. Thus, there is some consensus validity for the proposed ordering of the categories in terms of their abstractness.

Two of the dependent measures of structure in person knowledge were derived directly from the content-analyses of the descriptions using Fiske and Cox's taxonomy. The first of these was a measure of differentiation, which consisted of the total number of person concepts

Table 1

Descriptive statistics for concrete abstract ratings of 72 person descriptors as a function of their previous classification using the Fiske & Cox (1979) taxonomy for person concepts.

Person Concept Category	Statistics			
	Mean	Mode	S.D.	Range
Appearance	1.78*	1.5	.549	1.0-3.5
Context	2.12	2.4	.846	1.0-5.7
Origins	2.62	2.1	.959	1.3-5.7
Behaviour	3.7	3.6	.681	2.1-5.1
Relationship	4.1	4.4	.688	2.3-6.0
Personal Properties	4.4	4.4	.720	2.8-5.8

* Rating scale goes from 1 (very concrete) to 6 (very abstract).

provided in the description (across all categories). Differentiation was also examined by calculating the number of person concepts within each category, which provided a more fine-grained approach to this structural characteristic.

The within-category frequencies were also used to get a sense of how abstract the descriptions were. Rather than simply comparing the number of concepts in relatively concrete categories to the number of concepts in relatively abstract categories, a single index representing the overall abstraction of the description was calculated. First, the proportion of the total number of concepts within the description that fell into each category was calculated. Next, each category's percentage was multiplied by the category's ordinal position of increasing abstractness (e.g., X% of concepts in "appearance" times '1', Y% of concepts in "behaviour" times '4', and Z% of concepts in "properties" times '6'). Finally, all of these weighted proportions were summed to produce an index of abstraction. Theoretically, this procedure means that a normal distribution of abstraction scores, ranging from 1.0 to 6.0, is possible. The least abstract descriptions will have the largest proportion of person concepts in relatively concrete categories, whereas the most abstract descriptions will have the largest proportion of concepts in relatively abstract categories.

A third measure was the judged integration of the description. This was a subjective estimate of how well the perceiver managed to interweave the various attributes of the target person into an organized whole, resolving inconsistent and contradictory information. This measure was adapted from Radke-Yarrow & Campbell (1963). It consisted of a 7-point scale with higher values representing higher judged

integration. (See Appendix E for a copy of the scale and accompanying criteria for the assignment of an integration score.) In Study 1, the interjudge reliability for judged integration on a random sample of 25 descriptions was $r = .88$.

Another dependent measure was the complexity of the structure of person knowledge. This index was an additive combination of the standardized differentiation score (across all categories) and the standardized judged integration score.

A fifth, and final, dependent measure was the judged desirability of the person description. The possible range of scores on this measure was -3 to +3. The instructions and criteria for assessing the overall favourability of a description are presented in Appendix F. In Study 1, the interjudge reliability for judged desirability on a random sample of 25 descriptions was $r = .90$.

Results

1. Levels of significance and error rates.

All main effects and interactions were tested at the .05 level of significance. Because of the exploratory nature of the research, it was felt that adopting an error rate per family of comparisons of .20 for a posteriori mean comparisons provided adequate protection against Type I errors without unduly inflating the chance of committing Type II errors. Depending upon the number of levels and factors involved in the particular effect, the error rate per comparison ranged from .03 to .003.

2. Structure of Person Knowledge

Preliminary analyses including subjects' gender as a factor revealed significant gender main effects and/or interactions on every measure. Thus, all but the differentiation results are based upon 2 (subjects' gender) x 2 (spacing of interaction) x 3 (status of referent person) x 2 (length of acquaintance) analyses of variance involving simultaneous least squares estimation procedures.[2] The differentiation data were analyzed by adding "person concept category" into the design, as a second within-subjects factor with 6 levels. As a result of having two repeated measures factors (length of acquaintance was the other), and one with so many levels, numerator and denominator degrees of freedom for effects involving these factors were rather dramatically inflated. In addition, the probability of heterogeneity of variances and covariances was quite high. Thus, the Geisser-Greenhouse adjustment for degrees of freedom was used to test the significance of

F-ratios (see Kirk, 1968; Myers, 1979). This is an exact adjustment, which is internal to the BMDP Biomedical Computer Program (1979).

Differentiation. The analysis of the "fine-grained" differentiation measure (i.e., using within-category frequencies) revealed several main effects and interactions. First, there was a main effect for category usage, $F(2,83) = 55.63$, $p < .001$, indicating that perceivers described others on the basis of "appearance" ($M = 5.4$), "behaviour" ($M = 3.2$), "relationship" ($M = 3.0$), and "personal property" ($M = 3.4$) concepts, to the near exclusion of "context" ($M = .5$) and "origins" ($M = .4$) concepts. A main effect for "length of acquaintance", $F(1,48) = 19.98$, $p < .001$, indicated that, as expected, across categories, descriptions of "old" acquaintances ($M = 2.9$) were more differentiated than descriptions of "new" acquaintances ($M = 2.44$). Also, as expected, descriptions of acquaintances from "massed" encounters ($M = 2.9$) were more differentiated than descriptions of acquaintances from "spaced" encounters ($M = 2.4$), $F(1,48) = 4.36$, $p < .05$. A curious finding was that females used more concepts to describe their acquaintances than did males ($M = 2.9$ and $M = 2.5$, respectively), $F(1,48) = 4.54$, $p < .04$. There were no other significant main effects for differentiation.

Each of these main effects, however, was qualified by a second-order interaction. A "concept category" by "length of acquaintance" interaction, $F(3,158) = 3.34$, $p < .02$ (see Figure 2), revealed that descriptions of "old" acquaintances included significantly more "appearance" ($t(158) = 2.84$, $p < .01$) and "properties" ($t(158) = 3.98$, $p < .001$) concepts than did descriptions of "new" acquaintances. The "gender" and "spacing of interaction" main effects were qualified

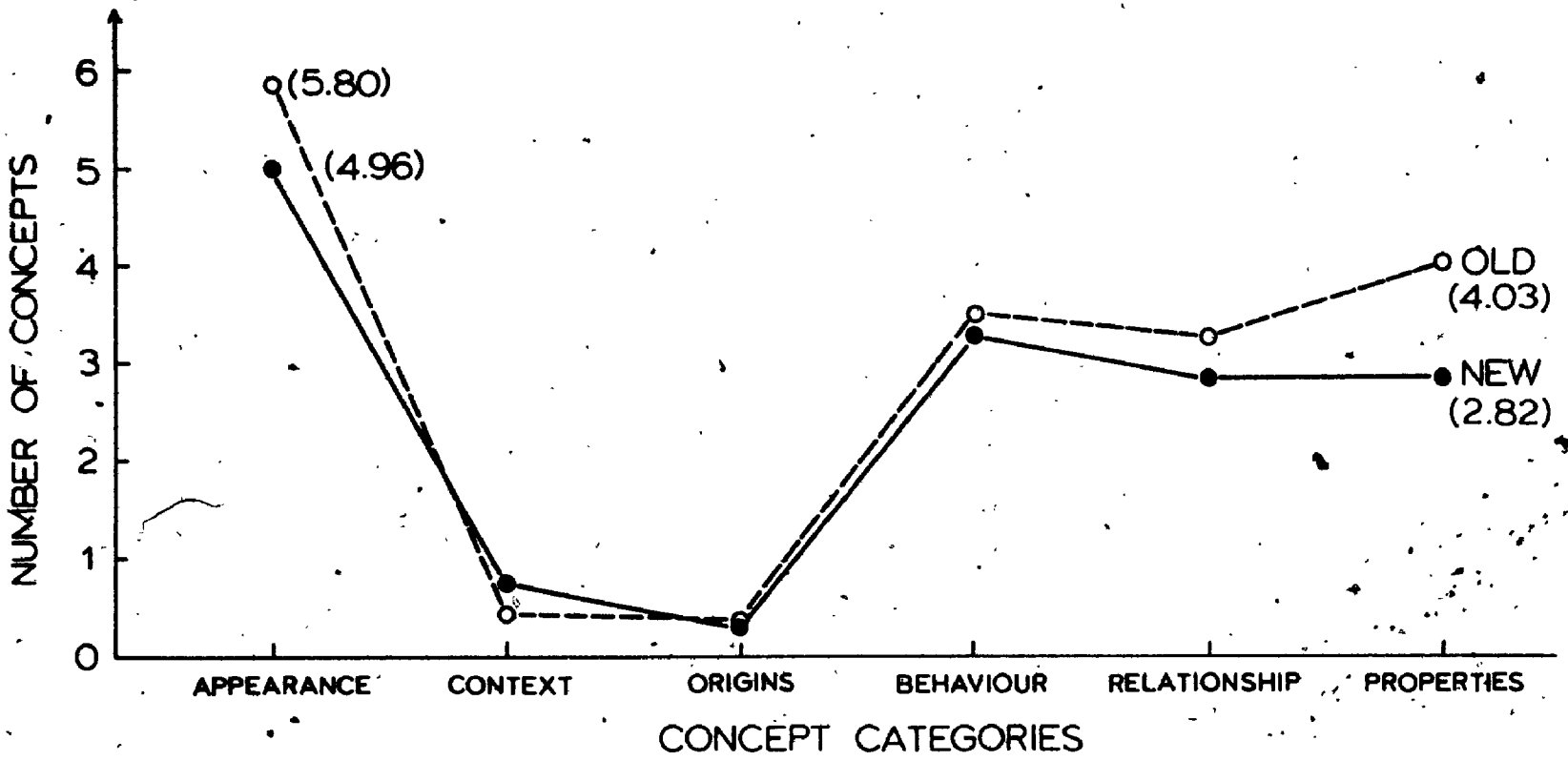


Figure 2. The number of concepts in each category as a function of "length of acquaintance" (old vs. new).

by an interaction of these two factors, $F(1,48) = 6.62$, $p < .02$, which indicated that females' descriptions of acquaintances from "massed" encounters were more differentiated than either females' descriptions of acquaintances from "spaced" encounters or males' descriptions of acquaintances irrespective of the massed-spaced factor ($p < .03$). A posteriori t-tests revealed no differences among the means of the latter three conditions (see Figure 3a). Finally, there was a significant four-way interaction involving "gender", "concept category", "length of acquaintance", and "status of referent person", $F(3,158) = 2.23$, $p < .04$, which was not readily interpretable (see Figure 4).

Judged Integration and Complexity. As with differentiation, "gender" and "spacing of interaction" main effects, as well as "gender" by "spacing" interactions, were manifested on the measures of integration and complexity (see Appendix J, for the ANOVA source tables). The similarity in the pattern of these results can be seen by referring to Figure 3 (a through c). These results show that females described acquaintances from "massed" encounters in a more integrated and complex fashion than acquaintances from "spaced" encounters, and that the "female-massed" descriptions were more integrated and complex than were males' descriptions of either "massed" or "spaced" acquaintances. Comparisons of the cell means revealed that, indeed, the "female-massed" cell was significantly different from the remaining three cells ($p < .03$), which were not different from each other.

Analysis of the judged integration data further revealed a significant "gender" by "referent person status" by "length of acquaintance" interaction, $F(2,48) = 3.99$, $p < .03$. The means for this

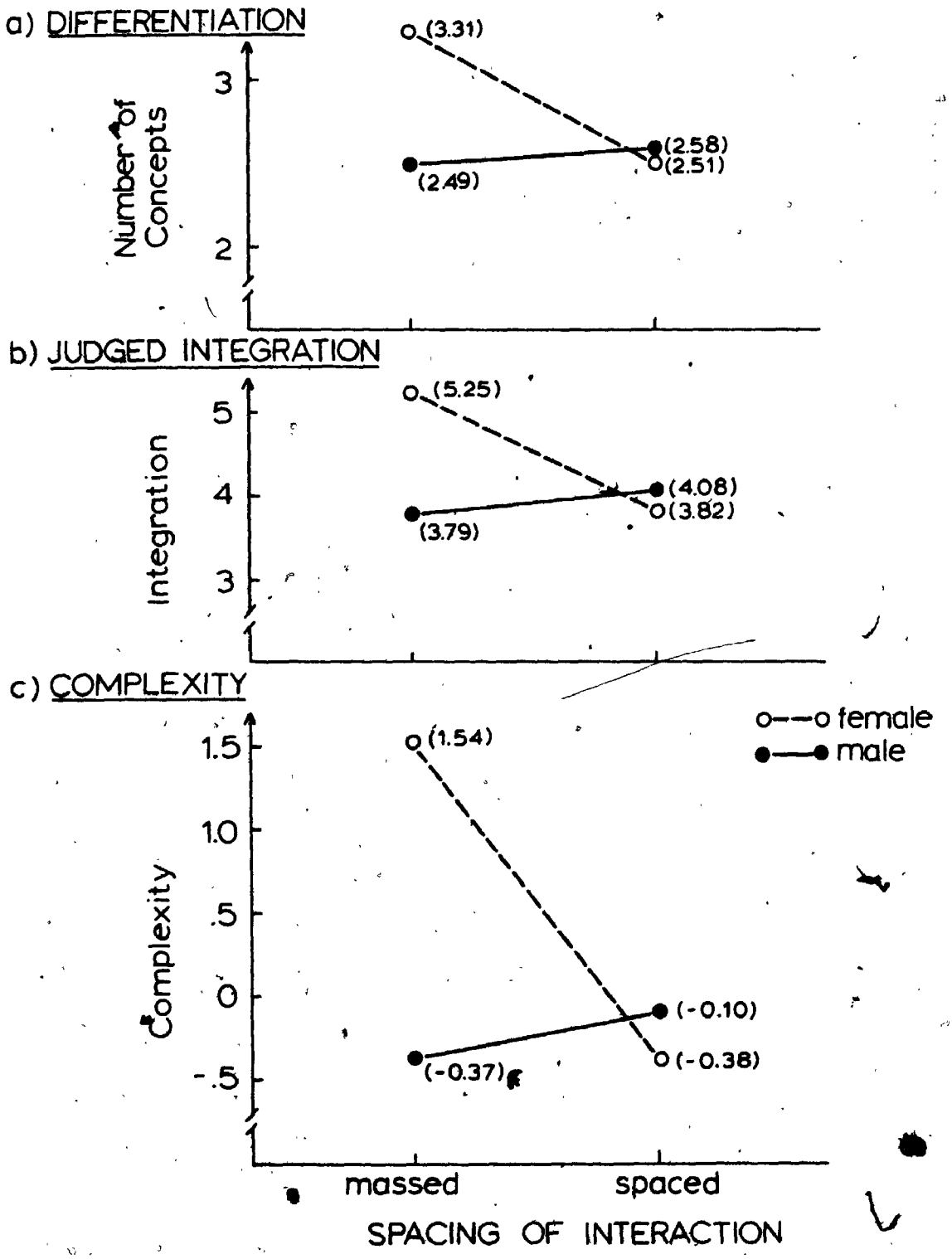


Figure 3. The interaction of "spacing of interaction" by "gender" on (a) differentiation, (b) integration, and (c) complexity of person descriptions.

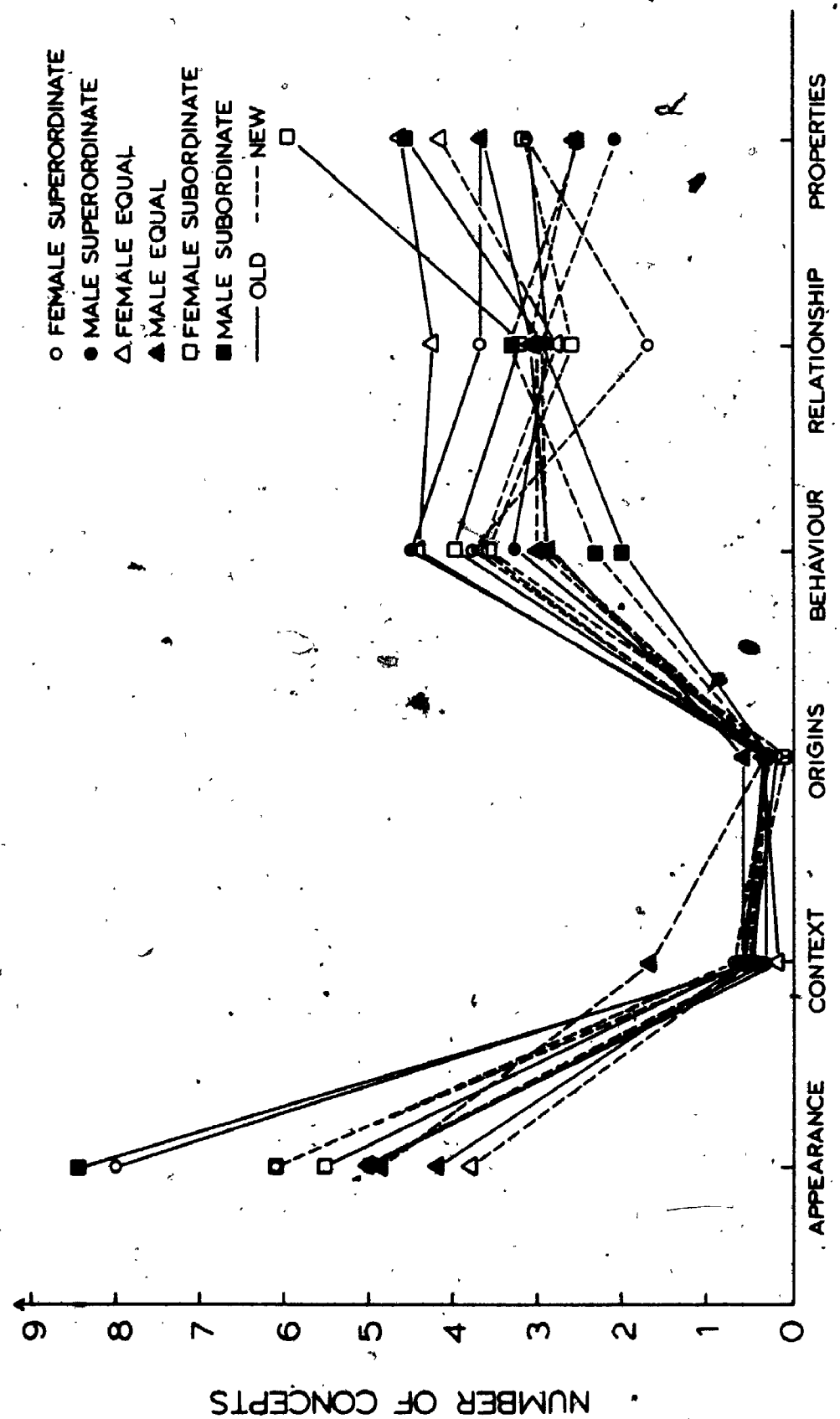


Figure 4. The number of concepts in each category as a function of "gender", "length of acquaintance", and "status of referent person".

interaction are presented in Table 2a. Mean comparisons revealed no significant differences between any of the cells, however, so it is difficult to interpret the source of the interaction.

Level of Abstraction. A similar "gender" by "referent person status" by "length of acquaintance" interaction was evidenced on the measure of abstraction of descriptions, $F(2,48) = 3.25$, $p < .05$. From Table 2b, it can be seen that females' descriptions of "new equals" were significantly more abstract than females' descriptions of both "new subordinates" and "new superordinates", and more abstract than males' descriptions of "new equals" and "old subordinates" ($p < .003$). In addition to this uninterpretable three-way interaction, there was a "spacing of interaction" by "length of acquaintance" interaction, $F(1,48) = 4.22$, $p < .05$, which indicated that the descriptions of "old" acquaintances from "massed" encounters were more abstract ($M = 3.8$) than either the descriptions of "old" acquaintances from "spaced" encounters ($M = 3.5$) or "new" acquaintances regardless of the spacing between encounters ("massed" $M = 3.5$ and "spaced" $M = 3.6$) ($p < .03$). This latter interaction provides some support for the expected impact of familiarity on abstractness (specifically, within "massed" encounters).

Judged Desirability. Finally, as predicted, the analysis revealed a main effect for "referent person status" on the judged desirability of the person descriptions, $F(2,48) = 6.8$, $p < .003$. Mean comparisons indicated that descriptions of "superordinate" ($M = 1.49$) and "equal" ($M = 1.63$) acquaintances were significantly more favourable than descriptions of "subordinate" acquaintances ($M = -0.003$) ($t(48) = 2.26$, $p < .04$ and $t(48) = 2.462$, $p < .02$, respectively). Descriptions of "superordinate" and "equal" acquaintances did not differ from one

Table 2

Judged integration (a) and level of abstraction (b) as a function of "subject's gender", "length of acquaintance", and "status of referent person".

2(a) Judged Integration -- Range 1-7

Gender	Familiarity	Referent Person: Superordiate	Equal	Subordinate
Female	Old	3.67	5.25	4.92
	New	4.67	4.13	4.74
Male	Old	4.29	3.33	3.89
	New	3.46	4.17	4.5

2(b) Level of Abstraction -- Range 1-6

Gender	Familiarity	Referent Person: Superordinate	Equal	Subordinate
Female	Old	3.49ab	3.96ab	3.83ab
	New	3.31b	4.14a	3.36b
Male	Old	3.72ab	3.72ab	3.26b
	New	3.43ab	3.41b	3.47ab

In 2(b), means not sharing a subscript are significantly different ($p < .003$).

another in desirability. This main effect was qualified, however, by a "gender" by "referent person status" by "length of acquaintance" interaction, $F(2,48) = 4.9$, $p < .02$. As can be seen in Figure 5, the tendency was for descriptions of "superordinate" and "equal" acquaintances to be more favourable than descriptions of "subordinate" acquaintances, except for females' descriptions of "superordinates" who are "new" acquaintances. The discrepancy of this one cell from the general pattern is not readily interpretable.

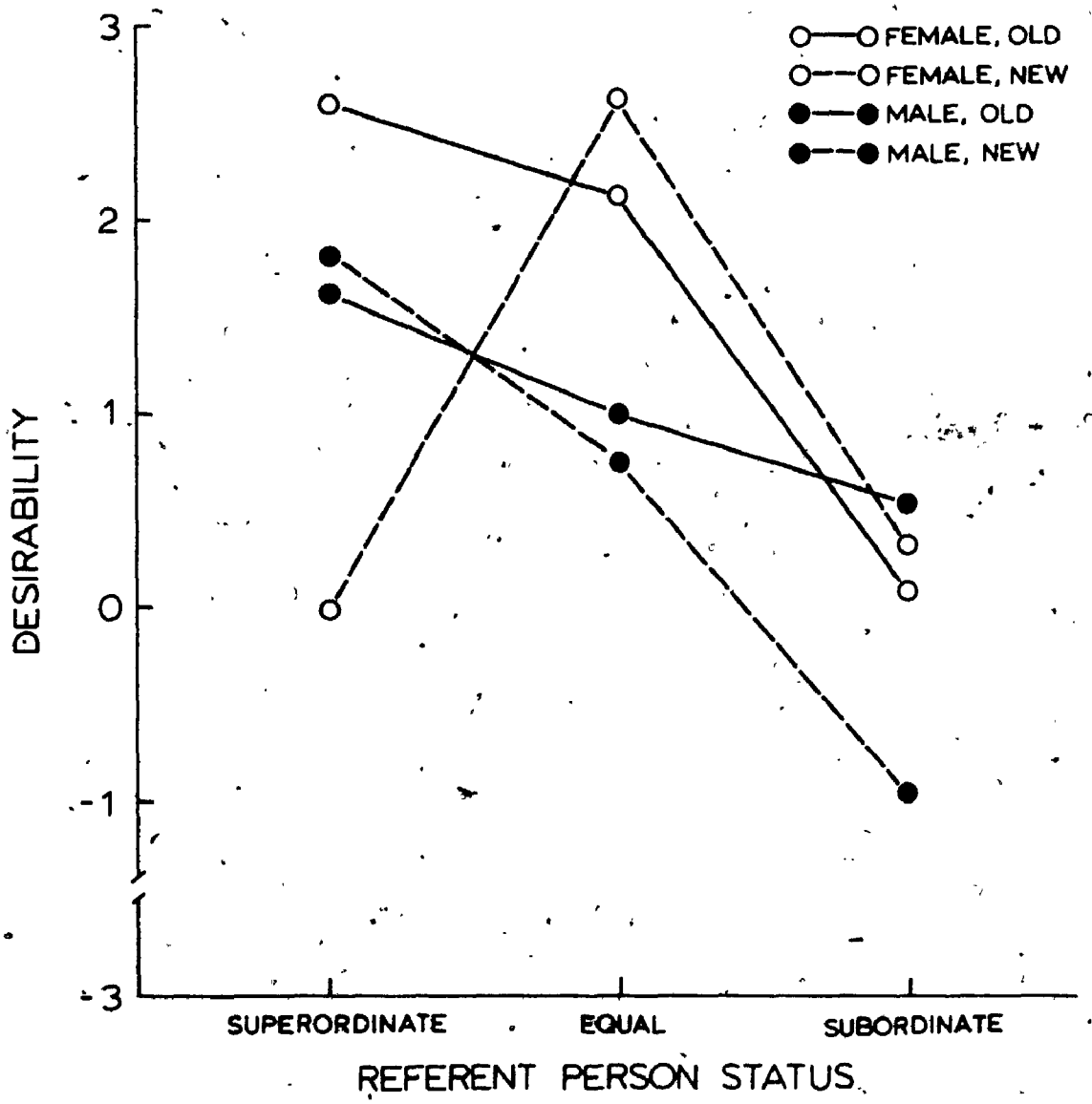


Figure 5. Judged desirability of person descriptions as a function of "gender", "length of acquaintance", and "status of referent person".

Discussion

The results of the first study provided several interesting findings. First, there was good support for the hypothesized evaluative effects of the "interpersonal" aspect of relationship-context on person knowledge. As expected, the nature of the interdependence between the perceiver and the perceived (i.e., whether they were "equal" or "unequal" in status and power) affected the favourability of the person descriptions. This effect occurred only in one direction of inequality, however: the descriptions of "subordinate" others were substantially less favourable than descriptions of either "superordinate" or "equal" referent persons.

This finding can be interpreted in at least two ways. First, perhaps subordinate roles are less desirable and are associated with boring or menial tasks, which afford persons in these social positions little opportunity to display their more attractive personal attributes. Alternatively, it is possible that subjects in this study selected undesirable or disliked targets when asked to think of a "subordinate". In other words, the less favourable descriptions of lower status persons may have reflected either aspects of the role itself or the persons who were selected as exemplars of such roles.

In Study 2, subjects within dyads will be randomly assigned to either "superordinate" (independent of their partner), "equal", or "subordinate" (dependent on their partner) roles in a problem-solving situation. In this case, only the roles themselves can affect the resultant impressions. Eurther, as well as providing free response descriptions of each other, dyadic partners will also complete a series

of bipolar trait attribution scales and will rate their liking for each other. These measures will allow a more thorough examination of the possible evaluative implications of "interdependence" (status).

The results of Study 1 also showed a consistent, though unexpected, tendency for females to provide highly elaborated impressions of acquaintances from "massed" encounters. Their descriptions of such persons were more differentiated, more integrated, and more complex than were females' descriptions of acquaintances from "spaced" encounters, and were more differentiated, integrated, and complex than were males' descriptions of either "massed" or "spaced" acquaintances. Perhaps there is something about females as either perceivers or targets (recall that females described other females and males described males) which enhances the elaboration of structure within "massed" encounters. For example, females did tend to be more cognitively complex than males in Study 1, according to their RCQ scores; but this difference was not significant, nor were cognitively complex females disproportionately represented in the "massed interaction" conditions (see Appendix J for ANOVA source tables for RCQ data in Study 1).

A more plausible explanation is that the manipulation of the "spacing of interaction" in Study 1 was confounded with "familiarity", at least for females. That is, female subjects may have selected "massed" acquaintances whom they know very well, whereas male subjects may have been less likely to do so. If this interpretation is valid, then "spacing of interaction" (massed vs. spaced) and "length of acquaintance" (old vs. new) may have been essentially redundant manipulations for the females.

To explore this possibility, the specific target persons that were

selected by subjects were examined. As might be expected from the interpretation suggested above, females were much more likely to select relatives as targets in the "massed" condition than were males. For example, when asked to describe someone they had known for at least three months (an "old" acquaintance), females selected relatives 71% of the time as a "massed" acquaintance but only 27% of the time as a "spaced" acquaintance; the corresponding percentages for males were only 25% and 8%.

Thus, as a result of this peculiar confounding of the "gender", "spacing of interaction", and "length of acquaintance" variables, the majority of findings in Study 1 seem basically interpretable as "familiarity" effects. For example, the "gender" by "massed vs. spaced" interactions on differentiation, integration, and complexity may reflect that females selected very familiar "massed" targets but relatively unfamiliar "spaced" targets, while males selected relatively unfamiliar targets in both conditions. As a result, the "female-massed" descriptions were more elaborated than were those in the other conditions.

In Study 2, "massed vs. spaced encounters" and "length of acquaintance" will be orthogonally manipulated. This should eliminate any confoundings of these variables, at least at the objective level, and allow a clearer examination of the independent impact of these factors on person knowledge.

The results of Study 1 also revealed some of the expected effects of "length of acquaintance", apart from the spurious familiarity effects resulting from the above-described confoundings. As expected, descriptions of "old" acquaintances included more concepts (i.e., were

more differentiated) than the descriptions of "new" acquaintances. Interestingly, as revealed by the comparisons within the categories of concepts, the descriptions of familiar persons involved more "appearance" and "properties" concepts than did the descriptions of less familiar persons (see Figure 2). The expectation of greater abstraction in person knowledge as familiarity increases would clearly predict the obtained increase in "properties" concepts, but not necessarily the obtained increase in "appearance" concepts. Further discussion of such familiarity effects will be reserved until the results of Study 2 have been presented, since the relevant factors are more precisely and orthogonally manipulated in that experiment.

To summarize the results of Study 1, then, let us consider the obtained evidence relevant to each of the "tentative hypotheses" presented in the Introduction. Hypothesis 1a predicted that interpersonal interdependence (status) would affect the evaluative tone of subjects' impressions. This hypothesis received support, although the precise nature of the obtained effects did not conform exactly to the expected pattern. Hypothesis 1b predicted that status would also affect the differentiation of subjects' impressions. This hypothesis was not supported. Hypothesis 2a predicted that differentiation would be greater for "massed" than for "spaced" acquaintanceship partners. This hypothesis was confirmed by a main effect in the analysis of the differentiation measure, but was also qualified by a gender interaction. Specifically, females' descriptions conformed to the expected pattern, but males' descriptions did not. Hypothesis 2b predicted less integration in the descriptions of "massed" than "spaced" acquaintanceship partners. This hypothesis was not supported. Indeed,

females' descriptions of "massed" acquaintanceship partners were more integrated than "spaced" acquaintanceship partners, while males revealed no integration differences between massed vs. spaced partners. Hypothesis 3 predicted that objective familiarity (in terms of length of acquaintance) would increase the differentiation, integration, complexity, and abstraction of subjects' impressions, as well as having possible evaluative effects. This hypothesis received some support, specifically for the differentiation and abstraction predictions. Further, a number of other patterns in the data seemed interpretable as "familiarity" effects. Finally, hypothesis 4a and 4b predicted that greater familiarity (i.e., "old" acquaintances) would increase the expected impact of the other factors on person knowledge structures, relative to the "new" acquaintances. Neither of these hypotheses received any direct support.

In general, then, the simpler or more basic predictions received relatively good support in the first study, whereas the more complex predictions fared less well. Experiment 2 will permit an assessment of the reliability of the obtained findings, while utilizing a more controlled and precise methodology.

STUDY 2

Method

1. Introduction and Overview

Study 2 was a methodological elaboration and conceptual replication of Study 1. In essence, the context of acquaintance was controlled more directly in Study 2 than in Study 1. Subjects, who were strangers to each other, were paired to form dyads and then engaged in direct, face-to-face interaction within experimentally created "relationship-contexts". Relationship-contexts were defined by orthogonally manipulating the "spacing of interaction" between the members of a dyad and the "equality vs. inequality" of the pair's interdependence. In addition, the number of encounters between dyad members, or their "objective familiarity" with each other, was varied between different groups of dyads. The experimental manipulations of relationship-context and familiarity factors in Study 2 afforded greater operational precision than the cross-sectional manipulations of these variables in Study 1. As a consequence, many of the confoundings among variables that clouded Study 1 were eliminated in Study 2, at least at the "objective" level.

The design and implementation of the second experiment were somewhat more complicated than Study 1. For one thing, subjects, in dyads, were run individually instead of mass-tested. Also, in the multiple-session conditions, a certain amount of negotiation among dyad partners and the experimenter was necessary in order to arrange subsequent sessions that met the demands of the experimental design as

well as the personal timetables of everyone concerned. By and large, though, scheduling subsequent sessions proved to be relatively straightforward.

The design complexities were due to factor nestings and the incorporation of several "control groups", which were used in preliminary analyses. In addition, practical and institutional limitations on the procedures for recruiting subjects precluded randomization with respect to the "objective familiarity" variable. Subjects "self-selected" to participate in either one, two, or three sessions of the experiment.

Although there may have been dispositional biases that affected volunteering for different numbers of sessions, it seems unlikely that these individual differences have any direct relevance for acquainting or person perception. For instance, subjects were not aware that participation in the experiment involved face-to-face interaction with another subject when they volunteered. Also, single-session subjects were not any more or less cognitively complex in the "interpersonal" domain than were multiple-session subjects, according to their RCQ scores (see Appendix J for the relevant ANOVA source table).

There were, however, differences in experimental credits offered to single-session versus multiple-session participants, as well as differences in the per session time commitments required of volunteers. Single-session participants received two experimental credits, whereas multiple-session participants received three credits. In terms of time, two uninterrupted hours were required in the single sessions, whereas participation in multiple sessions involved time commitments ranging from 35 minutes to 90 minutes per session. Since subjects were aware of

these differences between single sessions and multiple sessions, it seems likely that subjects "self-selected" to participate in the number of sessions that was most compatible with their credit needs and timetables. Thus, despite the lack of randomization of subjects with respect to the number of sessions ("objective familarity") variable, it seems unlikely that single-session and multiple-sessions participants differed on dimensions important to acquainting and person perception. Nevertheless, familiarity effects in Study 2 should be interpreted with some degree of caution.

Further complicating the design of the second experiment was the fact that the final sample of subjects came from two different populations of introductory psychology undergraduates. Approximately half were from the winter (or final) term of one academic year, while the other half were from the fall (or first) term of the next academic year. The summer term, which does not have a suitable subject pool, separated these two terms.

Theoretically, there is little to suggest that "acquainting" would differ between these two samples of subjects. The populations were composed of individuals from the same range of socio-cultural milieux. There were no significant social or political occurrences during the interim separating the two terms. Finally, and most importantly, preliminary analyses revealed no differences between the two groups on the major dependent variables (see Appendix G). The data, therefore, were combined for all subsequent analyses. One consolation is the increased generalizability that arises from the sampling of subjects from different populations.

The Method for Study 2 is divided into several sections. First,

the "Subjects" are described, followed by the "Materials" used in the experiment. The "Subjects" section includes a discussion of the procedures for scheduling experimental sessions and for forming dyads. In the "Design" section, the single-session and multiple-sessions conditions are considered separately. Single-session conditions were used in a "control group" sense, to rule out a potential problem introduced by the way that "acquaintance" was operationalized. Part of the discussion of the single-session conditions addresses the procedures that were used to incorporate the single-session groups into the overall analyses of variance for Study 2. The multiple-sessions conditions are presented next, and are followed by a discussion of the factor nestings in the design of the second experiment. The "Procedure" of the experiment, including the manipulations of the independent variables, is described after the "Design" section. Finally, the major dependent measures are reiterated, and all additional measures are described.

2. Subjects

One hundred and forty-four undergraduates at the University of Western Ontario, 72 females and 72 males, participated in Study 2 as part of their introductory psychology course requirements. Subjects volunteered to participate in either one, two, or three experimental sessions. Provisions were made for recruiting forty-eight subjects, 24 of each gender, in each "number of sessions" condition. Within each of the six groups defined by crossing "gender" with the "number of sessions" (i.e., 2 x 3), twelve dyads were formed by pairing the 24 subjects in the group. Each member of a dyad was designated "Member 1" or "Member 2". Dyads were run individually in all sessions.

Procedures for scheduling experimental sessions and for forming dyads. A master timetable for the experimental sessions was constructed prior to the recruitment of subjects. The timetable was organized so as to maximize variation of the experimental conditions across all times of the day and to facilitate the scheduling of additional sessions in multiple-sessions conditions at times that would be convenient for the members of the dyad, without compromising the manipulation of the "spacing of interaction" variable. Thus, many "free periods" were necessary in the timetable to provide an adequate number of alternative times for the scheduling of additional sessions in the multiple-sessions conditions.

Experiment sign-up sheets were drafted offering 72 initial time slots to potential participants from the Psychology Department subject pool at U.W.O. One volunteer per session was requested on a sign-up sheet. In order to recruit two subjects for each session, a duplicate of each sheet was also posted in the recruitment area. A pair of volunteers qualified as a dyad for the experiment only if the individuals were strangers to each other.[3] If two volunteers for the same time slot were at all acquainted with each other, they were awarded one credit for volunteering and were dismissed. Throughout the recruitment procedure, three pairs of volunteers, two male pairs and one female pair, were eliminated for this reason. These pairs were replaced by re-assigning the unfilled sessions later in the calendar and re-offering them to the subject pool.

It was intended that all data be collected during the 12 weeks included in the original timetable. Unfortunately, the subject pool was nearly depleted when the research was begun, and only 35 pairs of

subjects had participated in the study by the end of the academic term. The same scheduling procedures were therefore initiated when the new subject pool opened at the beginning of the next academic year (the summer term separated these two academic years). Pairs of subjects were run in the experiment until the initial goal of 72 dyads (N = 144) was reached.

It was initially feared that attrition from multiple sessions conditions would be a serious problem, but, in fact, only two dyads had to be replaced because a dyad member failed to return for a second or third scheduled session. Rather, occasions when only one individual volunteered for a particular session, or when one or more volunteers failed to appear for the initial, scheduled session, caused the major recruitment difficulties. Nevertheless, the goal of 144 subjects was achieved during the fall term of the second academic year.

3. Materials and Equipment

The task materials included three "organizational/management" role-playing problems, with subject response sheets and performance feedback booklets. Two of the problems were adaptations of Human Synergistics group problem-solving exercises, the "Subarctic Survival" (Eady & Lafferty, 1975) and the "Project Planning" scenerios (Boduch, Brown, Cangield, Eady, & Lafferty, 1975), which are very different in content (see Appendix H). The third task was an adaptation of an "in-basket-out-basket" memo task (Frederiksen, Jensen, & Beaton, 1972; Shapiro & Dunbar, 1980 -- see Appendix H). All three tasks were amenable to scoring and allow the generation of performance feedback that has some meaning for an individual's organizational ability. It should be noted, of course, that the precise nature of these problems

was not important for the study -- they simply had to provide an opportunity for subjects to engage in incidental acquaintance.

Other equipment included two audio cassette tape recorders for recording subjects' verbal descriptions of their partners, and an Electro-Vox audio intercom system. The laboratory was composed of two experimental rooms, each with chairs and a table, and a monitor-control room to which both experimental rooms were connected via the intercom system.

4. Design

Introduction. A major goal of the present study was to examine the structural nature of person knowledge at various points in the natural evolution of acquaintanceship between two persons. One way to do this would involve obtaining a series of impressionistic descriptions of the target person, over a period of time, following interactions between the perceiver and the perceived. Although this would be a powerful procedure, it would also be reactive. That is, such a repeated measures approach might result in distortion of subjects' knowledge about the target persons as a result of having overtly categorized them several times (c.f., Higgins, Rholes & Jones, 1977; Higgins & Rholes, 1978).

An alternative procedure, therefore, would be to examine "objective familiarity" effects on person knowledge structures in a between-groups design. In the present experiment, this was accomplished by obtaining dyad partners' descriptions of each other after either one, two, or three interaction encounters. It was assumed that the descriptions obtained after one, two, or three encounters would be generally similar to the descriptions that might be obtained after one, two or three meetings in an ongoing, natural acquaintanceship. There is, however,

one fundamental difference between the perceivers in the present experiment and perceivers in natural acquaintanceships: perceivers in the present study did not expect any further interaction with their partners after they gave their descriptions of them, whereas "natural" perceivers would expect to interact with their relationships partners again. To examine the possible importance of this difference in expected future interactions, half of the single-session dyads were led to expect future interaction. The details of this design feature are presented below.

Single-session conditions. Single-session subjects, in dyads, were randomly assigned to one of four conditions defined by the complete factorial crossing of 2 (expectation vs. no expectation for future interaction) x 2 (equal vs. unequal interdependence). Obviously, the "spacing of interaction" factor (massed vs. spaced) was not applicable to the single-session groups. Thus, the full "mini-design" for single-session groups, including "gender" and the "dyad member" nested factor, was a 2 (female vs. male) x 2 (expectation vs. no expectation) x 2 (equal vs. unequal) x 2 (dyad member 1 vs. 2) completely crossed factorial with nesting. Preliminary analyses were conducted to examine whether expectations of future interaction affected subjects' knowledge structures for their partners.

The fact that "spacing of interaction" was not part of the single-session mini-design did not preclude the incorporation of single-session conditions into the overall ANOVA design of Study 2. Following the procedure for "artificially crossing" control groups with a main ANOVA design suggested by Himmelfarb (1975), the single-session groups were randomly divided into two groups (maintaining the integrity

of the equal vs. unequal manipulation, of course), which were then randomly assigned to the levels of the "spacing of interaction" variable.

Multiple sessions. The subjects, in dyads, in two-sessions and three-sessions groups were randomly assigned to one of the four conditions resulting from the complete factorial crossing of the two "relationship-context" factors -- "equal vs. unequal interdependence" and "massed vs. spaced interactions". By including "gender" and the "dyad member" factor into the design, and by incorporating the "single-session" groups into the design artificially, Study 2 involved a 2 (female vs. male) x 2 (equal vs. unequal interdependence) x 2 (massed vs. spaced encounters) x 3 (number of encounters -- one, two, or three) x 2 (dyad member 1 vs. 2) completely crossed, factorially designed experiment, with a nested factor.

Factor nesting in the design. Although it was the responses of individuals that were of interest in this study, subjects participated in pairs, involving face-to-face interaction. As a result of their dynamic interactions, a real and statistical dependence existed between the responses of paired individuals, especially since these responses were their impressions of each other. As a consequence, the error term for testing the main effects and interactions of the independent variables had to account for the dependency of partners within dyads (see Kirk, 1968, for a discussion of similar issues with respect to hierarchical models).

In Study 2, "subjects", as the replication factor, was nested in another random factor, "dyad member designation", which was then nested in the completely crossed, between-groups factors in the design. The

variance associated with the "dyad member" random factor satisfied the statistical requirements for an error term that takes account of the dependency of partners' responses and was therefore used as the error term for the between-subjects factors. Nesting subjects in a "dyad member" factor rather than simply a "dyad" factor (which equally satisfies the statistical requirements) was also useful in other ways. The planned comparisons between "independent", "equal", and "dependent" partners in acquaintanceships (see Hypotheses 1a and 1b), for example, were facilitated by designating all "independent" partners as "dyad member 1" and all "dependent" partners as "dyad member 2". Then, a priori mean comparisons between "dyad member 1" and "member 2" within "unequal" conditions tested, in a straightforward fashion, the impact of "interdependency" differences between partners.[4]

5. Procedure

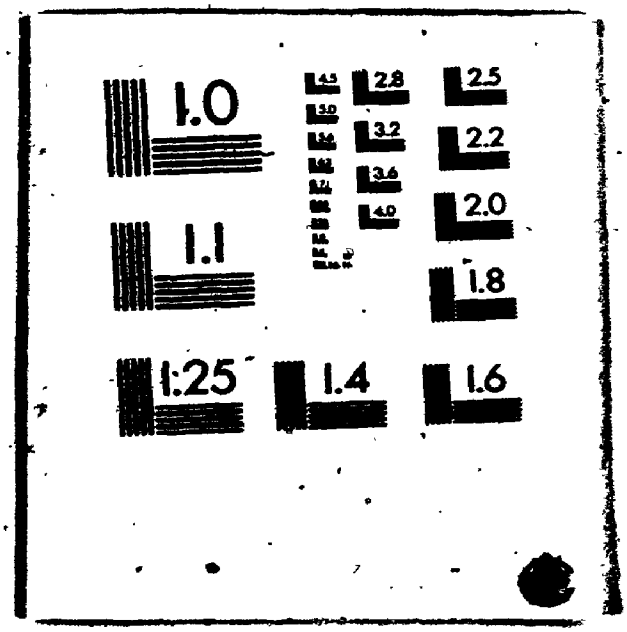
Manipulation of "objective familarity". Subjects were recruited, unknowingly in pairs, for an experiment entitled "Processes in Organizational/Management Problem-solving". When subjects volunteered, they committed themselves to either one 2-hour session, two sessions of 1 hour and 90 minutes, respectively, or three sessions of 1 hour, 35 minutes, and 90 minutes, respectively. Differences in the "number of sessions", given that each session involved one interactive encounter between dyad partners, constituted the manipulation of "objective familiarity". Participation in one, two, or three sessions resulted in one, two, or three encounters with another person who was initially a stranger.

Manipulation of "massed vs. spaced interaction". When subjects arrived at the laboratory, they were met by a male

experimenter. The experimenter introduced himself and made sure that the two subjects did not know each other. This was done by simply asking them. Subjects were introduced and then escorted to an experimental room. In the room was a table and three chairs. The room was connected by intercom (with both transmitting and receiving capabilities) to a monitor/control room. Subjects were seated in the chairs directly facing each other across the table. The experimenter sat in the third chair between the subjects.

In "multiple-session" conditions, the experimenter began by suggesting that "the three of us try to arrange the other (two) session(s) at times that would be convenient for all of us". Half the dyads in each of the "objective familiarity" conditions were randomly assigned to either "massed" or "spaced" encounters. In "massed encounters conditions", the experimenter indicated that it was necessary that all of the sessions be "completed within 5 to 7 days", and then, with reference to a timetable on his clipboard, offered a couple of periods as "good" for him. It took approximately five minutes for the subjects and the experimenter to arrive at one (in "two-encounter" conditions) or two (in "three-encounter" conditions) additional time periods that were mutually satisfactory to all.

In "spaced encounters conditions", the experimenter indicated that sessions should be "separated by about one week", and then offered a couple of periods from the following week as "good" for him. In "two-encounter" conditions, one additional session was scheduled for the next week. In "three-encounter" conditions, two additional sessions were arranged with each separated by at least one week.


1.0
1.1
1.25
1.4
1.6
2.8
3.2
3.6
4.0
2.5
2.2
2.0
1.8

Manipulation of "expectation vs. no expectation of future interaction". In "single-session" conditions, "frequency of interaction" was not applicable. Instead the experimenter either asked if the subjects would both be willing to come back for a brief additional session in about one week ("expectation of future interaction") or said nothing about an additional session ("no expectation of future interaction"). Half of all "single-session" dyads received the "expectation" manipulation, and half received the "no expectation" manipulation. No subjects refused to come back if asked. Assignment to the "expectancies" conditions was random.

Cover story and task instructions. The following instructions were recited by the experimenter to all subjects, in dyads.

> You are going to be participating in an investigation of 'executive decision-making processes', using tasks that are designed to simulate organizational and management settings. We are particularly interested in two parts of the decision-making process. First of all, we are interested in the skills and abilities that individuals, working in pairs, are able to bring to bear on a variety of organizational problems. Secondly, we are interested in the interactions that occur during the processes of problem analysis and problem solving.
>
> Our aim is to assess general "Executive Ability" under conditions resembling those in which management personnel must function every day. Since it is typically the case that company executives must interact with others to solve organizational problems, including members of other decision-making boards, other managers, etc., in this experiment, persons who have never met before, such as you two, participate in pairs; and in order to study how people work together to solve problems, we would like your consent to tape record your interactions while you work on the problems. (Verbal consent was obtained from subjects.) You will know when you are being recorded because this little red light comes on when the recorders are operating. (The experimenter indicated the pilot light on the intercom wall unit above the table.)

To multiple-session participants, the experimenter included the

following:

> We will examine executive problem-solving in more than one session so that we can study the continuity that characterizes typical occupations and work settings -- you know, the idea that people work with the same persons day after day and do the same kinds of things.

To all subjects, the instructions continued as follows:

> I will describe what is meant by "executive ability" in more detail in a few minutes. What I'd like to do first, though, is tell you what you are going to be doing in the experiment.
>
> You will both be working on special problems that have been designed to assess organizational/management skills. Tasks very much like these are used by some business schools and many management training programs in order to train and assess organizational skills. Because these tasks have this kind of history, I will be able to score your solutions to the problems by comparing your answers to the solutions provided by experts and professionals in the areas to which the problem relates. I will give you this feedback about your performance at the end of your participation in the study, and I'm sure you'll find it interesting.
>
> Your task in the experiment will be to analyze and work through the problem together, discussing all of the issues that the problem raises, various approaches to solving it, and maybe even specific solutions, much as any two executives might who had been assigned to the problem. After you have discussed the problem for a time, 30 minutes to be exact, you will be separated -- I'll take one of you to another room -- and you'll each be asked to provide an individual solution to the problem. It's important that you realize that you will have to produce an individual, personal solution to the problem and that no joint solution will be required. In order for us to assess individual ability, we have to focus on individual performance. This does not mean that you cannot try to learn from each other and try to help each other understand the problem during your analysis and discussions of it -- after all, that is part of the process we are trying to study -- but, in the end, it will be your own, personal solution to the problem that will be important; and it will be up to you each, individually, as to how you want to answer the problem. To repeat, then, you will be discussing the problem and its implications and possible solutions together, but your final solution must be your own, submitted individually on separate answer sheets. Of course you can submit identical answers, or

they can be different. Any questions about anything so far? Let me tell you a little about what we mean by "executive ability" before I tell you how it is going to be assessed. "Executive ability" not only involves one's skill at producing good solutions to organizational/management problems, a person's rational problem-solving abilities, but it also involves interpersonal effectiveness in their interactions with co-workers, in their working relationships with others. Working relationships are usually defined by such things as differences in status, authority, and power between co-workers. In most job settings, especially management settings, one's personal gains and benefits are often dependent upon the relationships that one has with fellow co-workers on a problem. In fact, depending upon the kind of relationship that exists between executive co-workers on a problem, one's personal consequences for job performance can be affected in a lot of different ways, and those consequences can be both good and bad.

Consider, for example, the relationship between a low level manager and a high level manager. Now, the low level manager may come up with some ideas and solutions regarding a particular organizational problem that happens to disagree with the ideas of the high level manager. Even if the low level manager's ideas are better than the high level manager's ideas, that's no guarantee that the low level manager will receive good benefits for his or her good job performance. You can think of situations in which that person may suffer negative consequences -- s/he could receive reprimands from the boss for "rocking the boat" or s/he could have the ideas "ripped off". Thus, good job performance in and of itself does not guarantee good benefits. "Executive ability", involving both its rational problem-solving skills and its interpersonal effectiveness skills, is what we believe allows executives to maximize personal benefits within the context of particular working relationships.

Manipulation of "equal vs. unequal interdependence". In the "equal interdependence" condition, the instructions continued as follows:

> In this experiment, we are looking at how co-workers score personal "executive ability" points when they are equally dependent on each other for those points. That is, each of your final "executive ability" scores will depend as much upon your partner's solution to the problem as your own solution. You are equally dependent upon each other.

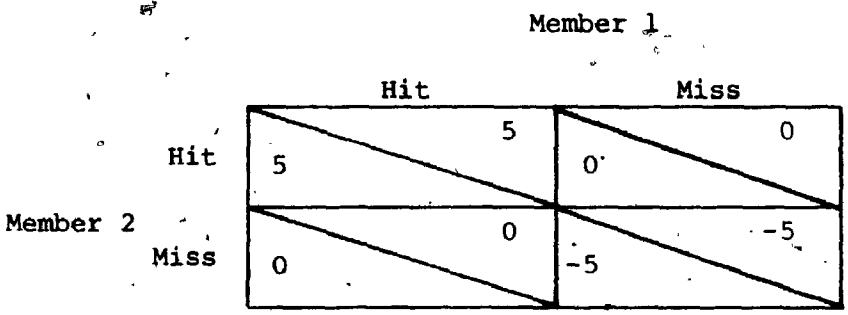
In the "unequal interdependence" condition, on the other hand, the instructions proceeded as follows:

> In this experiment, we are looking at how co-workers score personal "executive ability" points when they are unequally dependent on each other for those points. (The experimenter then looked at a chart on his clipboard, which listed in random fashion which member of the dyad, based upon where subjects had seated themselves, was to be designated the "independent" partner in the relationship.) According to this chart, which was constructed randomly, "unequally dependent" means that your (the experimenter speaks to the "dependent" person first) "executive ability" score depends as much upon your partner's solution to the problem as your own solution: you are, in a sense, dependent upon your partner for points. (Turning to the other person ...) Your "executive ability" score, on the other hand, depends solely on your own solution and is not influenced in any way by your partner's solution to the problem: you are, in a sense, independent of your partner for points.
>
> Let me describe the nature of your dependence in more detail with reference to how we will be scoring your solutions. Your solutions are scored according to a "closeness of fit" formula. When you get the problem, you will see that it is composed of a lot of smaller decisions. Each part of your solution, each smaller decision that you make, is compared in a match/mismatch way with the corresponding part in the expert's solution. If you match, within preset limits -- you are allowed to vary a little bit -- then you are awarded a match or "hit" on that part of the problem; if you do not match the experts within the present limits, then you are awarded a mismatch or "miss" on that part of the problem. Next, we take both of your solutions and compare them in terms of your mutual pattern of "hits" and "misses" and award "executive ability" points according to this payoff matrix.

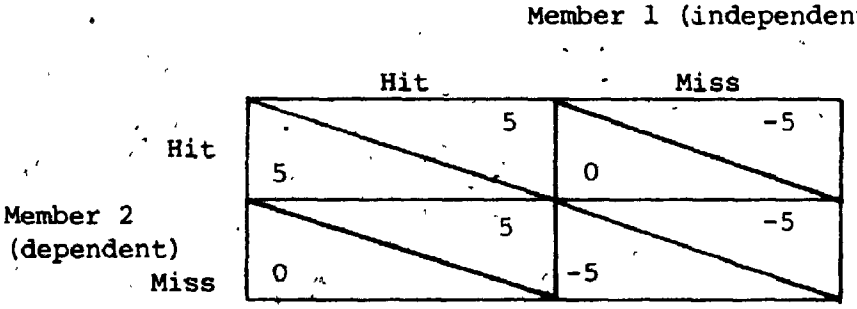
The experimenter then described the nature of the dyad's interdependence ("equal vs. unequal") using the appropriate matrix as shown in Figures 6a and 6b. The experimenter explained the nature of the interdependence and the awarding of "executive ability" points using the appropriate matrix until both members completely understood.

The experimenter finished the instructions concerning problem-solving with the following incentive cues to motivate efforts to do well on the problems.

> Of course, your "executive ability" scores do tell us about your level of competence on an important aspect of



a) Mutual dependence between dyad members (equal interdependence)



b) Unilateral dependence between dyad members (unequal interdependence)

Note: The numbers within each matrix represent how many points would be awarded or taken away from each dyad member, depending upon their respective "hits" and "misses", on each of the "smaller decisions" within a problem. The numbers above the diagonal represent the gain or loss for Member 1 and the numbers below the diagonal represent the gain or loss for Member 2.

FIGURE 6

Payoff matrices used to describe (a) mutual (equal) dependence and (b) unilateral (unequal) dependence manipulations to dyad members

> organizational/management problem-solving. However, the scores are only meaningful when they are compared with the scores of other people -- it is a very relative kind of scoring scheme. So, what we've decided to do is wait until everyone who is going to be in the experiment has finished participating; then we will take everyone's "executive ability" score and rank order them from the highest scores to the lowest scores. The ranked scores will then be publicly posted in the experiment sign-up area on one of the bulletin boards. You'll be able to go there and see how well you did on the problems relative to everyone else who participated in the study.
>
> Any questions about any of the procedure or the method of scoring for "executive ability"? Are we ready to go on to a problem?

After fielding any questions by the subjects, the experimenter distributed one of the three organizational problems (see Appendix H). The choice of problems was random. Subjects were informed that the instructions for a problem were self-explanatory, and that they should read them carefully. Subjects were given 30 minutes to work on any given problem. Subjects were told, further, that the nature of the problems required that subjects not leave the room for the full 30 minutes, nor would the experimenter return during this time. Any difficulties that arose during the 30 minutes would, in effect, become part of the problem and would have to be dealt with as such. Subjects were also asked to use the scratch pads for notes and not to write on the problem booklets, as they would be used by others in the study. The experimenter left the subjects alone in the room for 30 minutes, during which time the interaction between the subjects was recorded. At the end of the time, the experimenter returned, gave each subject a response sheet, and asked one of the subjects to accompany him to another room so that each person could complete their solution privately. Subjects were given five minutes to complete the response sheet. Subjects were

allowed to use any of the problem materials they wished, including any notes, to complete their solutions.

In multiple-sessions conditions, subsequent encounters involved partners working together on another, different problem (selected randomly) for 30 minutes. At the end of all but the last session, the experimenter would retrieve the subject's response sheet, remind the subject of the time of the next agreed-upon session (each subject was also provided with a written appointment memo), and request that the subject, "for control purposes", avoid meeting and interacting with their partner outside of the laboratory until their participation in the experiment was completed. Thus, all encounters between dyad partners, without the experimenter present, occurred in the lab, solving problems, and lasted exactly 30 minutes.

Dependent measures. All dependent measures were obtained from subjects individually and in private. When a subject had completed the response sheet in the final session (either after one, two, or three encounters), the experimenter stated that several other measures were to be collected. Subjects were assured of the confidentiality of all of the additional measures. Each subjects received the following instructions:

> In the first measure, we'd like you to respond orally. We would like to have you tape record your answer for us. (A small cassette recorder, with no rewind function, was placed on the table in front of the subject.) What I'd like you to do in this first measure is to describe your partner, _____, for me. I'd like you to tell me as much as you can about his (her) appearance, behaviour, personality as you can. (The order of presentation of these three exemplar categories was random across subjects.) Tell me, in as much detail as you can, what kind of person _____ is. Tell me what you think s/he is like to be around. Now, I don't want you to

> start right away. I'll give you a minute or two to think, and then I'm going to give you some additional instructions over the intercom system that describe, in a little more detail, how I'd like you to make your description. So, just sit tight for a few minutes, think about your partner, but don't start recording your description of _____ until you've heard the extra instructions.

The experimenter then left the one member of the dyad, went to the room of the other member, collected that subject's response sheet, and repeated the same instructions concerning the oral impression/description measure that had been given to the first subject. The experimenter, about one minute after leaving the second member's room, played the following taped instructions to both subjects simultaneously.

> As you know, this experiment is concerned with the organizational/management problem-solving abilities of individuals as they work in pairs, as well as the interpersonal interactions that occur during the "executive" decision-making process. One thing that we are interested in is what you have come to know about your partner while working together.
>
> What I would like you to do is tell me about your partner and record what you say. People are very accustomed to saying what they know and feel about a person, rather than doing something like writing out a descriptive paragraph. Talking is much more natural, it's faster, and it's easier for us to get our meaning across when we speak. I think this is because we have lots of practice talking about people. Most everyday, we are telling some friend about how so-and-so did this, or that so-and-so is this kind of person or that kind of person. What I would like you to do now is tell me, out loud so that it can be recorded, as much about your partner as you can. When you are ready, simply turn the microphone switch to the "on" position and then try to tell me a little story about your partner. Pretend that I am a close friend, who has never met your partner before, and you want me to know as much about your partner as you now know. Try to tell me things about your partner that will let me know what your partner is like to be around. When you have said as much as you can, just turn the microphone

switch to "off" and signal me by pushing the "push-to-call" button on the intercom wall unit.

You may begin when you like -- don't forget to turn the tape recorder on -- tell me as much about your partner as you can. What is your partner like to be around?

When a subject was finished describing his or her partner, s/he signalled the experimenter through the intercom system. The experimenter returned and placed the recorder aside. The subjects were next asked to rate their partner on 17, 11-point, bipolar trait-adjective scales, each of which was accompanied by an 11-point confidence scale. Following these ratings, subjects completed an 11-point "liking scale", where they indicated their overall liking or disliking for their partner. (The questionnaire booklet is shown in Appendix I.)

Following completion of the various rating scales, each subject was administered the Role Category Questionnaire for assessing individual differences in cognitive complexity. The eight descriptions of acquaintances that are required in the RCQ measure were timed through the intercom system for each subject separately. Subjects were allowed two minutes and 10 seconds to write each description (see Appendix I).

Upon completion of the RCQ, the experimenter obtained the subject's responses to two items that served as checks on the manipulation of "equal vs. unequal interdependence". Finally, each subject was asked to respond to four items that were designed to assess his/her emotional reactions to having recorded an impression of another person. Pre-testing of the materials and equipment had indicated that some persons felt a little uncomfortable following the oral "impression" measure. Responses to these items were obtained in order that the

experimenter could deal effectively during debriefing with any discomfort arising from the methodology of Study 2.

When subjects had completed all of the measures, they were reunited in the first experimental room, where they had worked together analyzing problems. The pair was extensively debriefed orally and provided with a detailed, written description of the research. Each subject was also provided with a detailed summary of their performance on all tasks for which they had provided a solution (see Appendix H). They were informed that no list of scores would be publicly posted and that the notion of "executive ability", as used in the experiment, was bogus. The experimenter attempted to deal with any indications that the subjects were uncomfortable or upset by their participation in any part of the experiment, including being in the presence of their partners after having "talked about" them. There were no cases in which participants felt distressed. On the contrary, most enjoyed the experiment very much. Subjects were thanked and dismissed after securing their promises not to discuss the research with any of their classmates.

6. Dependent Variables

The five major dependent measures of structure of person knowledge used in Study 1 were derived from the oral descriptions of partners provided by subjects in Study 2. The scoring of the structural indices was facilitated by producing written transcripts of the taped descriptions. The major dependent measures were the differentiation (both the "fine-grained" version and the "total" across the six Fiske and Cox concept categories), judged integration, complexity, level of abstraction, and judged desirability of the person descriptions.

The reliabilities of the subjectively determined structural

indices were assessed by having a second judge score different, randomly sampled sets of 25 out of the 144 descriptions. The interjudge agreement in classifying the content of descriptions into concept subcategories was 81%. The interjudge reliability of the integration scores was r = .88. The interjudge reliability on the measure of desirability was r = .91. The measure of judged desirability was assessed directly from the taped descriptions.

There were several additional measures. Two of these were relevant to the evaluative aspects of person knowledge. First, 13 of the 17 bipolar, trait-adjective scales consisted of evaluative dimensions, largely according to Anderson's (1968) favourability ratings (e.g., honest-dishonest, humorous-humorless, warm-cold, helpful-not helpful). The mean rating across these 13 scale items provided an "objective" evaluative impression measure, which could be compared to the "subjectively" derived measure of desirability of descriptions. Higher values reflected greater favourability in impressions. The Cronbach alpha statistic assessing the internal consistency of this 13-item "scale" was .83.

The second, evaluatively relevant measure was a single-item "liking" scale. It consisted of an 11-point scale ranging from 1 (like very much) to 11 (dislike very much). Scores were reversed for analysis in order to maintain consistency with the other evaluative measures -- i.e., so that higher scores reflected greater favourability.

The remaining four of the 17 trait-adjective scales described behavioural-dispositional dimensions that may be salient in interpersonal settings such as the "work sessions" simulated in the present experiment. Two of these scales also had some theoretical

relevance to the research. One of these scales, "competitive-cooperative", was included in order to see how effectively the "equal vs. unequal" aspects of interdependence was manipulated independently of the "cooperative/friendly-competitive/hostile" aspect of interdependence (Kelley, 1979). The second scale, "dominant-submissive", was included in order to see whether "equal vs. unequal" interdependence (especially in "unequal" conditions) affected perceptions of "stereotypic" interaction styles and orientations that may be associated with differences in status and power (Kelley, 1979). For example, it was suggested in the Introduction that, within "unequal" relationship-contexts, the "subordinate" may display more stereotypical "submissiveness", whereas the "superior" partner may display stereotypical "dominance". The final two dimensions were "opinionated-unopinionated" and "impulsive-cautious".

Subjects also responded to two, 11-point scale items that assessed the effectiveness of the "equal vs. unequal interdependence" manipulation. These two items were, "How dependent upon the solutions of your partner is your own score of 'executive ability'?"; and, "How dependent upon your solutions is your partner's score of 'executive ability'?". The scales ranged from 1 (not at all dependent) to 11 (very dependent).

Each of the 17 trait-adjective scales was accompanied by a "confidence of judgement" item. The mean confidence rating across all of the items was computed to provide some indication of how "sure" subjects were of their perceptions of their partners. It might be expected, for example, that subjects will show greater confidence in their trait ratings of "objectively" more familiar than less familiar

partners.

The conversations between members of each dyad, during all 30-minute encounters, were recorded. It was hoped that a gross content-analysis of the conversation as either "task-related" or "task-unrelated" (i.e., discussions of personal issues) might provide some insight into the interactional styles and orientations fostered by "relationship-context" variables. It turned out, however, that the amount of "task-unrelated" conversation was negligible, making the content-analysis of tapes not worthwhile. No other analyses of the taped conversations were performed, so these data will not be discussed further.

Results

1. Levels of significance and error rates

All main effects, interactions, and *a priori* mean comparisons (two-tailed tests) were evaluated at the .05 level of significance. As in Study 1, *a posteriori* mean comparisons (Myers, 1979) were performed using an error rate *per family of comparisons* of .20. Depending upon the number of factor levels in a given interaction, the error rate *per comparison* ranged from .03 to .001.

2. Treatment of data

The data in Study 2 were treated in essentially the same manner as the data in Study 1. Factorial analyses of variance, including a nested factor, were conducted on every measure.[5] The fine-grained differentiation data were analyzed by adding "person concept category" as a within-subjects factor with six levels into the standard between-groups design. In order to compensate for the resulting bias toward Type I errors associated with inflated degrees of freedom, the Geisser-Greenhouse adjustment for conservative *F*-tests (see Kirk, 1968; Myers, 1979) was again used to evaluate the significance of *F*-tests involving the repeated measures factor.

3. Manipulation checks

Subjects' responses to the two "equal vs. unequal interdependence" manipulation checks were assessed in two ways. First, *a priori* *t*-tests comparing the mean ratings of "independent" (superordinate), "equal", and "dependent" (subordinate) persons were performed for manipulation check 1 ("how dependent upon your partner are you?") and manipulation

check 2 ("how dependent is your partner on you?"). Second, ANOVA's involving all of the independent variables were also performed on each measure.

On the first manipulation check, "independent" subjects (M = 2.19) rated themselves as less dependent upon their partners than did "dependent" subjects (M = 8.92), correlated $t(35) = -14.96$, $p < .001$. "Equal" subjects (M = 8.35) rated themselves as equally dependent on their partners as did "dependent" subjects, $t(106) < 1$, and more dependent than did "independent" subjects, $t(106) = 13.42$, $p < .001$. On the second manipulation check, "independent" subjects (M = 9.56) rated their partners as significantly more dependent upon themselves than did "dependent" subjects (M = 2.75), correlated $t(35) = 16.45$, $p < .001$. "Equal" subjects (M = 8.44) rated their partners as less dependent upon themselves than did "independent" subjects, $t(106) = -2.27$, $p < .03$, and more dependent upon themselves than did "dependent" subjects, $t(106) = 11.26$, $p < .001$.

ANOVA's on the manipulation check measures revealed only significant main effects for "equal vs. unequal interdependence" and the "dyad member designation" factor (i.e., between "independent" and "dependent" partners). (See Appendix J for ANOVA source tables.) Thus, it appears that the manipulation of "interdependence" between dyad members had the desired phenomenological impact, as reflected in subjects' ratings of the mutuality or unilaterality of dependence with their partners.

Also bearing somewhat on the impact of "equal vs. unequal interdependence" between partners were perceptions of the "competitiveness-cooperativeness" of one's partner. Recall that the

goal was to establish "relationship-contexts" that were characterized by "correspondence of outcomes" (cooperation), as opposed to "non-correspondence of outcomes" (competition). "Independent" (M = 8.47) and "dependent" (M = 7.75) subjects did not differ significantly in their "competitive-cooperative" ratings of their partners, correlated $t(35) < 1$. "Dependent" subjects' ratings also did not differ from the ratings of "equal" subjects (M = 7.61), $t(106) < 1$, although "equal" subjects tended to perceive their partners as slightly less cooperative than did "independent" subjects, $t(106) = 1.96$, $p < .06$. In all cases, though, partners were perceived as cooperative (all means above '6', or neutral, on the bipolar trait dimension) and not competitive. The analysis of variance of the "competitive-cooperative" ratings revealed no significant effects (see Appendix J for ANOVA source tables). Thus, it appears that the "equal-unequal" aspect of interdependence was manipulated independently of the "cooperative-competitive" aspect.

4. Expectation vs. no expectation of future interaction

Analysis of variance of the single-session data, including the "expectation vs. no expectation of future interaction" variable, revealed no significant main effects or interactions that involved the "expectancy" factor on any of the dependent measures (see Appendix J). It would appear from these analyses that impressionistic descriptions of experimental acquaintanceship partners did not significantly differ as a function of expecting or not expecting to interact in the future. This does not necessarily mean, of course, that person knowledge structures are never affected by expectations about subsequent interaction. Indeed, it should be noted that, in the present experiment, paired subjects may have expected to meet their partners again later, at other

times and places on campus. In other words, even subjects who had no expectations for future interaction with their partners in the context of the experiment may have expected future interaction in some other context. Anecdotal evidence supporting this possibility was the fact that many of the partners left the laboratory together when their participation in the study was concluded, in both single-session and multiple-sessions conditions. Thus, it may have been that, ecologically, the experimental acquaintanceships were not too different from naturalistic acquaintanceships in terms of explicit or implicit expectations for future interaction.

In any case, the "expectancy" variable was dropped, and all of the single-session data were included in the major analyses of Study 2. Himmelfarb's (1975) procedure, as described previously, was used to artificially cross the single-session "equal" and "unequal" groups with the levels of the "spacing of interaction" ("massed vs. spaced encounters") variable.

5. Structure of Person Knowledge: The major dependent measures

Differentiation: replicated effects. The analysis of the "fine-grained" differentiation measure revealed a main effect for "categories", $F(1,24) = 181.73$, $p < .001$, indicating, as in the first experiment, that partners described each other in terms of "properties" ($M = 5.64$), "relationship" ($M = 4.07$), "behaviour" ($M = 3.74$), and "appearance" ($M = 1.70$) concepts, to the near exclusion of "origins" ($M = .26$) and "context" ($M = .21$).concepts. Also replicated from the first experiment was a main effect for "objective familiarity", $F(2,24) = 4.99$, $p < .02$. Descriptions tended to include more concepts after three encounters between partners ($M = 2.99$) than after either two encounters

($\underline{M}$ = 2.45) or one encounter ($\underline{M}$ = 2.36), although neither of these comparisons were significant (both $\underline{t}$'s < 1.20, $\underline{p}$ < .20).

In Study 1, analysis revealed a significant "category" by "familiarity" interaction (see Figure 2). The interaction of these variables did not achieve statistical significance in Study 2, $\underline{F}(2,24)$ = 2.74, $\underline{p}$ < .08; however, the pattern of results so nearly replicated the effect in Study 1 that it deserves mention (see Figure 7). Mean comparisons revealed, as in the first experiment, that more "properties" concepts were used to describe partners after three encounters ($\underline{M}$ = 6.97) than after either one encounter ($\underline{M}$ = 4.88) or two encounters ($\underline{M}$ = 5.08) ($\underline{p}$'s < .01). In addition, more "relationship" concepts were included in descriptions after three encounters ($\underline{M}$ = 4.83) than after one encounter ($\underline{M}$ = 3.54) ($\underline{p}$ < .01). These increases in the number of "abstract" categories with greater familiarity are consistent with expectations derived from Hypothesis 3. Unlike the first experiment, there were no differences in the number of "appearance" concepts as a function of "familiarity".

Differentiation: other findings. Analysis of the "fine-grained" measure revealed a significant "equal vs. unequal" by "familiarity" interaction, $\underline{F}(2,24)$ = 6.42, $\underline{p}$ < .006. Although mean comparisons revealed that none of the cells were significantly different from each other, the tendency was for differentiation to become greater as partners encountered each other more in "unequal" relationship-contexts, but not to change appreciably with more encounters in "equal" relationship-contexts (see Table 3a). This finding is contrary to Hypothesis 1b, which predicted that more encounters would result in more differentiation when partners were "equally" interdependent.

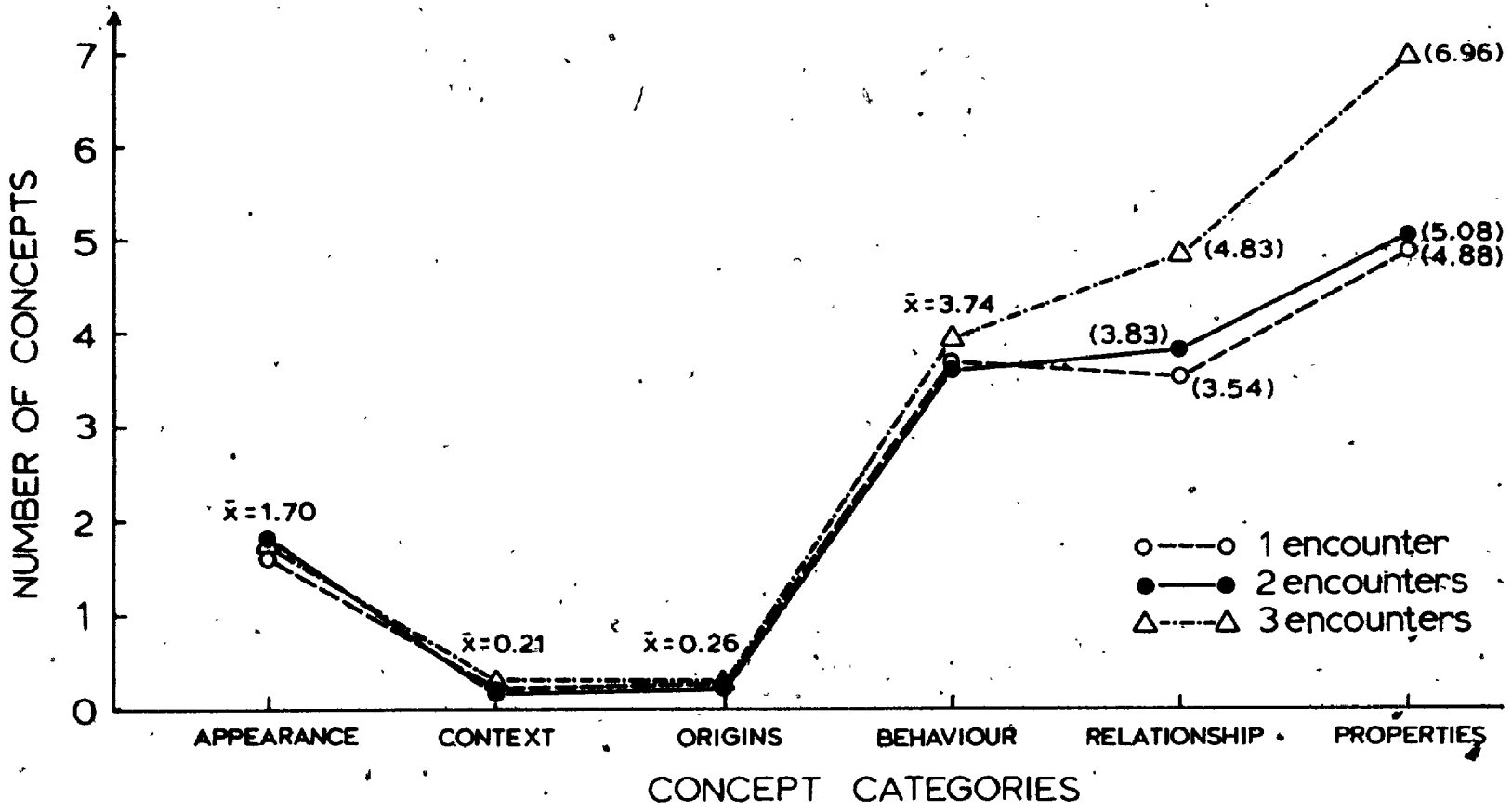


Figure 7. The number of concepts in each category as a function of "objective" familiarity" (1, 2, or 3 encounters).

Table 3

Differentiation (a) and Complexity (b) in descriptions as a function of "equal vs. unequal interdependence" and "objective familiarity".

a) Differentiation

	Number of Encounters		
Interdependence	1	2	3
Equal	2.64	2.41	2.50
Unequal	2.08	2.49	3.49

b) Complexity

	Number of Encounters		
Interdependence	1	2	3
Equal	$.24_{ab}$	$-.41_{a}$	$-.02_{ab}$
Unequal	$-.77_{a}$	$-.01_{ab}$	$.98_{b}$

In 3b, means not sharing a subscript are significantly different from each other, $p < .01$.

Comparisons of "independent" (M = 15.33), "equal" (M = 15.06), and "dependent" (M = 16.81) subjects revealed no differences in the total number of concepts used to describe partners (all t's < 1.32, p < .19).

The analysis of the fine-grained differentiation data also revealed a significant "gender" by "equal vs. unequal" by "familiarity" interaction, $F(2,24) = 3.76$, $p < .04$. There were no significant differences among the means, although the primary source of the interaction appears to be the fact that females in "equal" conditions described partners in the least differentiated way following three encounters; whereas, overall, differentiation in descriptions tended to be greatest following three encounters (see Table 4). This discrepant cell is not readily interpretable.

Integration. The integration of the descriptions of partners was characterized by a "gender" by "familiarity" interaction, $F(2,24) = 4.18$, $p < .03$. As can be seen in Table 5a, integration of the descriptions by females and males manifested mirror image patterns across the "familiarity" conditions, with two encounters resulting in the most integrated descriptions for females but the least integrated descriptions for males (M = 4.42 and M = 3.38, respectively). There were no other significant effects on the integration measure (see Appendix J). There were also no differences in integration among "independent" (M = 3.38), "equal" (M = 4.04), and "dependent" (M = 4.22) subjects (all t's < 1.15, p < .26).

Complexity. There were two significant interactions on the measure of complexity of descriptions. A significant "equal vs. unequal" by "familiarity" interaction, $F(2,24) = 4.42$, $p < .03$, produced a pattern of results very similar to that on the differentiation measure (see

Table 4

Differentiation as a function of "gender", "equal vs. unequal interdependence", and "objective familiarity"

Gender	Interdependence	Number of Encounters 1	2	3
Female	Equal	2.53	2.44	1.96
	Unequal	1.68	2.74	3.83
Male	Equal	2.75	2.38	3.04
	Unequal	2.49	2.25	3.14

Table 5

Integration (a) and Complexity (b) as a function of "gender" and "objective familiarity"

a) Integration

	Number of Encounters		
Gender	1	2	3
Female	3.71_{ab}	4.42_{b}	4.04_{ab}
Male	4.13_{ab}	3.38_{a}	4.54_{b}

For 5a) means not sharing subscripts are significantly different from each other ($p < .01$).

b) Complexity

	Number of Encounters		
Gender	1	2	3
Female	$-.63_{ab}$	$.28_{b}$	$.21_{ab}$
Male	$.09_{ab}$	$-.70_{a}$	$.74_{b}$

For 5b) means not sharing subscripts are significantly different from each other ($p < .01$).

Tables 3a and 3b for comparisons). A significant "gender" by "familiarity" interaction, $F(2,24) = 3.63$, $p < .05$, produced a pattern of results very similar to that on the integration measure (see Tables 5a and 5b for comparisons).

The "equal vs. unequal" by "familiarity" interaction shows that descriptions of partners in "unequal" relationship-contexts became increasingly complex across "objective familiarity" conditions. Mean comparisons indicated, in fact, that descriptions were more complex after three encounters ($M = .98$) than after one encounter ($M = -.77$) ($p < .01$). In "equal" relationship-contexts, on the other hand, complexity of descriptions tended to be greatest after one encounters ($M = .24$), lowest after two encounters ($M = -.41$), and somewhere in between after three encounters ($M = -.02$), although these three means did not differ reliably from each other (see Table 3b).

The "gender" by "familiarity" interaction shows that, for females, the most complex descriptions tended to follow two encounters ($M = .28$) or three encounters ($M = .21$), rather than one encounters ($M = -.63$), although mean comparisons revealed no significant differences between these cells. For males, descriptions were significantly more complex after three encounters ($M = .74$) than after two encounters ($M = -.70$) ($p < .01$), but not than after a single encounter ($M = .09$) (see Table 5b). These patterns of results are at least partly consistent with expectations regarding the effects of "familiarity", since the most complex descriptions tended to follow multiple encounters between partners.

Finally, descriptions by "independent" subjects ($M = -.17$), "dependent" subjects ($M = .31$), and "equal" subjects ($M = -.07$) did not

differ in complexity, all t's < 1.22, p < .23.

Abstraction. A main effect for "equal vs. unequal interdependence" was revealed in the analysis of the abstraction data, $F(1,24) = 4.47$, $p < .05$, indicating that partners in "unequal" relationship-contexts (M = 4.77) described each other more abstractly than did-partners in "equal" relationship-contexts (M = 4.60). A priori comparisons revealed that descriptions by "independent" (M = 4.73) and "dependent" (M = 4.81) subjects were equally abstract, correlated $t(35) < 1$. The descriptions by "equal" subjects, (M = 4.60) were not reliably different in abstraction from the descriptions by "independent" subjects, $t(106) = 1.08$, $p < .29$, but they tended to be less abstract than the descriptions by "dependent" subjects, $t(106) = 1.88$, $p < .07$.

A "familiarity" main effect, $F(2,24) = 3.58$, $p < .05$, indicated that, as expected, the level of abstraction in descriptions tended to be higher when partners had had several encounters with each other. Specifically, descriptions were more abstract following three encounters (M = 4.84) than either two encounters (M = 4.61) or one encounter (M = 4.60) (p's < .04). There were no other significant effects (see Appendix J).

Desirability. "Equal vs. unequal interdependence" was expected to have an impact on the evaluative tone of person descriptions. The desirability of descriptions by "independent" (M = 1.75), "equal" (M = 1.46), and "dependent" (M = 1.67) subjects, however, did not differ significantly (all t's < 1).

Analysis of variance revealed a main effect for "gender", $F(1,24) = 5.59$, $p < .03$, which indicated that females (M = 1.83) described their partners more favourably than did males (M = 1.33). This main effect

was qualified by a "gender" by "spacing of interaction (massed vs. spaced)" interaction, $F(1,24) = 6.22$, $p < .02$, showing that "massed" encounters resulted in descriptions of equal favourability by females ($M = 1.50$) and males ($M = 1.53$), whereas "spaced" encounters resulted in females' descriptions ($M = 2.17$) being more favourable than males' descriptions ($M = 1.14$). Mean comparisons revealed that only this latter difference in the "spaced" relationship-contexts was significant ($p < .03$).

Analysis of the desirability measure also revealed a significant "gender" by "spacing" by "equal vs. unequal" interaction, $F(1,24) = 4.41$, $p < .05$. As can be seen in Table 6, descriptions tended to be more favourable following "spaced" encounters than following "massed" encounters in most cases (although the differences did not achieve significance), which is consistent with expectations. This pattern, however, was reversed for males in "equal" relationship-contexts. The reasons for this particular pattern of means are unclear.

6. Additional Measures

Evaluative tone. Two additional measures relevant to the evaluative impact of "relationship-context" and "familiarity" factors on person knowledge were obtained in Study 2. These were subjects' liking for their partners and their evaluative impressions of their partners. Liking and evaluative impressions correlated $r(142) = .61$ ($p < .001$) with each other, and $r(142) = .60$ and $r(142) = .55$, respectively, with judged desirability (p's $< .001$). A priori comparisons indicated that "independent" ($M = 8.61$), "equal" ($M = 8.19$), and "dependent" ($M = 8.28$) subjects liked their partners equivalently (all t's < 1.17, $p < .24$). Analysis of variance on the liking measure

Table 6

Judged desirability of descriptions as a function of "gender", "spacing of interaction", and "equal vs. unequal interdependence"

Interdependence	Spacing	Gender: Females	Gender: Males
Equal	Massed	1.33_{ab}	1.78_{ab}
	Spaced	2.11_{b}	$.61_{a}$
Unequal	Massed	1.67_{ab}	1.28_{ab}
	Spaced	2.22_{b}	1.67_{ab}

Means that do not share subscripts are significantly different, $p < .007$.

also revealed no main effects or interactions (see Appendix J).

The evaluative impressions of "independent" (M = 8.0) and "dependent" (M = 7.93) subjects also did not differ (correlated $t(35) < 1$), nor did the evaluative impressions of "independent" and "dependent" subjects differ significantly from the evaluative impressions of "equal" subjects (M = 7.67), $t(106) = 1.73$, $p < .09$, and $t < 1$, respectively. Once again, the ANOVA revealed no significant effects.

Confidence in trait judgements. Subjects' confidence in their trait attributions to partners was assessed by computing their mean confidence rating for the 17 bipolar trait items. Analysis of variance on this measure revealed only a main effect for "equal vs. unequal interdependence", $F(1,24) = 5.05$, $p < .04$, indicating that subjects in "unequal" relationship-contexts (M = 8.20) were more confident in their trait ratings than were subjects in "equal" relationship-contexts (M = 7.80).

Comparisons of "independent", "equal", and "dependent" subjects revealed that "dependent" subjects (M = 8.21) tended to be more confident in their judgements than "equal" subjects (M = 7.80), $t(106) = 1.92$, $p < .06$, but not more confident than "independent" subjects (M = 8.19, correlated $t(35) < 1$).

Other perceptions of acquaintanceship partners. Subjects also rated their partners on three other bipolar personality dimensions -- "dominant-submissive", "impulsive-cautious", and "opinionated-unopinionated". Analysis of variance of the "dominant-submissive" ratings revealed no significant main effects or interactions (see Appendix J for the ANOVA source table).

The ANOVA of the "impulsive-cautious" ratings revealed a

significant "gender" by "spacing of interaction" interaction, $F(1,24) = 4.43$, $p < .05$. Mean comparisons indicated that males following "spaced" encounters ($M = 6.64$) rated their partners as less cautious than males following "massed" encounters ($M = 7.61$), ($p < .03$), but not significantly differently from females following "massed" encounters ($M = 7.31$) or females following "spaced" encounters ($M = 7.50$). These latter three conditions did not differ. A "spacing of interaction" by "familiarity" interaction, $F(2,24) = 7.76$, $p < .003$, indicated that partners were generally perceived as more cautious following three encounters than following one or two encounters when encounters were "spaced", but this was not the case when encounters were "massed" (see Table 7a for means). This latter interaction was further qualified by a "spacing" by "equal vs. unequal" by "familiarity" interaction, $F(2,24) = 5.10$, $p < .02$ (see Table 7b for means). This three-way interaction was not readily interpretable.

The analysis of variance of the "opinionated-unopinionated" ratings revealed a main effect for "spacing of interaction", $F(1,24) = 4.65$, $p < .05$, showing that partners were perceived as more opinionated following "spaced" encounters ($M = 4.79$) than following "massed" encounters ($M = 5.51$). This main effect was qualified by two higher-order interactions, however: "spacing" by "equal vs. unequal" by "familiarity", $F(2,24) = 3.71$, $p < .04$, and a four-way interaction that subsumed the 3-way interaction and included "gender", $F(2,24) = 6.7$, $p < .005$. The means for these interactions are presented in Tables 8a and 8b. Neither effect seems readily interpretable.

Finally, the means for "independent", "equal", and "dependent" subjects on the three bipolar personality dimensions are presented in

Table 7

Ratings of partners' "impulsivity-cautiousness" as a function of a) "spacing of interaction" and "familiarity", and b) "spacing of interaction", "equal vs. unequal interdependence", and "familiarity"

a) "spacing of interaction" by "objective familiarity"

	Number of Encounters		
Spacing	1	2	3
Massed	7.21_{ab}*	8.42_{b}	6.75_{a}
Spaced	6.71_{a}	6.75_{a}	7.75_{ab}

In 7a) means not sharing a subscript are significantly different ($p < .01$).

b) "spacing" by "equal vs. unequal" by "familiarity"

		Number of Encounters		
	Spacing	1	2	3
Interdependence				
Equal	Massed	7.92_{ab}	7.67_{ab}	7.33_{ab}
	Spaced	6.58_{a}	7.00_{ab}	7.42_{ab}
Unequal	Massed	6.50_{a}	9.17_{b}	6.17_{a}
	Spaced	6.83_{a}	6.50_{a}	8.08_{ab}

In 7b) means not sharing a subscript are significantly different ($p < .003$).

* Range is 1 (impulsive) to 11 (cautious).

Table 8

Ratings of how "opinionated-unopinionated"* partners were perceived to be as a function of higher-order interactions among variables

a) "spacing of interaction" by "equal vs. unequal" by "familiarity".

		Number of Encounters		
	Spacing	1	2	3
Interdependence				
Equal	Massed	5.58	5.00	6.75
	Spaced	5.83	5.33	4.17
Unequal	Massed	5.25	5.67	4.83
	Spaced	4.58	4.17	4.67

b) "gender" by "spacing" by "equal vs. unequal" by "familiarity"

			Number of Encounters		
		Spacing	1	2	3
	Interdependence				
Gender	Equal	Massed	5.00_{ab}	4.83_{ab}	7.83_{b}
		Spaced	6.67_{ab}	6.00_{ab}	3.00_{a}
Female	Un-	Massed	4.67_{ab}	4.00_{ab}	3.67_{a}
	Equal	Spaced	3.67_{a}	4.83_{ab}	5.50_{ab}
	Equal	Massed	6.17_{ab}	5.17_{ab}	5.67_{ab}
Male		Spaced	5.00_{ab}	4.67_{ab}	5.33_{ab}
	Un-	Massed	5.83_{ab}	7.33_{ab}	6.00_{ab}
	Equal	Spaced	5.50_{ab}	3.50_{a}	3.83_{ab}

In 8b, means not sharing a subscript are significantly different ($p < .001$).

* Range is 1 (opinionated) to 11 (unopinionated).

Table 9. As can be seen, there were no reliable differences between these three "dependency" (status) conditions on any of the measures, although there was a nonsignificant tendency for "dependent" subjects (M = 4.56) to rate their partners as more opinionated than "equal" subjects (M = 5.44), $t(106) = -.1.86$, $p < .07$.

7. Multiple sessions

The artificial assignment of single-session groups to one of the two levels of the "spacing of interaction" variable may have diluted the statistical impact of "massed vs. spaced" encounters on the dependent measures. In order to assess more clearly "spacing of interaction" effects on person knowledge, ANOVA's including only data from the multiple (two and three) session groups were performed on all dependent measures. These analyses revealed novel effects involving "spacing" on two of the evaluative tone measures (judged desirability and liking) and on the "impulsive-cautious" and "opinionated-unopinionated" impression measures. Novel "spacing" effects did not emerge on any of the other measures.

The analysis of variance of the judged desirability of descriptions revealed a "spacing" by "equal vs. unequal" interaction, $F(1,16) = 5.24$, $p < .04$. Although the means did not differ significantly from each other, it appears that descriptions in "unequal" relationship-contexts tended to be more favourable following "spaced" encounters (M = 1.95) than following "massed" encounters (M = 1.29), whereas descriptions in "equal" relationship-contexts tended to be less favourable following "spaced" encounters (M = 1.25) than following "massed" encounters (M = 1.58). The ANOVA of the desirability ratings also revealed a "spacing" by "familiarity" interaction, $F(1,16) = 6.15$, $p < .03$. Mean comparisons

Table 9

Attributions to partners on three bipolar trait dimensions by "independent", "equal", and "dependent" subjects

Trait Dimension	Subject's Dependency: Independent (n = 36)	Equal (n = 72)	Dependent (n = 36)	Significant Comparisons
1. dominant vs. submissive	6.06_1*	6.18_2	5.47_3	none
2. impulsive vs. cautious	6.83_1	7.32_2	7.58_3	none
3. opinionated vs. unopinionated	5.17_1	5.44_2	4.56_3	$\bar{x}_2$ vs. $\bar{x}_3$ $p < .07$

* Range is 1 (first trait) to 11 (second trait)

indicated that when encounters were "massed", descriptions of partners did not differ in favourability between two (M = 1.54) and three (M = 1.33) encounters; but, when encounters were "spaced", descriptions were significantly more favourable after three (M = 2.04) encounters than after two (M = 1.17) encounters ($p < .03$).

Similar "spacing" by "equal vs. unequal", $F(1.16) = 4.77$, $p < .05$, and "spacing" by "familiarity", $F(1,16) = 8.66$, $p < .01$, interactions also were obtained on the "liking" measure. The "spacing" by "equal vs. unequal" interaction revealed once again that descriptions in "unequal" relationship contexts tended to be more favourable following "spaced" encounters (M = 8.7) than following "massed" encounters (M = 8.2), whereas descriptions in "equal" relationship contexts tended to be more favourable following "massed" encounters (M = 8.6) than following "spaced" encounters (M = 8.1). As before, however, none of these means differed significantly. The "spacing" by familiarity interaction also replicated the pattern on the desirability measure, indicating that partners were liked equivalently after two (M = 8.3) and three (M = 8.4) "massed" encounters, whereas that they were liked significantly more after three (M = 9.1) than after two (M = 7.8) "spaced" encounters ($p < .03$).

In addition to these novel "evaluative" effects of "spacing", analyses of the multiple session data revealed several higher-order interactions involving "massed vs. spaced" encounters on the "impulsive-cautious" and "opinionated-unopinionated" impression measures. These effects included a "gender" by "spacing" by "familiarity" interaction, $F(1,16) = 5.05$, $p < .04$, on the impulsive-cautious ratings (see Table 10), and two interactions on the

Table 10

Higher-order interaction involving "spacing of interaction" on the "impulsive-cautious" trait dimension revealed by ANOVA of multiple-session data only.

"gender" by "spacing" by "familiarity"

		Number of Encounters	
Gender	Spacing	2	3
Female	Massed	8.2_{bc}	6.5_{a}
	Spaced	6.8_{a}	8.8_{c}
Male	Massed	8.7_{c}	7.0_{ab}
	Spaced	6.7_{a}	7.7_{b}

Means not sharing a subscript are significantly different ($p < .007$).

opinionated-unopinionated ratings -- one involving "gender", "spacing", and "familiarity", $F(1,16) = 5.20$, $p < .04$, and the other involving "gender", "spacing" and "equal vs. unequal interdependence", $F(1,16) = 14.74$, $p < .002$ (see Tables 11a and 11b). The two three-way interactions on the "opinionated-unopinionated" measure appear to replace the uninterpretable four-way interaction (see Table 8b) from the previous analysis including the single-session groups. Since there were no explicit expectations concerning particular impression scales, and no discernably meaningful patterns have emerged among the means in these novel effects, the results do not seem readily interpretable. Thus, they will not be discussed further.

Table 11

Higher-order interactions involving "spacing of interaction" on the "opinionated-unopinionated" trait dimension revealed by ANOVA of multiple-session data only

a) "gender" by "spacing" by "familiarity"

		Number of Encounters	
Gender	Spacing	2	3
Female	Massed	4.4	5.8
	Spaced	5.4	4.3
Male	Massed	6.3	5.8
	Spaced	4.1	4.6

b) "gender" by "spacing" by "interdependence"

		Spacing	
Gender	Interdependence	Massed	Spaced
Female	Equal	6.3_{bc}	4.5_{ab}
	Unequal	3.8_{a}	5.2_{ab}
Male	Equal	5.4_{ab}	5.0_{ab}
	Unequal	6.7_{bc}	3.7_{a}

In 11b, means not sharing a subscript are significantly different ($p < .007$).

Discussion

1. Overview

Study 2 was an elaboration and replication of Study 1, involving a more controlled and precise methodology. In this section, we will begin by discussing those results that occurred in both studies, since these may be considered the most robust findings. Next, the results that occurred in Study 2 but not in Study 1 will be considered, and then, finally, the non-replicated results from Study 1 will be discussed.

2. Corresponding Findings in Study 1 and Study 2

The most exact replications across studies occurred on the measure of differentiation. In both experiments, analyses of the "fine-grained" differentiation measure revealed that particular kinds of person concepts were used most often to describe acquaintances. Specifically, "properties", "relationship", "behaviour" and "appearance" concepts were heavily represented in descriptions, whereas "context" and "origins" were only sparsely represented. These relative frequencies of category usage also replicate the findings of Fiske and Cox (1979).

The consistent emergence of this pattern of category usage suggests that "origins" and "context" information may differ from the other categories. Perhaps the "situational" flavour of "origin" and "context" concepts makes them harder to articulate than other kinds of person information, which have a more "dispositional" flavour (such as behavioural and personality concepts). Another possibility, at least with respect to university freshman, is that information about other students' origins and contexts may be seen as relatively unimportant or uninformative about the person. In the present research, for example,

"context" information was presumably "available" in the memories of perceiver-subjects in Study 1 (where they described acquaintances from their existing social networks, with whom they had probably interacted across a variety of situations and settings), but was not "available" to partners in Study 2 (where all interactions between dyad members were confined to the laboratory situation). Nevertheless, "context" concepts were equally infrequent in the descriptions by subjects in each experiment. Thus, it may be that even if "context" information is available to perceivers, it may not be accessible. Perhaps "context" and "origins" concepts are not based upon salient information, or they may simply be unimportant to perceivers in some cases (such as in the present laboratory context).

It should be noted, however, that perceivers often focus on "origins" concepts in interactions with unfamiliar others, particularly relating to racial or ethnic backgrounds. For example, a common response to hearing a stranger's surname is to guess or ask about its ethnic origins. More dramatic examples of the importance of "origins" information are suggested by the phenomena of prejudice and discrimination. In addition, Allan's (1979) research points up some circumstances (e.g., in working-class acquaintanceships) where conceptions of others are bound strongly in contextual or situational properties.

Another likely possibility is that "context" and "origins" concepts may simply be fewer in number than other kinds of person concepts. If this is the case, then the low relative usage of these concepts in descriptions of persons may reflect "ceiling" effects and does not necessarily demonstrate that such information is inaccessible or

unimportant to perceivers. Finally, it is possible that the homogeneity of the sample with respect to background and context factors artificially suppressed the importance of these categories of person information.

Main effects for "length of acquaintance", or "objective familiarity", also were manifested on the differentiation data in both Study 1 and Study 2: greater familiarity resulted in more knowledge about an acquaintance. Furthermore, as expected (see Hypothesis 3), relatively "abstract" concepts (i.e., "properties" and "relationship") increased in frequency most noticeably with increased "familiarity", although, in Study 1, the number of "appearance" concepts (which are very "concrete") was also greater in the descriptions of "old" acquaintances than in the descriptions of "new" acquaintances. In fact, "appearance" concepts, overall, were more prevalent in the descriptions from Study 1 (34% of the total) than in the descriptions from Study 2 (11% of the total).

The reduced use of "appearance" concepts to describe partners in Study 2 may reflect the laboratory conditions and/or the problem-solving tasks of dyad partners. Subjects interacted face-to-face to solve organizational/management problems, while seated across from each other at a table. Such physical positioning, combined with the writing necessary to solve the problems, may have reduced the salience of "appearance" attributes such as "height", "weight", "build", and "dress".

Generally good support for the predicted effects of "familiarity" on the level of abstraction in descriptions was also obtained in Study 1 and Study 2. Recall that "spacing of interaction" ("massed" vs.

"spaced" encounters) and "familiarity" were confounded in Study 1, resulting in a "spacing" by "familiarity" interaction which showed that descriptions were most abstract in the "massed/old acquaintance" condition, with no differences among the remaining conditions. In Study 2, more precise manipulations of these variables resulted in the predicted main effect for "familiarity" on the measure of abstraction, unconfounded with other variables. Thus, the expectation that representations of familiar acquaintances will be more abstract and differentiated than the representations of less familiar acquaintances was well supported by the present research.

Thus, the impact of "objective familiarity" on person knowledge structure was quite robust in the present research. In fact, "familiarity" influenced every major dependent measure (excluding evaluative tone measures) in both studies, with the exception of "complexity" of descriptions in the first experiment. Of course, "familiarity" typically interacted with other variables, and not always with the same variables across experiments. Nevertheless, in both studies (though less consistently so in the first experiment), "familiarity" tended to be associated with more elaborate structure in person knowledge. In Study 1, when descriptions in a particular condition were significantly more elaborate than those in other conditions, subjects were usually describing highly familiar ("old") acquaintances. In Study 2, significantly more elaborated structure in descriptions usually followed multiple encounters (i.e., two or three encounters) rather than a single encounter between partners.

Finally, several effects involving subjects' gender were significant in each study, although the precise measures on which these

effects occurred were different across studies. That is, the obtained gender effects seemed to be unique to each experiment. One exception was the tendency for females' descriptions to be more favourable than males' descriptions. This was evidenced by the third-order "gender" interaction in Study 1 (see Figure 5), where females generally produced more favourable descriptions than males (only one cell deviated from this pattern, thereby producing the interaction), and it was evidenced by the "gender" main effect in Study 2, where females' descriptions were consistently and significantly more favourable than males' descriptions.

The fact that females were inclined to describe other female acquaintances more positively than males describing male acquaintances (recall that females always described females and males always described males) is contrary to what might be expected on the basis of person perception and attribution research (Schneider et al., 1979). For example, both men and women typically perceive women less favourably than they perceive men (cf. Broverman, Broverman, Clarkson, Rosenkrantz, & Vogel, 1970; Deaux, 1976; McKee & Sherriffs, 1957). This finding, however, has been usually derived from "description" paradigms, and it could be that <u>direct</u> interaction between women involves more congenial and pleasant interpersonal dynamics than direct interaction between men. To the extent that this is true, females would be expected to describe female acquaintances more favourably than males describe male acquaintances when "acquaintance" is the primary mode of knowledge acquisition. This was, of course, what tended to occur in the present research.

There is an important caveat concerning "gender" in the two experiments that should be kept in mind. Specifically, it is unclear whether it was the gender of the perceiver or the gender of the

perceived, or some combination of the two, that affected person knowledge structures. This "gender" by "perceiver vs. perceived" confounding necessarily imposes limitations on any explanation of "gender" effects on the dependent measures. Future research is necessary to tease apart the source of "gender" effects in naturalistic person perception paradigms.

3. Noncorresponding findings: Study 2

Several of the findings in Study 2 did not occur in Study 1. Often, these findings provided clearer insights into the impact of the independent variables on the structure of person knowledge, since the methodology of Study 2 eliminated the major confoundings in Study 1. Most notably, there was a series of second-order interactions involving "familiarity" on the differentiation, integration, and complexity measures (see Tables 3 and 5). First, an "equal vs. unequal interdependence" by "number of encounters" interaction on differentiation indicated that the number of concepts used to describe a partner increased as partners had encountered each other more, but only in "unequal" relationship-contexts. In "equal" relationship-contexts, differentiation in descriptions did not vary with the number of encounters between partners. This interaction was also obtained on the measure of complexity: greater "objective familiarity" resulted in increased complexity in descriptions, but only in "unequal" relationship-contexts. Second, on the measure of integration, a "gender" by "number of encounters" interaction indicated, essentially, that integration was highest in females' descriptions after two encounters, whereas males' descriptions were most integrated after three

encounters and lowest following two encounters (see Table 5a). This interaction was also obtained on the measure of complexity: for females, the most complex descriptions followed two encounters, whereas, for males, the most complex descriptions followed three encounters and the least complex descriptions followed two encounters.

A certain degree of consistency would be expected between the differentiation and complexity results, and between the integration and complexity results. Complexity was, after all, an additive composite of the equally weighted, standardized, differentiation and integration scores. Indeed, the differentiation and complexity data correlated $r(142) = .85$; and the integration and complexity data also correlated $r(142) = .85$. Differentiation and integration were also moderately correlated with each other, $r(142) = .45$ (all p's $< .001$).

The first set of "familiarity" interactions indicated, as expected, that differentiation and complexity were generally facilitated when partners were "objectively" more familiar with each other, at least in "unequal" relationship-contexts. This latter qualification in terms of the "interdependence" factor, however, was exactly opposite to predictions. That is, familiarity was expected to increase differentiation and complexity within "equal" relationship-contexts, rather than within "unequal" relationships. Although the total number of concepts in descriptions by "independent", "dependent", and "equal" subjects did not differ significantly, both the "independents" and (especially) the "dependents" (i.e., the "unequal" subjects) tended to produce more differentiated descriptions of partners than did "equals".

One possible explanation for the unexpected impact of "equal vs. unequal interdependence" on differentiation and complexity involves the

operation of implict personality theories (Schneider, 1973). Recall that "unequal" interdependence was hypothesized to foster more stereotypically guided patterns of interaction between partners (and therefore more limited ranges of behaviour) because of their status or power differences; whereas, "equal" interdependence was expected to allow freer and more diverse interaction styles and orientations between partners. It is possible, however, that stereotypic behaviours might elicit stored, "implicit personality theories", which are themselves highly differentiated and complex. That is, utilization of stereotypes to generate personality inferences might increase the differentiation and complexity of impressions, at least during the early stages of an acquaintanceship (presumably, after an extended period of time, such stereotypes would have an inhibitory effect on differentiation and complexity, since they would restrict the input of new and different information). Thus, "unequal" relationship-contexts may have produced more differentiated and complex descriptions than "equal" relationship-contexts because the former evoked stereotypical "personality theories". Note that the impact of implicit personality theories on differentiation would probably become more apparent after a number of encounters, since stereotypic behaviours would presumably occur several times, thereby repeatedly "priming" the stored theories. The present results are consistent with such a pattern.

Some additional support for this interpretation can be obtained by looking at subjects' rated confidence in their trait judgements of their partners on the bipolar impression items. One might expect that personality inferences based on stored stereotypes would be made more confidently than inferences based solely on behaviour from one, two, or

three interactions. And, indeed, subjects in "unequal" relationship-contexts (who may have used stored stereotypes) expressed more confidence in their ratings than did subjects in "equal" relationship-contexts. Thus, it is at least tenable that "unequal" relationship-contexts promoted differentiation (and complexity) in person knowledge more than "equal" relationship-contexts by enhancing the utilization of implicit personality theories in impression formation.

Turning now to the "gender" by "familiarity" interactions obtained on the measures of integration and complexity of descriptions, the "familiarity" effects were again generally consistent with predictions -- multiple encounters (either two or three encounters, depending on subjects' gender) produced the most integrated and complex representations of partners. These elaborations in structure, however, did not proceed linearly with increasing familiarity, as would be expected, for either gender. The absence of linear tendencies across increasing numbers of encounters suggests that integration in person knowledge may not be a linear, incremental process. Perhaps, during the first few encounters between new acquaintances, the integration of each individual's impression of the other is a fluctuating structural feature.

For example, new and different information may cause some destabilization or "liquification" (i.e., the opposite of crystalization) of the structure. The resulting "dis-integration" of the structure may be necessary for consolidation of the new information. Following the accommodation of the new information, re-integration of the person knowledge structure could occur. Thus, representations of an

acquaintance, at least in early encounters, may be characterized by cyclical processes of "integration/dis-integration/re-integration". This cycle would presumably lead to increasing elaboration of one's knowledge structure for another person. Complexity of structure would also be expected to follow a cyclic process, since integration is an important component of complexity.

The impact of "gender" has not been addressed in the proposed explanation for the integration and complexity findings obtained in Study 2. The impact of "gender", as mentioned previously, cannot be unequivocally associated with either the "perceiver" or the "perceived" in the present research. As a consequence, it may be best to regard "gender" as one variable (of which there are undoubtedly many) that influences when and at what intervals dis-integration/re-integration processes occur during the acquaintance process. Future research might be directed at assessing the viability of the proposed, cyclic integration processes in impression development, and also at identifying those factors, such as the gender of the perceiver and the perceived, that influence the nature of these processes.

The judged desirability of descriptions was another measure that produced noncorresponding results between Study 1 and Study 2. Quite different effects were manifested on this measure in the two experiments. Most unexpected was the failure to replicate in Study 2 the "equal vs. unequal (status) interdependence" effects of Study 1. In Study 1, the "status" effect was very robust -- "subordinate" acquaintances were described significantly less favourably than both "equal" and "superordinate" acquaintances.

In Study 2, subjects were randomly assigned to the "independent" (superordinate), "equal", or "dependent" (subordinate) positions. This more precise manipulation of the "interdependence" (status) variable in Study 2, however, revealed no differences between status positions in the desirability of the descriptions of partners. Nor were differences detected on two, additional measures of the "evaluative tone" of person knowledge structures. Subjects in the three "dependency/status" conditions did not differ in either their "liking" for, or their "evaluative impressions" of, their partners.

Since subjects' responses to the "equal vs. unequal interdependence" manipulation checks indicated that the respective dependency positions were successfully communicated to the dyad members, the null findings across the three evaluative measures are instructive. Recall that, in the Discussion of Study 1, it was suggested that the "status" effects on the desirability measure may have reflected either the "roles" themselves or the "persons" chosen by perceivers as exemplars of the roles. Random assignment of "persons" to "roles" in Study 2 allowed only "role" differences to affect impressions, which was the variable of interest in this thesis. As a consequence, the null findings on the evaluative measures in Study 2 suggest that the hypothesized effects of "interdependence" per se are invalid. It seems likely that the relatively unfavourable descriptions of "subordinate" acquaintances in Study 1 were a function of perceivers selecting relatively unattractive "subordinate" others. Future research will be necessary to see whether interdependence affects the evaluative nature of impressions in other situations.

On all three of the "evaluative" measures in the second experiment, partners were perceived in generally positive or favourable terms: the mean judged desirability of descriptions was 1.58 (possible range was -3 to +3), the mean liking score was 8.32, and the mean evaluative impression score was 7.84 (the range on the latter two measures was 1 to 11, with higher values reflecting greater favourability). The generally positive perceptions of partners is not surprising given the basically cooperative nature of the experimental tasks and the tendency for "positively biases" to operate in the evaluations of unfamiliar others (e.g., Bruner & Taguiri, 1954; Sears & Whitney, 1973).

The desirability data in Study 2 also produced two interactions that were not manifested in the first experiment, however. A second-order interaction involving "gender" and "spacing of interaction" qualified the previously-discussed (see p. 124) "gender" main effect on desirability. This interaction was further qualified by a three-way interaction between "equal vs. unequal interdependence", "gender", and "spacing" (see Table 6). Essentially, these findings revealed that "spaced" encounters generally produced more favourable descriptions of partners than did "massed" encounters, except for males in"equal" relationship-contexts, where "spaced" encounters produced (non-significantly) less favourable descriptions than did "massed" encounters. This discrepancy of the "male/equal" condition from the general pattern is difficult to interpret, especially given the uncertainties regarding the "gender" variable (i.e., the confounding of gender of perceiver with gender of target).

Finally, the analyses including only the multiple-session data revealed some additional effects on the desirability and liking measures, in which "spacing of interaction" figured prominently. These additional effects involved two sets of similar interactions on the two measures. First of all, the "spacing" by "equal vs. unequal" interactions on the desirability and liking measures indicated that more evaluatively extreme (positive) appraisals of partners tended to arise in relationship-contexts characterized by "unequal" interdependence and "spaced" encounters, relative to the other relationship-context conditions.

Recall that no explicit hypotheses were made regarding the evaluative consequences of the "spacing" variable. Rather, "spacing" was expected to affect processes of information consolidaton that would result in more differentiation following "massed" encounters and increased integration following "spaced" encounters. Since integration, as defined here, reflects the resolution of contradictory or incongruent information about the referent person, one possible consequence of increasing integration in "spaced" encounters may be evaluative consistency and polarization in one's impression of another. Further, the possible prominence of stereotypic behavioural patterns during interactions in "unequal" relationship-contexts (behavioural patterns which themselves may be heavily defined by an evaluative dimension) might also lead to more evaluatively extreme, or polarized, impressions. Thus, it may not be surprising that perceivers' liking for referent persons and the desirability of person descriptions was more extreme (i.e., positive) under "unequal" and "spaced encounters" relationship-context conditions.

The second set of effects involved "spacing" by "familiarity" interactions on the desirability and liking measures. On both measures, significantly more extreme (positive) appraisals of partners were manifested following three encounters than following two encounters when encounters were "spaced", but this effect of familiarity was not obtained when encounters were "massed". Once again, it is possible that evaluative polarization may be an implicit consequence of the hypothesized tendency toward greater assimilation in person knowledge when encounters are "spaced" rather than "massed". Thus, in accordance with the hypothesized facilitating effects of "objective familiarity" (see Hypothesis 3), it is intuitively reasonable that three "spaced" encounters resulted in more evaluatively extreme (positive) appraisals of another than did two "spaced" encounters' whereas, the evaluative tone of impressions arising from "massed" encounters was not greatly affected by "objective familiarity" (at least during the early stages of an acquaintanceship, as were represented in the methodology of Study 2).

Overall, then, these "spacing" effects on the desirability and liking measures are at least partially consistent with what might be expected assuming that greater assimilation of new person information occurs following "spaced" encounters than following "massed" encounters. Indeed, the current evidence indirectly supports recent theorizing that longer time intervals between encounters "polarizes" impressions in terms of prominent themes or general dimensions (see Tesser, 1978).

Other perceptions of acquaintanceship partners. Only subjects in Study 2 provided ratings of their partners on the content-specific dimensions of "competitive-cooperative", "dominant-submissive", "impulsive-cautious", and "opinionated-unopinionated". The null

findings on the "competitive-cooperative" ratings have already been discussed in relation to the effectiveness of the "equal vs. unequal" manipulation. The "dominant-submissive" dimension was expected to provide some information about interaction styles between acquaintanceship partners, but, unfortunately, analyses of these ratings revealed no differences among the experimental conditions.

The analyses of the remaining two trait measures, "impulsive-cautious", and "opinionated-unopinionated", revealed several multifactor interactions. Although no specific predictions were made regarding content of person knowledge structures, there was a minor, but theoretically relevant, tendency apparent in these findings. Specifically, "spacing of interaction" appeared in every interaction on these measures and as a main effect on the "opinionated-unopinionated" ratings. This main effect indicated that partners were rated as significantly more opinionated in "spaced" relationship-contexts than in "massed" relationship-contexts. The more extreme ratings following "spaced" encounters is suggestive of an interesting tendency for greater polarization in person knowledge when interactions were relatively spaced. Perhaps the longer time intervals between encounters in the "spaced" conditions allowed for greater crystalization of the subjects' impressions, as well as for more self-generated polarization in their impressions (see Tesser, 1978).

The tendency for more "extreme" ratings of partners to occur following "spaced" encounters than following "massed" encounters was not consistently reflected in the interactions involving "spacing" on these two attribution measures, however, although there was a weak tendency for more extreme ratings in one or both of the multiple-sessions

conditions (i.e., two or three encounters) in "spaced" relationship-contexts, but not in "massed" relationship-contexts (see for example, Tables 7a and 7b). Thus, while the "spacing of interaction" main effect on the "opinionated-unopinionated" ratings is suggestive, the results provided little systematic evidence in support of the main hypotheses regarding the "massed vs. spaced" variable. (Indeed, with the exception of the desirability and liking measures, there were no significant effects involving the "spacing of interaction" factor on any of the five, major, structural dependent measures.)

4. Noncorresponding Findings: Study 1

The results of Study 1 have been discussed previously. The findings that occurred in Study 1 but not in Study 2 involved, first, a series of "gender", "spacing of interaction", and "gender" by "spacing" effects on the measures of differentiation, integration, and complexity (see Figure 3, a through c). The patterns of results across these effects were generally consistent with the predictions for the factor of "familiarity". Furthermore, an examination of males' and females' choices of acquaintances to describe in the "massed" conditions indicated that the "spacing" and "familiarity" manipulations were essentially redundant for female subjects. Thus, these effects seem best interpreted as "familiarity" effects. Failure to replicate these results under more controlled conditions (Study 2) further justifies this interpretation.

The only other noncorresponding results in Study 1 involved the evaluative tone of person descriptions. Both the main effect for "referent person status" ("equal vs. unequal interdependence") and the interaction between this variable and the "gender" and "familiarity"

variables have been discussed in previous sections. The failure to replicate these evaluative tone findings in the second experiment suggests that perceiver-subjects in Study 1 selected relatively unattractive persons as exemplars of "subordinates" compared to their selections for exemplars of "equals" and "superordinates". That is, these findings do not seem informative about the impact of "interdependence" per se on the favourability of impressions.

The next and final section will begin by summarizing the extent to which the results of the two experiments supported each of the "tentative hypotheses" presented in the Introduction. Following this summary, the implications of "relationship-context" and "familiarity" for the structure of person knowledge will be discussed. Next, some of the limitations of the present research will be discussed. Finally, consideration will be given to the usefulness of an "acquaintance" paradigm in social perception research.

CONCLUSIONS

Hypotheses and Results

In order to summarize the results of the present research, let us consider the obtained evidence relevant to each of the "tentative hypotheses" that were presented in the Introduction. Hypotheses 1a and 1b concerned the impact of interpersonal interdependence (status) on the evaluative tone and differentiation of person knowledge structures. Hypothesis 1a predicted that "unequal interdependence" would result in more extreme evaluations of acquaintances (i.e., more positively or negatively polarized descriptions) than "equal" interdependence. Furthermore, it was predicted that the descriptions of "superordinate" (independent) and "subordinate" (dependent) referent persons would be "evaluatively different" from the descriptions of "equal" referent persons, and possibly from each other. This hypothesis appeared to be supported, at least in part, in the first study by the finding that "subordinate" referent persons were described more negatively than both "superordinate" and "equal" referent persons. In Study 2, however, this evaluative difference between referent persons in different status positions was not replicated. In fact, no differences as a function of the interdependence manipulation were obtained on any of the evaluative dependent measures. Thus, no consistent support for Hypothesis 1a was obtained in this thesis.

Hypothesis 1b predicted that "equal vs. unequal interdependence" would affect the degree of differentiation of person knowledge structures. Specifically, descriptions of "equal" referent persons were

expected to contain more person concepts than were descriptions of "unequal" referent persons. Study 1 provided no clear evidence for or against this hypothesis. In Study 2, specific comparisons of "independent", "dependent", and "equal" subjects revealed no differences in the number of concepts used to describe partners. There was, however, an "equal vs. unequal" by "objective familiarity" interaction, indicating that interdependence did influence differentiation in impressions. Unfortunately, the pattern of results in this interaction was exactly opposite to expectations: "unequal interdependence", rather than "equal interdependence", was associated with more differentiation in person knowledge as objective familiarity increased. In sum, interdependence did affect differentiation, but the precise nature of Hypothesis 1b was directly contradicted by the results of Study 2.

In Hypotheses 2a and 2b, predictions were made concerning the impact of "spacing of interaction" (i.e., "massed vs. spaced encounters") on person knowledge structures. Hypothesis 2a predicted that differentiation would be higher following "massed" than following "spaced" encounters between acquaintanceship partners. The first study supported this prediction, but the meaningfulness of "spacing" effects in the first experiment was doubtful because of the apparent confounding of "spacing" and "familiarity". In Study 2, differentiation of structure was not affected by the "spacing of interaction". It is concluded, on the basis of these null findings in Study 2, that Hypothesis 2a was not supported in the present research.

Hypothesis 2b predicted the opposite effect of "spacing of interaction" on the integration of person knowledge structures. Specifically, it was predicted that integration of descriptions would be

higher following "spaced" than following "massed" encounters. Study 1 supported this prediction, at least for females, but again the problems with the "spacing" manipulation raise interpretive questions about this finding. Study 2 provided no evidence of the expected effects of "spacing of interaction". Thus, Hypothesis 2b also was not supported by the present research.

Hypothesis 3 predicted that "length of acquaintance" (objective familiarity) would affect all of the dependent measures. As pointed out in previous discussions, Hypothesis 3 was well supported by numerous main effects for "familiarity", as well as interactions involving the familiarity factor, in both studies, primarily on the measures of differentiation and abstraction. Less clearly supported, but still generally validated by the patterns of results, were the predictions regarding "familiarity" effects on integration and complexity of person knowledge structures. The prediction concerning evaluative polarization in the impressions of "more familiar" others was not supported. Thus, Hypothesis 3 received direct support in terms of differentiation and abstraction in impressions; direct, but less clear, support in terms of integration and complexity in impressions; and no support in terms of the evaluative tone of impressions.

Hypotheses 4a and 4b concerned the interaction of "familiarity" with each of the relationship-context variables. In Hypothesis 4a, it was specifically predicted that impressions would be more evaluatively extreme, or polarized, in "unequal" relationship-contexts involving "more familiar" (as opposed to "less familiar") partners, whereas familiarity would have little effect on polarization in "equal" relationship-contexts. "Interdependence" per se did affect subjects'

evaluations in Study 1 (though not in Study 2), but no support was obtained for the expected interaction involving "familiarity" in either experiment.

In Hypothesis 4b, it was predicted that greater "objective familiarity" would result in more differentiation when encounters were "massed" rather than "spaced", whereas "familiarity" would be positively associated with integration following "spaced" rather than "massed" encounters. These predictions were not confirmed in either study. Of course, the failure to support the lower-order predictions for "spacing of interaction" (Hypotheses 2a and 2b) rendered these more complex hypotheses doubtful to begin with.

In general, then, the predictions for "objective familiarity" received good support on all but the evaluative tone properties of person knowledge structures. The predictions concerning differentiation and abstraction in impressions received the clearest and strongest support. The evidence concerning the impact of "relationship-context" variables on person knowledge structures was mixed, generally weak, and often unexpected. Overall, the evidence suggests that "equal vs. unequal interdependence" and spacing of interaction" had some impact on person knowledge in the present study of naturalistic person perception, but not in the expected directions.

Familiarity and Person Knowledge

The present research clearly demonstrates the important role played by one's "familiarity" with the referent person in the cognitive structuring of person knowledge. In line with the basic assumptions about the development of cognitive representations (e.g., Posner & Keele, 1968, 1970) outlined in the Introduction, greater objective familiarity facilitated the elaboration of person knowledge structures, especially the structural properties of "differentiation" and "abstraction". Indeed, the reliable effects of familiarity on person knowledge structure after only one or two repeated exposures to the referent person (see Study 2) attest to the powerful impact that this variable can have on person perception and impression development.

Although these psychological consequences of "familiarity" (i.e., the elaboration of cognitive person structures) are both intuitively and conceptually logical, and have been empirically demonstrated previously, they have never before been obtained in studies that manipulated familiarity as directly in a face-to-face context as did the present research. Thus, the current findings highlight the fact that a complete understanding of person knowledge structures and processes must address this important factor. In fact, it is strongly recommended, on the basis of the two studies reported here, that future research employing an "acquaintance" paradigm should manipulate experimentally, or at least control, the "objective" length of acquaintance (familiarity) of the perceiver with the perceived. This recommendation is further underscored by the numerous interactions of "familiarity" with the other independent variables in the current experiments.

In conclusion, then, "objective familiarity" is a factor with important consequences for the phenomenon of person perception, especially in naturalistic conditions. It is worth examining both in its own right and in relation to other "molar and interpersonal" variables. One important direction for future research is toward extending the lengths of acquaintance between subjects, which would provide interesting insights into the rates and trends (e.g., linear versus nonlinear) of elaboration in the structure and content of person knowledge.

1. Interpersonal aspect: "equal vs. unequal interdependence"

Very few of the expected person knowledge consequences of "equal vs. unequal interdependence" (status) were confirmed in the present research. Specifically, the "interdependence" manipulation in Experiment 2 affected differentiation in impressions (albeit in ways opposite to predictions, and only in the context of a "familiarity by interdependence" interaction), but did not replicate the evaluative findings of Study 1. Nevertheless, the obtained interactions between "equal vs. unequal interdependence" and other variables suggest that it may be premature to dismiss this interpersonal aspect of relationship-context. Furthermore, the fact that "unequal" subjects felt more confident than "equal" subjects in ascribing traits to their partners in Study 2 may indicate that "equal vs. unequal interdependence" has important theoretical and practical implications for other social judgements and social behaviour (i.e., other than the structure of person knowledge).

The findings for this factor do argue, though, for some conceptual re-evaluation concerning the relations between "status" and person knowledge structures. It was suggested earlier, for example, that utilization of stored, "implicit personality theories" in "unequal" relationship-contexts (relative to "equal" relationship-contexts, which presumably foster less stereotypic interpersonal behaviours) might increase the differentiation and complexity of person structures early in a relationship.

Additional research is necessary in order to evaluate this

proposal. One possible approach to this end might involve an initial assessment of the content of perceivers' implicit personality theories about social roles that differ in status and power (i.e., corresponding to the current positions of "superordinate", "subordinate", and "equal" roles). Then, in an ostensibly unrelated experiment, randomly paired subjects could interact with each other under experimentally defined acquaintanceship conditions where "status" and "familiarity" would be manipulated. If there was more correspondence between the content of subjects' implicit theories and the content of their impressions of acquaintanceship partners in "unequal" interdependence conditions than in "equal" interdependence conditions, then some support for the above proposal would be provided.

Thus, the interpersonal aspect of relationship-context may well be important in naturalistic person perception. From the current research, it appears, at the very least, to have some influence on the amount of different information that a perceiver obtains about an acquaintance. On the other hand, the evaluative implications of status relations are unclear at the present, and additional conceptual analysis and empirical investigation would seem warranted.

2. Nonpersonal aspect: "spacing of interaction" (massed vs. spaced encounters)

None of the hypothesized effects of "spacing of interaction" on differentiation and integration of person knowledge structures were manifested in the present research. There was, however, some evidence from Study 2 suggesting greater polarization in evaluative appraisals of partners following "spaced" encounters than following "massed" encounters. Specifically, increased familiarity produced more

evaluatively extreme (positive) descriptions in "spaced" encounters but not in "massed" encounters. There also was some tendency for partners to be rated more extremely on the trait dimension of "opinionated-unopinionated" following "spaced" encounters than following "massed" encounters.

These two indications of increased polarization in impressions following "spaced" encounters are generally consistent with the expectation that new person information is more likely to be assimilated in "spaced" encounters than in "massed" encounters. Greater assimilation of information to existing cognitive structures should presumably enhance the impact and/or extremity of pre-existing themes and dimensions, including evaluative assessments. Thus, these findings can be interpreted as supporting the initial hypothesis that "spacing of interaction" may have a basic, regulatory influence on information input during interpersonal interactions, and that the eventual impact of "spacing" is in terms of the consolidation of cognitive person structures (i.e., the relative degrees of assimilation and accommodation of new information about a person).

Apart from these polarization findings, however, none of the specific predictions concerning "spacing" were supported in either study. One reason for the null effects of "spacing of interaction" on differentiation and integration of person knowledge may have stemmed from operational shortcomings in the present experiments. From the outset, it was difficult to identify, in clear and concrete terms, the particular frequencies of interaction that distinguish "massed" encounters from "spaced" encounters. Perhaps, in the present research, intervals of "a couple of days" (massed) versus "one week" (spaced) were

inadequate to produce observable differences in person differentiation and integration. This problem may be particularly acute in naturalistic conditions of face-to-face interaction, where the salience of interpersonal behaviours is high (thereby potentially "swamping" weak manipulations of relationship-context factors).

It is also possible that some minimum number of interpersonal contacts is required before "spacing" effects become apparent. That is, numerous encounters between persons may be necessary before differences in the spacing of interaction will have any appreciable consequences for the structure of person knowledge. In the present research (i.e., Study 2), acquaintanceships based upon, at most, three encounters between persons may have involved too few encounters for differences in the "spacing of interaction" to produce differences in structural properties such as differentiation and integration.

In any event, these methodological features of the present experiments may have reduced the direct impact of "spacing" on the structure of person knowledge. Further research is needed to determine if this was the case. First, it will be necessary to establish more precisely the parameters of interpersonal contacts that clearly distinguish "massed" encounters from "spaced" encounters at the psychological level. In addition, future studies involving acquaintanceships of longer duration and more encounters are necessary. Such extended acquaintanceships could provide insights into the person knowledge consequences of "spacing of interaction", as well as "objective familiarity".

To conclude, the findings with respect to "relationship-context" variables in this thesis indicate that "interpersonal" aspects (the

status and dependency relations between acquaintanceship partners) have consequences for the amount of information represented in one's cognitive structure of another, but not necessarily for the evaluative tone of impressions. "Nonpersonal" aspects of relationship-context (the "spacing of interaction" between acquaintanceship partners) appeared to influence the consolidation of person knowledge, such that prominent themes or dimensions (e.g., evaluative assessments) were enhanced. Certain methodological limitations may have reduced the impact of "spacing" on other structural features, however. Thus, future research will be necessary to examine more precisely the effects of "spacing of interaction" on naturalistic person perception.

Limitations of the Present Research

The current research, to a large extent, was preliminary and exploratory in nature. For example, "acquaintance" approaches have rarely been employed to study person perception. Thus, many procedural and operational aspects of the current studies impose limitations on the findings of the research.

First, in both studies, the sample sizes within treatment conditions were relatively small. Cell sizes ranged from the three to seven in the first study, and equalled six (i.e., three dyads) in the second study. It is possible that some of the null effects, particularly with respect to the "spacing of interaction" variable, may have been due to low statistical power. There were, however, few "trends" apparent in the analyses of variance which suggested that increased sample sizes would have improved the findings. In addition, a priori predictions did not involve effects beyond second-order interactions. Consequently, when collapsed across levels of factors not involved in the predicted interactions, cell sizes were typically greater than 10 in Study 1 and 24 in Study 2. Thus, respectable cell sizes existed for tests of the hypothesized main effects and interactions.

Other limitations of the present research arise from threats to external validity. For instance, despite the attempt to examine phenomenologically and practically important relationship variables, the present manipulation of "equal vs. unequal" interdependence in Study 2 was somewhat artificial. Recall that this manipulation was based upon varying only one of several possible dimensions of outcome

interdependence (Kelley, 1979; Wish et al., 1976). Although the manipulation checks indicated that partners understood the mutuality vs. unilaterality of their dependence in terms of task performance outcomes (which indicates some degree of internal validity), it is not clear whether their phenomenology of role "equality" vs. "inequality" reflected, in any meaningful way, naturalistic differences in status or power relations. Indeed, while the dimensions of interdependence can be conceptually orthogonalized, real world examplars of relationships are perceived in terms of their multi-dimensionality (Wish et al., 1976). That is, real-life relationships are not typically defined by variation along only one dimension of interdependence (see Figure 1). Thus, the unidimensionality and artificially of the manipulation of "equal vs. unequal" role relations in Study 2 limits, to some extent, generalizability to naturalistic relationship-contexts, where the phenomenological basis of "equality vs. inequality" is undoubtedly multi-faceted. Future research could alleviate these limitations by developing operational techniques to increase the ecological validity of relationship-context manipulations,

Generalizability is also limited by the fact that relationship partners were exposed to each other within only one type of situation (i.e., a simulated work session). Future research could expand this focus by creating laboratory simulations of other kinds of social situations (e.g., educational or recreational situations) and by allowing periods during the interaction for subjects to exchange information more freely. Such elaborations would certainly enhance the "naturalistic" flavour of laboratory acquaintanceships, although control would necessarily be reduced (with a consequent threat to internal

validity).

The methodology of obtaining impressions in Study 2 also imposes some limits on the research. Recall that subjects described their partners orally into a tape recorder. Talking into a tape recorder with little prior warning may have intimidated subjects somewhat. Although subjects indicated, on a post-experimental questionnaire, that the experience was not particularly distressing, pilot testing revealed a preference among some subjects to describe their partners directly to the experimenter rather than into a tape recorder. Thus, it is possible that some subjects provided less comprehensive or less accurate impressions of their partners than they were capable of doing. Any such threats to the veridicality of impressions, however, was most likely represented as random error variance in the data since all subjects used the tape-recorder and subjects were randomly assigned to the relationship-context treatment conditions.

Finally, some problems with the dependent measures deserve mention, particularly with respect to the measure of integration. Ideally, integration reflects how well the perceiver deals with contradictory or inconsistent information s/he has obtained from interactions with the referent person (see Appendix E). Operationally, high integration represented the judge's rating of how "good" a story about the referent person the perceiver presented. Thus, it is possible that, despite explicit instructions to the contrary, judged integration reflected, to some extent, the writing and/or compositional skills of the perceivers. More technically, "integration" ratings may have reflected organizational properties in person descriptions that were a consequence of output processes or articulation skills rather than the underlying

knowledge structures representing the referent persons. Random assignment presumably equated writing/composition skills across experimental conditions, but this does not eliminate questions about the meaning of the integration scores. Thus, the construct validity of the measure of integration is open to some debate, although the measure provided, at least, a starting point for the current "naturalistic" investigations of person perception.

The "Acquaintance" Paradigm: Concluding Remarks

Two experiments examining person perception and impression development have been reported in this thesis. The studies involved different methodologies, but both emphasized the influences of "molar and interpersonal" factors under naturalistic conditions. That is, an "acquaintance" paradigm, involving the acquisition of knowledge about another person from repeated, face-to-face interaction, was employed to study the impact of "relationship-context" and "objective familiarity" on the structural nature of cognitive person representations. The focus on face-to-face interaction as the primary mode of acquiring social knowledge highlights Russell's distinction (described in the Introduction) between "knowledge-by-acquaintance" and "knowledge-by-description". Both are important general forms of personal knowledge about others, which could conceivably differ qualitatively. Typically, "knowledge-by-description" has been the focus of most person perception research despite the everyday, "real world" prevalence of "knowledge-by-acquaintance". The present research begins to redress this overemphasis by focussing on "knowledge-by-acquaintance". Together, these experiments comprise the most controlled investigation that is currently available of the relations between naturalistic conditions of increasing acquaintance between two persons and the structure of each person's cognitive representation (i.e., personal impression) of the other.

In addition, the conceptual and methodological framework presented in this thesis integrates the social relationships and social cognition areas within social psychology and thereby has potential theoretical and

heuristic value for the study of social knowledge. The "acquaintance" paradigm used in the present research also could be useful in studying processes of discovery during the "exploration" stage of relationship development (Scanzoni, 1979). Perhaps an understanding of the nature of person perception in beginning acquaintanceships would provide insights into processes of friendship formation, intimacy, and relationship evolution. It is hoped that the present endeavour will contribute to our understanding of naturalistic person perception by identifying important "molar and interpersonal" variables and by suggesting paths that may take us beyond "the social psychology of the stranger".

Footnotes

1. The term "person concepts" is used in this thesis in a rather different manner than its meaning in Fiske and Cox (1979). In Fiske and Cox (1979), the term person concepts is used to refer to the perceiver's overall concept or cognitive representation of the referent person, with various categories of information or attributes making up this overall concept. The individual attributes themselves, however, are not called concepts. In the present thesis, the term "concepts" is used interchangeably with the term "attributes". Thus, whenever the term "person concepts" or the phrase "number of person concepts" appears in this thesis, it is meant to refer to the various "attributes" used in person descriptions.

2. Preliminary analyses of covariance, using RCQ cognitive complexity scores as the covariate, revealed only minimal facilitation of effects when the covariate was statistically controlled, with no appreciable changes in means when adjusted for the covariate. Further, an ANOVA on the RCQ scores revealed no differences between conditions. Thus, the covariate was dropped from subsequent analyses.

3. To increase chances of obtaining pairs of strangers, duplicate sign-up sheets were maximally separated (placed upon different bulletin boards) in the subject pool.

4. Dr. Robert Gardner is thanked for his advice on this aspect of the experimental design.

5. As in the first experiment, the analyses of covariance, using the RCQ cognitive compelxity scores as the covariate, produced only minimal facilitation of effects, and there were no appreciable changes in means when adjusted for the covariate. In addition, an ANOVA of the RCQ scores revealed no differences between conditions, so the covariate was dropped from subsequent analyses.

References

Allen, G. H. (1979) A sociology of friendship and kinship. London: George Allen and Unwin.

Allan, R. B. and Ebbeson, E. B. (1981) Cognitive processes in person perception: Retrieval of personality trait and behavioral information. Journal of Experimental and Social Psychology, 17, 119-141.

Anderson, N. H. (1968) Likableness ratings of 555-personality-trait words. Journal of Personality and Social Psychology, 9, 272-279.

Anglin, J. M. (1977) Word, object and conceptual development. New York: Norton.

Asch, S. E. (1946) Forming impressions in personality. Journal of Abnormal and Social Psychology, 41, 258-290.

Baron, R. M. (1980) Contrasting approaches to social knowing: An ecological perspective. Personality and Social Psychology Bulletin, 6, 591-600.

Barrett-Lennard, G. T. (1962) Dimensions of therapist response as causal factors in therapeutic change. Psychological Monographs, 76, (43, whole no. 562).

Bartlett, F. C. (1932) Remembering: A study in experimental and social psychology. Cambridge: Cambridge University Press.

BMDP Biomedical Computer Programs, P-series.. (1979) Los Angeles: University of California Press.

Boduch, R., Brown, J., Cangield, A. A., Eady, P. and Lafferty, J. C. (1975) The project planning situation (3rd edition), Plymouth: Mich.: Human synergistics.

Brainerd, C. J. (1978) Piaget's Theory of Intelligence. Englewood Cliffs, N.J.: Prentice-Hall.

Broverman, I. K., Broverman, D., Clarkson, F., Rosenkrantz, P. and Vogel, S. (1970) Sex-role stereotypes and clinical judgments of mental health. Journal of Consulting and Clinical Psychology, 34, 1-7.

Bruner, J. S. and Taguiri, R. (1954) Person perception. In G. Lindzey (Ed.), Handbook of Social Psychology, Vol. 2. Reading, Mass.: Addison-Wesley.

Crockett, W. H. (1965) Cognitive complexity and impression formation. In B. A. Maher (Ed.), Progress in Experimental Personality Research, Vol. 2. New York: Academic Press.

Deaux, K. (1976) Sex: A perspective on the attribution process. In Harvey, Ickes and Kidd, (Eds.), New Directions in Attribution Research. Hillsdale, N.J.: Erlbaum.

Deutsch, M. and Krauss, R. M. (1960) The effect of threat on interpersonal bargaining. Journal of Abnormal and Social Psychology, 61I, 181-189.

Dornbusch, S. M., Hastorf, A. H., Richardson, S. A., Muzzy, R. E., & Vreeland, R. A. (1965) The perceiver and the perceived: Their relative influence on categories of interpersonal perception. Journal of Personality and Social Psychology, 1, 434-440.

Duck, S. W. (1973) Personal Relationships and Personal Constructs. New York: Wiley.

Duck, S. W. (1977) The study of acquaintance. Westmead, England: Saxon House.

Duck, S. W. and Spencer, C. P. (1972) Personal constructs and friendship formation. Journal of Personality and Social Psychology, 23, 40-45.

Eady, P. M. and Lafferty, J. D. (1975) The subarctic survival situation. Plymouth, Mich.: Human synergistics.

Fazio, R. H. and Zanna, M. P. (1981) Direct experience and attitude-behaviour consistency. In L. Berkowitz (Ed.), Advances in experimental social psychology (Vol. 14). New York: Academic Press.

Fiske, S. T. and Cox, M. G. (1979) Person concepts: The effect of target familiarity and descriptive purpose on the process of describing others. Journal of Personality, 47, 136-161.

Frederiksen, N., Jensen, O. and Beaton, A. E. (1972) Prediction of Organizational Behavior. New York: Pergamon Press.

Hamilton, D. L. (1981) Cognitive representations of persons. In E. T. Higgins, C. P. Herman and M. D. Zanna (Eds.), Social Cognition: The Ontario Symposium (Vol. 1). Hillsdale, N.J.: Erlbaum.

Hamilton, D. L., Katz, L. B. and Leirer, V. O. (1980) Organizational processes in impression formation. In R. Hastie et al. (Eds.), Person memory: The cognitive basis of social perception. Hillsdale, N.J.: Erlbaum.

Hastie, R. (1981) Schematic principles in human memory. In E. T. Higgins, C. P. Herman and M. P. Zanna (Eds.), Social cognition: The Ontario Symposium (Vol. 1). Hillsdale, N.J.: Erlbaum.

Hastie, R. and Kumar, P. A. (1979) Person Memory: Personality traits as organizing principles in memory for behaviors. Journal of Personality and Social Psychology, 37, 25-38.

Hastie, R., Ostrom, T. M., Ebbesen, E. B., Wyer, R. S., Hamilton, D. L. and Carlson, D. (Eds.). (1980) Person memory: The cognitive basis of social perception. Hillsdale, N.J.: Erlbaum.

Hastorf, A. H., Richardson, S. A. and Dornbusch, S. M. (1958) The problem of relevance in the study of person perception. In R. Taguiri and L. Petrullo (Eds.), Person perception and interpersonal behavior. Stanford, Calif.: Stanford University Press.

Heider, F. (1958) The psychology of interpersonal relations. New York: Wiley.

Higgins, E. T., Herman, C. P. and Zanna, M. P. (Eds.) (1981) Social Cognition: The Ontario Symposium (Vol. 1). Hillsdale, N.J.: Erlbaum.

Higgins, E. T. and King, G. (1981) Accessibility of social constructs: Information processing consequences of individual and contextual variability. In N. Cantor and J. F. Kihlstrom (Eds.), Personality, Cognition, and Social Interaction. Hillsdale, N.J.: Erlbaum.

Higgins, E. T., Kuiper, N. A. and Olson, J. M. (1981) Social cognition: A need to get personal. In E. T. Higgins, C. P. Herman and M. P. Zanna (Eds.), Social cognition: The Ontario Symposium (Vol. 1). Hillsdale, N. J.: Erlbaum.

Higgins, E. T. and Rholes, W. S. (1978) "Saying is Believing": Effects of message modification on memory and liking for the person described. Journal of Experimental Social Psychology, 14, 363-378.

Higgins, E. T., Rholes, W. S. and Jones, C. R. (1977) Category accessibility and impression formation. Journal of Experimental Social Psychology, 13, 141-154.

Himmelfarb, S. (1975) What do you do when the control group doesn't fit the factorial design? Psychological Bulletin, 82, 363-368.

Hollander, E. P. and Julian, J. W. (1976) Contemporary trends in the analysis of leadership processes. In E. P. Hollander and R. G. Hunt (Eds.), Current Perspectives in Social Psychology (4th Edition). New York: Oxford University Press.

Huston, T. L. and Burgess, R. L. (Eds). (1979) Social Exchange in Developing Relationships. New York: Academic Press.

Jones, E. E. (1973) Flattery will get you somewhere: Styles and uses of ingratiation. In E. Aronson (Ed.), Readings about the social animal. San Francisco: Freeman & Company.

Jones, E. E. and Davis, K. E. (1965) From acts to dispositions: A theory of correspondent inferences. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology, Vol. 2. New York: Academic Press.

Kelley, H. H. (1950) The warm-cold variable in first impressions of persons. Journal of Personality, 18, 431-439.

Kelley, H. H. (1967) Attribution theory in social psychology. In D. Levine (Ed.), Nebraska Symposium on Motivation 1967. Lincoln: University of Nebraska Press.

Kelley, H. H. (1971) Attribution in social interaction. In E. E. Jones et al. (Eds.), Attribution: Perceiving the causes of behavior. Morristown, N.J.: General Learning Press.

Kelley, H. H. (1979) Personal Relationships: Their structures and processes. Hillsdale, N.J.: Erlbaum.

Kelley, H. H. and Stahelski, A. J. (1970) The social interaction basis of cooperators and competitors' beliefs about others. Journal of Personality and Social Psychology, 16, 66-91.

Kelley, H. H. and Thibaut, J. W. (1978) Interpersonal relations: A theory of interdependence. New York: Wiley-Interscience.

Kirk, R. W. (1968) Experimental design: Procedures for the behavioral sciences. Belmont, Calif.: Brooks/Cole.

Knight, J. A. and Vallacher, R. R. (1981) Interpersonal engagement in social perception: The consequences of getting into the action. Journal of Personality and Social Psychology, 40, 990-999.

Kogan, N. and Wallach, M. A. (1964) Risktaking: A study in cognition and personality. New York: Holt, Rinehart & Winston.

Kuiper, N. A. and Derry, P. (1981) The self as a cognitive prototype: An application to person perception and depression. In N. Cantor and J. F. Kihlstrom (Eds.), Personality, cognition, and social interaction. Hillsdale, N.J.: Erlbaum.

Kuiper, N. A. and Rogers, T. B. (1979) Encoding of personal information: Self-other differences. Journal of Personality and Social Psychology, 37, 499-514.

Linville, P. W. and Jones, E. E. (1980) Polarized appraisals of out-group members. Journal of Personality and Social Psychology, 38, 689-703.

Markwell, G. and Hage, J. (1970) The organization of role relationships: A systematic description. American Sociological Review, 35, 884-900.

Martin, P. J. and Sterne, A. L. (1976) Post-hospital adjustment as related to therapists' in-therapy behavior. Psychotherapy: Theory, Research and Practice, 13, 267-273.

McClanahan, L. D. (1974) Comparison of counseling techniques and attitudes with client evaluations of the counseling relationship. Dissertation Abstracts International, 34, 9-A, 5637.

McClintock, C. G. (1972) Game behavior and social motivation in interpersonal settings. In C. G. McClintock (Ed.), Experimental social psychology. New York: Holt, Rinehart & Winston.

McKee, J. D. and Sherriffs, A. C. (1957) The differential evaluation of males and females. Journal of Personality, 25, 256-271.

Miller, D. T. and Holmes, J. G. (1975) The role of situational restrictiveness on self-fulfilling phrophecies: A theoretical and empirical extension of Kelley and Stahelski's triangle hypothesis. Journal of Personality and Social Psychology, 31, 661-673.

Moreland, R. L. and Zajonc, R. B. (1982) Exposure effects in person perception: Familiarity, similarity, and attraction. Journal of Experimental Social Psychology, 18, 395-415.

Myers, J. L. (1979) Fundamentals of Experimental Design. Boston: Allyn and Bacon.

Newcomb, T. M. (1961) The acquaintance process. New York: Holt, Rinehart & Winston.

Newtson, D. A. (1973) Attribution and the unit of perception of ongoing behavior. Journal of Personality and Social Psychology, 28, 28-38.

Orlinsky, D. E. and Howard, K. I. (1978) The relation of process to outcome in psychotherapy. In S. L. Garfield and A. E. Bergin (Eds.), Handbook of psychotherapy and behavior change, 2nd Ed. New York: Wiley.

Ostrom, T. M., Lingle, J. H., Pryor, J. B. and Geva, N. (1980) Cognitive organization of person impressions. In R. Hastie et al. (Eds.), Person memory: The cognitive basis of social perception. Hillsdale, N.J.: Erlbaum.

Paivio, A., Yuille, J. C. and Madigan, S. A. (1968) Concreteness, imagery, and meaningfulness values for 925 nouns. Journal of Experimental Psychology, Monograph Supplement, 76, No. 1, Part 2, 1-9.

Perloff, R. M. and Brock, T. C. (1980) And thinking makes it so: Cognitive responses to persuasion. In M. E. Roloff and G. R. Miller (Eds.), Persuasion: New directions in theory and research. Beverly Hills, Calif.: Sage.

Piaget, J. (1952) The origins of intelligence in children. New York: International Universities Press.

Posner, M. I. (1978) Chronometric explorations of the mind. Hillsdale, N.J.: Erlbaum.

Posner, M. I. and Keele, S. W. (1968) On the geneses of abstract ideas. Journal of Experimental Psychology, 77, 353-363.

Posner, M. I. and Keele, S. W. (1970) Retention of abstract ideas. Journal of Experimental Psychology, 83, 304-308.

Prager, R. A. (1971) The relationship of certain client characteristics to therapist-offered conditions and therapeutic outcome. Dissertation Abstracts International, 31, 5634B-5635B.

Pryor, J. B. and Ostrom, T. M. (1981) The cognitive organization of social information: A converging-operations approach. Journal of Personality and Social Psychology, 41, 628-641.

Pryor, J. B., Ostrom, T. M., Dukerich, J. M., Mitchell, M. L. and Herstein, J. A. (1983) Preintegrative categorization of social information: The role of persons as organizing categories. Journal of Personality and Social Psychology, 44, 923-932.

Radke-Yarrow, M. and Campbell, J. D. (1963) Person perception in children. Merrill-Palmer Quarterly, 9, 57-72.

Rogers, C. R. (1957) The necessary and sufficient conditions of therapeutic personality change. Journal of Consulting Psychology, 21, 95-103.

Rosch, E. (1978) Principles of categorization. In E. Rosch and B. B. Lloyd (Eds.), Cognition and categorization. Hillsdale, N.J.: Erlbaum.

Rosenkrantz, P. S. and Crockett, W. H. (1965) Some factors influencing the assimilation of disparate information in impression formation. Journal of Personality and Social Psychology, 2, 397-402.

Rosenthal, R. (1969) Interpersonal expectations: Effects of the experimenter's hypothesis. In R. Rosenthal and R. Rosnow (Eds.), Artifact in behavioral research. New York: Academic Press.

Russell, B. R. (1948) Human knowledge, its scope and limit. New York: Simon & Schuster.

Scanzoni, J. (1979) Social exchange and behavioral interdependence. In T. L. Huston and R. L. Burgess (Eds.), Social exhcange in developing relationships. New York: Academic Press.

Schneider D. J. (1973) Implicit personality theory: A review. Psychological Bulletin, 79; 294-309.

Schneider, D. J., Hastorf, A. H. and Ellsworth, P. C. (1979) Person perception, 2nd edition. Reading, Mass.: Addison-Wesley.

Sears, D. O. and Whitney, R. E. (1973) Political persuasion. Morristown, N.J.: General Learning Press.

Shapiro, Z. and Dunbar, R. L. M. (1980) Testing Mintzberg's managerial roles classification using an in-basket simulation. Journal of Applied Psychology, 65, 87-95.

Shrauger, J. S. and Patterson, M. B. (1974) Self-evaluation and selection of dimensions for evaluating others. Journal of Personality, 42, 569-585.

Skrypnek, B. J. and Snyder, M. (1982) On the self-perpetuating nature of stereotypes about women and men. Journal of Experimental Social Psychology, 18, 277-291.

Sloane, R. B., Staples, F. R., Cristol, A. H., Yorkston, N. J. and Whipple, K. (1975) Psychotherapy versus behavior therapy. Cambridge: Harvard University Press.

Snyder, M. and Swann, W. B. (1978) Hypothesis testing processes in social interaction. Journal of Personality and Social Psychology, 36, 1202-1212.

Snyder, M., Tanke, E. D. and Berscheid, E. (1977) Social perception and interpersonal behavior: On the self-fulfilling nature of social stereotypes. Journal of Personality and Social Psychology, 35, 656-666.

Sorrentino, R. M. and Boutillier, R. G. (1975) The effect of quantity and quality of verbal interaction on ratings of leadership ability. Journal of Experimental Social Psychology, 11, 403-411.

Storms, M. D. (1973) Videotape and the attribution process: Reversing actors' and observers' points of view. Journal of Personality and Social Psychology, 27, 165-175.

Struefert, S. and Struefert, S. C. (1978) Behavior in the complex environment. New York: Winston & Sons.

Tesser, A. (1978) Self-generated attitude change. In L. Berkowitz (Ed.), Advances in experimental social psychology, Vol. 11. New York: Academic Press.

Thibaut, J. W. and Kelley, H. H. (1959) The social psychology of groups. New York: Wiley.

Triandis, H. C. (1972) The analysis of subjective culture. New York: Wiley-Interscience.

Triandis. H. D., Vassiliou, V. and Nassrakou, M. (1968) Three cross-cultural studies of subjective culture. Journal of Personality and Social Psychology Monograph Supplement, 8, No. 4, Part 2, 1-42.

Vinokur, A., Trope, Y. and Burnstein, E. (1974) A decision-making analysis of persuasive arguments on group-induced shifts: A group problem-solving approach. Journal of Personality and Social Psychology, 29, 305-315.

Weary, C., Swanson, H., Harvey, J. H. and Yarkin, K. L. (1980) A molar approach to social knowing. Personality and Social Psychology Bulletin, [redacted], 574-581.

Wish, M., Deutsch, M. and Kaplan, S. J. (1976) Perceived dimensions of interpersonal relations. Journal of Personality and Social Psychology, 33, 409-420.

Word, C. O., Zanna, M. P. and Cooper, J. (1974) The nonverbal mediation of self-fulfilling prophecies on interracial interaction. Journal of Experimental Social Psychology, 10, 109-120.

Wyer, R. S. (1980) The acquisition and use of social knowledge: Basic postulates and representative research. Personality and Social Psychology Bulletin, 6, 558-573.

Wyer, R. S. and Srull, T. K. (1981) Category accessibility: Some theoretical and empirical issues concerning the processing of social stimulus information. In E. T. Higgins, C. D. Herman and M. P. Zanna (Eds.), Social Cognition: The Ontario Symposium, Vol. 1. Hillsdale, N.J.: Erlbaum.

Zajonc, R. B. (1960) The process of cognitive tuning and communication. Journal of Abnormal and Social Psychology, 61, 159-167.

Zajonc, R. B. (1968) Attitudinal effects of mere exposure. Journal of Personality and Social Psychology, Monograph Suppplement, 9, Part 2, 1-29.

Appendix A

Example instruction sheet describing attributes of "practice person" target in the "massed interaction, superordinate other" condition.

Practice item 2

Personal Acquaintances

INSTRUCTIONS

Think of a person who you know fits the following four characteristics as closely as possible. This person can be any age.

a) this person is the same sex as yourself

b) you have just recently met this person (within the last 2-3 months)

c) you interact with this person reasonably often (at least twice a week)

d) you interact with this person as a subordinate (that is, you are lower status or less powerful)

Think about this person carefully for a minute or so. Then, on the following page, describe this person as fully as possible so that one of your close friends, who has never met this person, will know him/her in the same way that you do now, and will know what s/he is like to be around.

Before you begin writing, please identify this person's relationship to yourself (for example, roommate, lab partner, paper boy/girl, professor, relative, parent, store merchant, teammate, neighbour, garage mechanic, dentist, doctor, teaching assistant, bartender, friend of a friend, etc.), and include his/her approximate age. The spaces for this information are provided at the top of the next page.

We suggest that you take no longer than 10 minutes.

Appendix B

Coding Guide for Person Descriptions

(Adapted from Fiske & Cox, 1979)

General Instructions

Score each adjective or phrase that falls into one of the following categories. A unit may be doubled scored. For example, "He is my postman" would receive one score under "role" and a second score under "occupation".

APPEARANCE: HOW THEY APPEAR. For this section score each adjective as one mention.

Body:

1) Physique: any mention of body type or build except as below
2) Weight: mention of a specific weight or adjective like "heavy"
3) Height: mention of specific height of adjective like "tall"
4) Posture: chronic or habitual body carriage, e.g., "slumped", "erect"
5) Specific parts: mention of abnormalities or elaborations on particular parts of body ... e.g., "beautiful hands"

Face:

1) Features: fixed physiognomic attributes, e.g., "warts", "scar", "lips"
2) Eyes: colour, size but not movement or contact, stares
3) Skin: colour, texture, complexion, etc.
4) Hair: colour, curliness, style, texture, etc.

Voice: fixed attributes such as "pitch", "loudness", etc.

Age: specific or estimated age or adjectives like "old", "young"

Race: specific racial category mentioned

Sex: specific gender mention ... "man", "girl", etc. but not pronouns

Overall attractiveness: evaluation of impact of appearance "Good-looking"

Grooming:

1) Clothing: style, colour, specific items (cane, shopping bag); jewelry
2) Make-up: any mention of cosmetics
3) Glasses: presence of, description or elaborations thereof
4) Hygiene: cleanliness, odours, etc.
5) Neatness: any mention of orderliness of appearance

CONTEXT: WHERE ONE FINDS THEM. This includes observable and non-observable settings.

Situations: interpersonal settings, e.g., cocktail parties, phone conversations, interview ... note: likes to go to parties = "attitude", but "partygoer" = "trait"

Location: physical place, e.g., office building, suburbs, New York

ORIGINS: HOW THEY GOT THIS WAY. Other than mentions of nationality/ethnicity and class, only items referring to characteristics from past to be scored in this section.

Nationality/ethnicity: country or group origins or affiliations
Class-socioeconomic: economic or social standing
Family: childhood experiences, birth order, family constellation
Educational/occupational background: training and work experience, past jobs, resume items
Drastic/unusual events: traumas, accidents, honours, life events of major impact, e.g., death of a loved one.

BEHAVIOR: WHAT THEY DO. For this section, score adjectives, such as he moves "gracefully", and phrases, such as "He moves as if he were dancing." These attributes are directly observable.

Chronic Nonverbal:
1) Speech: accent, language use, vocabulary, dialect, style, paralinguistic cues (intonation) note: "talks like ... 'x'" to be scored as "speech" not "script".
2) Facial behavior: mention of transient expressions, e.g., smiles, winks, laughs, etc.
3) Eye contact: visual attention, eye movement, glances, stares, etc.
4) Gestures: hand movements while talking, head nods, etc.
5) Movement: gait, general style of movement, fluidity, amount of movement, activity level (relaxed, active, calm)

Activities:
1) Incidents: any mention of behaviors or actions that does not describe a script, e.g., "last night he smashed a table with a bat", "He stole my girlfriend"
2) Habits: smoking, nail biting, finger drumming, etc.
3) Hobbies: avocations, sports played (only score specific sports mentioned) note: see "belief/attitude" subcategory also
4) Occupations: usual job, also score person identification at top of page as "occupation" or "role/social position" if other than a name is given

Scripts: chronic behavior patterns of behavior sequences used to illustrate a dispositional attribute, e.g., "He never says hello when you see him on the street", ... also "never ... ", "always ... ", "tends to ... ", "seems to ... ", "appears to ... "

RELATIONSHIPS: WHAT ONE DOES WITH THEM. This section involves non-observable attributes.

Role: social position, e.g., "my mother", "my friend", "his student", "her lawyer"
History: past interpersonal experiences with perceiver (e.g., "she lent me a dime") as well as any mention of duration of interpersonal association
Social network: person's relationships to and with other people in general, e.g., "he has a lot of friends", "he never goes out", "she is married"

Others' reactions: any comments describing how others feel or think about the person.

Perceiver's reaction: "He makes me nervous", "I like her", or other comments which state how the person being described makes the describer feel or react ... includes "fun-to-be-with" (but score "funloving" as a "trait"), also other mentions of how perceiver gets along with the person being described and also statements describing "how close each is to the other"

PERSONAL PROPERTIES: WHAT MAKES THEM UP. This includes inferred, internal characteristics.

Intelligence: any mention of person's intelligence including "smart", "bright", "dumb", "slow", etc. Note: score "witty", "naive", "ability", "expertise" as a "trait"

Interests: orientations and nonevaluative involvement, e.g., "He is into personal growth", "She is interested in children" ... often statements beginning with "love to ... " or "likes to ... " will be scoreable as an "interest", but at other times they will be more appropriate as "belief/attitudes"

Causality inferences: intentionality, environmental constraints, luck, personal effort or any perceiver's judgements or explanations of influences over the person's life events ... e.g., "works hard to ... ", "tries to ... ", etc.

Beliefs/attitudes: opinions, political stance, religious persuasion, evaluations of objects or ideas ... e.g., "likes 'x'" = "attitudes" Note: 'x' must be a specific object, idea, and only specific religious denominations (including Christian as a generic label)

Inferences about self-impression: any comment by the perceiver describing how s/he thinks the person "thinks or feels" about his/herself ... e.g., "he thinks he's God's gift to women"

Inferences about self-impression with perceiver disclaimer: any self-impression describing comment that is followed by a refutation by the perceiver ... e.g., "he thinks he's funny, but never is"

Traits: adjectives or descriptive phrases of dispositional attributes, such as "generous", "he's friendly", "thinks only of self", etc. Also score "abilities", "expertise", "needs" (e.g., "needs to be liked") as "traits" ... also "desires" and "ambitions" may be scored as "traits" or as "interests" (most often as "traits")

CODING SHEET -- PERSON DESCRIPTIONS

Subject No.: _____ Date: _____

Score: # of units: _____ # of concepts: _____

Other Comments: _____

Concept Category	Instances Given	Comments	Total
I. APPEARANCE			
Body -- physique			
weight			
height			
posture			
specific part			
Face -- features			
eyes			
skin			
hair			
Grooming -- clothing			
make-up			
glasses			
hygiene			
neatness			
Overall attractiveness			
Voice			
Age			
Race			
Sex			
II. CONTEXT			
Social Situations			
Physical Locations			
III. ORIGINS			
Nationality/Ethnicity			
Class/Socioeconomic			
Family			

Concept Category	Instances Given	Comments	Total
Education/Occupation			
Drastic/unusual event			
IV. BEHAVIOR			
Chronic Nonverbal --			
Speech			
Facial Behavior			
Eye Contact			
Gestures			
Movement			
Activities --			
Incidents			
Habits			
Hobbies			
Occupation			
Scripts			
V. RELATIONSHIPS			
Role/Social Position			
Past Experiences			
Social Network			
Others' Reactions			
Perceiver's Reactions			
VI. PERSONAL PROPERTIES			
Intelligence			
Interests			
Causality Inference			
Beliefs/Attitudes			
Inference of Self Impression			
Inference of Self Impression with Perceiver Disclaim			
Traits			

Appendix C

ROLE CATEGORY QUESTIONNAIRE:

A measure of cognitive complexity relevant to impression formation

(Rosenkrantz & Crockett, 1965)

Description of measure

In this measure, the subject is first required to identify eight different individuals whom s/he knows. These persons must fit the eight different categories generated by crossing these three factors:

1) older than vs. same age as the subject

2) liked vs. disliked by the subject

3) male vs. female

The subject is first instructed to identify eight different people who fit these categories, to spend a few minutes mentally comparing and contrasting the interpersonal characteristics of these eight people, and then to describe each individual in writing as fully as possible within a 2-minute time limit (see Rosenkrantz & Crockett, 1965).

The measure of cognitive complexity is the number of different interpersonal constructs that the subjects used in these eight descriptions.

"Role Category Questionnaire"

Read these instructions carefully.

Instructions. Identify 1 real person that you know who fits the category headings below. Think about how these people differ and how they are alike, in terms of their various personality attributes (traits, characteristics, attitudes, dispositions). Take about 5 minutes to do this mental comparing and contrasting.

You will now be required to write a description of each individual. Signal the experimenter when you are ready to begin writing. You will be allowed 2 minutes to write each description, with a 10-second break in between. Try to describe the individual as fully as possible.

Person categories

	Category	Who I know
1.	male/older/like	
2.	male/older/dislike	
3.	male/peer/like	
4.	male/peer/dislike	
5.	female/older/like	
6.	female/older/dislike	
7.	female/peer/like	
8.	female/peer/dislike	

Write one description only on each of the eight following pages. Label the person being described.

Appendix D

THE UNIVERSITY OF WESTERN ONTARIO
LONDON CANADA
Department of Psychology

Experiment: Phrases people use to describe others.

Sex: M F

Age: _____

PLEASE READ ALL INSTRUCTIONS CAREFULLY

Instructions

On the pages of the questionnaire booklet are listed 72 different terms and phrases that have actually been used by people to describe others that they know. These terms and phrases come from essays written by participants in other experiments in which they have described in detail the attributes and characteristics of friends, enemies, and other acquaintances. These 72 descriptive phrases were selected semi-randomly from over 1600 essays.

In this experiment, we would like you to make two (2) different judgments about the nature of person describing phrases.

1. First Judgment: How concrete vs. abstract is the attribute describedby a term or phrase?

All the terms and phrases in this booklet describe some attribute or characteristic that could be possessed by a person. Some descriptions refer to directly observable, physically apparent or explicit attributes; other descriptions refer to unobservable, inferred, assumed, or implicit attributes. Any description that refers to a directly observable, explicit attribute should be given a high concreteness rating; any description that refers to an unobservable, inferred, or implicit attribute should be given a high abstractness rating. For example, consider the descriptions "brown eyes" and "conceited". "Brown eyes" is a directly observable attribute. It is highly concrete. "Conceited", on the other hand, is not directly observable; it is a highly abstract concept referring to an implicit, dispositional property of the person.

Your ratings will be made in terms of a 6-point scale, where 1 is the high concreteness end of the scale, and 6 is the high abstractness end of the scale. The scale is reproduced at the top of each page of the booklet. Please make your rating of each descriptive term or phrase by writing the number on the scale that best indicates your judgment of concreteness vs. abstractness in the space at the beginning of each term or phrase. The descriptions judged to be most abstract would be

given a rating of 6, and the descriptions judged to be most concrete would be given a rating of 1. Descriptions that are intermediate between being highly concrete and highly abstract, of course, should be rated appropriately between the extremes. Feel free to use the entire range of numbers, from 1 to 6, and do not be concerned about how often you use a particular number as long as it is your true judgement. Read each description carefully and try to be precise in your ratings.

2. Second Judgement: What kind of attribute is described by the term or phrase?

Most attributes of persons can be categorized as one of the following kinds or types of attributes: appearance attributes, or what the person looks like; personality attributes, or what the person is like internally; origin attributes, or the person's background or how they got the way they are; behaviour attributes, or what the person does and how he/she acts; relationship attributes, or what one does with the person and how the person gets along with people; and, context attributes, or where the person is found.

In addition to rating each description for concreteness vs. abstractness, we would like you to classify the description in terms of one of the attribute categories just mentioned. These attribute category names are reproduced at the bottom of each page of the booklet. Make your classification of each description by writing the name of the category that you feel most appropriately would include the description in the space to the right of each description. Make your categorizations quickly, but do not be careless with your judgements.

Please study the following examples:

	Concrete/ Abstract	Description	Kind of Attribute
1.	4	involved in charitable groups	behaviour
2.	5	we have a lot in common	relationship
3.	2	same floor in residence	context
4.	3	born in Europe	origin

If necessary, refer back to these instructions when making your judgements of concreteness vs. abstractness and kind of attribute on the following pages. Ask any questions now; when you are ready, turn the page and begin.

Highly Concrete 1 2 3 4 5 6 Highly Abstract

Concrete/ Abstract	Description	Kind of Attribute
	crazy	
	raised in boarding schools	
	freckles on nose	
	I really like her	
	in the same chemistry lab	
	can make intelligent conversation	
	good at dealing with people	
	a show-off	
	at his house	
	thinks he's so much better than those around him	
	sits in front of me in sociology	
	younger than me	
	walks like she's being pushed from behind	
	mother spoiled him	
	fun to be around	
	has a college diploma	
	great sense of humour	
	real nice "buns"	
	drinks and smokes too much	

appearance -- what they look like
origin -- how they got the way are
behaviour -- what they do

personality -- internal make-up
context -- where they are
relationship -- what one does with them

Highly Concrete 1 2 3 4 5 6 Highly Abstract

Concrete/ Abstract	Description	Kind of Attribute
	wears "red-tag" levi jeans	
	English	
	his mind is in the gutter more than most	
	on the soccer field	
	has few friends	
	orphaned when 3 or 4	
	at her favourite pub	
	beard looks sick	
	every week he's "hosin'" somebody else	
	from high school	
	gives me a "creepy" feeling	
	likes to party	
	aggressive	
	family is from Italy	
	always joking around	
	a first-born child	
	hangs around the [illegible]	
	don't see eye to eye on very much	
	knows what she's talking about	

appearance -- what they look like
origin -- how they got the way are
behaviour -- what they do
personality -- internal make-up
context -- where they are
relationship -- what one does with them

Highly Concrete 1 2 3 4 5 6 Highly Abstract

Concrete/ Abstract	Description	Kind of Attribute
	real petite	
	works in the kitchen part-time	
	made a "fuck-up" of my 5 years living with him	
	see her on the bus	
	background full of intellectuals	
	stacked	
	excellent judge of character	
	grew up on army bases	
	easy to talk to	
	pointed chin	
	always trying to attract attention by making up stories	
	lives down the hall	
	unfair to me when I worked for him	
	lighthearted	
	at choir practice	
	5'8½" tall	
	lies through his teeth	
	family is rich	
	teaser	

appearance -- what they look like
origin -- how they got the way are
behaviour -- what they do

personality -- internal make-up
context -- where they are
relationship -- what one does with them

Highly Concrete 1 2 3 4 5 6 Highly Abstract

Concrete/ Abstract	Description	Kind of Attribute
_____	she fights like a Bear	_____
_____	friend of a friend	_____
_____	at the beach in Florida	_____
_____	sensible mind	_____
_____	quite a "bulge"	_____
_____	one night, she stole my boyfriend	_____
_____	sparkle in her smile	_____
_____	parents were killed tragically when he was little	_____
_____	not so lucky with women	_____
_____	father is a minister	_____
_____	known him for 15 years	_____
_____	curly blond hair	_____
_____	likes to see people smile	_____
_____	can talk his way out of anything and get any girl he wants	_____
_____	at all the parties	_____

appearance -- what they look like
origin -- how they got the way are
behaviour -- what they do

personality -- internal make-up
context -- where they are
relationship -- what one does with them

Appendix E

A Guide for Judging the Integration of Person Descriptions

The source of this measure of judged integration is Radke-Yarrow and Campbell (1963). On pages 62 and 63 they describe a subjective measure of "complexity of organization" of person descriptions. This "complexity" measure can be thought of as more of an index of thematic integration than complexity.

The scale:

low integration	1	2	3	4	5	6	7	high integration
				medium integration				

The meanings of scale values:

Value of 1 (low integration) indicates "vague global generalizations, inadequately supported or a congerie of specific details without stated or implied theme" (e.g., a listing of details and/or attributes).

Value of 4 (medium integration) indicates "superficial generalizations supported by some congruent behavioural details" (e.g., characteristics and attributes are accompanied by brief exemplar behaviours).

Value of 7 (high integration) indicates "interpretative generalizations, supported by interweaving of different complicated themes or by complex analyses of "'Why' of behaviour and traits" (e.g., well integrated personality portraits involving implicit and explicit inferences about behaviour".

Some cautions in making judgements of integration:

1. Try to make judgements independent of length of description, or the number of generalizations, details, and attributes mentioned. For example, single theme descriptions can be highly integrated, whereas descriptions including many characteristics with brief exemplars may be only moderately integrated at best.

2. Try not to be influenced by the verbosity or quality of writing displayed by authors of descriptions. Sometimes grammatically well-structured descriptions present only a low to moderately integrated impression of the person being described.

Appendix F

Some Criteria for Judging the Desirability of Person Descriptions

The scale:

very undesirable	-3	-2	-1	0	1	2	3	very desirable

The judging criteria:

1. Use your first reaction following a slow, careful reading of the description.

2. Descriptions that are either all negative or all positive and that include personal statements of liking or disliking could be scored either -3 or +3, respectively.

3. Mixes of positive and negative characteristics, or all positive or all negative descriptions having some qualifications or rationalizations for the referent person's character could be scored either -2 or +2 depending on which characteristics and attributes are dominant or in the majority.

4. Descriptions that are just "one side" of being neutral (e.g., having slight imbalances in the number of positive and/or negative characteristics) could be scored -1 or +1.

5. Equal amounts of positive and negative characteristics and attributes, or purely "physically descriptive" person descriptions most likely will be neutral and given a score of 0.

Appendix G

Summary Table:
Comparisons of different undergraduate samples on major dependent measures

First undergraduate sample from Winter Term, 1981-82 academic year, n = 70.
Second undergraduate sample from Fall Term, 1982-83 academic year, n = 74.

Measure	Group	Mean	S.D.	t-value, df = 142	2-tailed probability
RCQ measure cognitive complexity	1st	45.89	12.34	t = -.13	.90
	2nd	46.15	11.77		
Differentiation	1st	15.06	7.55	t = -.83	.41
	2nd	16.04	6.61		
Judged Integration	1st	3.93	1.47	t = -.87	.39
	2nd	4.14	1.39		
Complexity	1st	-.15	1.78	t = -1.00	.32
	2nd	.14	1.63		
Level of Abstraction	1st	4.68	.54	t = -.02	.99
	2nd	4.68	.57		
Judged Desirablity	1st	1.57	1.54	t = -.09	.93
	2nd	1.59	1.62		
Liking	1st	8.20	1.54	t = -.81	.42
	2nd	8.43	1.88		
Evaluative Impression	1st	7.80	1.13	t = -.37	.71
	2nd	7.87	1.39		
Confidence in Judgement	1st	7.87	1.02	t = -1.49	.14
	2nd	8.13	1.07		
"dominant vs. submissive"	1st	6.10	2.09	t = .68	.50
	2nd	5.95	2.29		
"impulsive vs, cautious"	1st	7.29	1.98	t = .13	.91
	2nd	7.24	2.08		
"opinionated vs. unopinionated"	1st	5.27	2.27	t = .58	.57
	2nd	5.04	2.50		
"competitive vs. cooperative"	1st	7.90	2.42	t = .20	.85
	2nd	7.82	2.06		
1st manipulation check	1st	7.11	3.82	t = .51	.62
	2nd	6.80	3.66		
2nd manipulation check	1st	7.63	3.59	t = 1.10	.25
	2nd	6.99	3.42		

Appendix H

Task Materials:
Organizational/Management Problems, with Response Sheets
and Subject Performance Feedback Booklets

SUBARCTIC SURVIVAL

INSTRUCTIONS

The critical situation described in this problem is based on actual cases in which men and women lived or died depending upon the survival decisions they made. Read the information below carefully, discuss the situation with your partner, and then make your responses on the Response Sheet provided.

The situation. It is approximately 2:30 p.m., October 5th and you have just crashed-landed on the east shore of Laura Lake in the subarctic region of the northern Quebec-Newfoundland border. Shortly after the crash, the plane drifted into deep water and sank with the pilot's body pinned inside.

The pilot was unable to contact anyone before the crash. However, ground sightings indicate that you are 30 miles south off your intended course and approximately 22 air miles east of Schefferville, your original destination, and the nearest known habitation. Schefferville (pop. 5,000) is reachable only by air or rail. Your party was expected to return from northwestern Labrador to Schefferville no later than October 19th and filed a Flight Notification Form with the Department of Transportation via Schefferville radio to that effect.

The immediate area is Tundra with patches of small evergreen trees (2 to 4 inches in diameter) and scattered hills having rocky and barren tops. Approximately 25% of the area is covered by long narrow lakes connected by innumerable streams and rivers (see map). Heavy clouds cover the sky most of the time with only one day in ten being fairly clear. The wind sweeps the exposed areas clear of snow and builds drifts 3' to 5' deep in other areas. The wind speed averages 13-15 miles per hour (west-northwest). You are both dressed in insulated underwear, sox, heavy wool shirts, pants, knit gloves, sheepskin jackets, wool caps, and heavy leather hunting boots. Your personal possessions include one pocket knife (2 blades), an awl which resembles an ice pick, one stub pencil, and an air map.

The problem. Before the plane drifted away and sank you and your partner were able to salvage the 15 items listed on the Response sheet. Your task is to rank these items according to their importance to your survival, starting with "1" the most important and "15" the least important. You will have approximately 30 minutes to discuss the problem with your partner.

RESPONSE SHEET SUBARCTIC SURVIVAL

INSTRUCTIONS

Rank order the following 15 items in terms of their importance to survival from your point of view.

Salvaged Items	Personal ranking of importance
A magnetic compass	
A gallon can of maple syrup	
One arctic sleeping bag per person	
A bottle of water purification tablets	
A 20' x 20' piece of heavy-duty canvas	
13 wood matches in a metal screwtop, waterproof container	
250' of ½" braided nylon rope (50 lb. test)	
An operating 4 battery flashlight	
3 pairs of snowshoes	
A fifth Bacardi rum (151 proof)	
Safety razor shaving kit with mirror	
A wind-up alarm clock	
A hand axe	
One aircraft inner tube for a 14" wheel (punctured)	
A book -- Northern Star Navigation	

PERSONAL PERFORMANCE FEEDBACK
PROBLEM: SUBARCTIC SURVIVAL

NAME: _____

Experts' rankings - Your rankings = _____

Comparative scores of other groups

Group	Ave. Ind. Scores
Salesman	46.0
College students	54.6
Mid-level managers	47.0
Key managers	44.5
Teachers	48.8
College Counsellors	46.1
Police Sergeants	47.3
Supervisors	52.5
Foremen and carpenters	55.2
Group of 4 Eskimo	16.5

The Experts

The experts for the Survival Problem are the Para Rescue Specialists for the 413 Transport and Rescue Squadron, the Canadian Forces. This squdron is responsible for air/sea rescue operations in Quebec, Newfoundland, Labrador, and the arctic regions. They have received training, not only in rescue, but also in survival in both the subarctic and the arctic.

The Decision

The basic decision is whether to stay or leave. From the analysis of the situation (from the given information), it should be known that:

a) The minimum walking distance to Schefferville is more than 50 miles.
b) Rarely, if ever, have either or both of you ever made a 50 mile hike, especially in this kind of terrain.
c) There are at least 9 water crossings to make on the best route to Schefferville.
d) The only means of navigation is a map which is small and difficult to read.
e) There are several items which could be used for hunting, fishing, signalling, shelter, and warmth.
f) From the 1900' hill a mile northeast of Laura Lake, they have in line of sight, the Schefferville airport.
g) There is ample fuel for fire, "the immediate area is covered with small evergreen trees... "
h) The weather conditions for the next month and a half, though potentially severe, are not impossible.

In view of the above, the best decision is to stay at Laura Lake where they will suffer fewer of the adverse consequences of walking and have a much greater potential for signalling, for conserving their strength, for remaining comfortable, and for gathering food.

The Para Rescue Specialists consider walking out of this situation to be certainly fatal, particularly for people unfamiliar with the terrain and basic survival tactics in the subarctic. For those who decided to stay, there is an excellent chance of being spotted and picked up within a day or two, especially if a signal fire is kept going day (smoke) and night, and if other fixed distress signals are kept in exposed places.

The Experts' rankings and rationale

Item and Rank	Your rank	Rationale
1. 13 wood matches in a metal screw-top, waterproof container	_____	The most critical item. Protection from cold and a source of fire are key problems to be solved. The fire at night could serve as a signal. Since terrain is high in this area, aircraft in and out of Schefferville might spot it.
2. a hand axe	_____	A continuous supply of wood is necessary to maintain the fire. It may be the most frequently used item in camp: cutting fire wood, constructing a frame for shelter, and butchering in the event some game (caribou) is located.
3. a 20' x 20' piece of heavy-duty canvas	_____	Prevailing winds of 13-15 knots will make some protection necessary. Spread on a frame secured by rope, it could make a good tent, and its area contrasting with the terrain, might also be more easily spotted in an air search.
4. a sleeping bag per person (arctic type)	_____	A possible 14 nights in the subarctic would make this type of bag a key factor in survival. Caution: keep dry.
5. A gallon can of maple syrup	_____	Has two possible survival purposes. The sugar is a source of energy. Can can be used for cooking and water gathering. After boiling, most arctic plants are edible, therefore the can is useful.

Item and Rank	Your rank	Rationale
6. 250' of ¼" braided nylon rope, 50lb. test	____	The rope has multipurposes: Tieing and lashing, threads may be used as fishing line, snares and deadfalls may be constructed, any fresh meat may be suspended to be kept away from predators (bears, wolves) and it could be used to construct a willow net for fishing.
7. 3 pairs of snowshoes	____	Traveling over the snow will be made easier, especially initially around the camp, and for to and from gathering food and water. Without such over-the-snow traveling equipment the soft snow would make any traveling exhausting.
8. 1 aircraft inner tube (punctured)	____	Can be used to construct a sling shot for hunting: there are many arctic birds available, such as fock ptarmigans that can be easily approached and killed with rocks or a sling shot. The burning rubber will also make dark smoke for signalling.
9. safety razor shaving kit with mirror	____	The mirror is a powerful communication device if the sun is out. Razor blades can be used for cutting edges.
10. an operating 4 battery flashlight	____	May be needed as an emergency source of light in addition to the campfire. Also, good as night time signalling device. Note, cold will reduce efficiency of battery power.
11. a fifth of Bacardi rum (151 proof)	____	Has medicinal purposes as disinfectant and anesthetic. Alcohol of use in starting fire. Bottle useful as water container. But greatest value would be a morale boost, perhaps a shot each evening while the next days plans are reviewed.
12. a wind-up alarm clock	____	Useful in setting camp routine, for signalling and fire watch. Also of some use as a timing device in navigation for an expert navigator. If dismantled, internal workings can be used for fishing hooks.

Item and Rank	Your rank	Rationale
13. a magnetic compass	_____	Unreliable in this area. Proximity to north magnetic pole produces serious errors. One is likely to become very lost.
14. book, Northern Star Navigation	_____	Since north star is so high in this area, such navigation is difficult. Useful as fire starter and toilet paper.
15. water purification tablets	_____	Water is among purest in world in this area. Not useful. Bottle may be of some use.

PROJECT PLANNING

INSTRUCTIONS

The situation described in this problem involves basic organizational/management decisions. Read the information provided carefully, discuss the situation with your partner, and then make your response on the Response Sheet provided.

Background Information

This task involves designing a plan for managing a "secret project" being sponsored by your "Employers". The project is so secret that no specific information has yet been revealed. You do know, however, that the project is expected to grow to sizeable proportions requiring additional people and resources.

The problem

Despite the lack of information regarding the Project, you must now design a preliminary plan for managing the Project. On the Response Sheet is a list of 15 Management Activities arranged in random order. Your task is to rank order these activities according to the sequence you would following in Managing the Project. Rank order the activities from "1" the first activity you would execute to "15" the last activity you would execute.

Go over the list of activities, discuss them with your partner, and then rank order them according to the sequence most likely to result in effective management of the Project. You will have approximately 30 minutes to discuss the problem with your partner.

RESPONSE SHEET PROJECT PLANNING

INSTRUCTIONS

Rank order the following 15 Management Activities according to the sequence you would follow in managing the Project.

Management Activities	Personal Ranking
Find qualified people to fill positions	
Measure progress toward and/or deviation from Project's goals	
Identify and analyze the various tasks necessary to implement the Project	
Develop strategies (priorities, sequences, timing of major steps)	
Develop possible alternative courses of action	
Assign responsibility, accountability, authority	
Set Project objectives	
Train personnel for new responsibilities/ authority	
Gather and analyze facts of current Project situation	
Establish qualifications for new positions	
Measure individual performance against performance objectives/standards	
Identify the negative consequences of each course of action	
Develop individual performance objectives which are mutually agreeable to the individual and his/her manager	
Define scope of relationships, responsibilities and authority of new positions	
Decide on a basic course of action	

PERSONAL PERFORMANCE FEEDBACK
PROBLEM: PROJECT PLANNING

NAME: _____

Experts' rankings - Your rankings = _____

Comparative scores of other groups

Group	Ave. Ind. Scores
Mid-level managers	61.9
Key managers	53.9
Welfare Program Coordinators	52.4
College students	no data available

The Experts

This ranking is suggested by a group of successful, high ranking managers. They feel that the essential purpose is to focus attention on planning, and to provide the participants with an opportunity to examine the planning process and experience sequencing the individual steps involved in this process. Thus, they feel that the scoring is not the most important part of this particular problem. Therefore, there is no need to embrace the expert ranking as an absolute answer. This is an abstract ranking, a highly rational approach to a problem about which nothing is known. The nature of the "real" project could, conceivably, alter the planning sequence. It can be predicted, however, that key level management personnel will score closer to the experts' ranking on this problem than mid-level managers because they have had more experience developing and using basic planning skills.

The Experts' ranking and rationale

Part I -- Planning

Expert Rank	Your Rank	Rationale
1	____	Review and analyze the facts of the current project situation. This is situation analysis. According to some experts this is not strictly a part of planning process. However, all agree that a fact finding or awareness of the opportunity, situation, or problem is an important first step in any realistic planning sequence.
2	____	Set project objectives. "The basic step in planning is to establish planning objectives for the entire project". Measurable objectives indicate priorities necessary to achieve the objectives. Project objectives should not be confused with the activities necessary to achieve them. Most of all, objectives (the desired results) of the project should be realistic and attainable.
3	____	Develop possible alternative courses of action. Searching for and studying alternative courses of action, especially those that are not immediately apparent, is a critical next step. There is seldom a plan for which reasonable alternatives do not exist and often the least obvious ones are the most useful.
4	____	Identify the negative consequences of each course of action. Evaluating alternative courses is the next step in planning. The best way to evaluate alternatives is by a cost-benefit analysis. One should be aware, however, that because the number of alternatives in many situations can be great, looking at the negative variables, limitations, and their consequences and evaluating them may be an exceedingly complex task.
5	____	Decide on a basic course of action. This is the point in the process where the basic (best) plan is adopted. This step is based on the rational analysis of the situation according to the first four activities.

Expert Rank	Your Rank	Rationale
6	____	Develop strategies (priorities, sequences, timing of major steps). After a decision has been made on a course of action, strategic plans must be developed to execute the proposed course of action. These plans would deal with the activities that follow, such as: the hiring and training of personnel, development of maintenance facilities, scheduling, advertising, financing, etc. The strategic plans serve as an outline for the organization of these activities.
		Part II -- Organizing
7	____	Identify and analyze the various job tasks necessary to implement the project. This involves a rigorous analysis of what work has to be performed, what work belongs together, and how each activity should be emphasized in the organization structure. This step and the next two steps constitute a subsequence of steps within the main sequence of planning a project.
8	____	Define the scope of relationships, responsibilities, and authority of new positions. This step flows from the preceding one. This step is essentially a determination of the hierarchical set-up of the project's organization of jobs. It is the structuring of the project's management.
9	____	Establish qualifications of new positions. The activity groupings and authority provisions determined in the preceding two steps must take into account people's limitations and customs. This is the part of the process that must be done in order to get people who can meet the project objectives.
		Part III -- Implementing
10	____	Find qualified people to fill new positions. This step is self explanatory. It should be noted that this is a way to bring new "blood" into an organization. The supply of qualified people limits the success of a business just as sharply as does the supply of money, materials, and market.

Expert Rank	Your Rank	Rationale
11	_____	Train and develop personnel for new responsibilities/authority. The efficiency of any organization depends directly on how well its members are trained. Newly hired employees almost always need some training before they can take up their work, and older employees require training to keep them alert to any new job demands and to fit them for transfers and promotions. "Training complements selection".
12	_____	Develop individual performance objectives which are mutually agreeable to the individual and his/her manager. Performance objectives are useful in training, coaching, and in helping employees improve their performance. The objectives should be measurable and not arbitrary. When the objectives are "agreeable" to all parties, then "enforcement" usually becomes unnecessary. People will be able and motivated to monitor their own performance.
13	_____	Assigning responsibility/accountability/authority. This step involves the delegation of necessary responsibility and authority to subordinates in order that they can carry out their jobs. It gives each subordinate a sense of being his/her own boss and exercising control over his/her own work environment. It is a source of internalized motivation.
Part IV -- Controlling		
14	_____	Measure progress towards and/or deviation from the Project goals. Control basically implies measurement of accomplishment against standards. Control is understandably closely related to planning. Once a plan becomes operational, control is necessary to measure progress. Measuring progress will also facilitate the setting up of checkpoints within the project itself.
15	_____	Measure individual performance against performance objectives and standards. Control of individual performance is similar to activity #14. However, if the objectives or standards have been appropriately drawn and specified (see #12), then this kind of evaluation will be easily accomplished and largely done by the employees themselves. This measurement should be done regularly, and inter-manager communication encouraged in order to identify problems that may have arisen to interfere with effective performance.

IN-BASKET PROBLEM

INSTRUCTIONS

TO: The New Managing Board (you and your partner)

FROM: The Experimenter

RE: Your Job

You and your partner have just accepted the Executive Managing duties of RIM Corporation, a large firm with around 6,000 employees. Its main business is the manufacture and distribution of various textile products. You were appointed because it was anticipated that your experience (and that of your partner) would be useful in helping the corporation to get out of its current profit crisis, resulting from a series of large losses incurred in the previous three years.

It is your first day on the job: You have 1/2 hour (30 minutes) to examine your incoming memos before you each catch separate planes to attend different important meetings. Each memo focuses on a different issue that has some degree of importance to the smooth and profitable operation of the company. Your task is to examine the memos and discuss the issues that each raises with your partner, weighing their importance. While you are away, your secretary will be preparing an agenda for a meeting with your top executives for the purpose of dealing with the issues raised by the memos. To aid your secretary in putting the most important issues first on the meeting agenda, you must rank-order the 7 memos in terms of the importance of the issues they raise with "1" being the most important memo and "7" being the least important memo. Also, you must indicate beside each memo whether or not you believe it is necessary to call the memo to the attention of any special personnel in the company, such as particular technical experts (for example, researchers, designers, engineers, lawyers, accountants, production foremen, etc.), so that these experts can be present at the meeting.

You will have 30 minutes to study and discuss the memos with your partner before making your importance rankings.

MEMO 1

TO: All Managers

FROM: Controller's Office

RE: Time records for staff

Given the difficult financial position of the company, it is the responsibility of all managers to ensure that the company utilizes its personnel. To ensure this, Head Office strongly recommends to local managers that they institute a system of attendance records so that it is known at all times who is present and who is not. These summarized records can then be forwarded to Head Office for accurate calculation of overtime, and deduction for leaves taken by staff.

In addition, other cost saving methods in the use of phones, office supplies and travel, should be promoted.

To: The Managing Board
From: Asst to the Board
RE: Time records for staff

The attached memo was sent out last week by the Controller's office. I want to call your immediate attention to the fact that a significant number of workers have not only protested, but also petitioned the union to intervene over this deterioration of working conditions.

MEMO 2

TO: The Managing Board

FROM: The Executive Vice President

RE: Government Investigation into the reliability of non-flammable fabrics

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As you know, the government has decided to carry out an investigation of the reliability of non-flammable fabrics after recent series of tragic accidents involving the failure of protective clothing worn by firemen. I have appointed a team of three to collect together and summarize the information we have concerning our experience and tests of these fabrics. It has not been decided how we shall present our position and who will represent us. The hearings commence in two weeks.

How do you wish me to proceed concerning this matter?

MEMO 3

TO: The Managing Board

FROM: Vice President Marketing

RE: Marketing Issues

In the past, the most productive regional salesmen have been recognized each month with special financial bonuses. The idea was to encourage increased sales efforts at a time when increased sales are critical to the company. Unfortunately, the practice seems to have created a morale problem. Some salesmen are always getting bonuses and others never get any, and now appear to be less motivated to improve sales. This is clearly a serious problem. It would seem that a meeting with you at this time might help resolve matters. Would this be possible?

MEMO 4

TO: The Managing Board

FROM: Vice-President, Corporate Planning

RE: TANRAS Consulting Inc.

As you know, your predecessor ordered a comprehensive report from TANRAS regarding longterm policy. The report has been received and evaluated by our department. The purpose of this memo is to spell out the major findings and recommendations of the TANRAS report. Performance has been hampered by low productivity of labor. TANRAS suggests the introduction of a wage incentive system. This idea is strongly supported by the controller's department.

On the other hand, our production people maintain that the low productivity reflects the inadequate quality of our equipment resulting in numerous bottlenecks in the plants. They argue that the problem has nothing to do with the motivation of our work force and therefore the work incentive scheme is a red herring.

Our production people have, in the last few weeks, proposed that we buy new equipment designed to solve the plant productivity problems and remove the bottlenecks. However, the controller's department does not agree with the justifications for the purchase and refuses to authorize the needed expenditures. Clearly, this situation is most unsatisfactory and needs to be resolved. As it stands now, nothing can be done about the low level of performance.

5

THE SECURITY ANALYSIS ASSOCIATION

The Managing Board
RIM Corporation

Dear Sir or Madam,

The SAA is pleased to invite either, or both, of you to speak at its meeting next month. As you can understand, our members have wide ranging interest among many different business perspectives. One of our aims is to keep ourselves informed of changes in corporate management.

Would you be willing to provide us with a luncheon address on the topic "Current Prospects for the RIM Corporation"?

We meet each Thursday at 12 P.M. at our club rooms on Main Street. We hope one of you will be able to find time to schedule a speaking date with us.

Sincerely,

Marvin Rand

Marvin Rand
Chairperson, SAA.

MEMO 6

TO: The Managing Board

FROM: The Controller

RE: Plant Safety

We have received numerous requests from Plant Manager/East for an increased budget allocation for the worker safety-program in this plant. These requests have been rejected because:

1) This plant already has the highest expenditures on worker safety-programs of any of our plants. Indeed, this plant manager spends more than 50% more on plant safety than some of our more economy minded managers. Clearly, he is over emphasizing personnel matters at the expense of overall corporate profits.

2) We try to follow a policy of being absolutely equal as far as expenditures for plant improvements are concerned. It seems to us that Plant Manager/East is trying to achieve a certain advantage.

We hope you will look into and help resolve this matter.

MEMO 7

TO: The Managing Board

FROM: Executive Vice-President

RE: Promotion in conjunction with the IWS

In conjunction with the International Wool Secretariate (IWS), and the Miss World Pageant Corporation, we have organized a cocktail party along with a display of our new line of clothes to be worn by Miss World and local models. The event takes place on the evening after the upcoming executive meeting. Your presence would be greatly appreciated.

Would you be willing to make some opening remarks?

RESPONSE SHEET IN-BASKET PROBLEM

INSTRUCTIONS

Rank-order the 7 memos listed below in terms of the importance of the issue it raises to the smooth and profitable operation of the company, with "1" being the most important and "7" being the least important. Also, indicate by circling Yes or No whether you wish to have special personnel made aware of the memo and invited to the meeting being scheduled by your secretary.

	Important ranking (1 through 7)	Notify special personnel? (circle one)	
MEMO 1	_____	Yes	No
MEMO 2	_____	Yes	No
MEMO 3	_____	Yes	No
MEMO 4	_____	Yes	No
MEMO 5	_____	Yes	No
MEMO 6	_____	Yes	No
MEMO 7	_____	Yes	No

PERSONAL PERFORMANCE FEEDBACK
IN-BASKET PROBLEM

NAME: _____

The In-Basket problem used in this experiment is a simplified adaptation of a much more involved, complex, and time-consuming Organizational/Management task. The original version of the In-Basket task is especially pertinent to a theory of Managerial behavior proposed by Henry Mintzberg (The Nature of Managerial Work, New York: Harper & Row Publishers, 1973) in which it is hypothesized that managerial behavior is basically the performance of a variety of "managerial roles" in response to the many and varied job-related demands required of managers in their attempts to carry out basic, regular duties.

The adapted version of the In-Basket task that you and your partner worked on is relevant to four of the managerial roles that Mintzberg says characterizes "what managers do". The four roles focused upon in the problem are: the Figurehead role, the Leader role, the Spokesman role, and the Disturbance Handler role.

Description of Four Managerial Roles (from Mintzberg, 1973, pp. 96-99).

Figurehead. The simplest of managerial roles, that of figurehead, identifies the manager as a symbol, obliged to carry out a number of social, inspirational, legal, and ceremonial duties. In addition, the manager must be available to certain parties that demand to deal with him because of his status or authority. Memo #7, appearing at the fashion show, describes a typical Figurehead activity.

Leader. This is the most widely recognized of all managerial roles. The leader role identifies the manager's relationship with his/her subordinates. S/he defines the milieu in which they work, motivates them, probes into their activities to keep them alert, and takes responsibility for hiring, training, and promoting them. The manager attempt to bring subordinate and organizational needs into a common accord to promote efficient operations. The leader role pervades virtually all the manager's activities in which subordinates are involved. The power of the manager is most clearly manifested in the leader role. Memos 3 and 4, dealing with the morale of salespersons, and the TANRAS consultation about the worker productivity problem, respectively, describe Leader role activities.

Spokesman. As spokesperson, the manager must transmit information about the organization to various external groups. S/he must act in a public relations capacity; lobby for his organization; keep key influencers (board of directors or boss) informed; inform the public about the organization's performance, plans, and policies. As spokesperson, furthermore, the manager must serve outsiders as an expert in the field in which the organization operates. Memos 2 and 5, the flammable fabrics issue, and the invitation to speak at the security

association, respectively, reflect Spokesperson role activities.

Disturbance Handler. The manager must take charge when his/her organization meets with an unexpected stimulus for which there is no clear programmed response. In effect, s/he assumes the role of disturbance handler. Disturbances may arise from conflicts between subordinates, conflicts between the manager's organization and other organizations, and losses of resources or threats thereof. Disturbances arise both because "poor" managers are insensitive and because "good" managers inevitably lead organizations to unexpected consequences when they are innovative. Faced with a disturbance, the manager gives it priority and devotes his/her efforts to removing the stimulus -- to buying time so that it can be dealt with leisurely by an improvement project. Memos 1 and 6, the institution of attendance records, and the plant safety fund allocation problem, respectively, are relevant to the role of disturbance handler.

What your performance indicates

There is no right or wrong solution to the In-Basket Problem. Your personal rankings of the memos simply provide a very rough indication of the relative importance of particular managerial roles to effective management of an organization, from your point of view.

Scoring

Each memo is given points that inversely correspond to their ranked position. (The memo ranked 1st is given 7 points, the memo ranked 2nd is given 6 points, and so on). Therefore, the role whose corresponding memos are ranked highest, can be regarded as the most important of the four roles in this instance from your point of view.

MEMO	YOUR RANKING	SCORE
1		
2		
3		
4		
5		
6		
7		

Your ranking of the seven memos indicates that the four managerial roles can be ordered, in terms of importance, as follows:

most important	1	_____
	2	_____
	3	_____
least important	4	_____

Note. Your ranking is no better nor any more valid than any other ranking. The content of memos used in any particular version of the In-Basket task will obviously have a significant influence on the relative importance of managerial roles.

APPENDIX I

Study 2:
Post-"oral description" Questionnaire

Key: * -- one of 13 items in evaluative impression scale
+'n' -- Anderson's (1968) likeableness ranking of "trait" adjective and its relative positivity or negativity
R -- scale was reversed for scoring

PERSONALITY INVENTORY

INSTRUCTIONS

In this booklet we would like you to rate your partner on a number of personality dimensions. We would also like you to indicate how confident you are about each of your ratings. Please indicate your judgments by circling the numbers below the scales. Treat each personality scale as a continuum going from one personality trait through a neutral point to the opposite trait.

EXAMPLE:

organized — 1 2 (3) 4 5 6 7 8 9 10 11 — disorganized

confidence in your judgement on the above dimension

not at all confident — 1 2 3 4 5 6 7 8 (9) 10 11 — very confident

This person has circled 3 on the organized-disorganized scale, indicating that his/her partner is moderately organized. If 9 had been circled, this would indicate that the partner was moderately disorganized. The two endpoints (1 and 11) indicate that the partner is extremely organized or extremely disorganized, respectively. Circling the midpoint of the scale (the number 6) would indicate a neutral position on the dimension (that is, neither organized nor disorganized, but equal amounts of both).

In the example given, the person has circled 9 on the second scale to indicate that s/he is quite confident about judging the partner as moderately organized. In other words, s/he feels quite certain about the rating of the partner on the organized-disorganized scale. Circling number 1 on the scale would mean that you are nearly guessing.

In making your judgements, use your first impressions and do not ponder too long on any one judgement. Be sure not to skip any of the scales.

-153

1. dominating _____ -219 submissive
1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment
on the above dimension

not at all confident _____ very confident
1 2 3 4 5 6 7 8 9 10 11

-213

* 2. impractical _____ +425 practical
1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment
on the above dimension

not at all confident _____ very confident
1 2 3 4 5 6 7 8 9 10 11

+466

* 3. lively _____ -97 boring R
1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment
on the above dimension

not at all confident _____ very confident
1 2 3 4 5 6 7 8 9 10 11

+555

* 4. honest _____ -51 dishonest R
1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment
on the above dimension

not at all confident _____ very confident
1 2 3 4 5 6 7 8 9 10 11

\-

* 5. rigid _____ + flexible
1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment
on the above dimension

not at all confident _____ very confident
1 2 3 4 5 6 7 8 9 10 11

* 6. +505 humorous — -101 humorless R

1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment on the above dimension

not at all confident — very confident

1 2 3 4 5 6 7 8 9 10 11

* 7. -195 unimaginative — +492 imaginative

1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment on the above dimension

not at all confident — very confident

1 2 3 4 5 6 7 8 9 10 11

* 8. +492 helpful — - not helpful R

1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment on the above dimension

not at all confident — very confident

1 2 3 4 5 6 7 8 9 10 11

* 9. -168 not intelligent — +537 intelligent

1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment on the above dimension

not at all confident — very confident

1 2 3 4 5 6 7 8 9 10 11

* 10. -182 moody — +527 good natured

1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment on the above dimension

not at all confident — very confident

1 2 3 4 5 6 7 8 9 10 11

	11.	+334 cautious	1 2 3 4 5 6 7 8 9 10 11	+307 impulsive	R

confidence in your judgment on the above dimension

not at all confident	1 2 3 4 5 6 7 8 9 10 11	very confident

*	12.	+429 sociable	1 2 3 4 5 6 7 8 9 10 11	-161 unsociable	R

confidence in your judgment on the above dimension

not at all confident	1 2 3 4 5 6 7 8 9 10 11	very confident

13.	competitive	1 2 3 4 5 6 7 8 9 10 11	+476 cooperative

confidence in your judgment on the above dimension

not at all confident	1 2 3 4 5 6 7 8 9 10 11	very confident

*	14.	+573 sincere	1 2 3 4 5 6 7 8 9 10 11	-109 superficial	R

confidence in your judgment on the above dimension

not at all confident	1 2 3 4 5 6 7 8 9 10 11	very confident

	15.	-257 opinionated	1 2 3 4 5 6 7 8 9 10 11	unopinionated

confidence in your judgment on the above dimension

not at all confident	1 2 3 4 5 6 7 8 9 10 11	very confident

* 16. +455 independent — dependent -254 R

1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment on the above dimension

not at all confident — very confident

1 2 3 4 5 6 7 8 9 10 11

* 17. -113 cold — warm +522

1 2 3 4 5 6 7 8 9 10 11

confidence in your judgment on the above dimension

not at all confident — very confident

1 2 3 4 5 6 7 8 9 10 11

Please circle the number on the following scale that best reflects how you feel about your partner.

like very much — dislike very much R

1 2 3 4 5 6 7 8 9 10 11

ROLE CATEGORY QUESTIONNAIRE

INSTRUCTIONS

Read these instructions carefully.

For each of the category descriptions below identify 1 real person that you know. Think about how these eight people differ and how they are alike, in terms of their various personality attributes (traits, characteristics, attitudes, dispositions). Take about 5 minutes to do this mental comparing and contrasting.

You will shortly be required to write a description of each individual. You will be allowed 2 minutes to write each description. Be prepared to describe each individual as fully as possible.

Before you begin please signal the experimenter by pressing the "push to call" button on the intercom wall unit in this room. The experimenter has some additional instructions.

Person category description	Who I know
1. a male / older than me / who I like	
2. a male / older / who I dislike	
3. a male / my peer / who I like	
4. a male / my peer/ who I dislike	
5. a female / older / who I like	
6. a female / older / who I dislike	
7. a female / my peer / who I like	
8. a female / my peer / who I dislike	

You will be writing one description only on each of the 8 following pages. Label the person being described.

APPENDIX J

Analyses of Variance
Summary Tables

Analysis of Variance Summary Table

Study 1: RCQ measures of cognitive complexity

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	48	179.045	1.25	.27
Status (S)		2	48	121.817	.09	.43
Frequency (F)		1	48	110.191	.77	.39
G x S		2	48	92.712	.65	.53
G x F		1	48	176.300	1.23	.27
S x F		2	48	206.017	1.43	.24
G x S x F		2	48	9.856	.07	.93
Subjects	G,S,F	48		143.817		

Analysis of Variance Summary Table

Study 2: RCQ measures of cognitive complexity

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	357.840	2.07	.16
Frequency (N)		1	24	.340	.002	.97
Interdependency (I)		1	24	29.340	.17	.68
Familiarity (F)		2	24	84.438	.49	.62
G x N		1	24	45.563	.26	.61
G x I		1	24	85.563	.50	.49
G x F		2	24	130.674	.76	.48
N x I		1	24	95.063	.55	.47
N x F		2	24	33.965	.20	.82
I x F		2	24	219.382	1.27	.30
G x N x I		1	24	227.507	1.31	.26
G x N x F		2	24	.646	.004	.99
G x I x F		2	24	378.146	2.19	.13
N x I x F		2	24	427.688	2.47	.11
G x N x I x F		2	24	422.007	2.44	.11
Dyad Member (M)	G,N,I,F	24	96	172.521	1.35	.15
Subjects	M,F,N,I,F	96		127.535		

Analysis of Variance Summary Table

Study 1: "Fine-grain" Differentiation measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance*
Gender (G)		1	48	22.224	4.54	.04
Frequency (N)		1	48	21.352	4.36	.05
Status (I)		2	48	2.646	.54	.59
G x N		1	48	32.437	6.62	.02
G x I		2	48	2.98	.61	.55
N x I		2	48	1.699	.35	.71
G x N x I		2	48	6.491	1.33	.28
Familiarity (F)		1	48	43.952	19.98	.001
F x G		1	48	5.377	2.44	.12
F x N		1	48	.286	.13	.72
F x I		2	48	.849	.39	.68
F x G x N		1	48	2.299	1.04	.31
F x G x I		2	48	3.112	1.41	.25
F x N x I		2	48	2.715	1.23	.30
F x G x N x I		2	48	4.124	1.87	.17
Subjects (S)	G,N,I	48		4.897		
S x F	G,N,I	48		2.200		
Categories (C)		5	240	429.074	55.63	.001
C x G		5	240	9.446	1.22	.29
C x N		5	240	1.532	.20	.79
C x I		10	240	11.908	1.54	.20
C x G x N		5	240	16.033	2.08	.13
C x G x I		10	240	5.065	.66	.60
C x N x I		10	240	4.369	.57	.66
C x G x N x I		10	240	14.022	1.82	.14
C x F		5	240	9.333	3.34	.02
C x F x G		5	240	2.905	1.04	.38
C x F x N		5	240	6.994	2.50	.06
C x F x I		10	240	2.508	.90	.51
C x F x G x N		5	240	1.042	.37	.79
C x F x G x I		10	240	6.247	2.23	.04
C x F x N x I		10	240	3.383	1.21	.30
C x F x G x N x I		10	240	4.228	1.51	.17
S x C	GxNxI	240		7.714		
S x F x C	GxNxI	240		2.798		

* adjusted by Geisser-Greenhouse θ for degrees of freedom.
θ for S X C errorterm = .3463
θ for S x F x C errorterm = .6587

Analysis of Variance Summary Table

Study 1: Judged Integration Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	48	9.708	4.54	.04
Frequency (N)		1	48	9.008	4.21	.05
Status (I)		2	48	1.844	.86	.43
G x N		1	48	20.244	9.46	.004
G x I		2	48	.982	.46	.63
N x I		2	48	3.760	1.76	.18
G x N x I		2	48	4.863	2.27	.12
Familiarity (F)		1	48	.019	.01	.93
F x G		1	48	.886	.40	.53
F x N		1	48	.136	.06	.80
F x I		2	48	.215	.10	.91
F x G x N		1	48	.333	.15	.70
F x G x I		2	48	8.768	3.99	.03
F x N x I		2	48	2.370	1.08	.35
F x G x N x I		2	48	.459	.21	.81
Subjects (S)	G,N,I	48		2.139		
S x F	G,N,I	48		2.200		

Analysis of Variance Summary Table

Study 1: Complexity Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	48	18.960	9.63	.004
Frequency (N)		1	48	18.680	9.69	.004
Status (I)		2	48	2.627	1.36	.27
G x N		1	48	32.907	17.07	.001
G x I		2	48	.152	.08	.93
N x I		2	48	2.724	1.41	.26
G x N x I		2	48	1.927	1.73	.14
Familiarity (F)		1	48	.085	.04	.85
F x G		1	48	1.621	.74	.40
F x N		1	48	.005	.00	.97
F x I		2	48	.047	.02	.98
F x G x N		1	48	.319	.15	.71
F x G x I		2	48	5.072	2.31	.12
F x N x I		2	48	2.693	1.23	.31
F x G x N x I		2	48	.976	.44	.65
Subjects (S)	G,N,I	48		1.927		
S x F	G,N,I	48		2.197		

Analysis of Variance Summary Table

Study 1: Abstraction Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	48	.908	.80	.38
Frequency (N)		1	48	.463	.41	.52
Status (I)		2	48	1.273	1.12	.33
G x N		1	48	.892	.79	.38
G x I		2	48	1.029	.91	.41
N x I		2	48	.328	.29	.75
G x N x I		2	48	1.251	1.10	.34
Familiarity (F)		1	48	.579	2.31	.14
F x G		1	48	.007	.03	.87
F x N		1	48	1.059	4.22	.05
F x I		2	48	.067	.27	.76
F x G x N		1	48	.001	.00	.96
F x G x I		2	48	.815	3.25	.05
F x N x I		2	48	.385	1.53	.23
F x G x N x I		2	48	.039	.15	.86
Subjects (S)	G,N,I	48		1.133		
S x F	G,N,I	48		.251		

Analysis of Variance Summary Table

Study 1: Judged Desirability Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F ratio	Level of Significance
Gender (G)		1	48	6.683	1.53	.22
Frequency (N)		1	48	4.307	.99	.33
Status (I)		2	48	29.727	6.80	.003
G x N		1	48	5.951	1.36	.25
G x I		2	48	8.811	2.01	.14
N x I		2	48	.718	.16	.85
G x N x I		2	48	1.489	.34	.71
Familiarity (F)		1	48	9.133	3.49	.07
F x G		1	48	.065	.02	.88
F x N		1	48	.001	.00	.98
F x I		2	48	4.277	1.64	.21
F x G x N		1	48	1.115	.43	.52
F x G x I		2	48	12.813	4.90	.02
F x N x I		2	48	.977	.37	.69
F x G x N x I		2	48	2.454	.94	.40
Subjects (S)	G,N,I	48		4.373		
S x F	G,N,I	48		2.616		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data"
"Fine-grain" differentiation measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	19.531	4.53	.07
Expectancy (E)		1	8	21.67	5.03	.06
Interdependence (I)		1	8	13.78	3.19	.11
G x E		1	8	11.281	2.62	.14
G x I		1	8	4.653	.99	.35
E x I		1	8	6.42	1.49	.26
G x E x I		1	8	1.253	.29	.60
Categories (W)		5	40	182.873	47.39	.001
G x W		5	40	6.039	1.57	.19
E x W		5	40	2.095	.54	.74
I x W		5	40	1.906	.49	.78
G x E x W		5	40	3.295	.85	.52
G x I x W		5	40	3.695	.96	.45
E x I x W		5	40	3.84	.99	.43
G x E x I x W		5	40	4.862	1.26	.30
Dyad Member (M)	G,E,I	8	32	4.309	.59	.77
Subjects (S)	M,G,E,I	32		7.309		
D x W	G,E,I	40	160	3.859	1.09	.34
S x W	M,G,E,I	160		3.517		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data", Judged Integration Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	2.083	1.14	.32
Expectancy (E)		1	8	4.083	2.23	.17
Interdependence (I)		1	8	6.75	3.68	.09
G x E		1	8	3.00	1.64	.24
G x I		1	8	.333	.18	.68
E x I		1	8	.000	.000	1.00
G x E x I		1	8	4.083	2.23	.17
Dyad Member (M)	G,E,I	8	32	1.833	1.11	.38
Subjects (S)	M,G,E,I	32		1.646		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data", Complexity measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	.934	.47	.51
Expectancy (E)		1	8	.518	.26	.62
Interdependence (I)		1	8	.393	.19	.67
G x E		1	8	.279	.14	.72
G x I		1	8	2.470	1.23	.30
E x I		1	8	3.288	1.64	.24
G x E x I		1	8	.038	.019	.89
Dyad Member (M)	G,E,I	8	32	2.000	1.925	.09
Subjects (S)	M,G,E,I	32		1.039		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data", Abstraction Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	.519	2.35	.16
Expectancy (E)		1	8	.262	1.19	.31
Interdependence (I)		1	8	1.923	8.72	.02
G x E		1	8	.331	1.49	.26
G x I		1	8	.239	1.09	.33
E x I		1	8	.065	.29	.60
G x E x I		1	8	.362	1.64	.24
Dyad Member (M)	G,E,I	8	32	.221	.68	.71
Subjects (S)	M,G,E,I	32		.327		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data", Judged Desirability Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	8.333	3.28	.11
Expectancy (E)		1	8	.083	.033	.86
Interdependence (I)		1	8	1.333	.525	.49
G x E		1	8	.333	.131	.73
G x I		1	8	4.083	1.61	.24
E x I		1	8	.000	.000	1.00
G x E x I		1	8	.083	.033	.86
Dyad Member (M)	G,E,I	8	32	2.542	2.068	.07
Subjects (S)	M,G,E,I	32		1.229		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data", Liking Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	4.688	.836	.39
Expectancy (E)		1	8	.521	.093	.77
Interdependence (I)		1	8	6.021	1.074	.33
G x E		1	8	.021	.004	.95
G x I		1	8	6.021	1.074	.33
E x I		1	8	.521	.093	.77
G x E x I		1	8	.021	.004	.95
Dyad Member (M)	G,E,I	8	32	5.604	2.28	.05
Subjects (S)	M,G,E,I	32		2.458		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data", Evaluative Impression Measure

Source	Nesting	Degrees of Freedom Num.	Degrees of Freedom Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	1.208	1.29	.29
Expectancy (E)		1	8	1.113	1.19	.31
Interdependence (I)		1	8	.119	.127	.73
G x E		1	8	.489	.525	.49
G x I		1	8	.045	.048	.83
E x I		1	8	.089	.096	.76
G x E x I		1	8	.188	.201	.67
Dyad Member (M)	G,E,I	8	32	.932	.542	.82
Subjects (S)	M,G,E,I	32		1.721		

Analysis of Variance Summary Table

Study 2: Single-session "Control Data", "Confidence of Judgements" Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	8	.373	1.06	.33
Expectancy (E)		1	8	.891	2.54	.15
Interdependence (I)		1	8	.104	.295	.60
G x E		1	8	.458	1.306	.29
G x I		1	8	.054	.155	.70
E x I		1	8	.188	.534	.49
G x E x I		1	8	.0001	.0003	.99
Dyad Member (M)	G,E,I	8	32	.351	.285	.97
Subjects (S)	M,G,E,I	32		1.231		

Analysis of Variance Summary Table

Study 2: Manipulation Check #1,
"How dependent are you on your partner?"

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	6.674	.18	.68
Frequency (N)		1	24	.063	.002	.97
Interdependence (I)		1	24	280.563	7.593	.02
Familiarity (F)		2	24	.424	.01	.99
G x N		1	24	6.674	.18	.68
G x I		1	24	10.563	.29	.60
G x F		2	24	2.590	.07	.94
N x I		1	24	9.507	.26	.62
N x F		2	24	4.688	.13	.89
I x F		2	24	2.896	.08	.93
G x N x I		1	24	1.563	.04	.84
G x N x F		2	24	15.799	.43	.66
G x I x F		2	24	12.896	.35	.71
N x I x F		2	24	5.715	.15	.86
G x N x I x F		2	24	6.438	.17	.85
Dyad Member (M)	G,N,I,F	24	96	36.951	5.21	.001
Subjects	M,G,N,I,F	96		7.097		

Analysis of Variance Summary Table

Study 2: Manipulation Check #2,
"How dependent on your partner are you?"

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	6.674	.18	.68
Frequency (N)		1	24	3.063	.08	.78
Interdependence (I)		1	24	189.063	5.20	.04
Familiarity (F)		2	24	2.632	.07	.94
G x N		1	24	14.063	.39	.54
G x I		1	24	16.674	.46	.51
G x F		2	24	5.007	.14	.88
N x I		1	24	.007	.000	.99
N x F		2	24	3.271	.09	.92
I x F		2	24	1.396	.04	.97
G x N x I		1	24	.007	.000	.99
G x N x F		2	24	8.063	.22	.81
G x I x F		2	24	.215	.006	.99
N x I x F		2	24	2.090	.06	.95
G x N x I x F		2	24	5.715	.16	.86
Dyad Member (M)	G,N,I,F	24	96	36.354	5.80	.001
Subjects	M,G,N,I,F	96		6.264		

Analysis of Variance Summary Table

Study 2: "Competitive-cooperative" rating scale measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	2.250	.31	.59
Frequency (N)		1	24	2.778	.39	.55
Interdependence (I)		1	24	9.000	1.25	.28
Familiarity (F)		2	24	6.924	.96	.40
G x N		1	24	.250	.04	.86
G x I		1	24	3.361	.47	.51
G x F		2	24	.563	.08	.93
N x I		1	24	.111	.02	.91
N x F		2	24	3.257	.45	.65
I x F		2	24	1.188	.17	.85
G x N x I		1	24	1.361	.19	.67
G x N x F		2	24	6.396	.89	.43
G x I x F		2	24	4.715	.66	.53
N x I x F		2	24	1.049	.15	.87
G x N x I x F		2	24	.632	.09	.92
Dyad Member (M)	G,N,I,F	24	96	7.194	1.46	.10
Subjects	M,G,N,I,F	96		4.917		

Analysis of Variance Summary Table

Study 2: "Fine-grain" Differentiation Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance*
Gender (G)		1	24	4.449	.66	.43
Frequency (N)		1	24	20.167	2.99	.10
Interdependence (I)		1	24	6.338	.94	.35
Familiarity (F)		2	24	33.644	4.99	.02
G x N		1	24	17.229	2.56	.13
G x I		1	24	15.574	2.31	.15
G x F		2	24	11.421	1.70	.21
N x I		1	24	2.449	.36	.56
N x F		2	24	1.389	.21	.82
I x F		2	24	43.199	6.42	.006
G x N x I		1	24	4.167	.62	.44
G x N x F		2	24	6.241	.93	.41
G x I x F		2	24	25.282	3.76	.04
N x I x F		2	24	21.588	3.21	.06
G x N x I x F		2	24	8.347	1.24	.31
Dyad Member (M)	G,N,I,F	24	96	6.732	.91	.59
Subjects	M,G,N,I,F	96		7.402		
Categories (W)		5	120	711.427	181.73	.001
W x G		5	120	1.241	.31	ns
W x N		5	120	2.631	.67	ns
W x I		5	120	7.802	1.99	ns
W x F		10	120	10.737	2.74	.08
W x G x N		5	120	6.474	1.65	ns
W x G x I		5	120	2.221	.57	ns
W x G x F		10	120	5.184	1.32	ns
W x N x I		5	120	.724	.19	ns
W x N x F		10	120	2.999	.77	ns
W x I x F		10	120	4.826	1.23	ns
W x G x N x I		5	120	6.925	1.77	ns
W x G x N x F		10	120	2.942	.75	ns
W x G x I x F		10	120	4.884	1.25	ns
W x N x I x F		10	120	5.809	1.48	ns
W x G x N x I x F		10	120	4.476	1.14	ns
M x W	G,N,I,F	120	480	3.915	1.11	ns
S x W	M,G,N,I,F	480		3.518		

* adjusted after using Geisser-Greenhouse conservative F-test procedure, $\theta = 1/(q-1) = 1/(6-1) = .2$ for adjusting degrees of freedom

Analysis of Variance Summary Table

Study 2: "Total number of concepts" Differentiation measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	25.840	.73	.41
Frequency (N)		1	24	98.340	2.79	.11
Interdependence (I)		1	24	37.007	1.05	.32
Familiarity (F)		2	24	162.646	4.61	.03
G x N		1	24	95.063	2.69	.12
G x I		1	24	79.507	2.25	.15
G x F		2	24	72.757	2.06	.15
N x I		1	24	10.563	.30	.59
N x F		2	24	17.549	.49	.62
I x F		2	24	258.049	7.31	.004
G x N x I		1	24	14.063	.40	.54
G x N x F		2	24	38.021	1.08	.36
G x I x F		2	24	123.632	3.50	.05
N x I x F		2	24	129.813	3.68	.05
G x N x I x F		2	24	39.813	1.13	.35
Dyad Member (M)	G,N,I,F	24	96	35.299	.79	.74
Subjects	M,G,N,I,F	96		44.472		

Analysis of Variance Summary Table

Study 2: Judged Integration Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	.063	.03	.87
Frequency (N)		1	24	4.340	2.01	.17
Interdependence (I)		1	24	.007	.003	.96
Familiarity (F)		2	24	2.382	1.10	.35
G x N		1	24	.840	.39	.54
G x I		1	24	.007	.003	.96
G x F		2	24	9.021	4.18	.03
N x I		1	24	.340	.16	.70
N x F		2	24	1.382	.64	.54
I x F		2	24	5.007	2.32	.13
G x N x I		1	24	2.507	1.16	.30
G x N x F		2	24	1.965	.91	.42
G x I x F		2	24	.840	.39	.69
N x I x F		2	24	.090	.04	.96
G x N x I x F		2	24	2.424	1.12	.35
Dyad Member (M)	G,N,I,F	24	96	2.160	1.14	.33
Subjects	M,G,N,I,F	96		1.903		

Analysis of Variance Summary Table

Study 2: Complexity Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	.295	.10	.76
Frequency (N)		1	24	8.192	2.83	.11
Interdependence (I)		1	24	.642	.22	.65
Familiarity (F)		2	24	8.250	2.85	.08
G x N		1	24	4.083	1.41	.25
G x I		1	24	1.738	.60	.45
G x F		2	24	10.505	3.63	.05
N x I		1	24	.754	.26	.62
N x F		2	24	1.111	.38	.69
I x F		2	24	12.787	4.42	.03
G x N x I		1	24	.337	.12	.74
G x N x F		2	24	2.737	.95	.40
G x I x F		2	24	2.942	1.02	.38
N x I x F		2	24	3.251	1.12	.35
G x N x I x F		2	24	3.395	1.17	.33
Dyad Member (M)	G,N,I,F	24	96	2.894	1.16	.30
Subjects	M,G,N,I,F	96		2.488		

Analysis of Variance Summary Table

Study 2: Abstraction Measure

Source	Nesting	Degrees of Freedom Num.	Degrees of Freedom Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	.247	1.05	.32
Frequency (N)		1	24	.181	.77	.39
Interdependence (I)		1	24	1.051	4.47	.05
Familiarity (F)		2	24	.841	3.58	.05
G x N		1	24	.006	.02	.88
G x I		1	24	.105	.44	.52
G x F		2	24	.144	.61	.56
N x I		1	24	.022	.09	.77
N x F		2	24	.057	.24	.79
I x F		2	24	.703	2.99	.07
G x N x I		1	24	.376	1.59	.22
G x N x F		2	24	.304	1.29	.30
G x I x F		2	24	.352	1.49	.25
N x I x F		2	24	.088	.37	.70
G x N x I x F		2	24	.057	.24	.79
Dyad Member (M)	G,N,I,F	24	96	.235	.73	.83
Subjects	M,G,N,I,F	96		.324		

Analysis of Variance Summary Table

Study 2: Judged Desirability Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	9.000	5.59	.03
Frequency (N)		1	24	.694	.43	.52
Interdependence (I)		1	24	2.250	1.40	.25
Familiarity (F)		2	24	1.896	1.18	.33
G x N		1	24	10.028	6.22	.02
G x I		1	24	.028	.02	.90
G x F		2	24	2.688	1.67	.21
N x I		1	24	4.000	2.48	.13
N x F		2	24	3.549	2.20	.14
I x F		2	24	2.146	1.33	.29
G x N x I		1	24	7.111	4.41	.05
G x N x F		2	24	1.174	.73	.50
G x I x F		2	24	2.965	1.84	.19
N x I x F		2	24	2.021	1.25	.31
G x N x I x F		2	24	2.840	1.76	.20
Dyad Member (M)	G,N,I,F	24	96	1.611	.63	.91
Subjects	M,G,N,I,F	96		2.549		

Analysis of Variance Summary Table

Study 2: "Liking" Measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	7.111	2.69	.12
Frequency (N)		1	24	.444	.17	.69
Interdependence (I)		1	24	2.250	.85	.37
Familiarity (F)		2	24	6.299	2.39	.12
G x N		1	24	.694	.26	.62
G x I		1	24	.111	.04	.84
G x F		2	24	2.590	.98	.39
N x I		1	24	5.444	2.06	.17
N x F		2	24	5.090	1.93	.17
I x F		2	24	3.396	1.29	.30
G x N x I		1	24	.694	.26	.62
G x N x F		2	24	.549	.21	.82
G x I x F		2	24	5.299	2.01	.16
N x I x F		2	24	1.465	.56	.59
G x N x I x F		2	24	1.257	.48	.63
Dyad Member (M)	G,N,I,F	24	96	2.639	.87	.65
Subjects	M,G,N,I,F	96		3.035		

Analysis of Variance Summary Table

Study 2: "Evaluative Impression" Measure, a 13-item scale

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	3.979	3.53	.08
Frequency (N)		1	24	.231	.21	.66
Interdependence (I)		1	24	4.234	3.76	.07
Familiarity (F)		2	24	1.036	.92	.42
G x N		1	24	.026	.02	.89
G x I		1	24	1.829	1.63	.22
G x F		2	24	.008	.007	.99
N x I		1	24	1.202	1.07	.32
N x F		2	24	3.045	2.71	.09
I x F		2	24	.535	.47	.63
G x N x I		1	24	.163	.14	.71
G x N x F		2	24	.491	.44	.66
G x I x F		2	24	3.086	2.74	.09
N x I x F		2	24	1.096	.97	.40
G x N x I x F		2	24	.666	.59	.57
Dyad Member (M)	G,N,I,F	24	96	1.126	.64	.90
Subjects	M,G,N,I,F	96		1.763		

Analysis of Variance Summary Table

Study 2: Trait-ascription
"Confidence in judgement" measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	.016	.02	.91
Frequency (N)		1	24	2.525	2.27	.15
Interdependence (I)		1	24	5.621	5.05	.04
Familiarity (F)		2	24	2.926	2.63	.10
G x N		1	24	.003	.002	.97
G x I		1	24	.654	.59	.46
G x F		2	24	.374	.34	.72
N x I		1	24	.305	.27	.61
N x F		2	24	.647	.58	.57
I x F		2	24	1.257	1.13	.34
G x N x I		1	24	1.242	1.12	.31
G x N x F		2	24	.317	.29	.76
G x I x F		2	24	.155	.14	.88
N x I x F		2	24	1.432	1.29	.30
G x N x I x F		2	24	.300	.27	.77
Dyad Member (M)	G,N,I,F	24	96	1.113	1.00	.48
Subjects	M,G,N,I,F	96		1.112		

Analysis of Variance Summary Table

Study 2: "Dominant-submissive" rating scale measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	8.028	1.29	.27
Frequency (N)		1	24	18.778	3.03	.10
Interdependence (I)		1	24	6.250	1.01	.33
Familiarity (F)		2	24	8.549	1.38	.28
G x N		1	24	.694	.11	.75
G x I		1	24	.444	.07	.80
G x F		2	24	1.090	.18	.85
N x I		1	24	17.361	2.80	.11
N x F		2	24	1.174	.19	.83
I x F		2	24	6.438	1.04	.37
G x N x I		1	24	5.444	.88	.36
G x N x F		2	24	2.549	.41	.67
G x I x F		2	24	1.590	.26	.78
N x I x F		2	24	1.507	.24	.79
G x N x I x F		2	24	.715	.12	.90
Dyad Member (M)	G,N,I,F	24	96	6.208	1.37	.15
Subjects	M,G,N,I,F	96		4.528		

Analysis of Variance Summary Table

Study 2: "Impulsive-cautious" rating scale measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	2.778	1.01	.33
Frequency (N)		1	24	5.444	1.97	.18
Interdependence (I)		1	24	.444	.16	.70
Familiarity (F)		2	24	4.694	1.70	.21
G x N		1	24	12.250	4.43	.05
G x I		1	24	.028	.01	.93
G x F		2	24	3.111	1.13	.35
N x I		1	24	2.250	.81	.38
N x F		2	24	21.444	7.76	.003
I x F		2	24	3.694	1.34	.29
G x N x I		1	24	11.111	4.02	.06
G x N x F		2	24	5.250	1.90	.18
G x I x F		2	24	1.694	.61	.55
N x I x F		2	24	14.083	5.10	.02
G x N x I x F		2	24	3.694	1.34	.29
Dyad Member (M)	G,N,I,F	24	96	2.764	.71	.83
Subjects	M,G,N,I,F	96		3.875		

Analysis of Variance Summary Table

Study 2: "Opinionated-unopinionated" rating scale measure

Source	Nesting	Degrees of Freedom Num.	Den.	Squares	F-ratio	Level of Significance
Gender (G)		1	24	4.694	1.16	.30
Frequency (N)		1	24	18.778	4.65	.05
Interdependence (I)		1	24	12.250	3.03	.10
Familiarity (F)		2	24	.965	.24	.79
G x N		1	24	16.000	3.96	.06
G x I		1	24	12.250	3.03	.10
G x F		2	24	.632	.16	.86
N x I		1	24	.111	.03	.87
N x F		2	24	4.257	1.05	.37
I x F		2	24	1.021	.25	.78
G x N x I		1	24	16.000	3.96	.06
G x N x F		2	24	8.896	2.20	.14
G x I x F		2	24	1.938	.48	.63
N x I x F		2	24	15.007	3.71	.04
G x N x I x F		2	24	27.063	6.70	.005
Dyad Member (M)	G,N,I,F	24	96	4.042	.75	.79
Subjects	M,G,N,I,F	96		5.375		

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