1991

M.A.

A. WOIKE

This is to certify that the

thesis entitled

THE EFFECT OF AROUSED POWER AND INTIMACY MOTIVES ON COGNITIVE COMPLEXITY

presented by

Barbara Ann Woike

has been accepted towards fulfillment
of the requirements for

MA degree in Psychology

Joel Aronoff
Major professor

Date 2-18-91

THE EFFECT OF AROUSED POWER AND INTIMACY MOTIVES ON COGNITIVE COMPLEXITY

By

Barbara Ann Woike

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

MASTER OF ARTS

Department of Psychology

1991

ABSTRACT

THE EFFECT OF AROUSED POWER AND INTIMACY MOTIVES ON COGNITIVE COMPLEXITY

By

Barbara Ann Woike

This study examined the hypothesis that individuals process their experiences at higher levels of cognitive complexity when information has potential relevance for personal motive satisfaction. Power- and intimacy-motivated subjects viewed a videotape of two job candidates involved in a peer interview under conditions which made power or intimacy a relevant concern. As predicted, the complexity with which subjects evaluated the target persons was greater when perceivers' motives were congruent with the situations. These findings are discussed in terms of the functional utility of cognitive complexity to increase prediction and control over hedonic outcomes.

In memory of Paul

ACKNOWLEDGEMENTS

My work has greatly benefitted from the guidance and assistance of others. First of all, I would like to thank Joel Aronoff for his support, and great interest in my professional development. He has been mentor as well as a good friend. From the start of this project Joel was very generous with his time and suggestions. He taught me how to critically evaluate my own work by tirelessly reading drafts and helping me work through problems at all stages of the study. Through this process, my ability to write clearly and explain the ideas to others has improved greatly. Joel taught me to value my own work and enjoy not only the end result but also the process. I enjoyed working with him very much on this project.

I am grateful to Larry Messé for his insightful suggestions and advice at various stages of this work. His comments have helped to greatly improve the quality of my work in many ways. I am particularly appreciative of his thorough and prompt feedback during the final stages of this work.

Thanks are also extended to Galen Bodenhausen for his comments and suggestions. He carefully read several drafts

of this work and helped to clarify a number of issues which in turn bettered the presentation of the study.

This study would not have been possible without the help of many students. I am especially grateful to Kim Salstrom and Eric Sauer who generously agreed to make a videotape of themselves that would scrutinizing and evaluated by hundreds of undergraduates. They also generously lended their time to be "on-hand" for the actual running of the experiment to make the cover story more believable.

I am also indebted to Steve McEldowney who was quite active in the development of Categories of Complexity coding system. He critically read many drafts and evaluated many of my decisions. He, Leah Yost, and Bill Kennedy met tirelessly with me to discuss problems and inconsistencies in the coding manual and endured many revisions before they actually coded the experimental sample.

Thanks are also extended to Kirk Stucky who used his expert judgement to score the final TAT sample. In addition, Kim Falk, Randy Soverinsky, Cynthia Howell, Todd McNeil, Alex Ghiso, Chris Thomas, Jann Grinwis, Shari Shaftler and Kim Keller were instrumental in the data collection and initial scoring phases. They made it possible to complete the running of the experiment in one term.

In addition, I am very grateful to many women who provided me with inspiration, guidance, and hope over the past nine years. Their support made it possible for me to

continue my education through many difficulties. These friends include Sherry Turner, Kim Weiskoph-Raymond, Jean Rooney, Nova Green, Rosemary Fitzgerald, Yo Ikuta, Diana Green, Mary Lou Karg, Eve Abernathy, Betty Casey, Candy Holland, Peg Pachasa, Sandy Osborne, Ann Bowman, Marie Kilbane, Margie Kane, and most of all Marisol del Riveria who thought anything good was possible. I am also grateful to my parents for their consistent love and financial support.

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INTRODUCTION

Scientists and philosophers have long been fascinated by our extraordinary ingenuity in forming mental representations out of materials selected from the outside world (e. g., Aristotle, 1931; Locke, 1979; Bruner, 1957). Since the advent of Gestalt psychology (Brunswik, 1954; Koffka, 1935), many psychologists have postulated that the perceiver takes an active role in social perception processes. Contemporary theories of social cognition assume that the perceiver actively constructs perceptions (Neisser, 1967, 1976; Fiske & Taylor, 1984) through a process that involves preference and selection.

One characteristic of this active construction process is cognitive complexity. For decades, psychologists have attempted to identify the bases for variations in the complexity with which individuals construe people, objects, and topics (e.g., Harvey, Hunt, & Schroder, 1961; Goldstein & Blackman, 1978; Schroder & Streufert, 1962; Schroder, Driver, & Streufert, 1967; Streufert & Streufert, 1978; Suedfeld & Tetlock, 1977; Tetlock, 1983; Tetlock & Kim, 1987). An event that one person views in a relatively simple fashion may be viewed with a good deal of complexity by

someone else, just as the same individual may form a simple construal of a person on one occasion and a complex one on another.

To explain this variability, substantial bodies of research have shown that dispositional and situational factors, when examined separately, influence the complexity of social cognitions (e.g., Schroder, et al., 1967; Streufert & Streufert, 1978; Tetlock, 1983; Tetlock & Kim, 1987). However, to date, little attention has been paid to the more inclusive possibility that dispositions and situations interact to determine the level of complex processing.

Thus, it was reasoned that when the situation engages the motives of the perceiver, more complex processing will be used for goal-directed thoughts and actions. Based on the general assumption that complex processing leads to more prediction and control over hedonic outcomes, I expected that this effect could be found with a variety of personal motives and social situations.

Many lines of research concur that the perceiver processes social information that is personally involving in qualitatively different ways than other types of information (e.g., Battistich, Assor, Messé & Aronoff, 1985; Bruner, 1957; Chaiken, 1980; Csikszentmihalyi, 1990; Kelly, 1955; Langer, 1989; McArthur & Baron, 1983; Petty & Cacioppo, 1986). For instance, the interactional and the ecological approaches both maintain that the characteristics of the

perceiver can interact with the features of the stimulus environment to create personally engaging experiences that affect the perceiver's cognitive processing of the "event." Some environmental features are perceived as opportunities for goal-directed action, called "affordances" by McArthur & Baron (1983). The perceiver becomes perceptually drawn to or, in their words "attuned to" these features. The differing goals of perceivers determine whether or not an environmental feature is perceived as an affordance, as such, affordances are in the eye of the beholder. When there is a congruence between the perceiver's goals and those aspects of the social environment, this conjunction of dispositional and situational attributes will lead the perceiver to become more perceptually attuned to those relevant features. This perceptual attunement may lead those environmental features relevant to the perceiver's purposes to be perceived with greater salience. In addition, potentially rewarding environmental features may appear more positive, while potentially threatening features appear more negative to the perceiver.

Past research suggests that the interaction of specific personal and social attributes does in fact evoke such perceptual attunement (Battistich, Assor, Messé & Aronoff, 1985). For instance, Assor, Aronoff, and Messé (1981) demonstrated that the personality variables of dominance and dependency interact with situational factors (in this case,

the attributes of a stimulus person) to affect the person perception process. They found that dominance-motivated perceivers evaluated low status targets more favorably than high status targets, while dependency-motivated perceivers evaluated high status targets more favorably than low status targets. This study provides evidence of motive-related distortions that are consistent with hedonic gratification. Each group of perceivers distorted their impressions in a positive direction for the stimulus person with gratifying characteristics and in a negative direction for the stimulus person with threatening characteristics.

Assor, Aronoff, and Messé (1986) further demonstrated that the presence of another dominant person leads to an increase in autonomic arousal, and when exposed to this potential threat, dominant observers engaged in defensive reconstruction of their impressions of the dominant target. Another experiment by Battistich and Aronoff (1985) demonstrated that dominance-motivated people seek information that deals with the assertive properties of the target, whereas dependency-motivated people seek information that deals with the affiliative properties of the target. As an aside, it is interesting to note that although direct descriptions of the target people on rating scales did not show any type of bias produced by the dispositions of the perceiver a bias was detected on free-response measures. This finding may indicate that more naturalistic measures

have more utility in detecting differences in perceptual-cognitive processes within the P X S framework.

In sum, these studies offer clear demonstrations of how the interactive effects of the observer's personality and the social object's attributes affect the impression-formation process in a ways that provide prediction and control over hedonic outcomes. Moreover, these experiments were designed to investigate the effects of hedonic relevance under threatening (or less than favorable) conditions. Research has not yet been conducted that examines how nonthreatening and potentially rewarding social stimuli are processed by motive-aroused observers within the P X S framework.

In a positively-arousing situation, the interaction of personal motives and environmental characteristics can enhance the degree to which an individual explores the environment. Generally speaking, if the person perceives a situation as a source of potential rewards, he or she should be more inclined to approach that situation which should in turn, increase information acquisition in ways that may expedite complex processing. It is to the perceiver's advantage to approach the situation and comprehend it in a thorough, complex, and flexible way in order to receive the potential rewards available.

Selecting Personality Variables

The premise that personality has an impact on perception was suggested in the 1950's by a group of psychologists who called their work the "New Look in Perception" (Bruner, 1957). This work proposed that characteristics of the perceiver can influence the nature of the cognitive processing of a stimulus object. In other words, an individual's salient concerns were believed to color his or her perception of the environment. For instance, these studies have demonstrated that the possession of certain values increased the perceiver's sensitivity to those characteristics of the world represented by those values (Haigh & Fiske, 1952; Postman, Bruner, & McGinnies, 1948).

Although this idea had intuitive appeal, critics (e.g., Schneider, 1973; Shrauger & Altrocchi, 1964; Tagiuri, 1969; Warr & Knapper, 1968) found important conceptual, methodological, and statistical problems that appeared to limit the conclusions that could be drawn from these studies (Aronoff & Wilson, 1985). A major problem was lack of careful consideration of the personal and situational variables employed in these studies (Battistich, Assor, Messé & Aronoff, 1985; Aronoff & Wilson, 1985). That is, experimenters did not take an interactive perspective on the

nature of hedonic relevance. They did not seem to consider that different social stimuli are hedonically relevant to different individuals. In order to examine how the environment influences the individual's perception, it is crucial to select a social context that is hedonically relevant to that particular perceiver. Thus, Aronoff and Wilson (1985) suggest that past methodological problems found in person X situation research (e.g. Endler & Magnusson, 1976; Endler, 1981) can be remedied by careful selection of the personal and situational variables.

Following this approach, the basic assumption of the interactionist model is that personality will affect perception when the social context is personally or hedonically relevant. If the individual does not perceive the situation as affecting his or her welfare (i.e., the social context does not engage the individual's motives), his or her personality should not affect perception (Aronoff & Wilson, 1985; Battistich, et al., 1985).

When considering which aspects of personality are most likely to become engaged with the environmental attributes in a way that could affect the degree of complexity developed in social cognitions, it appeared that two very different motives reflect a contrast that is central to many descriptions of personality. This distinction is characterized well in Bakan's (1966) notion of agency and communion, which describes the conflict between the need for

separation and autonomy on the one hand and the need for connectedness and belonging on the other (e.g., Angyal, 1951; Chodorow, 1974; Gilligan, 1982; Leary 1957; Rank, 1929, 1945). Important aspects of these personality orientations have been studied intensively in the research programs of the need for power and the need for intimacy: the need for power is described as a recurrent preference to have impact, control, and influence over another person, group, or the world at large (Winter, 1973), while the need for intimacy refers to a recurrent readiness to experience warm, close, and communicative exchanges with others (McAdams, 1980).

A large body of research by McClelland (1975, 1985) and colleagues (e.g., McAdams, 1988, 1990; Winter, 1973, 1988; Winter & Stewart, 1978) on the need for power and the need for intimacy and affiliation has contributed a great deal to our understanding of these fundamental motives. As this group of researchers define these motives, the need for power is a recurrent preference or readiness to "impact, control and influence over another person, group or the world at large." (Winter, 1973) In contrast, the need for intimacy is a recurrent preference or readiness for experiences of a warm, close and communicative interactions with others (McAdams, 1980, 1988; McAdams & Powers, 1981). The body of research on the need for power and the need for intimacy offers an excellent illustration of how individuals differ in their perceptions of what is hedonically relevant. It

appears that these motives are associated with two very different perceptual-cognitive orientations.

According to theory, social motives have three basic functions that are implicitly related to perception (McClelland, 1985; Cofer & Appley, 1964). First of all, motives have the power to drive, energize and arouse individuals. This activation of a motive can be triggered by the social context. Secondly, motives have an orienting function that leads to an increase in sensitivity to motive-related stimuli. And thirdly, motives have a selective function in that motive-related stimuli tends to be processed differently than other stimuli. Individuals tend to encode and remember more motive-related stimuli (McAdams & McClelland, 1983) and encode and learn motive-related information faster (McClelland, 1985). Research on power and intimacy motivation indicates that both of these motives do in fact energize, orient, and influence selection of behavior for certain individuals (McClelland, 1985). The effects of each motive on perception will be examined in turn, along with a discussion of some illustrative studies.

The need for power has been extensively studied for the past three decades (McAdams, 1988; McClelland, 1975, 1985; Winter, 1973; Winter & Stewart, 1978). Individuals high in the need for power (n Power) seek to have a personal impact on or stand out in their social worlds. They are interested in obtaining prestige and personal recognition and attempt to

do this through persuasion, direction, and control of others. They seek positions of leadership (e.g. teaching, administration) in which they can influence and shape the thoughts and behavior of others. Researchers have found a complex set of affective, cognitive, and behavioral orientations that are related to power motivation. For instance, Steele (1973, 1977) aroused power motivation in student subjects by having them listen to excerpts of famous political speeches such as Winston Churchill's speech at Dunkirk, while a control group listened to recordings of travel descriptions. After the recordings, all students wrote imaginative stories to pictures. As expected, those who heard the inspirational speeches wrote stories that contained significantly more power imagery than those who heard the travel tapes. In addition, Steele (1973) measured changes in physiological arousal and found that the subjects who showed the greatest signs of arousal, as indicated by increases in epinephrine secretion, were those who used the greatest amount of power imagery in their stories. In a similar study, Steele (1977) found a relationship between power motivation and general activation. As before, the inspirational speeches produced a marked increase in the n Power score and also an increase in self-reported general activation (i.e., extent to which subjects describe themselves as feeling lively, vigorous, energetic, and full of pep). Thus, physiological activation to power stimuli is

significantly related to n Power in thought content.

In addition, there is compelling evidence to suggest that people high in the need for power are more sensitive to power-related stimuli (McClelland, 1985). For example, McClelland, Davidson & Saron (1979) assessed the electrical responsivity of the brain to various stimuli and found a difference in the way subjects high and low in the need for power responded to power and neutral stimuli. People high in n Power were much more sensitive to power-related words in relation to neutral words than those low in n Power. This difference was detected remarkably early in the perceptual process (i. e., within a quarter of a second).

Thus, power motivation is characterized by both physiological arousal and a specific perceptual and cognitive orientation. The developmental experiences that have lead to power motivation have also lead to certain physiological responses. It appears that individuals high in n Power have developed a sensitivity to power-relevant social stimuli. This finding is reminiscent of Bruner's (1957) earlier notion that the predispositions of the perceiver increase his or her sensitivity to disposition-related words.

This special sensitivity is also manifest in the selective encoding process. McAdams and McClelland (1983) had subjects listen to a tape of someone telling a story about a picture. The story contained thirty facts relating to power, thirty facts relating to intimacy and fifteen

neutral facts. Subjects performed other activities and then unexpectedly, were asked to recall the details of the story. Individuals high in the need for power recalled more power related words relative to neutral words than those low in the need for power. This difference persisted at least twenty minutes after they heard the story. In another study, McClelland, Davidson, Saron and Floor (1980) found evidence that selective recall of power-related material by power-motivated people leads to faster learning of associations. This finding appears to be due to physiological changes that increase alertness. In contrast, in another learning association experiment, subjects high in the need for affiliation had better recall of affiliative facts but did not show the same pattern of changes in physiological arousal and alertness. These findings suggest that a complex relationship exists between the perceiver and the motive-relevant stimuli in which the pattern of moderating affective responses is different for each motivation.

There is similar evidence to demonstrate that the need for intimacy can energize, orient and influence the selection of behavior in unique ways. Intimacy motivation refers to a concern that individuals have for establishing contact and close, friendly relations with others. People high in intimacy motivation seek situations that create possibilities for establishing and maintaining intimate relations. They are, in a sense, more concerned with interpersonal

relationships per se than individuals concerned with power (McAdams, 1988).

There is growing evidence that the need for intimacy (n Intimacy) has definite effects on cognition and behavior. For instance, McAdams and Powers (1981) found that people who score higher on either the need for intimacy (or the need for affiliation) engage in more energetic intimacy-related activities. They had students engage in psychodrama sessions that were videotaped and coded by independent judges. They found that students high in n Intimacy (or n Affiliation) stood closer to other people, made more "we" references in discussing their scenarios, produced more laughter from the group, made fewer demands on others, and touched other people more often in an affectionate, nonthreatening way. Motivational differences were also reflected in the themes chosen for the scenarios. Those high in the need for intimacy more often chose themes of positive interpersonal affect and surrender of control over the situation.

As with the need for power, the need for intimacy also seems to be related to a unique perceptual and cognitive orientation. McAdams (1979) found that the intimacy motive sensitizes individuals to human faces. Subjects high in intimacy motivation showed a greater sensitivity to variations in placements of facial features than those low in the need for intimacy as indicated by the variability of the adjectives used to describe them. This finding is consistent

with the idea that face-to-face or eye-to-eye contact to an essential and adaptive part of intimate relationships (e.g., Argyle & Cook, 1976).

The intimacy motive has been demonstrated to have a selective effect on memory as well. McAdams (1982) found that individuals high in the intimacy motive recalled more autobiographical incidents involving intimacy experiences. In another study, McAdams and McClelland (1983) had subjects read one of two stories equal in length and containing an equal number of facts. One story had an intimacy theme and the other had a neutral theme. As predicted, those high in the intimacy motive recalled more facts from the intimacy story relative to the neutral story than those low in the intimacy motive.

Thus, research has established that power and intimacy motivation have a definite effect on relatively simple aspects of cognitive processing. The energizing component of the motive seemed to create an affectively-toned alertness or sensitivity which was strong enough to orient the individual to encode and selectively process motive-related information. It is quite likely that this sequence of motive arousal affects more complicated aspects of information processing as well. We have yet to know how power and intimacy motivation effect higher levels of information processing. It seems

that a higher level of cognition would be especially likely to mediate the thoughts and actions related to power and intimacy goals and experiences.

Selecting Situational Variables

The social motives of power and intimacy interact with social contexts in unique ways. To consider each motive in turn, power motivation should affect the cognitive processing of power related stimuli. The need for power is described as a recurrent preference or readiness for experiences of having impact and feeling strong, potent, agentic in relation to the environment (Winter, 1973). Situations that offer the opportunity to engage in these activities such as leadership roles and competitive situations should be of special interest to power-oriented individuals. As the research presented above has demonstrated, power-related situations have a unique effect on the activation mechanisms of power-oriented individuals that allows them to process information in a special manner that facilitates motive gratification. A power-arousing situation, such as a competitive debate or a leadership position should lead to a more complex construal of that situation than a situation that is not related to power such as studying quietly at home. A complex construal of a power situation may be the key to attaining power-related goals.

In the similar fashion, intimacy motivation should affect the cognitive processing of intimacy-related stimuli. The need for intimacy is the recurrent readiness or preference to engage and maintain close and intimate relations with others (McAdams, 1980). Situations in which intimacy seems likely to occur should be of special interest to intimacy-oriented individuals. As the research described earlier has shown, intimacy-related situations have a special effect on the activation mechanisms of intimacy-oriented individuals that allows them to process information in their own distinctive ways that facilitate motive gratification. An intimacy-arousing situation, such as a discussion of friendship or close relationships, should lead to a more complex impression of that situation than a non-intimacy-related situation such as a discussion of exam-taking strategies. A more complex construal of an intimacy situation may be essential to experiencing intimacy.

Thus, each of these motives is aroused by a particular set of situational affordances that associated with two fundamental social tasks: achieving control over the environment as an autonomous agent and relating harmoniously with others as an equal member in a shared experience (e.g., Bakan, 1966; Bales & Cohen, 1979; Chodorow, 1974; Erikson, 1963, Franz & White, 1985; Gilligan, 1982; Hogan, 1982). In these descriptions, agentic situations are characterized as task-related contexts that provide an opportunity to lead,

persuade, influence, and assert power over others. Communal situations, on the other hand, are characterized as socio-emotional contexts that offer a chance to become acquainted with, understand, and become emotionally connected with others. From an interactionist perspective, power-motivated individuals should be more attuned to agentic situations, whereas intimacy-motivated individuals should be more attuned to communal situations. Thus, although the content of the impressions formed in each of these situations is likely to be quite different, when either situation arouses the motives of the perceiver, more complex processing can be used for goal-directed thoughts and actions.

Complex Social Cognitions

Cognitive complexity allows us to perceive the nuances, options, discrepancies, anomalies and unexpected relationships in our social world. A complex perception (or impression) of a social situation provides us with the means to have richer and more meaningful experience as well as plan future action in a more informed and perhaps, strategic manner. The construct of cognitive complexity consists of two broad cognitive processes: differentiation and integration (Schroder, et al., 1967). Differentiation refers to the perception of multiple discrete attributes of a social object and the contrasts and differences between

these attributes, while integration refers to the perception of similarities, connections, and inter-relationships among social objects and their attributes. Thus, complex structure allows us to perceive many different features in the environment and draw connections between them.

The term cognitive complexity has been used to study the perceptual-cognitive processing of a wide array of social stimuli including people (e.g. Crockett, 1965, Kelly, 1955), the self-concept (e.g. Linville, 1985), and other abstract subjects, issues, and problems (e.g. Tetlock, 1986; Winter, McClelland, & Stewart, 1981). Over the past forty years, a number of coding systems have been developed to measure cognitive complexity. Of these systems, Schroder, Driver & Streufert's (1967), Human Information Processing is probably the best known pioneering work on cognitive complexity. The theory presented in this book was based on the idea that differences in cognitive processing were influenced by early developmental and social learning experiences and resulted in a relatively stable characteristic of individuals. Thus, "simple" individuals were those who processed information in a less differentiated and less integrated way, while "abstract" individuals processed information at higher levels of differentiation and integration.

Research has since demonstrated that a wide array of factors (e.g., motivational-attributes of the situation, role demands, and value conflicts) can shape the complexity

cognitive processing. It is now more commonly believed that cognitive processing is influenced by both personal and situational factors. That is, an individual's level of cognitive complexity varies from situation to situation and the same situation may be processed at different levels of cognitive complexity by different individuals. In recent years, Tetlock & Hannum (1984) has modified the Schroder, Driver & Streufert (1967) coding system to better suit an interactive theoretical approach. His term integrative complexity refers to the complexity of cognitive structuring as it is influenced by dispositional and situational factors. Tetlock & Hannum's (1984) system also expands the concept of integration to include many examples from political rhetoric and intellectual reasoning.

For example, Tetlock (1983; Tetlock & Kim, 1987) have demonstrated that situational demands can affect the complexity of an individual's thoughts about social issues. In one of these studies, Tetlock (1983), accountability (i.e., their need to justify their views to others) was experimentally manipulated, then subjects reported their views on three important social issues. A structural analysis revealed that increased accountability led to more complex cognitive processing in that the participants who believed that they were accountable generated more complex opinions. In this study, cognitive complexity served as a valuable way to discover situationally-induced differences in

information processing.

For a different purpose, Winter (1984) has developed a coding system to measure cognitive skills such as flexibility and critical thinking. This system has been used to demonstrate that complex thought has functional utility in an academic setting (see Winter, McClelland, & Stewart, 1981). To investigate the intellectual abilities of liberal art students, he asked them to write a descriptive analysis of two thematic stories. The similarities and differences that were drawn among the two subjects were then examined for complexity. Results demonstrated that a liberal arts education enhanced students' ability to think integratively.

Crockett's (1965) Structural Analysis of the Organization of Written Impressions was used to study impressions written about others. The system consists of a procedure to identify types of differentiated aspects or "constructs" and types of integration or "organization." The system emphasizes how positive and negative aspects are structured within an impression. This system has been used to test hypotheses about generality across domains of content and the development of cognitive complexity within the individual (Crockett, 1965a).

Linville (1985) developed a technique to measure what is called self-complexity. In her view, "the self" is a cognitive representation with multiple aspects, including information about attributes, abilities, roles, traits, etc.

The main difference between Linville's and other systems is that complexity is defined as "the number of nonredundant or distinctive attributes underlying a person's thinking about a domain (p. 97)." In this scheme, the greatest degree of complexity occurs with a large number of totally independent aspects. The lowest degree of complexity occurs with a small number of totally interdependent aspects. Thus, what Linville (1985) terms a high degree of complexity is what most scholars (e.g., Crockett, 1965; Goldstein & Blackman, 1978; Schroder, Driver, Streufert, 1967; Tetlock & Hannum, 1984) term a high degree of differentiation.

The literature review above attests to the fact that many forms of differentiation and integration have been identified in naturally-occurring thoughts as well as controlled cognitive tasks (e.g., Bieri, 1966; Crockett, 1965; Goldstein & Blackman, 1978; Harvey, Hunt & Schroder, 1961; Kelly, 1955; Linville, 1987; Schroder, et al., 1967; Tetlock & Hannum, 1984; Winter, 1984). For convenience, I have classified these components into four categories sorted them into four types according to their common properties. The complete list of references for each type are in the Categories of Complexity coding manual found in Appendix B. First, in its simple form, differentiation, refers to the number of isolated aspects that are perceived in a given stimulus set. Second, more elaborated differentiated thoughts are formed through distinctions, restrictions,

contrasts, and comparisons within a particular set of social stimuli. Third, simple integration refers to the use of an element to amplify the meaning of another. Fourth, more elaborated integrated thoughts are developed through identification of commonalities, causal connections, inter-relationships, and resolutions of discrepancies between elements.

Past research has demonstrated that there are a variety of forms of complexity that allow perceivers comprehend their social environment. In all of these systems, there is the general implicit notion that a more complex construal of the environment can lead to richer thought and behavior patterns. Some of these types have been identified as more "complex" than others (Schroder & Streufert, 1962; Schroder, et al., 1967; Tetlock & Hannum, 1984). I assume, as past researchers have maintained that higher levels of complexity should lead to greater comprehension and thus have greater functional utility for the perceiver. Moreover, while complex cognitive processing facilitates comprehension of the world around us, it is impossible to perceive all the environment has to offer in a complex way. Therefore, complexity must be regulated by certain factors and conditions.

General Motive-Situation Congruence

A congruence between the perceiver's motives and environmental affordances should generally lead to more complex cognitions because differentiation and integration processes can be used to obtain a wide array of goals. For instance, differentiation allows perceivers to see multiple facets of a topic and contrasting characteristics between targets, as well as to draw distinctions and comparisons among social objects. These kinds of cognitions should make social stimuli appear more variable and distinct, which is likely to be asset in sorting and decision-making tasks. In contrast, integration allows perceivers to see common strands of a topic and dynamic relationships within and between targets as well as to see how concepts fit together and resolve discrepancies between attributes. These kinds of cognitions should make social stimuli appear more related and less isolated, which is likely to be particularly useful in tasks involving interdependence and accommodation. Both differentiation and integration processes allow the perceiver to became engaged with the social environment in ways that can lead to greater prediction and control and therefore, greater motive-satisfaction. The congruence or lack of congruence between the perceiver's motives and situational characteristics can, thus, explain the variability in complex

processing among perceivers.

Thus, a higher overall level of complexity of cognitive processing is likely to occur when motives are positively aroused. When the social context is activates the motives of either power- or intimacy-oriented individuals, this hedonically relevant event creates a sense of familiarity and positive affect which allows the individual to acquire more information from the situation and process it an a more complex and productive manner. This complex perception is essential to achieving motive satisfaction.

Specific Motive-Situation Congruence

Within a general congruency model, differentiation and integration can be seen as separate processes that may have differential functional value to social motives. I suggest that differentiation processes may be functionally related to power motivation, while integration processes might be functionally related to intimacy motivation. To consider each of these processes in turn, differentiation is the perception of separation. The differentiation process involves thinking about the ways things differ and the characteristics that make them separate. When the need for power is positively aroused, the situation should be perceived in a more differentiated way. The need to stand out in relation to others can be expressed through the

drawing of distinctions and the perception of a greater number of differences than similarities in power-related stimuli. The need to command, influence, and impact has an adversarial tone. The social stimulus or target is, in a sense, in opposition to the power-oriented individual. Differentiation involves the perception of autonomy that might be part of a competitive strategy. Seeing oneself as different in relation to an opposing object can facilitate such a scheme. The stimulus is different and separate from the perceiver and thus, more able to be viewed in an "objective" and strategic way. In addition, power-motivated individuals tend to enjoy opportunities to make quick decisions that affect others. Differentiation processes can expedite these decision making processes.

In contrast to power motivation, the need for intimacy is characterized by two general themes. The theme of communal concern seems to manifest in the readiness to engage in interpersonal encounters and the ability to enjoy them. This communal awareness or sensitivity may lead those with positively aroused intimacy motivation to perceive more commonalities than differences when construing motive-relevant stimuli. This effect might be manifest in the form of many similarities and fewer differences in the processing and conceptualization of intimacy-related stimuli. The need for communality is expressed through the forming of relationships and similarities. The perception of

similarities and connections between people can be the foundation for gratifying intimacy experiences.

Thus, I expect that differentiation processes are functionally related to power motivation, while integration processes should be functionally related to intimacy motivation. Agentic motives such as the need for power are based on a concern for separateness, autonomy, personal recognition, and competition (Winter, 1973). I reason that because differentiation processes involve special attention to differences rather than similarities, separate rather than collective systems, comparisons between groups, restrictions and exclusions, they may serve to maintain a "separate" cognitive orientation while making decisions, leading, persuading, competing, and influencing others. In contrast, communal motives such as the need for intimacy center on a concern for relatedness, accommodations, empathy, and reciprocity (McAdams, 1980). I expect that because integration processes involve special attention to similarities, generalities that resolve discrepancies and the ways that social objects mutually affect each other, they may help intimacy-motivated people maintain a connected orientation and a readiness to engage in interpersonal encounters involving close and communicative exchange with others and form relationships with others.

In sum, the interaction of personal motives and different social situations is likely to produce different

styles of complex information processing. When motives are positively aroused, specific types of targets or situations are likely to be processed in a more differentiated or integrated way. In many hedonically relevant situations, the perceiver's relationship to the person or target is ambiguous. The situation allows for enough subjectivity for the perceiver to structure the stimuli in a way that reflects his or her underlying motivation. When motives are aroused in these situations, it is likely the perceiver will process the information in ways that will reflect the style or structure of that underlying motive and enhance the situation's potential rewards. Thus, the power-motivated individual may see more differences between themselves and ambiguous, but positively arousing targets, whereas intimacy-motivated individuals may see more similarities between themselves and ambiguous, but positively-arousing targets.

A Model of the Antecedents of Cognitive Complexity

Thus, a model that describes that impact of the interactive characteristics of the person and the situation on the complexity of social impressions has been developed as follows. The perceiver brings personal motives and hedonic concerns to the situation. These motives can interact with situational attributes in ways that to create a motive-arousing experience for the perceiver. Under these motive-

arousing conditions, personal attributes interact with situational attributes in ways that allow the perceiver to acquire more information and be more cognitively active in the situation. This increase in cognitive productivity is reflected in a higher level of cognitive complexity.

When personal attributes do not interact with situational attributes in a way that creates a motive-arousing experience, or if motives are aroused but the person is constrained by the demands of the a highly structured task, the situation will not be processed in a way that involves these special activation mechanisms and therefore will not lead to more complexity information processing.

The final step in the model specifies that differences in the structure of cognitive complexity are based on the functional characteristics of the aroused motives. It is predicted that the structure of the more complex impression will be more differentiated for power-oriented people, while it will be more integrated for intimacy-oriented people.

Overview of the Study

In order to test a set of hypotheses that describe the relationship of cognitive complexity to a set of conditions that determine the hedonic relevance and that different motives influence different aspects of cognitive complexity, I selected individuals who were high in either power or

9intimacy motivation. Social situations were experimentally created that were hedonically relevant to either power or intimacy. Within each social situation, power- and intimacy-motivated individuals were asked to form impressions of two target persons whom they believed they would be meeting later. Their impressions were examined for simple and elaborated forms of both differentiation and integration and as well as the total amount of cognitive complexity.

Hypotheses

Hypothesis I

Individuals in congruent arousal conditions (i.e., individuals with high power motivation and low intimacy motivation scores in power arousing conditions and individuals with high intimacy motivation and low power motivation scores in intimacy arousing conditions) will process their experience at a higher level of overall complexity than those individuals in incongruent arousal conditions (i.e., individuals with high intimacy motivation and low power motivation scores in power arousing conditions and individuals with high power motivation and low intimacy motivation scores in intimacy arousing conditions).

Hypothesis Ia

The congruency effect should be present in both components of complexity: differentiation and integration. Individuals in congruent arousal conditions should process their experience with higher levels of differentiation and integration than those individuals in incongruent arousal conditions.

Hypothesis II

More elaborated forms of complexity should have more functional utility for the perceiver. Therefore, the congruency effect should be stronger for the elaborated forms of differentiation and integration than for the simple types of differentiation and integration.

Hypothesis IIIa

In power arousal conditions, individuals who have a high need for power (i.e., high power-low intimacy) are expected to process their impressions of the targets with greater differentiated complexity than people who score high on the need for intimacy (i.e., high intimacy-low power). Individuals high in power motivation in the power arousal condition should have the most differentiated processing relative to all others.

Hypothesis IIIb

In intimacy arousal conditions, individuals who have a high need for intimacy (i.e., high intimacy-low power) are expected to process their impressions of the targets with greater integrative complexity than people who score high on the need for power (i.e., high power-low intimacy). High intimacy individuals in the intimacy arousal condition should have the most integrated processing relative to all others.

CHAPTER 2

METHOD

Overview of the Procedure

Female and male undergraduates participated in two experimental sessions which were described as research concerning "how imagination affects social impressions." In the first session, they wrote six TAT stories. In the second session, subjects high in intimacy or power motivation watched a videotape of two students conducting a peer interview. They were told to imagine that they were a psychologists who were looking for a research assistant to help them in their work. Their job was described as one relating to power or intimacy motivation. In addition, in order to increase their arousal further, they were told that they would be role-playing with one of the targets later. After they viewed the videotape, they were asked to write a thoughtful paragraph describing their choice of the person who they thought was best suited for the job. Their responses were coded for cognitive complexity including simple and elaborated forms of differentiation and integration.

Subjects

Introductory psychology students from the Michigan State University subject pool participated in the study. All subjects received class credit for their participation.

In order to complete the data-gathering phase of the study in one term, a large group of approximately 400 subjects were pre-tested for power and intimacy motivation. From this large sample, distributions of power and intimacy scores were examined and selection criteria as described below were derived for high-intimacy, low-power and high-power, low intimacy. Subjects whose TAT scores did not meet these criteria performed tasks unrelated to this study for the second session so they could receive the same amount of class credit for their participation. 108 subjects participated in the experimental session and approximately 300 subjects participated in a different, unrelated second session.

The First Session

The first session involved administering the Thematic Apperception Test to find individuals who were high in power and low in intimacy motivation or high in intimacy and low in power motivation. Subjects participated in groups of 20 to

60 persons in a neutral classroom setting. The experimenter greeted the subjects and gave them the following instructions:

"Today you will be participating in a study about social impressions that is in two parts. In this session, you will write some imaginative stories to pictures. Then we will call your back in a couple weeks and arrange a convenient time for you to participate in the second session. During the second session, you will participate in other social impression tasks. Please read the consent form and sign it if you would like to participate in the study." (See Appendix A).

The consent forms were collected and the TAT booklets were passed out. The experimenter read aloud the instructions on the TAT cover sheet (see Appendix A).
All subjects were shown 6 TAT slides that were projected on to a large screen. These slides have been used in past research because they potentially cue power and intimacy motives (McAdams, 1984). These pictures include the following:

1. Two people sitting on a park bench near a river.
2. A man sitting at a desk upon which sits a photograph of a family.
3. A (male) ship's officer conversing with another man.
4. Two (female) scientists in a laboratory.

5. A man and a woman on a trapeze.

6. An older man, a younger woman, a dog, and horses walking through a field.

Pictures (1) and (2) can be found in McClelland and Steele (1972) and (3), (4), (5) and (6) can be found in McClelland (1975).

All subjects were shown the same six pictures in the same order under neutral classroom conditions. The testing followed the standard group administration procedure and standard instructions typically used in this type of assessment (Atkinson, 1958). Each picture was projected onto the screen for 20 seconds. Subjects then had five minutes to write each story. All subjects wrote their stories in a booklet composed of a cover sheet and six blank pages. (An example of the TAT booklet can be found in Appendix A.) All subjects were shown the 6 slides in the order used in previous studies (e.g. McAdams, 1982, 1988; McAdams, Lester, Brand, McNamara & Lensky, 1987; McClelland, 1985).

After all the TATs were shown and participants had written all six stories, they were thanked and reminded that they would be called for the second session in approximately two weeks.

Classification of Subjects into Power and Intimacy Motivation Groups

The Thematic Apperception Tests for the need for intimacy (McAdams, 1984) and the need for power (Winter, 1973) were selected as the most direct way to test the hypotheses because the hypotheses were broadly derived from the literature that uses TATs to study these complex motivations. Coders were trained in the assessment of power and intimacy motivation through coding manuals (McAdams, 1984; Winter, 1973). These detailed manuals explain the coding procedures and provide practice stories that allow coder's to compare their scores with an "Expert Scoring" key. All coders achieved a reliability of r = .90 or higher before scoring the stories written by subjects in the study. Their reliability scores were computed by correlating the coders scores with the expert coding provided in the manual for the practice stories.

The TAT protocols were scored by these coders in a two-step procedure that included an initial screening and then a final selection to determine the final sample of subjects who manifested the two motives most strongly. From these scores, separate distributions were derived for males and females on each motive. Sixty-three persons whose motive scores were in the top third on one motivation and the lower

half on the other were selected for participation in the experiment. Females had the following scores: high power = 7-17, low intimacy = 0-6, low power = 0-6, and high intimacy = 7-24. Males had the following scores: high power = 7-19, low intimacy = 0-6, low power = 0-6, and high intimacy = 5-11.

To examine if, in fact, the distributions of motive scores were equal across arousal conditions, 2(motive) X 2(condition) X 2(sex) ANOVAs were performed on the power and intimacy motivation scores. This analysis revealed only one effect that was significant: the Motive X Arousal Condition interaction for power scores: Subjects high on power motivation in the power condition had higher power motive scores than subjects high on power in the intimacy condition. To equate the power motive scores across the conditions, three subjects with extremely high power motivation scores were dropped from the final sample. This sample of 60 subjects whose data were used to test the hypotheses. Note, however that data analyses that included these three subjects yielded the same results as the analyses reported below.

The Manipulation of Power and Intimacy Arousal

The manipulation of power and intimacy arousal in a laboratory setting entails some special considerations. First, power and intimacy seem to be opposing, and at the

very least orthogonal social orientations: Situations that engage power motivation will generally not engage intimacy motivation and vice versa. An experimental situation had to be devised that would generally appeal to both power- and intimacy-motivated individuals. Since both power and intimacy are "social" motives in that motive satisfaction can be found in social settings, situations involving people could be potentially engaging for both groups of individuals. Secondly, the experimental situation had to be created in which all aspects of it could be held constant except for the arousal manipulation. And lastly, it was imperative that the experimental situation be powerful enough to arouse these motives in subjects and keep them aroused during the time that the dependent measure was taken.

A social situation was selected in which the subjects watched a videotape of two undergraduate students interviewing each other for a job as a research assistant in the psychology department. This videotape was constructed to be especially interesting and relevant to the undergraduate experience. A decision task was chosen as the best way to obtain the dependent measure. The subjects were to chose the target they felt was most suitable for the job. The situation demanded that the subjects make a decision and justify it.

To increase involvement even more, subjects were told they would be actually meeting one of the targets on the

videotape. The subjects knew that the targets were in fact waiting in the next room. It seemed that having at least one of the targets physically present made the experimental manipulation much more powerful and believable.

Once issues of general involvement were dealt with, the differential arousal power and intimacy motivation was considered. The general theme of "using your imagination" was chosen as a plausible way to engage subjects and give the experiment a sense of continuity from the first to the second session. Thus, subjects were instructed that they would be using their imaginations by thinking of themselves as a psychologist who was viewing the videotape looking for a research assistant. They were also told that they would be acting in the role of a psychologist when they actually met one of the targets. Subjects were given descriptions of "the type of psychologist we would like you to be." As described below, in the intimacy arousal condition, subjects were given a description related intimacy and in the power condition, subjects were given a description related to power.

This approach had several advantages. First, by merely changing the description of the psychologist the rest of the experiment remained constant. The descriptions were equally balanced so that they had an equal "strength" or salience to the subject. The arousal was further augmented by the subjects believing they would be interacting with one of targets in an intimacy or power "role." I expected that the

role descriptions were powerful enough to arouse subjects' motivations and at the same time, did not impose too much control or structure on them so that they did not show reactance or fall into "scripted" behavior, but were free to choose to become more or less engaged.

The Selection of the Impression Task

To obtain a sample of cognitions under motive-arousing conditions, a task was required that was unstructured enough to allow the subjects' to form their own impressions in a subjective way but still required more than just a superficial level of cognitive processing.

A decision-making task was most suitable because it required subjects to make a choice and justify it. Thus, in the experiment, subjects were asked which of the two targets was more suitable for the job. They were asked to put their names on their responses but were not explicitly informed whether or not the targets would see their answers. The instructions on the impression information task were designed to get subjects to think in a thoughtful way and to encourage them to use different sorts of information from the videotape and job description in different ways without giving them specific guidelines of how to structure their decision.

Subjects wrote a response to the following question during a 10-minute period:

> Think about what you have seen of Eric and Kim. Think about the kind of job we have described. Since both people and jobs are complex and hard to pigeon-hole, they need to be thought of in relation to each other in different ways and on different levels. Take a moment or two to gather your thoughts and then decide who is most suitable for the job. What kinds of qualities and behaviors were shown on the videotape that lead you to believe that this person is the best for the job? Please carefully state your reasons for taking this position.

Videotape Presentation of Target Persons

A 17-minute videotape that was composed of segments of the same female and male undergraduate conducting various stages of the peer interview and working on a task together. These two actors were chosen because they appeared to be in similar appearance, size, attractiveness, pleasantness, and intelligence. The two actors had conducted a series of peer interviews and interactive tasks. From this sample of approximately 6 hours of videotape, segments were edited to create a videotape in which both actors performed the interview and related tasks with equivalent competency and equal participation. The tasks were performed to be balanced, containing equal amounts of power and intimacy behavior. In making this videotape, students studied an outline describing initiation and affiliation behaviors derived from the Interaction Process Analysis (IPS) coding systems (Bales, 1950; Borgatta & Crowther, 1965). This

outline provided suggestions for demonstrating initiation and affiliation behaviors in the interview context. The final videotape was edited to be used in the experiment.

To insure that the actors did not differ in the amount of power or intimacy behaviors, the videotape was coded by two assistants trained in the use of the Interaction Process Scores (IPS) system for analyzing interpersonal behavior (Borgatta & Crowther, 1965). Power-oriented behaviors, defined by the initiation axis of the IPS system, included the following categories: (4), acknowledges, understands, recognizes; (6), procedural suggestion; (7), suggests solution; (8), gives opinion; (11), gives orientation; (12), draws attention; (13), asks for opinion, and (14), disagrees. As expected, there was not a significant difference, t (7) < 1, in the amount of initiative behaviors between the two actors.

The intimacy behaviors, defined by the affiliation axis of the IPS system, included the following scoring categories: (1), social acknowledgment; (2), shows solidarity through raising the other's status; (3), shows tension release, laughs; and (5), shows agreement, concurrence, compliance. As expected, there was not a significant difference t (3) < 1, in the amount of affiliation behaviors used by the two actors. Inter-coder reliability was high, r = .98 for the combined initiation and affiliation categories.

Design

The design of this experiment consisted of three independent variables, each with two levels each. The study was a 2(power versus intimacy motive) X 2(power versus intimacy arousal condition) X 2(female versus male subjects) factorial design with a minimum of five subjects per cell.

Procedure of the Experimental Session

Subjects high on power or intimacy motivation were called for the second one-hour session. Assistants to the experimenter who were unaware of the motive orientation of the subjects scheduled them to participate in groups of two. Motivation and sex of subject were not controlled in the scheduling of the experimental groups.

Each group of two was randomly assigned to either the power or intimacy condition. The experimenter was blind to subjects' motivation throughout the experiment. The experimenter greeted the participants. She explained that the experiment room, which was a small room containing a table and two chairs and some plants, was being used to make videotapes for an interview tape library for students of industrial and organizational psychology to practice and learn about interviewing. Although the room also contained a camera, the participants were assured that their session

would not be videotaped. It was demonstrated that the lens cap was on the camera.

Subjects were told the session would be in two phrases. First, they would watch a videotape of two people named Kim and Eric conducting what is called a peer interview. After they watched the tape, they would be asked a question and given about 10-minutes to write out their thoughtful responses. In the second phase, they were told they would be doing a role-playing exercise in which they would be randomly paired with either Kim or Eric. At this point, the experimenter mentioned that either Kim or Eric had stepped out and should be back soon. After role-playing with one of the targets, they would again be asked their impressions. The experimenter explained that the study was concerned with how the impressions that people form of others on a videotape differ from the impressions they form in real life. The experimenter then asked if there were any questions.

The experimenter then gave the following arousal orientation: "As you know in the first session, we were interested in your imaginative skills--we asked you to write some imaginative stories to pictures. In this session, we are also like you to use your imagination in two ways. First, as you are watching the videotape they would like you to imagine that you are a psychologist who is looking for a research assistant. As you know from your coursework, there are many different kinds of psychologists and they do various

things in their work. Here is description of the type of psychologist that we would like you to be:

[power description] You are a psychologist who is looking for a research assistant. In your job, you are a leader. As a psychologist, you are required to give many speeches and lectures and convince students to become interested in psychology. You are also expected to negotiate with other staff members for research funding and other resources.

Your role as interviewer involves a sense of knowing how to make important decisions that affect others. You have a great deal of decision-making power. You must be able to decide if a person's right for a job, make evaluations of others and give them instructions. Take a moment to imagine yourself in this role."

[intimacy description] You are a psychologist who is looking for a research assistant. In your job, you are a socially-sensitive person. You have the ability to draw people out and understand their needs. As a psychologist, you are required to facilitate small group discussions for an ongoing study of self-disclosure and friendship processes. You are expected to work together and share ideas with others.

Your role as interviewer involves getting on the same wavelength with prospective employees to find out what kind of person will be compatible with a sensitive nature of the job. Take a moment to imagine yourself in this role."

The experimenter asked again if there were any questions. As the experimenter turned to start the videotape, either Eric or Kim knocked on the door, opened it and said "Kim's (or Eric's) here." The experimenter replied "Ok, thanks." and began the tape and left the room.

After the tapes were viewed, the experimenter returned and read aloud the paragraph completion instructions. These instructions can be found in the previous section on selecting an impression formation task. Subjects were allowed ten minutes to write their responses. Then the

paragraphs were collected and subjects filled-out the Role-Playing Questionnaire (i.e., a suspiciousness questionnaire to insure that subjects really believed they would be meeting one of the targets. See Appendix A).

Debriefing Period

After the subjects filled-out the suspiciousness questionnaire, they were informed that they would not be role-playing with the targets after all. Instead, they were told about the nature of the experiment. Subjects were told that the experiment was really about how people's attitudes, concerns, and motivations affect their perceptions of others. It was explained that the imaginative stories that subjects wrote in the first session were used to study the concerns and motives of students. By examining their decisions of the best job candidate, the researchers will be able to see how their opinions related to their personal concerns and motivations. The subjects were told that it was necessary to tell them they would be meeting either Kim or Eric so that they would feel they had a personal stake in the decision making. The experimenter apologized for having to use deception and explained more generally why deception is sometimes necessary in psychological research. She then asked if there were any questions and gave them credit for their participation.

The Selection of an Instrument to Measure Cognitive Complexity

An impression formation task was used as a means of obtaining a sample of cognitive complexity. As people form impressions of others, they must select a relatively small amount of information and structure it in a way that can be understood. An impression is a representation of the cognitive structuring of an event, person, topic, or situation.

In order to study the complexity of impressions formed by individuals with high power and intimacy motivation, it was desirable to have a coding system that (a) is related to structure rather than content, (b) can generate separate differentiation and integration scores, (c) is more discriminating than a global rating, and (d) can obtain simple and elaborated levels of both differentiation and integration.

In reviewing a wealth of previously developed coding systems, it appeared that all of them met some the requirements but no single coding system that met them all. To consider each requirement in turn, the construct of complexity refers to the structure of information rather than its content. Therefore, it is desirable to use a system that is as content-free as possible. The problem is that the

content-free systems such as Tetlock & Hannum's (1984) integrative complexity coding system and Winter's (1984) Test of Thematic Analysis were generally created to code material such as political speeches and scholarly writings. By comparison, the social impressions from this study are at a much lower baseline level of complexity so that this type of coding system would not have much discriminating power. That is, all of social impressions would be scored as having a low degree of complexity with these systems.

On the other hand, the coding systems that have been used to examine person impressions and descriptions (Crockett, 1965; Peevers & Secord, 1971) are strongly based on content. For instance, these systems are concerned with how positive and negative attributes are dealt with in an impression. In studying both types of coding systems, however it became possible to derive a system that contained the structural components of the Tetlock & Hannum (1984) and Winter (1984) systems that was relevant to person impressions.

In addition, my system was developed so that differentiation and integration could be considered as separate cognitive processes. In the systems of measurement employed by Tetlock (1983) and Schroder, Driver & Streufert, (1967), integration is dependent on differentiation such that there cannot be a high level of integration without a high level of differentiation. These coding systems consist of a

7-point Likert scale ranging from low differentiation, low integration to high differentiation, high integration. In this framework, it is not possible to assess differentiation and integration separately and there is no category for low differentiation, high integration. In fact, a review of other coding manuals of cognitive complexity (Woike, 1989) found that no previous system has dealt with the categories of differentiation and integration separately. The closest exception to this finding is a study of ideological reasoning by Tetlock (1986) in which each response was given a global rating for differentiation and a separate global rating for integration. For the hypotheses of this study to be tested, it was necessary to obtain separate scores for differentiation and integration.

Thirdly, it was also preferable to obtain a frequency measure of differentiated and integrated responses rather than global ratings. Frequency measures of the presence of differentiated and integration structures provide a more precise representation of the psychological variable under investigation. Therefore, a main objective of the coding system I have derived was to create a technique to obtain frequency measures of these separate categories from the same psychological variable.

The fourth consideration was the possibility of obtaining different levels of complexity within differentiation and integration. Other coding systems that

used frequency measures (Crockett, 1965; Winter, 1984) gave different "weights" to their categories to indicate that they were more or less complex or important relative to the other categories. Making the decision not to use global ratings left merely a gross frequency measure. As the subcategories of differentiation and integration were derived, it became clear that some subcategories were more complex than others but there was no clear basis to make finely weighted discriminations. Therefore, by using the Schroder, Driver & Streufert (1967) distinction of "simple versus complex," differentiation and integration were each divided into two levels. Simple differentiation refers to the naming of different aspects or attributes in the impression and complex (or elaborated) differentiation refers to the process of making distinctions and differentiated comparisons among stimuli. Simple integration refers to forming simple links between previously mentioned aspects of the impression and complex (or elaboarated) integration refers to the description of dynamic relationships and complex connections between stimuli.

Sample for Construction of the Cognitive Complexity Measure

An additional group of 60 subjects participated in a modified version of the experimental second session. Groups

of 8 to 12 subjects watched the same videotape that was used in the experiment. These subjects were instructed to imagine that they were psychologists who were looking for a research assistant and they were given either the intimacy or power arousal description. However, they were not told they would be role-playing with the targets. They wrote responses to the same question as the experimental group.

This sample of approximately 60 paragraphs was used to derive the categories of differentiation and integration. This system sought to employ previously created structural categories of complexity that were relevant to my sample. That is, I wanted to capture how differentiation and integration processes were used in this particular decision-making task.

Some examples from these paragraphs were used to create a coding manual that was written to teach coders how to score the paragraphs from the experimental session. Below is an outline of the categories of complexity. The complete coding manual can be found in Appendix B.

Outline of the Categories of Complexity

Differentiation

Differentiation is the process of focusing on differences between and within a given stimulus group. The

differentiation process involves special attention to (a) differences rather than similarities, (b) the ways in which people and objects can be perceived separately rather than collectively, (c) the features that can be used to make distinctions between and among stimulus groups and (d) the exclusions, restrictions and contrasts that can be made within a stimulus set.

1. Simple Differentiation

(A) A new aspect of a given subject is one that is different and relatively unrelated to any aspect mentioned in any previous statement. This concept is central to many theorists' notions of complexity. For instance, it is called "aspect" in Linville's (1985) work on self-complexity. A similar concept is used by Tetlock (1984), Winter (1984), Peevers and Secord (1973), Schroder & Streufert (1962), and Crockett (1965). Sometimes new aspects are further defined by a context. For instance, the perceiver may state, "Eric is a good leader." Or she may state "Eric is a good leader in group activities."

2. Elaborated Differentiation

(A) Relative comparison refers to a comparison of relative standing between two subjects, objects or targets on some

dimension on which they are perceived as being unequal. Words such as "more," "better," or "best" signify that two or more targets, subjects or objects are perceived as unequal on some dimension.

(B) Contrast refers to a comparison of two opposing aspects. The perceiver sees the target(s) as being different from other target(s) or object(s) through the use of contrasting aspects that may be (a) on a bipolar dimension (e.g. dominant/submissive; active/passive), or (b) uni-dimensional opposites (e.g. masculine/feminine), or an aspect and its negation (interested in sports/not interested in sports; intellectual/not intellectual).

(C) Restriction of meaning refers to a statement that restricts, makes more precise or delimits another statement. The central idea is that these restrictive statements and phrases confine aspects and structures to a particular context, situation, perspective, condition, or criteria rather than merely providing additional meaning to a statement.

Integration

Integration refers to a way of perceiving and forming impressions that includes larger structures. The central feature of the integration process is the presence of connections or links between stimuli that has been differentiated (Schroder, Driver, & Streufert, 1967; Tetlock, 1984), at least to some degree. The perceiver does not stop with a list attributes, but continues to form an impression that is more whole, integrated, and interconnected. The integration process involves special attention to (a) similarities and congruencies within and between differentiated stimuli, (b) relationships between targets and objects, and (c) how targets and objects influence and affect one another. In this manual, integration is divided into 5 discrete categories.

1. Simple Integration

(A) Supporting aspect refers to an attribute that is linked or some how related to a previous aspect. Instead of perceiving attributes of the target as separate entities or delimiting information, the perceiver builds or links two aspects together by using a commonality that expands the meaning. In the following example, the second sentence

supports the first sentence: "Kim seems very well-rounded. She describes herself as being busy with a variety of activities."

2. Elaborated Integration

(A) Causal links refer to the perception of a dynamic relationship between targets or subjects. The perceiver views these features of the stimulus set as dynamic or interacting with one another rather than existing in isolation.

Subcategories:

(1) Dynamic relationship between the targets (e.g. "Kim seemed to put Eric at ease.")

(2) Dynamic relationship between the target(s) and perceiver (e.g., "Kim made me feel that I could really trust her."

(3) Possibility of Interaction with the Target(s) (e.g., "If Eric were my assistant we probably wouldn't get along well.")

(4) Simple Causal Links (not directly related to the target influence) (e.g., "The job interview made them nervous.")

(B) Similarity refers to the perception of commonality between two targets. The targets are described as sharing a

common attribute or a common experience. For example, "They both enjoyed sports."

(C) Matching Characteristics refers to integrating the information provided by the job description with the characteristics of the target(s). The perceiver explains how aspects of the target(s) are congruent or incongruent with the job characteristics. For example, "Kim shows initiative which will definitely help her in this position."

(D) Resolution of the impression is characterized by (1) the statement of choice for the job, then (2) stating attributes of the target(s), reasons, observations and opinion that are related to that choice and then (3) concluding the impression by resolving these differentiated attributes, reasons, etc with the choice restated in a way that provides the impression with a central theme.

Coding the Impressions

Three independent coders were trained to code the impressions for differentiation and integration with the Categories of Complexity scoring manual (Woike, 1989). All three coders achieved at least .80 reliability for the total complexity, differentiation and integration scoring categories on the practice materials. Reliability was

determined by comparing their scores with the expert scoring key of the practice paragraphs.

In coding the paragraphs from the experiment, trained coders followed the procedure outlined in the coding manual, see Appendix B. Coders were assigned to work in three coder pairs so that each paragraph was scored by two independent coders. Table 1 shows the inter-rater reliabilities for the categories of complexity. If there were large disagreements, the paragraph was given to the third coder and the mean of the two scores in closest agreement were used for the analysis. In a few cases, all three codings were discrepant from each other. In those cases, all three scores were used. Table 2 shows the inter-rater reliabilities after recoding. The scores for each subject on the categories of complexity were derived by taking the mean of the coders' scores after recoding. It should be noted that a few of these scores were lower on the recoding than on the first coding, but for the most part the recoding improved the reliability scores.

Table 1

Inter-rater Relabilities for the Categories of Complexity Before Recoding

Category	Mean	Range
Total Complexity	.88	.82 - .96
Total Differentiation	.80	.73 - .93
Total Integration	.87	.79 - .94
Simple Differentiation	.77	.69 - .85
Complex Differentiation	.83	.75 - .94
Restriction	.24	.00 - .54
Relative Comparison	.71	.37 - .93
Contrast	.57	-.04 - .95
Simple Integration	.73	.61 - .80
Complex Integration	.79	.62 - .91
Causal Links	.74	.64 - .80
Similarities	.89	.81 - .96
Matching	.73	.57 - .85
Resolution	.47	.17 - .75

Table 2

Inter-rater Relabilities for the Categories of Complexity After Recoding

Category	Mean	Range
Total Complexity	.91	.87 - .97
Total Differentiation	.86	.82 - .90
Total Integration	.85	.83 - .87
Simple Differentiation	.81	.78 - .84
Complex Differentiation	.84	.80 - .91
Restriction	.30	.17 - .46
Relative Comparison	.84	.71 - .91
Contrast	.54	.29 - .80
Simple Integration	.67	.59 - .76
Complex Integration	.82	.79 - .87
Causal Links	.68	.60 - .73
Similarities	.88	.84 - .94
Matching	.74	.71 - .78
Resolution	.37	.31 - .45

CHAPTER 3

RESULTS

The Psychometric Properties of the Cognitive Complexity Measure

Since this particular combination of categories has not been used before to measure differentiation and integration processes, it is informative to examine the psychometric properties of this measure of cognitive complexity. Analyses were performed to obtain descriptive statistics, correlations and internal reliabilities on the components and subcategories of cognitive complexity.

For these analyses, as well as the tests of hypotheses, both differentiation and integration components of complexity were divided into simple and elaborated (or complex) categories. Table 3 presents the descriptive statistics for the major components of cognitive complexity. Inspection of the means reveals that, on average, total differentiation scores are about twice the amount of total integration scores. Simple differentiation (the total number of separate attributes mentioned) makes up over a third of the total differentiation score. For integration, the simple and

complex components are approximately equal.

Table 4 shows the relations among these major components of complexity. Most notably, simple differentiation and simple integration are significantly related (r = .27, p. <.05). This relationship indicates that the more simple components of cognitive complexity occur together in impressions, but the more complex components do not occur together in impressions, as indicated by the lack of a significant correlation between complex differentiation and complex integration. The other significant correlations are between total differentiation and simple integration (r = .29, p. < .05) and total differentiation and between total integration (r = .23, p. < .10). These correlations are influenced by the relationship between the two simple components of cognitive complexity as they make up a good deal of the total scores.

To take a closer look at differentiation and integration, I begin with the descriptive statistics on differentiation presented in Table 5. There is one category of simple differentiation and three categories of elaborated differentiation. By examining the range and means, it appears that relative contrast and contrast are the primary subcategories that make up elaborated (or complex) differentiation. The restriction subcategory has a very low frequency.

Table 6 shows the correlations among the subcategories

of differentiation. Simple differentiation is significantly related to one subcategory of elaborated differentiation, contrast. This correlation between contrast and simple differentiation differs from zero at the $p < .001$ level of significance. The reason for the relationship is that a contrast is typically (although not always) made up of new aspects which are scored as simple differentiation. The other two subcategories of elaborated differentiation are not significantly related to simple differentiation. In addition, there no significant relationships among the subcategories of elaborated differentiation. This lack of association may be due to the fact that different aspects of the differentiation construct are being tapped.

The descriptive statistics for the subcategories of integration can be found in Table 7. The largest subcategory of integration is simple integration. As indicated by the range and standard deviation, simple integration scores appear highly variable. Inspection of the means indicates that the subcategories of complex integration occur infrequently. However, by looking at the range and variability of the scores, it appears that some subjects used these categories a great deal more than other subjects. Given the hypotheses, this is a potentially promising finding. As an aside, it should be noted that resolution was scored for its presence or absence, therefore zero and one are the only possible scores for each paragraph.

The correlations among the subcategories of integration are presented in Table 8. There are some statistically significant relationships among the subcategories of elaborated integration. Notably, there was a strong correlation between matching and resolution ($p < .001$). This finding suggests that many subjects that matched the job characteristics with the attributes of the target(s) also used this information to give their impression a central theme. There are also marginally significant relationships between simple link and dynamic relationship with perceiver (DRP) ($p < .05$), between simple integration and dynamic relationship between targets (DRT) ($p < .06$), and between simple integration and simple link ($p < .10$).

In general, the correlations among the subcategories of differentiation and integration were anticipated to be higher. However, the primary goal in developing this coding system was to create a comprehensive measure that could capture unique differentiation and integration processes in a brief description. Essentially, I sought to include a number of nonredundant categories which people use to express a given mode of information processing. The measure has content validity in the sense that it truly represents a wide range of differentiation and integration processes found in the impressions formed in this experiment. In addition, these categories were developed by relying heavily on previous instruments designed to measure the construct of

cognitive complexity (or abstract thought).

In my review of these coding materials (Woike, 1989), I have not found tests of internal consistency for these measures. Therefore, it might be informative to do such analyses. Cronbach's (1951) coefficient alpha was employed to determine the measure's internal consistency. The alpha coefficient on whole complexity measure (including the four differentiation and eight integration subcategories) was .08; the standardized item alpha was .44. The internal consistency of the differentiation and integration components was tested separately. The alpha coefficient for the four subcategories of differentiation was .35; the standardized item alpha was .40. The alpha coefficient for the eight subcategories of integration was .01; the standardized item alpha was .32. These alpha coefficients were lower than anticipated. They revealed no clear basis to regroup, drop, or add categories. Therefore, the a priori groupings of cognitive complexity that were specified previously were used to test the hypotheses as there was no basis to do otherwise.

Table 3

Descriptive Statistics for the Major Components of Cognitive Complexity

Variable	Mean	Std. Dev.	Range
Simple Differentiation	7.2	3.0	1 - 14
Elaborated Differentiation	2.9	1.9	0 - 9
Total Differentiation	10.1	4.1	3 - 22
Simple Integration	2.8	2.1	0 - 9
Elaborated Integration	2.5	1.8	0 - 6
Total Integration	5.4	3.0	0 - 12

Table 4

Relations Among the Major Components of Cognitive Complexity

	Simple Integration	Elaborated Integration	Total Integration
Simple Differentiation	.27	.00	.19
Elaborated Differentiation	.19	.11	.19
Total Differentiation	.29	.05	.23

Table 5

Descriptive Statistics for the Subcategories of Differentiation

Variable	Mean	Std. Dev.	Range
Simple differentiation	7.2	3.1	1 - 15
Elaborated Differentiation			
Relative Contrast	2.0	1.5	0 - 7
Contrast	0.9	1.0	0 - 6
Restriction of Meaning	.09	.25	0 - 1

Table 6

Relations Among the Subcategories of Differentiation

	1.	2.	3.	4.
1. New Aspects	---	.07	.51	.14
2. Relative Contrast		---	.14	.10
3. Contrast			---	.15
4. Restriction				---

Note: New Aspects are equivalent to simple differentiation.

Table 7

Descriptive Statistics for Subcategories of Integration

Variable	Mean	Std. Dev.	Range
1. Simple Integration	2.9	2.12	0 - 9
Elaborated Integration			
2. Dynamic Relationship between Targets	.19	.49	0 - 3
3. Dynamic Relationship with Perceiver	.12	.35	0 - 2
4. Potential Interaction	.24	.54	0 - 3
5. Simple Links	.17	.38	0 - 2
6. Similarity	.63	1.00	0 - 5
7. Matching	.90	.98	0 - 4
8. Resolution	.29	.37	0 - 1

Table 8

Relations Among Subcategories of Integration

	1.	2.	3.	4.	5.	6.	7.	8.
1. SA	---	.25	.07	-.07	.22	.05	.11	.14
2. DRT		---	.07	-.08	.05	.02	-.05	-.08
3. DRP			---	-.13	.26	.06	-.16	.01
4. PIT				---	-.09	-.04	.11	.17
5. SL					---	.08	.14	.16
6. SIM						---	-.16	-.05
7. M							---	.54
8. RES								---

The key to abbreviations is as follows:

1. Supporting Aspects (i.e., simple integration)
2. Dynamic Relationship between Targets
3. Dynamic Relationship with Perceiver
4. Potential Interaction
5. Simple Links
6. Similarity
7. Matching
8. Resolution

Testing the Hypotheses

Hypothesis I: The Effects of Motive Arousal on Cognitive Complexity

Hypothesis I predicts that individuals in arousal conditions that are congruent with their motivations will process their experience at a higher level of overall cognitive complexity than individuals in arousal conditions that were incongruent with their motivations. Specifically, it was predicted that power-motivated individuals will have a higher level of overall cognitive complexity in the power arousal condition than power-motivated individuals in the intimacy arousal condition. Similarly, it was predicted that intimacy-motivated individuals have show a higher level of overall cognitive complexity in the intimacy arousal condition than intimacy-motivated individuals in the power arousal condition. Hypothesis I was examined by an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on the total complexity scores (the sum of the total differentiation and the total integration).

Inspection of Table 9 which presents the planned comparisons, reveals a significant main effect for condition on total complexity. It appears that individuals in motive-

congruent arousal conditions did in fact have a higher level of cognitive complexity. The lack of significant interaction indicates that the congruency effect was demonstrated with both motives. Therefore, Hypothesis I was strongly supported.

Hypothesis Ia: The Effects of Motive Arousal on Differentiation and Integration Processes

Hypothesis Ia predicts that individuals in arousal conditions that are congruent with their motivations will process their experience at a higher level of both differentiation and integration than those individuals in arousal conditions that were incongruent with their motivations. Specifically, it was predicted that power-motivated individuals will have a higher level of differentiation and integration in the power arousal condition than power-motivated individuals in the intimacy arousal condition. Similarly, it was predicted that intimacy-motivated individuals will have a higher level of differentiation and integration in the intimacy arousal condition than intimacy-motivated individuals in the power arousal condition.

Hypothesis Ia was examined by an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on total differentiation (the

sum of the simple and complex differentiation scores) and by an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on total integration (the sum of the simple and complex integration scores). Then, planned comparisons were performed within the framework of the motive X congruence design. The results of these planned comparisons can be found in Table 9.

Inspection of Table 9 reveals that a marginally significant main effect was found for arousal condition on differentiation. It appears that individuals in motive-congruent arousal conditions did in fact have a higher level of differentiation than those in incongruent arousal conditions. Inspection of Table 9 further shows that there was a main effect for arousal condition on total integration. It appears that individuals in motive-congruent arousal conditions did in fact have a higher level of integration than those in motive incongruent arousal conditions. Therefore, these results lend further support for the congruency hypothesis and suggest that a closer examination of both differentiation and integration processes may be enlightening.

Table 9

Means for the Total Categories of Complexity in Motive-Congruent versus Motive-Incongruent Conditions

	Condition			
Complexity	Congruent	Incongruent	t	p.≤
Total Complexity	16.71	13.54	2.14	.02
Total Differentiation	10.68	9.18	1.34	.10
Total Integration	6.03	4.36	2.12	.02

Hypothesis II: The Effects of Motive Arousal on Simple and Elaborated Differentiation and Integration Processes

Hypothesis II predicted that individuals in arousal conditions that are congruent with their motivations will process their experience with more elaborated differentiation and more elaborated integration than those individuals in arousal conditions that were incongruent with their motivations. This effect should be evident by separately examining the simple and elaborated or complex processes of differentiation and integration. Specifically, it was predicted that power-motivated individuals will show more complex differentiation and more complex integration in the power arousal condition than power-motivated individuals in the intimacy arousal condition. Similarly, it was predicted that intimacy-motivated individuals will show more complex differentiation and more complex integration in the intimacy arousal condition than intimacy-motivated individuals in the power arousal condition.

Hypothesis II was examined by analysis of variances for power versus intimacy motivation and congruent versus incongruent arousal condition on simple differentiation, simple integration, elaborated differentiation, and elaborated integration. Then, planned comparisons were performed within the framework of the motive X congruence design.

Inspection of Table 10 reveals that there is no significant main effect for congruency on simple differentiation. It appears that the congruent arousal condition did not effect simple differentiation. This finding is interesting because total differentiation is made up of two-thirds simple differentiation which accounts for the only marginally significant main effect for arousal condition on total differentiation (see Table 9). Further inspection of Table 10 reveals a significant main effect for arousal condition on complex differentiation. It appears that individuals in motive-congruent arousal conditions did in fact show a higher level of complex differentiation than those in incongruent arousal conditions. Inspection of Table 10 further reveals that there was a main effect for arousal condition on the subcategories of relative contrast and contrast. The congruency effect on the third category of complex differentiation, restriction was not significant. This finding is probably influenced by the fact that this response occurred with such low frequency. Thus, it appears that under congruent arousal conditions, subjects tended to make more comparisons of relative standing between the targets and more comparisons using opposing attributes. These results strongly support Hypothesis II on elaborated differentiation processes.

The results of the analyses on integration are found in Table 11. There is only a marginally significant main effect

for congruency on simple integration. It appears that the arousal condition did not affect simple integration as strongly as complex integration, since there is a significant main effect for arousal condition on complex integration. It appears that individuals in motive-congruent arousal conditions did in fact show a higher level of complex integration than those in incongruent arousal conditions. Inspection of Table 11 further reveals that there was a main effect for arousal condition on the subcategory of causal links. The other subcategories of complex integration (i.e., similarities, matching and resolution) were not significant individually, but the means are in the predicted direction. This pattern of findings could be influenced by the fact that these subcategories occur with such low frequency. Thus, it appears that under congruent arousal conditions, subjects tended to perceive more dynamic relationships between the targets or attributes of the targets. These results strongly support Hypothesis II on elaborated integration processes.

In general, the findings strongly support the congruency hypotheses which predict that individuals in motive-congruent conditions will process their experience with more complex differentiation and more complex integration. All the means of all subcategories were in the direction of the hypotheses. These directional findings also appear in the simple and complex components of differentiation and integration. As predicted, the congruency effect was stronger for the more

complex or elaborated components of differentiation and integration.

Table 10

Means for the Subcategories of Differentiation in Motive-Congruent versus Motive-Incongruent Conditions

	Condition			
Differentiation	Congruent	Incongruent	t	p.≤
Simple Differentiation	7.30	7.07	0.28	ns.
Elaborated Differentiation	3.38	2.11	2.50	.01
Relative Contrast	2.23	1.49	1.84	.04
Contrast	1.08	0.50	2.18	.02
Restriction	0.07	0.12	0.68	ns.

Table 11

Means for the Subcategories of Integration in Motive-Congruent versus Motive-Incongruent Conditions

	Condition			
Integration	Congruent	Incongruent	t	p.≤
Simple Integration	3.15	2.40	1.36	.09
Elaborated Integration	2.88	1.95	1.98	.03
Causal Links	.87	.46	1.73	.05
Similarities	.69	.52	.61	ns.
Matching	1.00	.73	1.01	ns.
Resolution	.32	.23	.84	ns.

Hypothesis IIIa: The Effects of Power Motivation and Power Arousal on Differentiation Processes

Hypothesis IIIa predicts that people high on power motivation in the power arousal condition will process their experience in a more differentiated way compared to people high on power motivation in intimacy arousal condition and people high on intimacy motivation in either arousal condition. This hypothesis was examined by an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on total differentiation which was the sum of simple and complex differentiation and by an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on complex differentiation.

1. Total differentiation

Table 12 presents the results of an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on total differentiation. Inspection of the means in Table 12 reveals that there is a strong congruency effect. That is, the means for congruent versus incongruent arousal conditions are significantly different from one another. However, there is no significant difference between power and intimacy motivation in the

congruent conditions.

2. Elaborated differentiation

Table 13 presents the results of an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on complex differentiation. The means in Table 13 do not appear to support Hypothesis IIIa either. The results of an analysis of variance of motive by arousal condition on complex integration yield an nonsignificant *F* value. Planned comparisons revealed only that individuals in congruent conditions used significantly more complex integration than individuals in incongruent conditions. There were no significant differences between power and intimacy motivation in the congruency conditions. Thus, I must conclude that Hypothesis IIIa was not supported by the results.

Table 12

Total Differentiation for Power versus Intimacy Motivation in Congruent versus Incongruent Arousal Conditions

	Arousal Condition	
Motive	Congruent	Incongruent
Power	10.60a	9.20b
Intimacy	10.76a	9.17b

Note: Means with noncommon subscripts differ at the $p < .05$ level of significance.

Table 13

Elaborated Differentiation for Power versus Intimacy Motivation in Congruent versus Incongruent Arousal Conditions

	Arousal Condition	
Motive	Congruent	Incongruent
Power	3.31a	2.42b
Intimacy	3.44a	1.86b

Note: Means with noncommon subscripts differ at the $p < .05$ level of significance.

Hypothesis IIIb: The Effects of Intimacy Motivation and Intimacy Arousal on Integration Processes

Hypothesis IIIb predicts that people high on intimacy motivation in the intimacy arousal condition will process their experience in a more integrated way compared to people high on intimacy motivation in the power arousal condition and people high on power motivation in either arousal condition. This hypothesis was examined by an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on total integration and by an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on complex integration.

1. Total Integration

Table 14 presents the results of an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on total integration. Inspection of Table 14 reveals that all means are significantly different from one another. The *F* value for the interaction of motivation and arousal condition is not significant, however. It appears that intimacy-motivated subjects in the intimacy arousal condition have the highest total integration. However, total integration means for

intimacy motivation in both congruent and incongruent conditions are higher relative to the total integration means for power motivation. This effect is further obscured by the main effect for congruency. In order for these results to support Hypothesis IIIb, the mean for intimacy motivation in intimacy arousal needs to be significantly higher than all other means with no other significant differences between these means. Thus, in this case, the means do not provide conclusive evidence that intimacy-motivated individuals in intimacy arousal conditions use more total integration relative to others.

2. Elaborated Integration

Table 15 presents the results of an analysis of variance for power versus intimacy motivation and congruent versus incongruent arousal condition on elaborated integration. The F value for the interaction of motivation and arousal condition is not significant. However, planned comparisons revealed that intimacy-motivated individuals in intimacy arousal conditions used significantly more elaborated integration than all other groups. There were no significant differences between any of the other three cells. Thus, Hypothesis IIIb was supported for elaborated integration: Intimacy-motivated individuals in intimacy arousal conditions do indeed use more elaborated integrated processing.

Table 14

Total Integration for Power versus Intimacy Motivation in Congruent versus Incongruent Arousal Conditions

	Arousal Condition	
Motive	Congruent	Incongruent
Power	5.73a	3.92b
Intimacy	6.30c	4.72d

Note: Means with noncommon subscripts differ at the $p < .05$ level of significance.

Table 15

Elaborated Integration for Power versus Intimacy Motivation in Congruent versus Incongruent Arousal Conditions

	Arousal Condition	
Motive	Congruent	Incongruent
Power	2.49a	2.00a
Intimacy	3.22b	1.94a

Note: Means with noncommon subscripts differ at the $p < .05$ of significance.

Additional Findings

There was only one unpredicted finding. A main effect for condition on possibility of perceiver-target interaction (i.e., a casual link subcategory of complex integration) was found. Subjects in the intimacy condition used more PITs (Mean = .42) than subjects in the power condition (Mean = .06, F (1,56) = 6.56, p <.02. Apparently, subjects in the intimacy arousal condition thought more about their future interaction with the target(s) than those in the power arousal condition.

The Relationship between Cognitive Complexity and Verbal Fluency

The last issue that must be considered is the relationship between cognitive complexity and verbal fluency. Because the measure of complexity used in this study involves using a frequency count, it is important to understand this relationship and its potential problems. First, complexity has to be expressed through words in that it is not possible to obtain a complexity score without words. However, it is crucial to be able to demonstrate that significant findings are not merely a result of the number of words. It is

possible that the relationships between complexity and verbal fluency are not the same for all categories of complexity. To examine this possibility, correlation coefficients examined the relationship between total word count the major components of complexity. In Table 16, the results show that there is a stronger relationship between word count and the simple components of complexity than between word count and the more complex components of complexity. This distinction is important in light of the findings. The congruency and differential predictions for power and intimacy state that the effects should be stronger on the more complex components than the simple components of complexity. Therefore, it is probably safe to conclude that the significant results that were found on the elaborated components of complexity can not be attributed to verbal fluency alone.

To separate word frequency from complexity, the components of complexity were examined through a ANCOVA, with word count as a covariate. There was a significant main effect for congruency on elaborated complexity (i.e., combined elaborated differentiation and elaborated integration), F (1,52) = 4.26, $p < .05$. Adjusted means indicated that individuals in congruent conditions expressed more elaborated complexity, (M = 6.01), than individuals in incongruent conditions, (M = 4.66), even when word count was controlled. In addition, a main effect for congruency on simple complexity (i.e., simple differentiation and simple

integration) approached significance, F (1,52) = 3.07, p < .09. Examination of the adjusted means revealed a reverse pattern; with word count controlled, individuals in congruent conditions used less simple complexity, (M = 9.90) than those in incongruent conditions, (M = 10.94). Thus, when word frequency was statistically equated across conditions, individuals in the congruent situations demonstrated more actual elaborate processing, while those in incongruent situations tended to use more simple descriptors. This finding lends further suport for the congruency hypothesis.

Table 16

Correlations between Word Count and the Major Components of Cognitive Complexity

Variable	Correlation Coefficients	p.<
Simple Differentiation	.57	.0001
Simple Integration	.69	.0001
Elaborated Differentiation	.41	.005
Elaborated Integration	.42	.001
Total Differentiation	.62	.0001
Total Integration	.72	.0001

CHAPTER 4

DISCUSSION

The major objective of this study was to demonstrate that personal motives and situational attributes operate in conjunction to affect social information processing in important ways. Complexity is an attribute of cognitive processing that can potentially lead to greater prediction and control over hedonic outcomes. It was predicted that when the situation engages the motives of the perceiver, more complex processing will be used goal-directed thoughts and actions.

The congruency hypothesis was strongly supported in two very different motivational domains. The need for power and the need for intimacy share little in common, other than they both are motives that are expressed in one's social environment. While power-oriented people seek to compete, control and influence others, intimacy-oriented people seek to cooperate, connect and know others. Opportunities to engage in these behaviors are very satisfying to these individuals. Such situations lead people to process information quite differently when they can potentially satisfy one of these underlying motivations.

Under these hedonically relevant conditions, both power- and intimacy-motivated individuals, when asked to make a decision through an impression formation task, tended to see the people in the stimulus environment in more differentiating or discriminating ways. They were more apt to make comparisons of relative standing and perceive opposing attributes between or within these persons. They also tended to see the persons in their stimulus field as having dynamic and interacting qualities. In fact, the whole situation was perceived in a more "alive" and interrelated way.

The congruency effect was demonstrated with individuals who had very different social orientations, therefore it is reasonable to assume that some generally adaptive principle is at work. This study further confirms as past research (e.g., Assor, et al. 1981, 1986; Battistich & Aronoff, 1985; Battistich, et al., 1985) has demonstrated, that information processing can be greatly influenced by the interaction of individual's hedonic concerns and the attributes of the situation.

Thus, I conclude that the variability in complexity among perceivers can be best understood within a perspective that considers both dispositional and situational characteristics. The fundamental premises of the P X S and ecological positions were used to explain this general adaptive principle that seems to underlie important aspects

of cognitive functioning in social settings. The interactive effects demonstrated in this study emphasize the conclusion reached by several reviewers that main effects of person variables on social perception are very weak in and of themselves (e.g., Schneider, 1973; Taguiri, 1969) and that only by considering the Person X Situation interaction in one's theoretical conceptualization can individual differences in social perception be consistently demonstrated. This framework emphasizes the careful selection of the personality and situational variables that are hedonically relevant to each other, which is an important theoretical consideration for the study of personality influence on the social cognition processes (Aronoff & Wilson, 1985).

By creating an experimental situation that was personally involving for participants and employing a free-response measure to study cognitive processes, I believe I was able to approximate social cognitive processes as they occur in natural settings. A broad range of social information processing procedures are employed to select, encode, and elaborate information in the process of making decisions about people (Battistich, et al., 1985). A model that considers hedonic relevance as a mediating factor to account for differences in social cognition is essential to understanding the variability within these components of social information processing because these processes,

including cognitive complexity, have a great deal of functional utility for perceivers in attaining a wide array of interpersonal outcomes.

By using an inclusive measure of cognitive complexity that consisted of both simple and more elaborated forms of differentiation and integration, I was able to demonstrate that individuals in motive-relevant situations used more elaborated complexity (i.e., both elaborated differentiation and elaborated integration) than those in situations which were not motive-relevant. In contrast, when verbal fluency was controlled, it was found that individuals in situations that were not relevant to their motives used more simple descriptors than those in motive-relevant situations. Individuals who were in the motive-relevant situations tended to see the contrasting attributes between and within the targets as well as inter-relationships between the targets and the situation. They also attempted to resolve the contrasts between discrepant attributes of the targets and the situation. On the other hand, individuals in the situation that was not motive-relevant used simple descriptors, which is perhaps the easiest way to meet the demands of the type of impression-based decision-making task with which they were confronted.

Along these lines, the ways in which stimuli are "worked", processed, or structured is also a topic of interest for cognitive psychologists who study attention

processes. One theory in this area may shed some light on this finding. Treisman's Feature Integration Theory (Treisman & Gelade, 1980) suggests that separable dimensions, which are similar to "new aspects" in this study, are initially coded independently of each other through an automatic process. The particular values on these dimensions represent "features" (e.g. round, blue). After this initial encoding, attention processes "glue" the percept together. Supporting evidence for this idea appears to be drawn strictly from "cold" cognition research, but it is possible to speculate about a similar social information processing sequence. Following Treisman's notion, one could speculate that individuals encode the same amount of information (or "aspects") in motive-congruent and motive-incongruent situations, but apply greater amounts of attention to the social stimuli in motive-congruent situations. Further research might tease apart the processes of encoding and attention in examining the consequences of hedonic relevance. Namely, the P X S method could be used for a finer grained analysis of the mechanisms that underlie the relationship between social information processing and motive arousal in which variables such as selective attention, retrieval, and accuracy can be added to a model of complex cognitive processing.

In this thesis, I also introduced the hypothesis that differentiation and integration are separate processes that

have differential functional utility. Rather than viewing power and intimacy motivation as related to fixed cognition orientations, I proposed that in motive-relevant situations, power-motivated individuals would use more differentiated processing, (i.e., perceive more separate and contrasting attributes), while intimacy-motivated individuals would use more integrated processing, (i.e., perceive more connected and interrelationed attributes).

The hypothesis that intimacy-motivated individuals in intimacy arousing situations should perceive the situation in a more integrated way was confirmed. It appears that intimacy-motivated individuals did in fact perceive more inter-relationships and connections between and within the targets and between themselves and the targets. This style of cognitive complexity might be a foundation for subsequent intimacy experiences.

However, the results fell short of demonstrating that power-motivated individuals in power arousing situations perceive a hedonically relevant situation in a more differentiated way. One possible explanation for the null finding might be found in the nature of the task. The need to make a decision could have created more differentiated thinking for all individuals in congruent groups rather than just those high in power-motivation. Perhaps the differential hypothesis should be tested in the future with a different cognitive task.

Alternatively, because a consistent pattern emerged in which intimacy-motivated individuals demonstrated a higher level of complexity than power-motivated individuals in motive-congruent situations, it is possible that intimacy-motivated people are simply more sensitive to motive-congruency. The nature of intimacy motivation and its relation to psychological maturity may offer support for this interpretation. McAdams (1980, 1988) has maintained that the need for intimacy refers to a recurrent preference to experience warm, close, and communicative exchanges with others as an end in itself, rather than a striving to fulfill a deficiency for love and belonging (c.f., Maslow, 1970). Further, McAdams and Vaillant (1982) have found a positive relationship between intimacy motivation and psychosocial adaptation, supporting a common theoretical assumption that the capacity and desire to engage in intimate relationships with others is a hallmark of psychological health (Erikson, 1963, Fairburn, 1952; Levinson, 1978; Sullivan, 1953). Thus, I reason that more psychologically mature people should have a greater capacity to process social information that is related to their needs (Erikson, 1963; Maslow, 1970). The findings of the greater use of elaborated integration may therefore be due to the greater capacity of intimacy-motivated individuals to process motive-relevant information rather than due to a specific cognitive style.

In conclusion, based on the assumption that complex

processing leads to more prediction and control over hedonic outcomes, I have argued that the variability in complexity among perceivers can be best understood through a Person X Situation approach. Higher levels of complexity were expected when the perceiver's motives and the attributes of the situation were congruent. This hypothesis was strongly supported in two very different motivational domains. When each motive is aroused by a situation related to these desired interpersonal outcomes, more complex processing is used to obtain these goals.

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APPENDIX A

EXPERIMENT MATERIALS

MICHIGAN STATE UNIVERSITY

Department of Psychology

DEPARTMENTAL RESEARCH CONSENT FORM

1. I have freely consented to take part in a scientific study being conducted
by:_____
under the supervision of: Joel Aronoff
Academic Titles: Professor of Psychology

The research will require that I write six imaginative stories to pictures. I will return for a second session that will be arranged. In the second session I will perform some social impression tasks that ask me to form impressions of others. Participation in this experiment usually consists of two separate one-hour sessions.

2. The study has been explained to me and I understand the explanation that has been given and what my participation will involve.

3. I understand that I am free to discontinue my participation in the study at any time without penalty.

4. I understand that the results of the study will be treated in strict confidence and I will remain anonymous. Within these restrictions, results of the study will be made available to me at my request.

5. I understand that my participation in the study does not guarantee any beneficial results to me.

6. I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signed:_____
Date:_____

EXERCISE IN IMAGINATION

Name_____ Sex___ Student#_____
Number_____
Phone(clearly)_____

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

An important personal asset is imagination. This test gives you an opportunity to use your imagination, to show how you can create ideas and situations by yourself. In other words, instead of presenting you with answers already made up, from which you have to pick one, it gives you the chance to show how you can think things on your own.

On the following pages, you are to make up and write out a brief, imaginative story for each of the six pictures that will be presented on the screen. You will have five minutes for each story. There is one page for each story (in any case, please do not write more than about 150 words per story.) To help you cover all the elements of a story plot in the time allowed, you will find these questions repeated at the top of each page:

1. What is happening? Who are the people?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought: What is wanted? By whom?
4. What will happen? What will be done?

Please remember that the questions are only guides for your thinking: you need not answer each specifically. That is, your story should be continuous and not just a set of answers to these questions. There are no "right" or "wrong" stories. In fact, any kind of story is quite all right. You have a chance to show how quickly you can imagine and write a story on your own. Try to make your stories interesting and dramatic. Show that you have an understanding of people and can make up stories about human situations. Don't just describe the pictures, but write stories about them.

Each picture will be projected onto the screen for 20 seconds, then turn the page and write the story suggested to you by the picture. After 5 minutes, another picture will be projected onto the screen. Turn the page, and write the story suggested to you by the picture and so on for all six pictures. I will announce that it is time to move on before I show the next picture.

Picture # 1

1. **What is happening? Who are the people?**
2. **What has led up to this situation? That is, what has happened in the past?**
3. **What is being thought: What is wanted? By whom?**
4. **What will happen? What will done?**

Picture # 2

1. **What is happening? Who are the people?**
2. **What has led up to this situation? That is, what has happened in the past?**
3. **What is being thought: What is wanted? By whom?**
4. **What will happen? What will done?**

Picture # 3

1. What is happening? Who are the people?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought: What is wanted? By whom?
4. What will happen? What will done?

Picture # 4

1. What is happening? Who are the people?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought: What is wanted? By whom?
4. What will happen? What will done?

Picture # 5

1. What is happening? Who are the people?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought: What is wanted? By whom?
4. What will happen? What will done?

Picture # 6

1. What is happening? Who are the people?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought: What is wanted? By whom?
4. What will happen? What will done?

ROLE PLAYING QUESTIONNAIRE

Directions: Read the following questions and circle the best answer.

1. Have you ever met or seen Kim before viewing the videotape?

YES NO

If yes, please explain.

2. Have you ever met or seen Eric before viewing the videotape?

YES NO

If yes, please explain.

3. How likely is it that you will be role-playing with Kim?

1	2	3	4	5	6	7	8	9
very unlikely		somewhat unlikely		equally likely and unlikely		somewhat likely		very likely

4. How likely is it that you will be role playing with Eric?

1	2	3	4	5	6	7	8	9
very unlikely		somewhat unlikely		equally likely and unlikely		somewhat likely		very likely

5. How pleasant do you think it will be to role-play with Kim?

1	2	3	4	5	6	7	8	9
very unlikely		somewhat unlikely		equally likely and unlikely		somewhat likely		very likely

6. How pleasant do you think it will be to role-play with Eric?

1	2	3	4	5	6	7	8	9
very unlikely		somewhat unlikely		equally likely and unlikely		somewhat likely		very likely

Information to Participants

Currently, a great deal of research in psychology concerns social information processing. Researchers are studying the various ways in which we encode (or take in) stimuli from the environment. For instance, some experimenters study how well individuals remember certain events or how people store and retrieve new information. The experiment that you have just participated in is one such study.

Psychologists agree that differences in motivation and other types of social orientations can have a great impact on how we differentiate and categorize one person from another (as well as one situation from another). That is, a person's social orientation can have a great impact on how he or she perceives the environment. For example, a person with a high need for achievement might be better able to remember information related to a class project or some other achievement related task than a person who has different concerns.

We all know that we have different personalities and different "points of view" from others. In this experiment, we were especially interested in how people's general attitudes influence their views and first impressions of people and social situations. By asking you to first write imaginative stories and then form an impression of the people on the videotape we will be able to learn more about how information is categorized and how distinctions are made between people and social situations.

Thanks very much for participating in today's experiment. We will be happy to answer any questions that you might have at this time or you may speak with Barbara Woike in 424 Baker Hall regarding this study.

APPENDIX B

THE CATEGORIES OF COMPLEXITY CODING MANUAL

Categories of Complexity

Barbara A. Woike

Michigan State University

Cognitive complexity is a hypothetical construct used to explain the number of aspects that one perceives or recognizes in a stimulus group and the connections among those aspects. This manual presents a coding system for cognitive complexity that allows for the separate analysis of the two major components of complexity: differentiation and integration. Differentiation refers to the number of different aspects that an individual perceives in a given stimulus set. Integration refers to the number of links and connections between and among differentiated aspects.

A number of other coding systems were consulted in creating this manual. Schroder, Driver & Streufert's (1967), Human Information Processing is probably the best known pioneering work on cognitive complexity. The theory presented in this book was based on the idea that differences in cognitive processing are influenced by early

developmental and social learning experiences. The ways in which people structure information was believed to be a relatively stable characteristic. Thus, "simple" individuals were those that processed information in a less differentiated and less integrated way, while "abstract" (or "complex") individuals processed in information at higher levels of differentiation and integration.

Research has since demonstrated that a wide array of factors (e.g., motivational-attributes of the situation, role demands, and value conflicts) can shape cognitive processing. It is now more commonly believed that cognitive processing is influenced by both personal and situational factors. In recent years, Tetlock (1984) has modified the Schroder, Driver & Streufert (1967) coding system to better suit an interactive theoretical approach. His term integrative complexity refers to the complexity of cognitive structuring as it is influenced by dispositional and situational factors. Tetlock's (1984) system also expands the concept of integration to include many examples from political rhetoric and scientific reasoning.

The coding categories contained in this manual were derived from other sources as well. Winter's (1984) Test of Thematic Analysis is a scoring manual devised to analyze written comparisons of TAT stories. Essentially, these descriptions draw similarities and differences among two TAT stories or subjects. It has been used to measure

intellectual abilities (e.g., intellectual flexibility, critical thinking) in liberal arts students (Winter, McClelland, & Stewart, 1981).

Crockett's (1965) Structural Analysis of the Organization of Written Impressions is used to study impressions written about others. The system consists of a procedure to identify types of differentiated aspects or "constructs" and types of integration or "organization." The system emphasizes how positive and negative aspects are perceived. It has been used to test hypotheses about generality across domains of content and development of cognitive complexity within the individual (Crockett, 1965a).

Peevers and Secord (1973) also developed a system for content analysis of descriptions of others. Their system emphasizes the use of traits as well as other person concepts that are considered to be developmental in nature. People are asked to describe liked and disliked peers. Their responses are coded on four dimensions called: descriptiveness, personal involvement, evaluative consistency, and depth. The system has been used to study broad developmental changes in person perception (Peevers & Secord, 1973) as well as changes in perception brought on by specific life events (Healy, 1989).

Linville (1985) developed a technique to measure what is called self-complexity. In this view, "the self" is a

cognitive representation with multiple aspects, including information about attributes, abilities, roles, traits, etc. The main difference between Linville's and other systems is that complexity is defined as "the number of nonredundant or distinctive attributes underlying a person's thinking about a domain (p.97)." In this scheme, the greatest degree of complexity occurs with a large number of totally independent aspects. The lowest degree of complexity occurs with a small number of totally interdependent aspects. Thus, what Linville (1985) terms a high degree of complexity is what most scholars (e.g., Crockett, 1965; Goldstein & Blackman, 1978; Schroder, Driver, Streufert, 1967; Tetlock, 1984) term a high degree of differentiation.

A review of other coding manuals of cognitive complexity (Woike, 1989) found that no previous system has dealt with the categories of differentiation and integration separately. The closest exception to this finding is a study of ideological reasoning by Tetlock (1986) in which each response was given a global rating for differentiation and a separate global rating for integration.

For the hypotheses of my research to be tested, it is necessary to obtain separate scores for differentiation and integration. In addition, it is also preferable to obtain a frequency measure of differentiated and integrated

responses rather than global ratings. I believe frequency measures of differentiation and integration will yield a richer and more precise representation of the psychological variable under investigation. Therefore, the main objective of this coding system was to create a technique to obtain frequency measures of these separate categories from the same psychological variable.

Although differentiation and integration are related, their structural characteristics are quite different. Differentiation refers to the number of aspects an individual perceives in a given topic, subject or impression, whereas integration refers to the number of connections between and among these differentiated aspects. The sub-categories of differentiation and integration in the manual will delineate fundamental structural characteristics of each.

There are two levels of subcategories within differentiation and integration. Following the Schroder, Driver & Streufert (1967) distinction of "simple versus complex," differentiation and integration were each divided into two levels. Simple differentiation refers to the naming of different aspects or attributes in the impression and complex differentiation refers to the process of making distinctions and differentiated comparisons among stimuli. Simple integration refers to forming simple links between previously mentioned aspects of the impression and complex

integration refers to the description of dynamic relationships and complex connections between stimuli.

This manual was developed to help understand the structure of "social impressions." As people form impressions, they must select a relatively small amount of information and structure it in a way that it can be understood. Cognitive structuring is a necessary adaptation that helps us organize our experiences. An impression is a representation of the cognitive structuring of an event, person, topic or situation. When experiencing relatively common events such as watching two people converse or hearing a discussion of a political issue, we are continually engaged in the process of structuring our social reality.

An experiment was designed to study this process of impression formation. We made a 17-minute videotape of two actors named Kim and Eric engaged in what is called a peer interview in which they interviewed each other for a job as a research assistant in the psychology department. Subjects in the experiment were instructed to watch the tape with a certain job description in mind. They were told that after watching the tape, they would be randomly selected to meet either Kim or Eric. After the subjects viewed the tape, they were asked which person is best suited for the job. The actual question they responded to is below.

Think about what you have seen of Eric and Kim. Think about the kind of job we have described. Since both people and jobs are complex and hard to pigeon-hole, they need to be thought of in relation to each other in different ways and on different levels. Take a moment or two to gather your thoughts and then decide who is most suitable for the job. What kinds of qualities and behaviors were shown on the videotape that lead you to believe that this person is the best for the job? Please carefully state your reasons for taking this position.

The coding manual will be used to examine the paragraphs written in response to this question. The manual begins with a list of basic terms and their definitions as they pertain to their usage in the manual. This is followed by the main part of the manual which consists of one section on differentiation and one section on integration. There are four sub-categories within each of the two sections. Each section starts with a description of the general process (i.e., differentiation or integration) and then each subcategory is explained individually.

For each sub-category, there is first a short definition followed by a description and references of how similar categories have been used in other manuals. This is followed by a "working definition" of the category that is to be used for the actual coding. The working definition is followed by several examples and a discussion of each on the particular issues to be considered when scoring the category.

It should be noted that in this manual, each exemplary

sentence is scored only for that particular category being considered, unless otherwise mentioned. In actual coding, all sentences will be scored for all categories. The manual gives additional examples of scoring whole paragraphs for all categories in the final section.

In this final section, a coding procedure outline will give step-by-step instructions for coding. The coding procedure outline is followed a brief section on specific scoring rules. This is followed by examples of paragraphs to be scored. Each paragraph will be followed by a scoring key in which all phrases, sentences and paragraphs will be scored completely. These examples will serve as demonstrations as to how the manual is used in actual scoring.

Basic Terms Used in Definitions

1. The perceiver is the person who has watched the videotape of Eric and Kim, formed an impression, and written a paragraph.
2. The target is the object perceived in the formation of the impression. In this experiment, the target is Kim, or Eric, or both.
3. An aspect is a cognitive representation which contains information about a specific behavior or event, trait, role, physical feature, personality characteristic, category membership, ability, preference, goal, or relation to another person.

Differentiation

Differentiation refers to a way of perceiving and forming impressions. The number of different aspects an individual perceives in a given stimulus group is the common definition of differentiation (e.g., Schroder, Driver & Streufert, 1967; Tetlock, 1984). In this manual, the concept of differentiated thinking is used to describe a particular cognitive style that individuals use in perceiving the world.

The differentiation process involves focusing on differences between and within a given stimulus group. The perception of an object is developed and formed from its separate and distinctive qualities. The perceiver takes a whole stimulus set and separates it into different attributes, exceptions, comparisons, contrasts, and restrictions. The perceiver uses this particular style to form complex perceptions about the world. The differentiation process involves special attention to (a) differences rather than similarities, (b) the ways in which objects and people can be perceived separately rather than collectively, (c) the features that can be used to make distinctions between and among stimulus groups and (d) the

exclusions, restrictions and contrasts that can be made within a stimulus set.

In this manual, there are two levels of differentiation, simple and complex. Simple differentiation involves naming or listing attributes or characteristics. When using simple differentiation the perceiver does not attempt to compare, separate or further differentiate between or among stimulus groups. In this manual, simple differentiation is called **new aspects** which refers to an aspect of the stimulus set that is unrelated to any other aspect that a perceiver uses to form an impression. In some cases, **new aspects** may be used to form more complex differentiated structures.

Complex differentiation involves making distinctions, separations, and comparisons within a particular stimulus set. In this manual, there are three subcategories of complex differentiation. First, **restriction of meaning** refers to a statement that restricts, makes more precise or delimits another statement. In this way, the perceiver views certain attributes of the stimulus set through a restricted point of view.

The second and third subcategories have to do with comparisons. People or objects in the stimulus set are perceived in terms of their relativeness to each other on some dimension and are then described as being different or opposing in some way. The second category, **contrast** refers

to a comparison of two opposing aspects. The perceiver sees the target(s) or objects(s) as being different from other target(s) or object(s) in that the impression is formed in opposites. The third category **relative comparison** refers to a comparison of relative standing between two subjects, objects or targets on some dimension on which they are perceived as being unequal.

Category D-1: New Aspect is an aspect of the stimulus set that is unrelated to any other previously mentioned aspect that the perceiver uses to form the impression. The more new aspects the perceiver sees in the stimulus set, the more simply differentiated the impression.

This concept is central to many theorists' notions of complexity. It is called "aspect" in Linville's (1985) work on self-complexity. Tetlock (1984) and Schroder & Streufert (1962) refer to this concept as "Multiple Dimensions," meaning that a person or object is perceived as having multiple attributes. The dimension of "descriptiveness" used by Peevers and Secord (1973) refers to information that renders an individual unique from others. The concept is referred to as "elements" by Crockett (1965) and Winter (1984) and used in a similar fashion.

A new aspect of a given subject(s) is one that is different and relatively unrelated to any aspect mentioned in any previous statement. Differentiation is explicitly expressed when a new attribute is used in perceiving the person or object. For a list of entities that are included, see the definition of the term "aspect" on page 9. Sometimes new aspects are further defined by a context. For instance, the perceiver may state, "Eric is a good

leader." Or she may state, "Eric is a good leader in competitive activities." If the context mentioned with the attribute enriches the meaning of that attribute, it is scored as an new aspect with context. Sometimes the perceiver will use new aspects to describe things that are not directly related to Kim or Eric. For instance, the perceiver may state, "Interviews are stressful." or "The question Kim asked was stupid." In these examples, the attributes "stressful" and "stupid" are scored as new aspects unrelated to the targets.

New Aspect (without a context) is abbreviated NA.
New Aspect with Context is abbreviated NA/cxt.
New Aspect unrelated to the targets is abbreviated NA/un.

Example (A)
Eric seemed to me to be the best suited for this job. He seemed like a **very friendly person** [NA].
Note: In this example, there is only one new aspect. The phrase "best suited for this job" is not scored as NA because it is considered part of the question stem that was previously asked. This is explained in more detail later in the section on specific scoring rules.

Example (B)

Eric has more **diversity in the working world** [NA/cxt].

Note: In this example, "diversity" is an attribute and "in the working world" is the context in which it occurs. The perceiver does not see the target as having a general diversity, but as having diversity in a context. Thus, The attribute and context are scored as one NA/cxt.

Example (C)

Kim **shows good leadership skills when working out problems** [NA].

Note: In this example, "good leadership skills" is the attribute and "when working out problems" is the context in which it occurs. The attribute and context are scored as a single NA/cxt. It is worth noting that the attribute "shows good leadership skills" would be scored as an NA if it appeared alone.

Example (D)

I think Eric would be best suited for the job. He showed much more **enthusiasm** [NA/cxt] and **confidence throughout the interview** [NA/cxt] than Kim. He also **showed authority** [NA/cxt] and **proposed ideas when making the arrangement out of videotapes** [NA/cxt].

Note: In this example, the total number of new aspects with contexts is four. When two or more NAs appear to be

related to the same context, they are all scored as NA/cxts. In this example, the perceiver forms a differentiated impression by mentioning four relatively unrelated attributes of the target within two contexts of the interview. Again, "best suited for the job" is not scored as a new aspect. See the section of specific scoring rules.

Example (E)

She seemed to be a **likeable person** [NA] that **got along well with others** [NA], and **takes pride in what she's accomplished** [NA/cxt].

Note: In this example, "likeable person" and "got along well with others" are scored as separate because they are not explicitly or even implicitly related to each other; there are many reasons why people can get along well. An aspect that is related to one another will be considered in detail in the section on integration. The phrase "got along well with others" is not scored as an NA/cxt because "with others" is necessary to understand the meaning of "got along well." Contexts generally contribute additional meaning that is not necessary to understanding the aspect. Thus, in this example, the total number of new aspects in this example is three: two NAs and one NA/cxt.

Example (F)

Kim seems like **bright** [NA] and **interesting** [NA] person and she **works well on cooperative tasks** [NA/cxt]. Eric is **very good at telling stories** [NA]. Their performance on the videotape task was **exceptional** [NA/un].

Note: In this example, new aspects are attributed to different subjects. Two new aspects ("bright" and "interesting") are used to describe Kim. Then, one new aspect with context ("works well on cooperative tasks") is used to describe Kim and one new aspect ("very good at telling stories") is used to describe Eric. Note that this phrase ("very good at telling stories") is not scored as an NA/cxt because the phrase "very good" in itself is not meaningful in the perceiver's impression. Finally, one new aspect unrelated to the targets ("exceptional") is used to describe their performance. Thus, the total number of new aspects in this example is five: three NAs, one NA/cxt and one NA/un.

Example (G)

I think Eric is more qualified for the job because of **his current work experience** [NA]. The work seems **pretty difficult** [NA/un] but it is **good counseling experience** [NA/un].

Note: In this example, the first attribute "his current work experience" is an attribute directly related to the

target. This phrase is the first new aspect because the phrase "qualified for the job" is not scored. The other two attributes mentioned, "pretty difficult" and "good counseling experience" are not directly related to the target, therefore they are scored as new aspects unrelated to the targets.

Example (H)

Kim, although she **looked good** [NA], **did not show too much leadership ability** [NA].

Note: In this example, the perceiver uses two unrelated aspects to form an impression of Kim. It should be noted that it is possible for these aspects to be related in certain ways. If the phrase "although Kim looked good" qualified or restricted the phrase "did not show too much leadership ability," it would be scored as another form of differentiation called restriction of meaning. The restriction of meaning category refers to the perception of the target as being restricted or qualified in some way. It will be described in detail on the next section. If the two aspects were related in the form of opposites, it would be scored as another form of differentiation called contrast. This category will be explained in detail later. In this example, the two phrases or aspects are not related in these ways. Thus, the total number of new aspects is two.

Example (I)

Kim doesn't present her thoughts clearly [NA].

Note: In this example, the perceiver describes the target using a negative aspect. The perceiver sees Kim as lacking the attribute of ability to present thoughts clearly. This phrase is scored as one NA.

Example (J)

When dealing with people, Eric is **nervous** [NA/cxt].

Note: In this example, the context appears before the NA. This is scored as an NA/cxt because it has the same meaning as "Eric is nervous when dealing with people."

Category D-2: Restriction of Meaning refers to a statement that qualifies or delimits the meaning of another statement. Differentiation is expressed through the perceiver's view of the target's attribute(s) within a restricted context, indicating that the perceiver has differentiated the impression to include more than one unspecified point of view.

This concept is called "exception-qualification" by Winter, (1984) and is a form of "implicit differentiation" in Tetlock's (1984) integrative complexity coding manual.

Restriction of Meaning is a statement that qualifies or delimits the definition of a statement or particular aspect or structure. These restrictive statements usually appear immediately before or after the aspect or structure that is being restricted. This category includes statements intended to restrict but not illustrate or expand another statement. The perceiver forms an impression with attributes that are restricted to certain conditions. The central idea is that these restrictive statements and phrases confine aspects and structures to a particular situation, perspective, condition, or criteria rather than merely providing additional meaning to a statement. It is important to remember that restriction of meaning is scored only when a phrase is clearly used in a restrictive way.

Restriction of Meaning is abbreviated RM.

Example (A)

From an employer's point of view [RM], Eric seemed especially courteous.

Note: In this example, the target is perceived as being courteous from a particular point of view. This is a hypothetical perspective that the perceiver employs to differentiate his impression of Eric. The perception of Eric being courteous is restricted to that specific perspective imposed by the perceiver.

Example (B)

Since the field of Psychology requires thought processes not related to mechanical reasoning [RM], Kim seems to illustrate a more abstract way of thinking.

Note: In this example, the target's attribute(s) are viewed through a complex and restricted criterion. It is important to note that "restricted" does not imply that these impressions are simpler or less complex. The perceiver has imposed a complex criterion to perceive the target.

Example (C)

Judging from the qualities displayed on the videotape [RM], I feel Kim is best suited for the job.

Note: In this example, the perceiver uses a specific restrictive criterion to structure the impression of the targets. If the phrase was merely "On the videotape," is would not be scored as an RM because the phrase represents a context rather than a restrictive structure made by the perceiver.

Example (D)

Although it might not have been all psychology [RM], he had worked in a job related to his field of study.

Note: In this example, the NA "worked in a job related to his field of study" is qualified by the phrase "although it might not have been all psychology." The perceiver restricts the attribute that follows by stating an exception or qualification.

Example (E) <u>not</u> an RM

Although Eric had a lot to say about working in a helping profession, he didn't seem to care much about Kim.

Note: In this example, the phrase "although Eric had a lot to say about working in a helping profession" is used to make a comparison rather than make a restrictive exception to the NA "didn't seem to care much about Kim." This

phrase would not scored as an RM. It is instead, a contrast which is another category of differentiation that will be described in detail later.

Category D-3: Relative Comparison **is a comparison of relative standing between two objects, subjects, or targets on a dimension. The perceiver sees these objects as being unequal. Although both objects, subjects or targets are compared on the same dimension, the important point is that the perceiver has chosen to differentiate them on that dimension.**

This concept is called "simple relative comparison" by Winter, (1984) and called "discrimination along a dimension" by Schroder & Streufert, (1962).

Relative Comparison **is made when one target, subject, or object is described as unequal to another target, subject, or object on the same dimension. By comparing two targets' and/or subjects' and/or objects' relative standing on that dimension the targets become differentiated. These comparisons can be (a) made explicitly between two targets and/or subjects and/or objects, or (b) the comparison may be implied to the second target, subject or object. Words such as "more," "better," or "best" signify that two or more targets, subjects or objects are perceived as unequal on some dimension.**

Relative Comparison **is abbreviated RC.**

Example (A)

Kim seemed **a little more personal** [RC] than Eric during the interview.

Note: In this example, the perceiver differentiates Kim from Eric along the dimension of being personal. The two targets are explicitly compared.

Example (B)

Kim seemed like **more of a go-getter** [RC].

Note: In this example, the perceiver differentiates Kim from Eric implicitly in the role of "go-getter." The comparison is made between Kim and Eric even though Eric is not explicitly mentioned.

Example (C)

I feel Eric is the **stronger** [RC] leader.

Note: In this example, the perceiver differentiates Eric from Kim in the role of strong leader. As in the example above, the comparison is made implicitly.

Example (D)

Kim is **too emotional** [RC].

Note: In this example, the perceiver compares the target to a particular standard. By perceiving Kim as being "too emotional," the perceiver implicitly differentiates Kim from others on some standard or norm of emotionality.

Example (E)

If I was looking for an assistant, I would choose **Kim over Eric** [RC].

Note: In this example, the perceiver uses differentiation to choose one target "over" the other. This means the perceiver views the targets through a difference in relative standing.

Example (F)

Eric and Kim had **more than just superficial conservation** [RC].

Note: In this example, the targets' conversation is compared to a standard. This means that the perceiver views the targets' conversation as compared to other conversations.

Example (G) <u>not</u> an RC

I thought Eric was more suited for the job than Kim.

Note: In this example, there is no RC. The phrase ("more suited for the job") is not scored as an RC because it is considered part of the question stem to which the response is written. For details, see the section on specific scoring rules.

Example (H) <u>not</u> an RC

I will pick Eric for the job.

Note: In this example, the perceiver makes the selection by considering both targets but without making a relative comparison between the targets.

Category D-4: A Contrast is a differentiated comparison that employs two opposing aspects. The perceiver sees people or objects as being different in the form of opposites.

This type of differentiated comparison is called Direct Compound Comparison by Winter (1984) and referred to as a bipolar construct by Crockett (1965).

The contrasting aspects may be (a) on a bipolar dimension (e.g. dominant/submissive; active/passive), or (b) unidimensional opposites (e.g. masculine/feminine; interested in work/interested in social happenings), or an aspect and its negation (interested in sports/not interested in sports; intellectual/not intellectual).

It should be noted that the unidimensional aspects used to make contrasts are often not opposing when viewed objectively. In these instances, it is important to take the perceiver's perspective and consider the structure of his or her impression rather than relying solely on content. If two new aspects are set up to be a comparison but are really orthogonal, they should be scored as a contrast if there is a clear indication that the perceiver considers them to be opposing.

Contrasts may be made (a) between targets, (b) within a single target, (c) between two situations or contexts,

and (d) between target(s) and situation(s). In addition, some contrasts may be implicit. Sometimes only one contrasting aspect is explicitly mentioned. If the other contrasting aspect can be readily implied, it is scored as an implicit contrast. Key phrases that may indicate that a contrast is being made include: but, although, whereas, while, and the one that.

Contrast is abbreviated C.

Example (A)

Kim seems **dominant** [1/2 C] but Eric **isn't dominant** [1/2 C] at all.

Note: In this example, the perceiver makes an explicit contrast between two targets. An aspect and its negation are applied to Kim and Eric, respectively.

Example (B)

Kim seems **passive** [1/2 C] while Eric seems **active** [1/2 C].

Note: In this example, the perceiver has makes an explicit bipolar contrast on the dimensions of active/passive between Kim and Eric.

Example (C)

She not only **shared many of her own ideas** [1/2 C], but she **was a good listener** [1/2 C].

Note: In this example, the perceiver sees a contrast within one target. Two opposing attributes are used to characterize Kim. Even though the word "but" is used, it should be noted that this example would not be scored as an RM because there is no evidence of restriction or qualification. In addition, this example could not be scored as simply two NAs because they are related in the form of opposites.

Example (D)

Eric is a **smooth-talker** [1/2 C], but **a little bit uneasy** [1/2 C].

Note: In this example, the perceiver sees a contrast within the target. As in the example above, there is no evidence of qualification or restriction. Even though the word "but" is used, the aspects are related in the form of opposites. Therefore, it is scored as a contrast.

Example (E)

I could see Eric **as a member of a group involved in discussion about themselves** [1/2 C] but I don't think he **has the initiative to lead** [1/2 C].

Note: In this example, the perceiver makes a subtle contrast between two possible opposing roles of the target. Eric's performance is contrasted in these two possible roles. As in the example above, the second half of the contrast does not restrict the first half, therefore it can not be scored as a RM.

Example (F) <u>not</u> a C

I liked Kim better but I feel Eric is better suited for the job.

Note: In this example, the phrase "better suited for the job" is not scored. Therefore, the phrase "I liked Kim" is scored as an NA.

Below are examples of more complex contrasts. These examples have been scored for all categories of differentiation including NAs, RMs, and RCs. It is important to note that the new aspects that make up the contrast are scored as NAs as well.

Example (G)

Eric is **more concerned with making things work on a whole** [RC] [NA] [1/2 C] and **more willing to communicate** [RC] [NA] than Kim - who **appears to be more concerned with herself and her individual role** [RC] [NA] [1/2 C].

Note: In this example, the perceiver makes a complex contrast between Eric and Kim. First, two NAs are used to describe Eric ("concerned with making things work on a whole," "willing to communicate"). The word "more" before each of these phrases means that Eric is being compared relative to Kim. Therefore, they are also scored as two RCs. Second, the phrase ("appears to be concerned with herself and her individual role") used to describe Kim is scored as one new aspect because it is one complete idea or aspect. In addition, this phrase is scored for RC because the word "more" indicates that Kim is being compared to Eric. Finally, when examining the two NAs used to describe Eric and the NA used to describe Kim, there is a contrast of uni-dimensional opposites between these attributes.

Example (H)

Both Kim and Eric were creative with the video tape holders, **but Eric had the idea for the tables and chairs** [1/2 C] [NA].

Note: In this example, the perceiver sees something that Kim and Eric have in common, then differentiates Eric from

Kim through a contrast. The perceiver describes Eric and Kim as being creative with the videotape holders. This kind of similarity is a form of integration which will be described in detail in the next section. The perceiver describes Eric as having the idea and implies that Kim did not have an idea. Therefore, it is scored as a contrast. The phrase "had the idea for the tables and chairs" is also scored as an NA.

Example (I)

Kim **spoke well** [NA], and **is still in school studying psychology** [NA] [1/2 C] which is another quality that would qualify her for the job; whereas Eric **had been out of school for some time** [NA] and **not really in the thinking terms of psychology** [NA] [1/2 C].

Note: In this example, the perceiver makes a complex contrast between Kim and Eric. The perceiver uses two NAs ("spoke well" and "is still in school studying psychology") to describe Kim and two NAs ("had been out of school for some time" and "not really in the thinking terms of psychology") to describe Eric. The perceiver forms a contrast between Kim and Eric by using one NA used to describe Kim ("is still in school studying psychology") is contrasted with both of the NAs ("had been out of school for some time" and "not really in the thinking terms of psychology") used to describe Eric. In addition, the

phrase ("which is another quality that would qualify her for the job") is a type of integration called supporting aspect of the NA ("is still in school studying psychology") because it extends the meaning the NA. Supporting Aspects will be discussed in detail in the next section.

Example (J)

Kim seemed like **a real nice person** [NA] [1/2 C (a)], but **you have to be aggressive in life** [NA/un] [1/2 C (b)] and I think **she is too mellow** [NA] [RC] [1/2 C (a)].

Note: In this example, the perceiver sees a contrast between the attributes of the target and the attributes of the situation. The perceiver contrasts the target's attributes of "a real nice person" and "she is too mellow" with a situational attribute of "you have to be aggressive in life." The attributes of the target (marked by [1/2 C (a)]) that make half of the contrast are mentioned both before and after the contrasting attribute of the situation (marked by [1/2 C (b)]).

Integration

Integration refers to a way of perceiving and forming impressions that includes larger structures. The central feature of the integration process is the presence of connections or links between stimuli that has been differentiated (Schroder, Driver & Streufert, 1967; Tetlock, 1984), at least to some degree. The perceiver does not stop with a list of differentiated attributes, but continues to make an impression that is more whole, integrated, and interconnected. As with differentiated thinking, the concept of integrated thinking refers to a particular cognitive style that characterizes a pattern of perceiving the world.

The integration process involves focusing on similarities between and within a given stimulus group. The perception of an object is developed and formed from its common and interrelated qualities. The perceiver takes a stimulus set and forms similarities, extensions, and elaborations. The integration process is also marked by the ability to perceive dynamic and causal relations between objects in the stimulus group. In general, the perceiver views the stimuli as "alive" -- having the ability to influence and change other things.

The perceiver uses this particular style to form complex perceptions about the world. The integration process involves special attention to (a) how differentiated stimuli are related within and between stimulus groups, (b) relationships between targets and objects, and (c) how targets and objects influence and affect one another.

As with differentiation, integration has two levels, simple and complex. First, simple integration involves perceiving simple links and commonalities between two aspects. In this manual, the presence of simple integration is called a **supporting aspect** which refers to an attribute that is linked or some how related to a previous aspect. Instead of perceiving attributes of the target as separate entities or delimiting information, the perceiver builds or links two aspects together by using a commonality that expands the meaning.

The next set of subcategories are classified as complex integration because they involve more than a simple connection between two attributes. Complex integrated structures are characterized by the perception of some kind of relationship within (or among) the given stimulus set. In this case, the important features of the stimulus set are Kim, Eric, the perceiver, the characteristics of the job, the need to decide who is best for the job and possibility that the perceiver might actually interact with

Kim or Eric. Complex integrated structures are formed by seeing the relationships been these features.

In this manual, there are seven subcategories of complex integration that can be separated into two types. The first type of complex integration concerns the perception of a dynamic relationship between two targets or subjects. The perceiver views these features of the stimulus set as dynamic or interacting with one another rather than existing in isolation. These relationships are called **causal links**. There are four types of **causal links** including dynamic relationship between the targets, dynamic relationship between the target(s), possibility of interaction with the target(s), and simple causal links. Each will be discussed in detail.

The second type of complex integration concerns the perception of consistency or congruency between two subjects. The first subcategory, **similarity** refers to the perception of commonality between two targets. The second subcategory is called **matching characteristics**. Part of the perceiver's task in the experiment was to select the best person (or target) for a certain job. By integrating the information on the videotape with the information provided about the job, perceiver sees congruency (or lack of congruency) within the stimulus set. Finally, **resolution of the impression** is expressed by concluding the impression by resolving differentiated attributes with the

restatement of choice in a way that provides the impression with a central theme.

Category I-1: A Supporting aspect is an attribute that is linked to a previous aspect in some way. The perceiver introduces a new aspect and then introduces another aspect that is in some way related to the first. The perceiver views these two aspects as related to one another in a way that emphasizes a commonality.

This concept is called "Example" by Winter (1984) and is used to analyze how people use specific illustrations to extend (as well as clarify) their comparisons of thematic apperception stories. In addition, this concept includes some examples of what Winter (1984) calls "redefinition" (i.e., statements that are made to extend coverage of a previous definition).

Supporting aspect is scored when a sentence is related to a previous aspect. A supporting aspect must be specifically connected to a previous aspect or structure. This can be accomplished in a number of similar ways.

First, a supporting aspect may extend coverage to another context or object. For example, the perceiver may introduce a New Aspect and then explain how the target might use it or possess it in a hypothetical context. This must be an additional context which extends meaning rather restricts it. Or, in some cases, the perceiver may introduce a New Aspect and then explain how this attribute

is related to another target or situation. In these cases, a supporting aspect is scored when a link (or relation) is drawn between that attribute and another attribute, situation, possibility, or example.

Similarly, a supporting aspect may bring in other element(s) to connect with the target attribute. For example, the perceiver may introduce a New Aspect, then show a relationship between that particular New Aspect and other supporting aspects. The aspect is scored as supporting because there is a relationship of similarity between the first and the second aspect.

Supporting Aspect is abbreviated SA.

Example (A)

First of all, she seems to be more confident in herself [NA/cxt]. She tells of her good qualities as a softball player [SA] and the will to achieve a goal. [SA].

Note: In this example, the new aspect "confident in herself" is attributed to the target and then this aspect is supported through examples of the targets behavior. The perceiver elaborates on the NA by providing two separate examples. Therefore, this statement is scored as on NA/cxt and two SAs.

Example (B)

Kim seemed more mellow [NA] **than Eric. In conflict situations, Kim is apt to stay cool-headed** [SA].

Note: In this example, the perceiver uses the NA "mellow" to describe Kim and then relates it to Kim's predicted behavior in a particular kind of hypothetical situation. This situation does not restrict the meaning of Kim's attribute of "mellow" but extends it to a tendency to stay cool-headed. In addition, the phrase "more mellow" is scored as an RC. It should be noted that if the first sentence did not support the second sentence. Then the phrase "apt to stay cool-headed" is scored as an NA/cxt because it is modified by "in conflict situations."

Example (C)

The type of job he had at the hospital [NA], **I think a safe assumption can be made that he also works well with people** [SA].

Note: In this example, the perceiver describes Eric as having a job at the hospital, then he extends this attribute by relating it to Eric's ability to work well with people. Notice that working well with people is not restricted to a certain context and having a job at the hospital does not restrict Eric's other attributes. It should be noted that the phrase, "the type of job he had at the hospital" is not an RM because it is an attribute of

the target rather than a restricted criterion.

Example (D)

His ability to answer questions [NA] **and keep the conversation rolling** [NA] **was much better than Kim's. This would mean he could carry on speeches in front of an audience much more smoothly** [SA] **than Kim.**

Note: In this example, the perceiver forms a relative comparison between the targets and then extends it to another relative comparison. The perceiver makes a relative comparison between Eric and Kim with the NAs ("ability to answer questions" and "keep the conservation rolling") and extends it to the hypothetical context of making speeches in front of an audience.

Example (E)

He demonstrated his commitment to any job that he held [NA]. **Even saying that being a busboy was a neat experience** [SA] **and that he was always striving to do his job the fastest** [SA].

Note: In this example, the perceiver mentions an attribute ("demonstrated his commitment to any job that he held") and then elaborates on its meaning by providing two specific examples in which the attribute is present. Each of these examples are elaborations that are not clearly restrictive of the NA "demonstrated commitment;" therefore it is scored

as two separate SAs.

Example (F)

Eric also **shared his humanitarian side when he spoke about his job at the hospital** [NA/cxt]. **"The money's not great, but the people make it worthwhile** [SA]."

Note: In this example, the perceiver mentions an attribute "shared his humanitarian side" and then specifies the context ("when he spoke about his job at the hospital") in which it occurs. Then a supporting aspect is introduced as an example that elaborates on the NA/cxt.

Example (G)

Kim is a **good leader** [NA] **who will work well with others** [SA].

Note: In this example, the perceiver uses two qualities of the target that are connected to form an SA. By first stating an attribute "good leader" of the target, and then further describing the target in a way that is related to the NA, the perceiver draws a supporting link.

Example (H)

Kim **cried** [NA] **showing her vulnerability during a stressful situation** [SA].

Note: In this example, the NA "cried" is used to describe the target and then this NA is elaborated on by stating its

implications. The perceiver elaborates on the NA by providing additional meaning that is not clearly restrictive, therefore it is scored as an SA.

Example (I)

Eric **excels in leadership situations** [NA], **especially those involving intermural sports** [SA].

Note: In this example, the NA "excels in leadership situations," is elaborated by mentioning the context in which it is especially likely to occur. The perceiver elaborates on the NA by providing additional meaning that is not restrictive.

Example (J)

Eric has trouble expressing his thoughts and ideas [NA] **due to lack of time and experience** [SA].

Note: In this example, the NA "trouble expressing his thoughts and ideas" is supported by a causal explanation "lack of time and experience." The perceiver elaborates on the NA by describing how it came about.

Example (K)

Kim showed good leadership skills [NA] **because the interviewer coached her** [SA].

Note: In this example, the NA "good leadership skills" is elaborated on by a statement of causality "the interviewer

coached her." The perceiver states the origin of the target's attribute in a way the extends meaning.

Example (L)

By mixing academics and athletics [SA], Kim seems very well-rounded [NA].

Note: In this example, the SA occurs before the NA of "very well-rounded." The perceiver believes Kim seems very well-rounded because she is mixing academics and athletics. The perceiver forms a connection between an example of the target's attribute and the attribute itself.

Causal Links

The next four subcategories of integration are classified under the general category of causal link. These subcategories pertain to integration expressed through the perception of one subject, target or object as influencing another. This influence involves the inherent linking of one person or object to another.

Causal Link is considered a form of "implicit integration" by Tetlock (1984).

Causal links can be expressed as:

(A) one target influencing another target (This is called a dynamic relationship between targets.)
(B) a target(s), object(s), or situation(s) influencing the perceiver. (This is called a dynamic relationship between target(s) or possibility of interaction with the target(s).)
(C) one aspect influencing another aspect (This is called a simple causal link.)
(D) a situation or object influencing a target(s) (This is also called a simple causal link.)

In addition, the presence of a causal link can be expressed negatively as: (a) one target not influencing another target, (b) one aspect not influencing another aspect, and (c) a situation, context or object not influencing a target(s) and (d) a target(s), object(s), situation(s), or context(s) not influencing the perceiver. The absence of influence is scored because it is the recognition of potential influence, and therefore the recognition of a potential relationship.

Category I-2: Subcategories of Causal Links: Dynamic Relationship between the Targets is the perception of one target influencing another.

A **Dynamic Relationship between the Targets** is characterized by the perception of Kim and Eric as interacting with one another rather than as separate entities. When the perceiver sees a **dynamic relationship between the targets** he or she mentions them as (a) interacting with one another, (b) influencing one another, or (c) sharing a common experience that is clearly dynamic.

An impression that does **not** describe the relationship between the targets as dynamic is one in which the targets are described as only having certain attributes. The perceiver sees the targets in isolation and does not mention their relationship to one another in any way.

Dynamic Relationship between the Targets is abbreviated DRT.

Examples:

(A) **Eric was nervous to be around Kim** [DRT].

Note: In this example, Kim is described as having an influence on Eric's emotional state. The perceiver sees the targets as "alive"--able to effect and influence one

another.

(B) **Kim made him feel more at ease** [DRT].
Note: In this example, Kim is described as actively influencing Eric's emotional state. The perceiver sees the targets as active and able to influence one another.

(C) **When he said he wanted to be a counselor she told him that her mother was one** [DRT].
Note: In this example, the perceiver describes the conversation between Kim and Eric in a way that shows the understanding that they are influencing each other and that their conversation is a dynamic process.

(D) **Kim followed his lead like a wet dog** [DRT].
Note: In this example, the perceiver describes Kim's actions as being implicitly influenced by Eric. The perceiver's way of perceiving Kim is not separate from Eric's actions.

(E) **Kim followed** [DRT].
Note: In this example, the dynamic relationship between targets is implicit. The phrase "Kim followed" implies that she must have followed someone (given the context of the impression formation task).

(F) **Kim shared some stories of her life because of Eric** [DRT].

Note: In this example, Kim's actions are described as having been influenced by Eric. At a glance, it might appear that "shared some stories of her life" is an NA and "because of Eric" is a SA, but a closer inspection reveals the dynamic relationship between targets. Eric is clearly described as having influenced Kim's story telling.

(G) **She pointed out their similarities and put them on the same level** [DRT].

Note: In this example, Kim's influence on Eric is implied. By mentioning "their similarities" and putting "them on the same level." The perceiver recognizes that Kim has the capacity to influence Eric.

Category I-3: Subcategories of Causal Links: Dynamic Relationship between the Target(s) and Perceiver **is the perception of the target(s) influencing the perceiver.**

Dynamic Relationship between the Target(s) and Perceiver **is characterized by the perception of the target(s) as being able to affect the perceiver. The perceiver sees the connection between him or herself and the target(s) by mentioning that the target's actions are responsible for the perceiver's impression of or reaction to the target. It should be noted that a simple "I think..." or "I feel..." on the perceiver's behalf does** not **indicate that the perceiver sees the connection between the impression formed and the target's actions.**

Dynamic Relationship between the Target(s) and Perceiver **is abbreviated DRP.**

Examples:

(A) Eric convinced me that he was right for the job [DRP].

(B) Kim left me feeling this I could really trust her [DRP].

(C) Eric's nervousness made me realize that Kim was best for the job [DRP].

Note: In these examples, the perceivers see the target as directly influencing their decision. Thus, the examples illustrate that the perceiver views the target as an active agent and the relationship between the target(s) and perceiver is viewed as dynamic in nature.

Examples:

(D) **I laughed at Eric's story about the softball pitcher** [DRP].

(E) **When I heard Kim talking about her waitressing jobs I could really relate** [DRP].

Note: In these examples, the perceivers see the target as an active agent that has directly affected their experience. In this way, the relationship between the perceiver and the target is seen as a dynamic one.

(F) By saying he worked in a hospital [SA], **Eric convinced him that he was the one for the job** [DRP].

Note: In this example, the perceiver sees the target as directly influencing his decision. In addition, a supporting aspect precedes the DRP because the perceiver uses this phrase to elaborate on the exact nature of the influence.

Category I-4: Subcategories of Causal Links: Possibility of Interaction with the Target(s) **is the perceiver's perception of a hypothetical link between him or herself and the target(s).**

When the perceiver expresses the possibility of interaction with the target(s)**, he or she sees the targets on the videotape as real persons who could potentially engage in a real interaction. When the perceiver (a) mentions a hypothetical interaction between self and target(s) or (b) compares his or her own attributes with those of the target(s) in the context of a hypothetical interaction. The perceiver is making a connection between himself or herself and the target(s).**

Recognizes the Possibility of Interaction with the Target(s) **is abbreviated PIT.**

Examples:

(A) If Eric were my research assistant, we probably would not get along too well [PIT].

(B) Kim seems like she would be fun to be with [PIT].

Note: In these examples, the perceivers mention the hypothetical possibility of interaction between the target and themselves and recognize the potential to make a real connection with the targets.

Example (C) My personality is similar to Kim's so I think Eric and I would be compatible [PIT].

Note: In this example, the perceiver compares her own attributes with those of the target. By making a connection between herself and the target, she makes a decision about what might happen if she were to engage in a real interaction with the target. In this way, the perceiver sees her relationship with the targets to be a dynamic one.

Example (D) <u>not</u> **an CL**

I felt Kim was warmer than Eric.

Note: The perceiver does not use any type of <u>causal link</u> **in this example. The targets are not described as having any direct effect on the perceiver or on each other. A sentence that simply begins with "I" does not necessarily mean that the perceiver has been influenced by the subject.**

Category I-5: Subcategory of Causal Link: Simple Causal Link **is the perception of an aspect, object or situation influencing the target(s) or another object.**

Simple Link **is integration expressed through the perception of influence that is not directly related to the target's influence. This can be expressed as: (a) one aspect influencing another aspect, or (b) a situation, context or object influencing a target(s)**

Simple Link **is abbreviated SL.**

Examples:

(A) Kim's assertiveness clashes with Eric's need for control [SL].

(B) Kim's personality did not effect Eric's answers [SL].

(C) Eric's wanting to lead made Kim act more submissively [SL].

Note: In these examples, an aspect or attribute of one target influences an aspect or attribute of the other target. It is important to notice that it is the aspects of the targets that are influencing each other and not **the targets themselves.**

Examples:

(D) **The camera seemed to make them self-conscious** [SL].

(E) **The job interview seemed to put Eric in a self-promoting mood** [SL].

(F) **Kim's questions made Eric nervous** [SL].

Note: In these examples, an object, context, and attribute of the target are perceived as having a direct effect on the target. The perceiver sees the relationship between various subjects and the target(s) as dynamic.

(G) Eric wasn't very good at staying cool [NA]. **Either he was nervous to be around Kim** [DRT] **and/or the camera made him nervous** [SL].

Note: In this example, the perceiver sees the target's behavior as being affected by another target and the situation. The perceiver considers two possible causal influences. Eric's behavior is perceived as being influenced by (a) Kim's presence and/or (b) the camera's presence. Because the perceiver considers two different possible causal influences, they are scored as two separate causal links. The first is scored as a DRT and the second is scored as a SL.

Category I-6: Similarity Statement **is a statement of commonality between two targets or objects.**

A Similarity Statement **is scored when an aspect is used to illustrate a commonality between two or more subject(s), target(s) or object(s). The perceiver describes these subject(s), target(s) or object(s) as having some aspect in common. In addition, a** similarity statement **is scored when the targets are described as having shared a common experience that is** not **clearly dynamic.**

Similarity Statement **is abbreviated SIM.**

Examples:

(A) **Both Kim and Eric seemed bright and hard-working** [SIM].

(B) **Neither Kim nor Eric has what it takes for this job** [SIM].

(C) **Both subjects did not display too much leadership ability** [SIM].

(D) **Both were friendly and open** [SIM].

Note: In these examples, the perceivers see the targets has sharing common attributes or sharing a common lack of an attribute. It is important to note that when more than one attribute is listed in a similarity statement, SIM is scored only once.

Examples:

(E) **They enjoyed sports** [SIM].

(F) **Their performance was okay** [SIM].

(G) **They got along with each other** [SIM].

Note: In these examples, the perceivers describe the targets as having a common experience which are not clearly dynamic. These are scored as similarity statements because the two targets are seen as connected through a common experience.

Examples that are NOT scored as SIMs

1. Anything scored as an CL or dynamic relationship is not scored as a SIM.
2. Statements that describe the targets as sharing a common experience that are clearly dynamic such as "They had an interesting discussion" or "Kim and Eric joked around and got along with each other" or "They enjoyed each other's personal stories" would be scored as a DRT.
3. Context phrases that involve both Kim and Eric are generally not scored as a SIM. For example, "when they were building something with videotapes" or "when Kim and Eric were asked to build something" would not be scored as a SIM. (In some cases these phrase would be scored as NAs with contexts).

Category I-7: Matching Characteristics refers to integrating the information provided by the job description with the characteristics of the target(s). The perceiver explains how aspects of the target(s) are congruent or incongruent with the job characteristics.

This is a form of implicit integration in Tetlock's (1984) integrative complexity coding system.

Matching or congruency pertains to the perceptions of the characteristics of the job and describes these characteristics are related to the target's attributes and/or the target's suitability of the job. The perceiver shows integrated thinking by using the information that was provided by the job description to relate to information about the target(s). A matching or congruency is characterized by a statement of the characteristics of the job (i.e., what it calls for) and a statement of how aspects of a target(s) are congruent or incongruent with those job characteristics.

There are four kinds of matching or congruency. First, there are statements that describe the characteristics of the target and use them to expand on his or her hypothetical behavior in the job context. Second, there are statements that match the characteristics of the target and the characteristics of the job. Third, there are

statements that support previously mentioned attributes by comparing or matching them to the (or a) job. And fourth, there are statements of the criteria of the job following an explanation of why or why not the target would be suitable.

Congruency or Matching is abbreviated M.

Examples:

(A) Eric seems like a born-leader [NA]. I can see him running research groups [M].

(B) Kim seems very in touch with her feelings [NA] and the feelings of others [NA]. This will help her in this job [MAT].

(C) In building the table, it showed that she would work well among employees [M] and has a creative mind [NA/CXT].

(D) Kim is more suitable because she is interesting [NA] and holds together conversation [NA] which would be a plus working with people in a personnel position [M].

(E) She is self-reliant [NA], not needing too much guidance on the job [M], saving time and effort [SA].

(F) I think she would relate better [RC] to people [NA] and be more [RC] successful as head of a PR firm [M].

(G) He appeared uncomfortable in a highly visible role [NA/CXT]--which is what PR is all about [M].

(H) Although **the job includes many demands** [M], Eric would be able to set priorities.

(I) Since Kim demonstrates decisiveness [NA] and Eric didn't [C], she is more suitable **for a job in which making decisions is important and taking authority with people as a manager** [M].

Note: In these examples, characteristics of the targets are perceived and then used them to expand on the target's hypothetical behavior in the job context.

Example (J)

This position calls for a strong leader [NA/un]. Eric was friendly and assertive during the videotape task [NA/cxt].

Note: This is <u>not</u> a match because the characteristics of the job and the characteristics of the target are unrelated.

Examples:

(K) Eric is assertive [NA], after all **isn't that what the job calls for** [M]?

(L) **For this job, I need someone who cares** [M], Kim is the most [RC] considerate [NA].

Note: In these examples, the perceiver uses statements that match the characteristics of the target with the characteristics of the job.

Example (M)

Eric **would best fill the role of personnel manager** [M]. In support of this, I remember his good leadership and interpersonal skills [SA].

Note: In this example, the perceiver state his choice to fill the job description and then adds a supporting aspect to connect his choice to the attributes of target. It should be noted that the first sentence would not be scored as a MAT if it appeared alone without a sentence of supporting characteristics of the target.

Examples:

(N) Eric seems to put more [RC] of himself and effort into the project [NA/CXT], therefore, I feel, he **would be a dedicated worker** [MAT] and try to also make it interesting [SA].

(O) She demonstrated that she will speak up if things are not the way they should be [NA/CXT], **which is a good quality for a manager** [M].

Note: In these examples, the perceiver uses statements that support previously mentioned attributes by comparing or matching them to the job description.

Example (P)

This job calls for someone who will be calm [NA/UN], Eric was too nervous to be a good worker [M].

Note: In this example, the perceiver states the criteria of the job following an explanation of why the target would not be suitable.

Category I-5: Preference as a Resolution is the perception of a central theme that the perceiver uses in forming the impression and deciding who is best suited for the job.

This concept is similar to Winter's (1984) term overarching issues.

Preference as a Resolution pertains to the problem of selecting the target that is best suited for the job. The perceiver shows integrated thinking by using his or her choice to create a resolution of differentiated aspects between and among the targets. The preference as a resolution is characterized by (1) the perceiver stating his or her choice for the job, then (2) stating attributes of the target(s), reasons, observations and opinions that are related to that choice and then (3) concluding the impression by resolving these differentiated attributes, reasons, etc. with the choice restated in a way that provides the impression with a central theme. It is important to note that the choice simply being restated at the end of the paragraph does not qualify as a resolution. The paragraph must be "pulled together" around a central theme.

Preference as a Resolution is abbreviated as RES.

Examples:

1)I think Eric is more suitable for the job because he has pretty good leadership qualities. 2)He presents himself fairly well and seems to know where he is going in life. 3)He does need some help expressing his ideas and thoughts clearly. 4)That come in time and experience. 5)He has diversity in the working world, and has interacted with a great deal of people in his many working experiences. 6)He seems to be compassionate of people and understands human thinking. 7)Kim is too emotional. 8)Her big downfall was breaking down during a stressful situation while working. 9)Life is full of stress and people are expected to function during stressful situations. 10)Eric's leadership abilities impressed me most. 11)He is a take charge kind of guy who isn't afraid to work. 12)Eric would be the best choice for me.

Scoring:

(A) In Sentence 1, the perceiver states his choice for the job.

(B) In Sentences 2 through 9, the perceiver states attributes of the targets, reasons, observations and opinions that are related to that choice.

(C) Beginning in Sentence 10, the perceiver starts concluding the impression by resolving these differentiated attributes, reasons, etc. with the restated choice as the central theme of the impression (i.e., Eric is chosen for his leadership qualities).

Note: <u>Preference as a Resolution</u> can only receive a maximum score of <u>one</u> for each paragraph. In other words, if RES is present, it is scored as one and if RES is absent it is scored as zero for each paragraph.

Paragraph Section

The following examples demonstrate how whole paragraphs are scored. A detailed procedure that coders are to use for scoring paragraphs is presented. This is followed by a section that outlines some specific coding rules that have not yet been discussed. Then, there are examples of written paragraphs. Each paragraph is followed by an example of how the actual coding sheet is to be completed.

Coding Procedure

The scoring procedure for each coder will be as follows:

a. Read each response completely.

b. On a separate coding sheet, record the identification number of the response.

c. Count the number of words and record them.

d. Count the number of sentences and record them.

e. Consider one sentence at a time.

f. Consider one category at a time.

g. Record the presence or occurrence of each category and note the key word(s) or phrase(s) that were scored.

h. After each sentence has been considered separately, each response should read over carefully for instances of differentiation and integration that occur through the use of more than one sentence. For instance, Cs, SAs, MAT and RESs often evolve out of more than one sentence. These are called secondary scores.

i. Carefully read the response over a third time to be sure instances of differentiation and integration were not omitted or scored incorrectly.

Specific Scoring Rules

1. The first sentence in each paragraph is usually the answer to the question: " ...who is best suited for the job?" Therefore, the phrases such as "best suited," "better suited," "more suitable," "better candidate," etc. are not scored because they are simply part of the question stem that the perceiver has repeated in his or her answer.
2. If the perceiver repeats any phrase or sentence, it is not scored the second time.
3. New aspects are sometimes used to create other differentiated structures such as RMs, RCs and Cs. These aspects are scored as NAs independent of the other differentiated structures. For instance, if contrast consisted of two new aspects, it would be scored as two NAs and one C. However, this general rule, however, does not extend to categories of integration. New aspects are <u>not</u> scored within the categories of integration.
4. Two supporting aspects of previously mentioned NAs can sometimes be used to create a contrast. For instance, the perceiver might mention a new aspect related to Kim and a new aspect related to Eric and then form a contrast using two respective supporting aspects. In this example, the two SAs within the contrast are scored as well as the two

NAs and the C.

5. It is possible for SIMs or any type of causal link to be scored as an supporting aspect if it is connected to a previously mentioned NA.

Paragraph (A)

1) I think Kim is the best suited for the job. 2) Since she will be doing interviews and dealing directly with people, I thought her face-to-face presentation was better. 3) She looked Eric straight in the eye while talking to him, whereas Eric shuffled his foot and looked down.

4) Eric stated that he liked being a busboy because he didn't have to interact with the customers. 5) A research assistant would need to <u>like</u> talking and interacting with them.

6) While Kim was doing the interviewing, she seemed to very easily hold up the conversation, to get Eric to say more than merely answering the questions. 7) By drawing him out, she was able to find out more about his actual personality than just his past experiences would reveal. 8) This quality of being skilled at drawing people out is extremely important in psychology.

9) Though both students were well educated, friendly and experienced, I think Kim is better for the job.

Code Sheet for Paragraph (A)

ID #___089___

Word Count ___159__

Sentence Count __9___

Sentence 1 0

Sentence 2 M "Since she will be doing interviews and dealing with people directly."

NA "face-to-face presentation"

RC "her face-to-face presentation was better."

Sentence 3 1/2 C "She looked Eric straight in the eye while talking to him"

1/2 C "whereas Eric shuffled his foot and looked down."

SA "She looked Eric straight in the eye while talking to him"

SA "whereas Eric shuffled his foot and looked down."

Sentence 4 NA "Eric stated that he liked being a busboy."

SA "because he didn't have to interact with customers."

Sentence 5 M "A research assistant would need to <u>like</u> talking with people and interacting with

them."

	SA	whole sentence
Sentence 6	NA/cxt	"While Kim was doing the interviewing, she seemed to very easily hold up the conversation."
	DRT	"to get Eric to say more than merely answering the questions."
	RC	"more than merely"
Sentence 7	DRT	"By drawing him out"
	DRT	"She was able to find out more about his actual personality"
	RC	"more about his actual personality than just his past experience would reveal."
	SA	whole sentence
Sentence 8	M	"the quality of being skilled at drawing people out is extremely important in psychology."
	SA	"the quality of being skilled at drawing people out is extremely important in psychology."
Sentence 9	SIM	"both students were well-educated, friendly, and experienced."

Secondary Scores 0

Total Scores for Example (A)

Differentiation	Integration
NAs - 3	SA - 6
RM - 0	CL - 3
RC - 3	SIM - 1
C - 1	M - 3
Total Differentiation = 7	RES - 0
	Total Integration = 13

Paragraph (B)

1) I think that Eric would be the best one for the job. 2) He seemed like the type that would be easy to talk with. 3) Also he seemed relaxed and I think if you were talking to him, he would make you feel relaxed also. 4) He had experienced working at many jobs. 5) Also he had learned how to get the best tip (telling people it was his first day) so it showed he understood the people he waited on and knew what to say to them to get the best tip he could. 6) When given the tapes to build something, he was the one who came up with the idea of the table and chairs. 7) Kim just started putting them together, but he thought about it and watched her for a minute and then he was the one who came up with the idea. 8) Also he found room for the rest of the tapes by putting a few here and there until they were all used up.

Coding Sheet for Paragraph (B)

ID # 065

Word Count 166

Sentence Count 8

Sentence 1 0

Sentence 2 NA "the type that would be easy to talk with."

Sentence 3 NA "relaxed"

PIT "make you feel relaxed also"

SA whole sentence

Sentence 4 NA "experienced working at many jobs."

Sentence 5 NA "learned how to get the best tip"

RC "best tip"

SA "by telling people it was his first day"

SA "so it showed he understood the people he waited on."

SA "knew what to say to them to get the best tip"

Sentence 6 1/2 C "the one who came up with the idea ...."

NA/cxt "the one who came up with the idea .... "

1/2 C [it is implicit that Kim did not come up with the idea.]

Sentence 7	1/2 C	"Kim just started putting them together"
	NA	"the one who came up with the idea ...."
	1/2 C	"he thought about it and watched her for a minute then he was the one that came with the idea."
	NA	"he thought about it."
	NA	"and watched her for a minute."
	NA	"then he was the one that came with the idea."
Sentence 8	NA	"found room for the rest of the tapes."
	SA	"by putting a few here and there until they were all used up."
Secondary Scores	0	

Differentiation	Integration
NA - 10	SA - 5
RM - 0	CL - 1
RC - 1	SIM - 0
C - 2	M - 0
	RES - 0
Total Differentiation = 13	Total Integration = 6

Paragraph (C)

1) I think Eric and Kim both have good qualities for the job. 2) Eric is good-looking, intelligent and sort of a performer. 3) As my assistant, he would probably be a lot of fun. 4) Also, he is creative and spontaneous as demonstrated by his ability to make a table and chairs out of videotape boxes. 5) Kim is smart, athletic, and a good listener. 6) As my assistant, she would be a person I could rely on. 7) She seemed to have a calming effect on Eric. 8) I guess if I had to choose Kim would be my choice.

Code Sheet for Paragraph (C)

ID # 017

Word Count 93

Sentence Count 8

Sentence 1	SIM	"good qualities"
Sentence 2	NA	"good-looking"
	NA	"intelligent"
	NA	"sort of a performer"
Sentence 3	PIT	"As my assistant, he would probably be a lot of fun."
	SA	whole sentence
Sentence 4	NA	"creative"
	NA	"spontaneous"
	SA	"as demonstrated by his ability to make a table and chairs out of videotape boxes."
Sentence 5	NA	"smart"
	NA	"athletic"
	NA	"good listener"
Sentence 6	PIT	"As my assistant, she would be a person I could rely on."
	SA	whole sentence
Sentence 7	DRT	"she seemed to have a calming effect on Eric."
	SA	whole sentence

Sentence 8 0

Secondary Scores

Sentence 2 1/2 C "Eric is.... a sort of performer."

Sentence 5 1/2 C "Kim is.... a good listener."

Differentiation

Integration

NA - 8	SA - 4
RM - 0	CL - 3
RC - 0	SIM - 1
C - 1	M - 0
	RES - 0

Total Differentiation = 9 Total Integration = 8

Paragraph (D)

1) Although Eric was quite fidgety, he seemed best suited for the job as my assistant. 2) I could relate to many of his past experiences such as working at a hospital and being a busboy. 3) When building the videotapes, Eric was creative but kind of domineering. 4) Eric is not as good of a listener as Kim, but I guess that reflects his ability to be a social and dominant leader. 5) Eric seemed better able to handle stressful situations. 6) Kim would be a nice person to talk to but Eric would be my choice because I can better understand and relate to him.

Coding Sheet for Paragraph (D)

ID # 133

Word Count 102

Sentence Count 6

Sentence 1 NA "quite fidgety"

Sentence 2 DRP "I could relate to many of his past experiences."

SA "working at the hospital"

SA "being a busboy"

Sentence 3 NA/cxt "creative"

NA/cxt "kind of domineering"

Sentence 4 RC "Eric is not as good of listener as Kim"

NA "good listener"

SA "reflects his ability to be a social and dominant leader."

1/2 C "social"

1/2 C "dominant"

Sentence 5 RC "better able to handle stressful situations."

NA "able to handle stressful situations."

Sentence 6 PIT "would be a nice person to talk to"

PIT "I can better understand and relate to him."

RC "better understand and relate"

RES whole sentence

Secondary Scores 0

Differentiation	Integration
NA - 5	SA - 4
RM - 0	CL - 2
RC - 3	SIM - 0
C - 1	M - 0
	RES - 0

Total Differentiation Total Integration = 6

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