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The effects of perceiver's processing goals on person memory and organization in a multi-target setting: An examination of the associative network model of person memory

Hall, Pamela Denise, Ph.D.
The Ohio State University, 1992
THE EFFECTS OF PERCEIVERS PROCESSING GOALS ON
PERSON MEMORY AND ORGANIZATION IN A MULTI-TARGET
SETTING: AN EXAMINATION OF THE ASSOCIATIVE NETWORK
MODEL OF PERSON MEMORY

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree of Doctor of Philosophy in the Graduate
School of the Ohio State University

By

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Love suffers long and is kind; love does not envy; love does parade itself, is not puffed up; Does not behave rudely, does not seek its own, is not provoked, thinks no evil;

Does not rejoice in iniquity, but rejoices in truth;

Bears all things, believes all things, hopes all things, endures all things.

I CORINTHIANS 13: 4-7

To my dear family: Mother, Marie A. Hall Father, John Mack Hall Sisters, Annette Hall Hinton and her children Arlisa & David Sister, Jacqueline Hall Crumm & her daughter Cabrilla Sister, Robinette Hall Reaves and her sons Irvine and Bryan Sister, Lisa Michelle Hall & her daughter Porscha Brother, John Hall & his daughter Deondra Brother, William Hall & his sons Wilbert, William & Wayne

Thank you for loving me and showing me how to love!!! You all hold a special place in my heart.
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To my advisor Thomas M. Ostrom who I have learned what it takes to educate others and to be patient during the process. You are one of the reasons why I will never forget Ohio State. I am eternally grateful.

SCRG keep the data coming in and the publications going out!!

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To my best friend Antointte Cheatham and her family who have been a source of strength during my stay here at Ohio State. You have all shown me and taught me what God truly means by LOVE!! I thank you all wholeheartedly.
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CHAPTER I.
INTRODUCTION

The notion that there are individual differences in the need to structure relevant situations in meaningful, integrated ways was introduced by Cohen, Stotland & Wolfe, (1955). They suggest that this "need for cognition", is a need to understand and make reasonable the experiential world. Though the plausibility of this individual difference variable seemed clear, the study of the need for cognition did not gain much empirical and conceptual validation for nearly thirty years. During Cohen's era there seemed to have been the lack of interest in individual difference variables. In fact Underwood & Shaughnessy, (1975) acknowledges this by saying "no variable has been so consistently ignored as the individual difference variable in theory construction".
During the late 70's and early 80's the focus of many persuasion studies was the effect of individual difference variables on attitude change. In 1982 Cacioppo and Petty reintroduced the variable need for cognition. They developed an empirical based assessment device of the need for cognition construct that had strong psychometric properties. Their conceptualization of need for cognition was different from Cohen's. It focused on the statistical tendency of and the intrinsic enjoyment individuals derive from engaging in effortful information processing. Conversely, Cohen suggested that need for cognition is derived from sources of energy conceptualized as needs, drives or instincts. This terminology suggested that need for cognition was a state of arousal similar to hunger or thirst. Yet, Cacioppo & Petty maintain that individuals low in need for cognition are cognitive mizers (Taylor, 1981) relative to individuals high in need for cognition. Though the conceptualization is different from Cohen, Cacioppo & Petty retained the name "need for cognition" after developing a device to measure the variable.
Cacioppo and Petty (1982) were able to show that need for cognition tapped a construct distinct from test anxiety and cognitive style. Need for cognition was predictably and weakly related to cognitive style and unrelated to test anxiety (See Studies 1 and 2). Further, in Study 3 they were able to demonstrate that need for cognition was weakly and negatively correlated with being close minded, unrelated with social desirability, and positively correlated with general intelligence. These studies provided both discriminant and convergent validity for the need for cognition variable. The last study (Study 4) and Cacioppo, Petty & Morris (1983) demonstrated the predictive validity of need for cognition.

In the area of attitude research, Cacioppo & Petty (Study 4, 1982) & Cacioppo, Petty, & Morris 1983 have found that need for cognition may affect whether or not a person is influenced by a persuasive communication. High need for cognition individuals or HNC’s are said to process and integrate information indepthly while low need for cognition individuals or LNC’s get little enjoyment from activities that involve a great deal of
thinking. In both these studies they found that HNC’s recalled more of the persuasive arguments than LNC’s. These studies both demonstrated the predictive validity of the need for cognition variable.

Studies outside the area of attitudes and persuasion have further demonstrated the generalizability of the need for cognition variable. Petty, Cacioppo & Kasmer (1985) found that HNC’s did not social loaf on tasks whereby their individual performance could not be singled out but LNC’s did.

In 1991, Lassiter, et al., found that HNC’s break events into more meaningful units than did LNC’s and also recall more information. Srull, Lichtenstein, & Rothbart (1985) found that individuals high vs. low in need for cognition have better recall for incongruent information. He explained his findings using two well known associative network models of person memory. These two studies mentioned above show that the need for cognition variable has only recently gained empirical and theoretical interest in social cognition.
Thus, this lack of interest in the study of individual difference variables has spread to the social cognition area. Yet, the term need for cognition implies that there may be individual differences in the goals a perceiver brings to a social situation. These goals may no doubt affect the way information is recalled and organized about the target person.

Multi-target or single target designs are often used when studying examining person memory and organization. A multi-target design exists when the target is given information about 2 or more target persons. A single target design exists when subjects are given information about only one target person. If there happens to be multiple targets then processing goals may strengthen or weaken the perceivers cognitive abilities. Sedikides, et al., 1991 concluded their paper on the study of the effects of processing goals on person memory and organization in a multi-target setting with the following idea. They believe there should exist a taxonomy of goals that perceivers bring to bear on social informational processing and these goals should be studied to determine their affect on memory.
structures and processes. They focused on processing goals and not need for cognition. However, studying both of these perceiver's goals might determine the applicability of associative network models of person memory with regards to multi-target settings.

The impetus of this paper is to further address the effects of the goals perceivers bring to the social situation on person memory and organization. It will focus on two variables, need for cognition and processing goals. The study of both variables was done by Srull, et al., 1985 in the study above. However, instead of employing different processing goals, subjects were only given an impression set. Additionally, they studied the incongruency effect using a single target design.

Thus far it has been demonstrated that work on need for cognition has been limited in social cognition. This is also true for the study of processing goals as a perceiver's goal. The limitation of the research done on processing goals is due to the fact that most work is done using a single target or a single target in a multi-target setting design instead of a multi-target
design. Also, the research did not examine the effects of different processing goals on person memory and organization. For instance, the studies used an impression set or memory set but not both.

So, they either used a single target design and manipulated processing goals or they manipulated processing goals but did not use a single target design. These findings led to two established associative network models. Two latter studies did examined the effects of processing goals on memory and organization in a multi-target setting. The findings led to an extension of the associative network models.

To thoroughly understand and address the effects of processing goals on memory and organization in a multi-target setting, which is a purpose of this paper, it is necessary to understand the findings of research done thus far. The research extends into two areas.

**Area One: Single Target Design**

The notion that individuals recall incongruent information about a single target better than congruent or irrelevant information was first introduced by Hastie & Kumar, 1979. The basic paradigm, which became the
standard for future research, is as follows: subjects are presented with a set of personality trait adjectives describing the target person to create an initial expectancy of the types of behaviors that would be expected from this person. This expectancy is followed by a series of behaviors. The behaviors are either congruent, incongruent or irrelevant to the initial expectation. The number of congruent, incongruent and irrelevant behaviors varied across experimental condition. Subjects read about a target who performed behaviors, typically with a ratio of 7 congruent, 7 incongruent and 7 irrelevant to the initial expectancy. This procedure was replicated across several trait dimensions that were both socially desirable or undesirable. The basic finding: recall for the incongruent items was best, followed by the congruent items, with the irrelevant items recalled worst.

This incongruency effect was both confirmed and expanded upon by Srull, 1981; Srull, 1983; and Srull, Litchenstein & Rothbart, 1985. These studies examined the effects of the perceiver's processing goals on what Hastie, 1980 called the incongruency effect. In one of
these studies subjects received either anticipated interaction, impression or memory instructions prior to the initial expectancy. The anticipated interaction subjects were told that they would later meet and work collectively on some tasks with the target person and they would be given some information about the target that would make him/her more familiar. The impression set subjects were told to form an impression of what the target person would be like. Lastly, the memory set subjects are told to remember as much of the information as possible because they would later be asked to recall them. Both anticipated interaction and impression formation instruction sets have been found to lead to higher levels of recall and organization for the target than memory set instructions (See Srull, Lichtenstein, & Rothbart, 1985).

Organization was typically measured by determining conditional probabilities when subjects read information about a single target and ARC-Scores when subjects read about a single target in a multi-target setting. A conditional probability is an index for measuring the likelihood of recalling an item of the same or different
type in adjacent order. For instance \([P(I/C)]\) is the formula for measuring the probability of recalling an incongruent item if one has just recalled a congruent one while \([P(C/I)]\) is the formula for measuring the probability of recalling a congruent item given that one has just recalled an incongruent item. The probability of the former is more likely than the latter.

The adjusted ratio of clustering (ARC) measures categorical clustering (Roenker, Thompson, & Brown, 1970). ARC scores range from 0 (chance clustering) to 1 (perfect clustering). Negative ARC scores indicate that subjects employed an organizational strategy that is different from the category under which the data were scored. Srull 1981 & Srull, Lichtenstein & Rothbart 1985 used conditional probabilities. Srull, 1983 used ARC-Scores.

This framework of accessing the role of processing goals on person memory was first explored by Hamilton, Katz & Leirer, 1980. Subjects were presented with behavior statements related to four conceptual categories (interpersonal, intellectual, sports and religious
activities). Half of these subjects received memory set instructions while the other half received impression set instructions. In a free recall task subjects in the impression condition had better recall than those in the memory condition. Though the finding was consistent with regards to work related to the incongruency effect it differed in one important way. The items of information did not contain a mixture of congruent, incongruent and irrelevant items. The items were from four different conceptual categories. Thus, the affect of processing goals on information from different conceptual categories lead researchers to examine the affects of processing goals when the information contained a mixture of information from one conceptual category.

Researchers interested in the incongruency effect were able to demonstrate the effect of the perceiver's processing goals on the recall and organization using a different type of stimulus information. The processing goals were manipulated in a manner consistent with Hamilton, et al 1980a & b. Yet, contrary to presenting information that came from four different conceptual
categories, the information differed in its evaluative direction (congruent, incongruent or irrelevant to expectancies based on trait descriptions). The only divergent study was Srull, 1983. In this study not only did he manipulate processing goals, but he manipulated the order in which the items were presented. The information was blocked by target person or presented randomly. Also the information differed in the number of target persons and the number of behaviors about each target person. He found that the impression set lead to more items recalled than the memory set. In addition, he found that information was recalled better when it was blocked by target than when randomly presented. Lastly, by computing ARC scores, he found that information was organized around the target person better in the block presentation. Due to the consistency of these findings an associative network model representing the way subjects may be organizing information about the target person was formulated.

The associative network model of memory proposes that inferring traits from behaviors establishes an associative linkage in memory between each behavior
and the trait it implies. If more than one behavior implies a trait then the trait becomes the central node. In essence, the expectation leads the subject to expect behaviors that will confirm the initial expectation. When he/she receives incongruent information it remains in working memory longer as the individual attempts to resolve the incongruency. Thus, the incongruent items of information become attached to congruent items as well as other incongruent items. These associative connections thereby lead to a higher probability of recalling and displaying a more organized memorial representation for the incongruent items.

Further, subjects given the anticipated interaction or impression set instructions are more motivated to resolve any incongruencies while the memory subjects are only engaging in rote rehearsal. The incongruent items do not remain in working memory as long for the memory subjects as they do for the impression set subjects. Hence, the superior recall of incongruent items for impression set subjects over memory set subjects.
Thus, to infer that other perceiver's goals, such as need for cognition, might lead to similar findings is reasonable. This line of reasoning would suggest that HNC's focus on the more challenging part of the task when attempting to form an impression. The most challenging part of the task would be attempting to resolve the incongruency. Thus, more associative pathways exist between the incongruent items and the congruent items for the HNC's. This explains why HNC's had better recall then LNC's did for the incongruent information in Srull et al., 1985. (For a review of the associative network models see Hastie, 1980 & Srull, 1981).

Again, the Hamilton et al., study was the first to address the affect of processing goals on person memory and organization for a single target in a multi-target setting. They compared impression and memory sets. Further, Srull & Brand (1983) examined the role of anticipated interaction, as processing goal, on person memory. The dependent measure was person memory for items from different conceptual categories versus memory for congruent, incongruent and irrelevant
items. Anticipated interaction subjects had better recall and organization than memory subjects. These researchers claimed that anticipated interaction instructions led subjects to integrate the information more thoroughly than memory instructions.

These two studies as well as Srull, 1983 suggest that the models proposed by Hastie 1980 & Srull, 1981 are applicable to memory about a single target in a multi-target setting. Even when there is not any incongruent or irrelevant items presented. This implies that processing goals do affect the interitem linkages that are formed during encoding information that consists of a mixture of congruent, incongruent and irrelevant in regards to a single target.

Unfortunately, Srull & Brand confounded the anticipated interaction instructions with impression instructions. Subjects in the anticipated interaction condition were specifically instructed to form an impression of what the target person would be like because they would later meet him/her. Thus, the superior recall of the anticipated interaction subjects over the memory subjects do not tell whether or not the
anticipated interaction set or the impression set aspect of the instructions is leading to the superior recall and organization.

Fortunately, in 1989 Devine, Sedikides & Fuhrman validated this finding by showing that anticipated interaction and impression set instructions both lead to superior recall in comparison to memory set instructions.

These models account for memory for a single individual or a single individual in a multi-target setting. However, when information is presented about several unfamiliar individuals (a multi-target setting) will the models be applicable? Ostrom, 1989 suggests that a comprehensive model of person memory should account for memory and organization in both single and multi-target settings. The models should be able to account for other perceivers goals, like need for cognitions as well as the perceiver’s processing goals.

The previous models do a great job of explaining the effect of processing goals on memory and organization for information that is a mixture of congruent, incongruent and irrelevant. However, when
the information is presented about multiple targets, that is from the several competing categories or temporally ordered, there are several different organizational schemes to choose from. When examining person memory and organization in a multi-target setting both competing and non competing category designs have been used. A competing category design exists when the information about the target persons come from the same set of conceptual categories. For instance, John's hometown is Columbus and his major is finance. Bob’s hometown is Dayton and his major is psychology. The information about John and Bob comes from the conceptual categories hometown and major.

A non competing category design exists when the information about the target persons do not share any of the same conceptual categories. For instance, John cooks gourmet food and he can type 55 words per minute. Bob is a naval scientist and he plays the lottery everyday. The information about John and Bob do not share the same conceptual categories.
Research by Ostrom and his colleagues have addressed this issue of competing organization schemes. Their results suggest a model similar to Hastie & Srull’s.

**Area Two: Multi-Target Setting**

Research lead by Ostrom and his colleagues examined the affect of presentation format on person memory and organization in a multi-target setting. (Ostrom, Pryor, Pusateri, & Mitchell, 1984 Studies 2 & 3; Devine & Ostrom 1985). The basic paradigm in these studies is to present subjects with information about four target persons. The information is blocked by person (high person focus) or blocked by category (low person focus). Information blocked by person refers to presenting items of information about 1 person contiguously before presenting information about another person. Information blocked by category refers to presenting information about one conceptual category before presenting information from another category.

The overwhelming finding is that subjects organized and recalled information in a manner consistent with the presentation format. Subjects who received the high person focus condition had higher Person ARC-
Scores than Category ARC-Scores and the opposite was true for those who received the low person focus condition. Categorical clustering was measured by means of the adjusted ratio of clustering (ARC; Roenker, Thompson, & Brown, 1971).

From these findings Ostrom, Pryor & Simpson 1981 extented the terminology of the associative network models to account for memory in a multi-target setting. They maintain that when presented information about a single target the way in which the information is likely to be organized is by the person node. The features will become attached to the person they read about. However, in a multi-target setting there are competing organizational schemes. Further, their findings suggest that their are conditions that increases the likelihood of choosing one scheme over the other. The competing schemes can lead to temporal or descriptor organization.

Descriptor organization refers to organization based upon semantically related descriptor terms. Information presented about the target persons’ hometowns, part-time job or hobbies is descriptor
information. Moreover, these descriptors can be competing or noncompeting with regards to the targets. Thus, the descriptor might not lead to name-to-item associations as the Hastie & Srull models proposes. They might also lead to item-to-item associations when a competing categories design is used.

These associations can be within person, meaning the items from the same category (ie, the targets hometowns) are closely linked in memory or between person, meaning the items from different category are closely linked (ie., a hometown, followed by a hobby, then a major). If the design is noncompeting then the name-to-item and item-to-item between person pathways should be strengthened.

The temporal organization refers to organization based on the temporal order in which blocks of information are received. In a multi-target setting Ostrom used information that was blocked by person or by descriptor category. The information is either about each target may be from competing or noncompeting categories. If a competing categories design is used the
subjects can organize information is a manner consistent with the presentation format. This suggests that a design blocked by person strengthens the name-to-item pathways while one that is blocked by descriptor enhances both between and within person item-to-item pathways. If the design is not competing then the information must be presented blocked by person or randomly presented.

Another factor that effects the strength of the associative pathways is the salience of the information. McCann, Ostrom, Tyner, & Mitchell 1985 found that person organization was better for targets made salient by race or gender versus those not made salient. This suggests that the name-to-item pathways are strengthened in a multi-target with noncompeting categories by salient information.

This research suggests a model that account for memory in a multi-target setting. However, it’s only limitation is that it does not thoroughly address the issue of processing goals. The only exception was Pryor and Ostrom 1981. They compared the memory and organization of impression and memory set instructions.
The impression set subjects had better recall and organization. However, the comparative effects of anticipated interaction was not examined in their study.

In an attempt to test such a prediction in a multi-target setting, Sedikides, et al. 1991 manipulated processing goals (anticipated interaction, impression, use, and memory) and presentation format of the target information (target-blocked, item-blocked or random) to determine if the same memory and organization effects would be obtained. Though anticipated interaction, impression set and use instructions lead to better recall than the memory instructions, the effects they had on clustering in a single-target setting did not replicate in the multi-target setting. Anticipated interaction did not lead to better organization.

Further, did not replicate the basic finding of Ostrom's whereby the presentation format affects the way the information is organized in memory. This suggests that processing goals sometimes disrupt subjects ability to organize information in a manner
consistent with the presentation format. Also, it does replicate Devine et al., 1989 & Srull and Brand, 1983 whereby the anticipated interaction lead to superior organization. Memory was measured via recall and organization was measured via conditional probabilities.

The results of the conditional probability data suggests that anticipated interaction instructions are leading subjects to do more than the impression instructions. Ostrom & Pryor (1981) suggest that matching and conditional probabilities tap different aspects of the structure of the person memory. The matching data are sensitive to the formation of name-to-item associations. The conditional probabilities are effective in establishing both name-to-item and item-to-item associations. Due to the formation of both name-to-item and item-to-item associations the likelihood of recalling and organizing information should be increased. For item-to-item associations the information must be within instead of between categories to produce the recall and organization correlation. Why?
If the subject only has a name-to-item association then each time he/she recalled an item he/she would have to start at the top of the person(name) node to find an item. However, if subjects also have within category item-to item associations they would not have to traverse back to the top of the person node to find the item. The items would be connected to one another. However, if this were the case then anticipated interaction and impression set subjects should have both better memory and organization. This was true in Devine, et al., 1989 but not Sdekides et al., 1991.

Their 1991 study also found that the blocking of the information did lead to better recall than randomly presenting the information. However, it did not lead information to be organized in a manner consistent with the way it was presented. Thus, the associative pathways that are usually strengthened by temporal presentations was not upheld in this study.

Though this claim has not been addressed, these findings suggests that an attempt to form 4 associative networks may be affecting person organization but not memory. This seems particularly likely when subjects
are given the instructions to anticipate interacting or form an impression of the four target persons. However, this conclusion cannot be drawn by relying on findings using a competing category design without obtaining adequate evidence using a non competing category design.

This dissertation will address the effects of perceivers's goals on memory and organization in a multi-target setting with either competing or noncompeting designs. This will be done in attempt to determine when the associative linkages are weakened or strengthened.

**Study 1** Will examine the effect of Need for Cognition on memory and organization in a multi-target setting. A competing categories design will be used with information blocked by person or by alternative taxonomic categories.

**Study 2** Will examine the effect of both Need for Cognition and Processing Goals on memory and organization in a multi-target setting. The presentation format will be the same as that of Study 1. However, the stimulus information that is usually presented in a list format
(the information items from each category consists of a sentence or phrase such as Bryan is from Virginia) will be compared with a different communication format. The same items of information, blocked by person or category will be embedded in a transcript that subjects will be reading.

**Study 3** Will examine the effects of Need for Cognition on memory and organization in a multi-target setting. However, a noncompeting categories design will be used. No items of information about the four target persons will come from the same category.

**Study 4** Will examine the effect of Need for Cognition and Processing Goals on memory and organization in a multi-target setting. Again a noncompeting categories design will be used. In addition, the information about the four stimulus persons will be blocked by person or randomly presented. Additionally, the stimulus person will be made salient (occupational status) or nonsalient (name). Instead of just given the stimulus information as well as the target’s name they will be given the target’s occupation along with the stimulus information.
CHAPTER II.

STUDY ONE

Purpose

This study has two primary purposes and several secondary purposes. The first primary purpose is to determine if Need for Cognition effects subjects ability to process information about four target persons. There will be four items of information presented with regards to four target persons. The information will represent four competing conceptual categories. Srull, 1985 et al., study was the only one that examined the effect of Need for Cognition on person memory. This study employed the single target design and did not assess cognitive organization. However, they found that HNC’s recall of more incongruent items than LNC’s. They suggest that HNC’s spend extra effort with the difficult parts of the task (resolving the incongruency). If this is true, than in this study the more difficult part of the multi-target task is a) linking the names to
the descriptor information and b) finding out what is distinctive about each of the four persons in order to form name-to-item categories. This predicts that better recall for HNC’s than LNC’s. Srull, et al., 1985 did not measure recall by using a name-to-item matching task. However, if HNC’s are processing information about multi-targets in the above two ways than name-to-item matching should also be higher for HNC’s than LNC’s. Further, if HNC’s are able to separate each of the four target persons than this should lead to higher person clustering for them than for LNC’s.

The first secondary purpose is an attempt to replicate the findings by Ostrom in his colleagues whereby the presentation format effects the way in which subjects organize information in memory. Thus, will subjects that receive the high person focus condition have higher Person ARC Scores and lower Category ARC Scores than those that receive the low person focus condition and vice versa. Devine, et al, 1985 and Hall’s masters thesis did obtained this finding. However, Sedikides, et al., 1991 did not.
The second secondary purpose will attempt to determine the traditional ARC-Score X Person Focus interaction will be affected by Need for Cognition. Ostrom's research suggests that the presentation format aids subjects in organizing the target information. HNC's and LNC's may both used the format presented during the experiment just as subjects in other studies did (See Devine et al, 1985). However, it is possible that HNC's need to engage in integrative processing may invoke their own organizational scheme. LNC's need to cognitively mize may lead them to rely strictly on the format they are presented with.

The last secondary purpose is to determine if the two different replication sets used as stimulus materials would lead to similar patterns of recall, name-to-item matches and person organization. This is an attempt to generalize the findings across replications.

Method

Subjects

Fifty six subjects enrolled in Psychology 100 at Ohio State University served as subjects. Their
participation was in partial fulfillment of a course option.

**Stimulus Materials and Dependent Measures**

A 2 (Replication Set: Sorority, Backpack) X 2 (Person Focus: High, Low) design was employed in this study. The two stimulus presentations consisted of two different person focus versions. The stimulus items appeared one per page and were blocked by person or by taxonomic category. The items about each target person was underlined. Replication A consisted of four items of information pertaining to the activities that each of the four men engaged in during a four day backpacking trip. The four competing categories pertained to

1) experiences each man had putting their tent up
2) problems each man had cooking breakfast
3) reactions each man had to a bear in the campsite and
4) experiences each man had swimming in a lake. In Version One the information was presented blocked by person (high person focus condition) and Version Two's information was presented blocked by taxonomic category (low person focus). To aid the subjects in differentiating the target persons their names began
with the first four letters of the alphabet (Al, Bob, Carl and David).

Replication B consisted of information pertaining to four women planning a sorority party. Each person suggested a party theme, a type of food to serve, a type of beverage to serve and a type of band to play at the party. The theme, food, beverage and band represented the four taxonomic categories. Consistent with Replication A the two versions had information blocked by person and by category. Also, the four women's names began with the first four letters in the alphabet (Ann, Betty, Cathy and Denise). (See Appendix A. for an example of the items used in both replication sets).

Fourteen subjects were randomly assigned to the four between subjects conditions. The stimulus materials consisted of three separate booklets. Booklet one consisted of an instruction page and one version of the two replication sets. The instruction page told subjects that the study was interested in determining how subjects formed impressions about others. They were further told that they would be reading information about four individuals planning
a backpacking trip or sorority party and they should form an impression of what each individual would be like. A hidden words distractor task was given before booklet two. Booklet two consisted of the recall instructions and 16 1/2 pieces of pages for subjects to complete the recall task. The recall instructions informed the subjects that they had 5 minutes to recall the information they read about the four target persons. The third booklet consisted of a name-to-item matching task, followed by a Need for Cognition Scale.

Procedure

Subjects were run in groups of 4 to 6 in an experimental room. Partitions on the tables obscured visual contact amongst the subjects. They were escorted to seats that had a gold folder on the table. The experimenter started the experiment by telling the subjects they would be working on three booklets within the gold folder and the experimenter would pace them through each booklet. They were then told to take out the first booklet which was visibly sticking out the folder. They were told to read the instructions. After reading the instructions the experimenter briefly
repeated the instructions verbally. After they completed this task, they put the first booklet on the shelf above them. They were instructed to read one item at a time without looking ahead to future items or back to previous items. They had two minutes to complete this task. They were then given a two minute distractor task. After the distractor task they were told to take out the second booklet and read the instructions. Again the experimenter reiterated the recall instructions. They were reminded to place one item per page, recall the items in the order they came to mind and they did not have to recall the persons name. After five minutes they were instructed to put booklet two on top of the first one and take out the third booklet. They were told the last booklet consisted of a name-to-item matching task and a scale they should complete after the matching task. After they completed this booklet they were debriefed, thanked and dismissed. (See Appendices B.-F. for an example of the instruction page, distractor task, recall instruction page, the name-to-item matching task, and the Need for Cognition Scale). Due to the similarity of each study
the debriefing and format of the name-to-item matching task is the same for all studies.

Results

All the tables for results from the analyses below can be found in Appendix G.

Need for Cognition

The recall protocols were scored according to lenient general meaning or gist criterion. By using a median split to identify individuals who are low and high in the need for cognition the primary and secondary predictions could be tested. The medians for the sorority high and sorority low person focus conditions were 61 and 56, respectively. The medians for the backpack high and backpack low person focus conditions were 53 and 51, respectively.

Recall.

A 2(Replication Set: Sorority, Backpack) X 2 (Person Focus: High, Low) X 2(Need for Cognition: High, Low) between subjects Analysis of Variance was done on the items recalled. There were two significant effects obtained. A need for cognition main effect with F(1, 48) = 7.50, p < 0.009. The means in Table 1. show that HNC's recalled significantly more items than the
LNC's. A significant main effect for replication set $F(1,48) = 27.65, p < 0.001$ was also obtained. The means in Table 2. show that subjects that received the sorority replication set recalled more items than those would received the backpacking replication set.

These findings have several implications. First the need for cognition main effect is consistent with Lassiter, 1991, Petty & Cacioppo, 1982 & 1983 and Srull, Lichenstein and Rothbart, 1985. HNC's are recalling more information than LNC's. Second, the fact that subjects recalled more information when they read the sorority instead of the backpacking information may be that planning a party is more schematic than going on a backpacking trip.

**Number of correct name-to-item matches.** A 2 (Replication Set: Sorority, Backpack) X 2(Person Focus: High, Low) X 2(Need for Cogniton: High, Low) between subjects Analysis of Variance was done on the number of correct name-to-item matches each subject had. The same significant effects that were found in the recall analysis were significant in this analysis. The need for cognition main effect $F(1,48) = 4.51, p < 0.04$
and the version $F(1,48) = 27.65, p < 0.001$ had means in the same direction as the recall means. Table 3. shows that HNC's had more name-to-item matches than the LNC's. Table 4.'s means show that subjects that received the sorority party replication had more name-to-item matches than those that received the backpacking replication.

These two findings expand on the findings by showing that HNC's were more accurate at matching information about the target persons than LNC's. They also suggests that the information items in the sorority story may aid subjects in remembering information about the four target persons are more vivid or familiar.

**Cognitive Organization.** Cognitive organization of the information was measured by means of the adjusted ratio of clustering (ARC; Roenker, Thompson & Brown, 1971). Subjects recall protocols were scored to yield two ARC-Scores (Person ARC and Category ARC). A person arc is a measure of categorical organization based on the person or the likelihood of recalling all the information about each target person contiguously. A
category arc is a measure of categorical organization done around the four conceptual competing categories or the likelihood of recalling all the information from each taxonomic category contiguously.

The ARC-Scores were entered into a 2 (Replication Set: Sorority, Backpack) X 2 (Person Focus: High, Low) X 2 (Need for Cogniton: High, Low) X 2 (ARC-Type: Person, Category) design with repeated measures on the last factors. The results yeilded a significant main effect and interaction. First, there was a ARC-Type main effect, $F(1,48) = 20.93, p < 0.0001$. The means in Table 5. show that there is an preference for organizing information around conceptual vs. person categories. This effect is qualified by a Person Focus X ARC-Type interaction, with $F(1,48) = 24.74, p < 0.001$. The means in Table 6. show that subjects that received information blocked by person (hi person focus) organized information around the target person while those that received the information blocked by conceptual category (low person focus) organized information around the conceptual categories. This finding is consistent with Cafferty, DeNisi &
Williams, 1984 and Devine & Ostrom 1985. However, it conflicts Sedikides, et al, 1991. Thus, the temporal order seemed to strengthen the associative pathways for all subjects.

Need for Cognition did not interact ARC-Type. The means is Table 7. yielded an $F(1,48) = 0.10, p < 0.75$.

**General Discussion**

**Replications of Previous Research**

The ARC-Type X Person Focus interaction did replicate previous research findings. The ARC-Type main effect did also. This suggests that Ostrom's claim that the temporal ordering of information effects the order in which the information is recalled. Further, the second finding is consistent with Sedikides & Ostrom 1989 whereby they found more categorical than person organization in a mult-target setting.

**Need for Cognition Effects**

The effects of need for cognition were on memory and name-to-item matching accuracy. However, HNC’s did not show more person organization than LNC’s. These
findings shed further light on the effects of need for cognition on person memory and organization. In this instance it explains whether or not name-to-item associations are stronger for HNC’s than for LNC’s in a multi-target setting. The conclusion is that the name-to-item associations were strengthened for HNC’s. However, name-to-item associations were not enough to lead to a correlation between person memory and organization. This is consistent with Ostrom et al, 1981 who suggest the use of competing categories may lead to both name-to-item and/or item-to-item associations. They go further to suggest that in a competing categories design both name-to-item and item-to-item associations are necessary for the recall and organization correlation. Item-to-item associations may be within or between person. A within person association is one in which there are direct links between two facts about the same person. For example, learning that Irvine is a carpenter and Irvine owns a hammerom Hampton may yield item-to-item associations that the carpenter owns a hammer. The existence of such associations strengthens the use
of person categories in recall. Between person item-to-item associations can either be within category (eg., Irvine is from Newark and David is from Hampton) or between category (eg., Porscha is from Richmond, Cabrillya is a psychology major, Arlisa loves to play basketball and so on). The prediction that HNC’s would have more person organization than LNC’s was not confirmed. This suggests that only name-to-item associations were formed and that their effect on person organization was counteracted by either the formation of between person item-to-item associations or by a reduction of within person item-to-item associations.

In conclusion, a follow up study was be done that replicated experiment one with greater power. Greater power might produce the predicted ARC-effect. Second, the processing goals were varied. This prediction was based on Sedikides et al., 1991 who found that anticipated interaction and impression sets led to better memory than a memory set. Lastly, a transcript presentation format will be compared to the list format.
The information may be more vivid in a transcript than in a list. Thus, the subjects may be better able to form more name-to-item associations and within person item-to item-associations with the transcript.
CHAPTER III.

STUDY TWO

Purpose

This study has three primary purposes and two secondary purposes. The first two primary purposes are an attempt to expand on the role of person memory and organization in a multi-target setting. First, will the effects of anticipated interaction, impression formation set instructions lead to superior recall and name-to-item matches than the memory set instructions? Further, will the first two processing goals differ from the memory set instructions as it pertains to organization? Sdekides, et al., 1991 found better recall but not more accurate matching or person organization for anticipated interaction and impression set subjects versus memory set subjects. Will this finding be upheld?

The last primary purpose is an attempt to determine if Need for Cognition and Processing Goals have an
interactive effect. Though no empiricizing has been
done regarding the effect that Need for Cognition has
on person memory Sedikides, et al., 1991 have
theoricized about the differences in the processing
goals on memory and organization. They found that
anticipated interaction does not always lead to better
recall, name-to-item matches and organization over the
other processing goals. This affect may be strengthened
or weakened by Need for Cognition. Srull et al., 1985
did find that Need for Cognition strengthened the
incongruency effect. Anticipated interaction and
impression set subjects attempt to form a more
unified impression than memory set subjects. However,
the fact that only recall was better for these
two processing objectives in Sedikides, et al., 1991
suggests that both name-to-item and item-to-item
associations (within person) were not formed.
Yet, based on Srull's findings, Need for Cognition may
strengthen these associations for the two processing
objectives. This suggest that the challenging part
of the task will be worked on more for HNC's than LNC's.
Like study one, the challenging part of the task will
be linking the names to the descriptor information and finding out what is distinctive about each of the four persons in an attempt to form name-to-item categories. This should be the case for subjects that receive the anticipated interaction and impression formation instructions but not the memory instructions. Thus, recall, name-to-item matching and clustering scores should be higher for HNC’s than LNC’s that receive the above mentioned instructions.

The first secondary purpose is to replicate the Need for Cognition Finding. Thus, will HNC’s recall and have more accurate name-to-item matches than LNC’s. The Second, is an attempt to replicate the Ostrom et al., 1984, Devine, et al., 1985 & Cafferty et al., 1984 and Study One’s finding whereby subjects show an organization pattern that is consistent with the presentation format they received. Further, will need for cognition interaction affect person organization? This finding was not significant in the previous study.

The last secondary purpose is an attempt to determine if the format used to present the stimulus information will affect recall, name-to-item matching
and person organization. The information that is
blocked by person or taxonomic category will be
presented using two different formats. First, the
information will be presented one item per page as
it is traditionally done. This format will be
compared to a transcript format. The information will
be blocked by person or by category in a three page
transcript. The information in the transcript will
include all the elements of a group interaction.
It will also contain many features of a more
naturalistic interaction. Researchers in the area of
communication suggests that both verbal and nonverbal
cues may affect the interpretation of what the speaker
is saying (Knapp, 1978 & Trager, 1958). So in order to
enhance to realism of the transcript it will have a
beginning and an ending as well as contain paralingual
cues such as pitch, rhythm, pauses, laughs, yawns and
groans. This transcript may either enhance or
interrupt HNC’s ability to recall, match and organize
information. It may also affect the anticipated
interaction and impression formation instructions. No
research has employed a realistic stimulus presentation besides Hall (1990).

In this master's thesis information was embedded in a coherent story and compared to the list format. The story format did not increase subjects recall and person organization. Yet it did not serve as a disruptive device either. It showed that subjects that received information blocked by person in a coherent story had higher person arc scores and those that received information blocked by category had higher category arc scores.

The transcript condition of this study is similar to the story format of Hall, (1990). It was used instead of a story to increase the believability of the anticipated interaction instructions. This procedure will be compared with the list format to see if it affects memory, matching and person organization or interacts with processing goals or need for cognition.

**Method**

**Subjects**

One hundred and twenty students enrolled in Psychology 100 at Ohio State University served as
subjects in this experiment. Their participation was in partial fulfillment of a course option.

**Stimulus Materials**

A 3 (Processing Goals: Anticipated Interaction, Impression Formation, Memory) X 2 (Communication Structure: Transcript, List) X 2 (Person Focus: High, Low) between subjects design was employed in this study. Due to the fact that the sorority version used in study one proved to be most effective the items from that study was used. Ten subjects were randomly assigned to each of the 12 conditions.

One stimulus replication had information that was information blocked by person or by taxonomic category. Further, the information was presented in a list format or a transcript format. Additionally, due to the difference in the processing goals instructions there was a transcript and a list format for anticipated interaction, impression and memory subjects. The transcript version contained four pages. Page one (experimenter instructions) consisted of the instructions the experimenter gave the group in regards to planning a theme, a type of food and beverage as
well as a type of band for a party. At the end of page one the experimenter leaves the four person group to discuss the four topics. Pages two-four (group discussion) consisted of three pages that were high or low in person focus. In the high person focus condition the four group members decided to each suggest a theme, food, beverage and then band for the party. In the low person focus condition they decided to let first person suggest the four topics then the next person until each person had made his/her suggestions.

In the second version the information was presented in the traditionally used list format. Each of the 16 items were presented one per page in either a high or low person focus format.

The instructions differed for each processing goals.
A) Anticipated Interaction/Transcript: subjects were told the study was interested in how people who are unfamiliar with one another work collectively to solve various problems. Further the study was interested in how adding a new member would affect group performance. They were told that to help them become familiar with
their prospective group members they would be working with during the second 1/2 hour of the experiment they would be reading some information about the four group members. Lastly, they were told to read the information carefully because it would aid them in working effectively with the group on a new problem solving task. The bottom of page 1 instructed them to wait for further instructions. Page two of the transcript format stated that a videotaped interaction was taken from the first meeting of the prospective working on suggesting a theme, food, beverage and band for a party. The videotape had been transcribed into a written format for them to read. They should read the transcript with the notion that they would later be working on a task with the four target persons. The bottom of this page said to wait for further instructions.

B) Anticipated Interaction/List: The first page was the same as the transcript instructions. The second page stated that the information was taken from a videotape of the first meeting of the group. Further, they would be given the items that suggested by each of the four members. At the bottom of the page the were
instructed to wait for further instructions.

Making the Group Salient for the Anticipated Interaction Subjects.

Due to the fact that the subjects were run in groups of 4, the each had to be led to believe they would be working with a different group. This idea was stressed in two ways. First, as the subjects entered the lab and sat at a partitioned cubicle which had either a blue, green, yellow or red folder on the desk. The experimenter told them that they would be working on two phases in the experiment. During the first phase they would be reading about a four prospective group members. The group they would be working with would be classified by the color of the booklet on their desk. They would be called the blue, green, yellow and red group. Secondly, the information on the second instruction page always referred to the group by its designated color. For instance, in the transcript condition the subjects were told the information they would be reading was taken from a videotaped interaction between the Blue Group while planning a party.
C) Impression Formation/Transcript: Consisted of one instruction page. The subjects were told the study was interested in how people form impressions of unfamiliar persons. They were told they would read about four group members who were responding to the questions "You are planning a party for an organization. Tell me what theme, food, beverage and band you would choose?" Further, they were told they would be reading the actual transcript that was taken from a videotape of the discussion. Lastly, it was stressed that they should read the information carefully because it would help them form an impression of each group member. The bottom of the page also instructed them to wait for further instructions. This page was followed by the actual transcript.

D) Impression Formation/List: The instructions were the same as the transcript condition with one exception. The subjects were told they would be reading the items that were suggested by all four group members in regards to the four topics. The were also told to form an impression of each of the group members. The bottom of the page told them to wait for further instructions.
This page was followed by the stimulus items presented one per page.

E) Memory Transcript & Memory List: They were primarily the same as the Impression Transcript and List instructions. However, instead of saying the study was interested in how they formed impressions of unfamiliar others they were told the study was interested in how individuals recall information about unfamiliar others. It was later stressed that they should memorize the information about each person because they would later be asked to recall the information suggested by each person. As in the other conditions subjects were instructed to wait for further instructions. This page was followed by the actual stimulus information (transcript or list format).

Thus, the instructions and stimulus information was in the first booklet. This was followed by a hidden words distractor task given to them by the experimenter. The second booklet contained the recall instructions and the third booklet contained the name-to-item matching task and the Need for Cognition scale. The recall instructions were the same for all subjects. They
were told to recall the suggestions that were made by the four group members. See Appendices H.-N. for examples of the anticipated interaction/transcript & anticipated interaction/list instructions, an example of the blue group A.I. transcript instructions, an example of blue group A.I. list instructions, impression/transcript, impression/list, memory/transcript, and memory/list instructions and the low person focus transcript. (Note: the high person focus transcript contains the same information. The only difference is that the information is presented about each person contiguously instead of by each category contiguously).

Procedure

The anticipated interaction subjects were bought into the lab and told to sit at cubicle with a colored folder on it. The experiminter told them they would be working on a two phase experiment. During Phase 1 they were told they would read information about the group of individuals they would be working on a problem solving task during the second phase. They were also
told they each would be working with the group whose name was the color of the folder on their desk. Besides this difference the instructions were the same for all groups. They were told to open their colored folder and take out the first booklet. The experimenter held all other booklets so that subjects wouldn’t look at information on the future booklets.

After the subjects read the instructions on the first page they were reiterated by the experimenter and then they moved on to the next page. For all subjects except the anticipated interaction subjects this meant reading the stimulus information. The anticipated interaction subjects read the second instruction page, the experimenter reiterated it and then they moved on to read the stimulus information. Due to the difference in the length of the transcript and list the subjects in the transcript group were given five minutes and the list two minutes to read the stimulus information. Thus, all subjects that read the transcript were run together and those that read the list were run together. After reading the stimulus information they were instructed to put it on the shelf above them and then
they were given a two minute hidden words puzzle
distractor task. This was followed by the recall task,
the name-to-item matching task and the Need for
Cognition scale. They had five minutes to complete the
recall task and they were instructed to work on the last
two task at their own pace. The subjects were
debriefed, thanked and let go.

Results

The tables for the results of these analyses can
be found in Appendix 0. The same procedure used in
study one was employed to separate HNC's from LNC's.
The medians for anticipated interaction transcript high
and anticipated interaction transcript low person focus
were 53 and 52, respectively. The medians for
anticipated interaction list high and anticipated
interaction list low were 58 and 48, respectively. The
medians for impression transcript high and impression
transcript low were 54 and 56, respectively. The
medians for impression list high and impression list
low were 48 and 50, respectively. The medians for
memory transcript high and memory transcript low were
51 and 52, respectively. Lastly, the medians for
memory list high and memory list low were 53 and 49, respectively.

**Recall.** The recall protocols were coded and entered into a $3 \times 2 \times 2 \times 2$ design: (Processing Goals: Anticipated Interaction, Impression Formation, Memory) $\times$ (Communication Format: Transcript, List) $\times$ (Person Focus: High, Low) $\times$ (Need for Cognition: High, Low) between subjects. Analysis of Variance. The need for cognition main effect yielded an $F(1, 96) = 0.88, p < 0.35$. The means in Table 8 are in the predicted direction. HNC's recalled more items than LNC's. There also was not a significant main effect for processing goals. The means in Table 9 yielded an $F(1, 96) = 0.08, p < 0.92$. These means are basically the same for each processing goal.

There was a significant interaction found, Processing Goals $\times$ Communication, $F(2, 96) = 3.21, p < 0.05$. The means in Table 10 show that anticipated interaction and impression formation subjects had better recall under the list format than the memory subjects while the memory subjects had better memory than the other two groups under transcript format. The
anticipated interaction and impression subjects show one pattern and the memory subjects show another.
Lastly, the Need for Cognition x Processing Goals yielded a $F(22.96) = 1.41, p < 0.15$ (See means in Table 11.).

**Name-to-Item Matching.**

The number of correct name-to-item matches each subject made was entered into a 3(Processing Goals: Anticipated Interaction, Impression Formation, Memory) X 2(Communication Format: Transcript, List) X 2(Person Focus: High, Low) X 2(Need for Cognition: High, Low) between subjects Analysis of Variance. This analysis yielded a significant main effect and four interactions. A main effect for Need for Cognition yielded a $F(1,96) = 9.33, p < 0.003$. The means in Table 12 show that HNC's had more name to item matches than LNC's.

However, processing goals did not lead to a main effect. The means in Table 13. lead to a $F(2,96) = 0.59, p < 0.56$, for the processing goals main effect. The Need for Cognition X Processing Goals interaction, $F(2,96) = 2.34, p < 0.10$ was marginally significant. The means in Table 14. show that HNC's had more name to
item matches that LNC's under both the impression and memory set but did not differ under the anticipated interaction set.

An interaction between processing goals and Communication Structure, $F(2,96) = 3.50, p < 0.03$ show that the list format lead to more name to item matching for both the impression formation and memory set subjects. However, as the means in Table 15. also show the transcript lead to more matches for the anticipated interaction instructions. There was a marginal Communication Structure and Person Focus interaction, which yielded a $F(1,96) = 3.86, p < 0.06$.

The means in Table 16. show that under the high person focus condition the list format lead to more matches and under the low person focus condition the transcript lead to more matches.

These findings had several implications. First, the primary purpose of replicating the fact that HNC's are more accurate at name-to-item matches was upheld. Further, the transcript communication structure affected subjects ability to match information. First, it aided subjects that received the impression formation
and memory set instructions but disrupted those that received the anticipated interaction instructions. Second, it also aided the subjects that received the low person focus condition in accurately matching the information with the targets.

Clustering. The same method of computing both Person and Category ARC-Scores in study two was employed in this study. They were entered into a 3(Processing Goals: Anticipated Interaction, Impression Formation, Memory) X 2(Communication Format: Transcript, List) X 2(Person Focus: High, Low) X 2(Need for Cognition: High, Low) X 2(ARC-Type: Person, Category) between subjects design with repeated measures on the last factor. This analysis yielded one main effect and three interactions.

An ARC-Type main effect, $F(1,96)= 19.39, p < 0.001$ was significant. The means in Table 17. show that subjects organized information around the four taxonomic categories more than around the four persons. This was qualified by an ARC-Type X Person Focus interaction, $F(1,96)= 40.68, p < 0.001$. The means in Table 18. show that subjects organized information in a manner
consistent with the presentation format. There was also an ARC-Type X Processing Goals interaction. It yielded a $F(2,96) = 4.70, p < 0.01$. The means in Table 19. show that the anticipated interaction and impression subjects organized more around the taxonomic categories while the memory subjects organized more around the person categories. Lastly, the means in Table 20. show an ARC-Type X Communication Structure Interaction, $F(1,96) = 3.84, p < 0.05$. They show that category arcs are higher under the transcript format and person arcs are higher under the list format.

There was no main effect for processing goals and need for cognition did not interact with ARC-Type. The main effect for processing goals yielded an $F(1,96) = 2.21, p < 0.12$ (See Table 21 for means). The interaction yielded an $F(1,96) = 1.27, p < 0.26$ (See Table 22. for means).

These findings replicated the effects in study one and the Meta-Analysis by Sedikides and Ostrom (1989) whereby subjects organize more around the categories than the person and they also organize information in a manner consistent with the presentation format.
Secondly, they suggest that the role of the processing goals have differential effects on organization. Lastly, they show that the transcript format enhances the use of taxonomic categories and the list format enhances the use of person categories.

General Discussion

Replication of Previous Research. The ARCType X Person Focus interaction was upheld in this study. This is consistent with previous research (See Devine, et al., 1985). The main effect for ARCType is consistent with Sedikides, et al., 1989. Lastly, the list structure in the Processing Goals X Communication Structure produce recall synonymous to Sedikides et al., 1991. Anticipated interaction and impression set subjects had better recall than memory set subjects (See Table 10). Also, consistent with Sedikides et al., 1991, these two processing goals did not differ from the third in the nametoitem matching or the clustering analyses.

Need for Cognition Effects. Need for cognition lead to a main effect only in the nametoitem matching task. Also, only in this task did need for
cognition interact with processing goals. The means in Table 14 show that HNC’s were more accurate in the impression and memory conditions than the LNC’s.

The need for cognition main effect in the recall analysis that was significant in study one was not obtained in this study. However, this may be due to the differences between the two studies. This study manipulated the presentation structure and processing goals the subjects obtained. These variables were not manipulated in study one. The lack of relation between processing objectives and need for cognition suggest two things. First, the effects of need for cognition does not strengthen the recall of processing goals. Second, this suggest that item-to-item within person associations were not strengthened by need for cognition. This is evident by the nonsignificant need for cognition main effect in the recall and clustering analysis. Both associations are necessary for enhanced recall.

**Processing Goal Effects.** Again name-to-item matching scores lead to differential effects for impression and memory subjects over anticipated
interaction subjects. However, organization scores show that anticipated interaction and impression subjects organized more around categories more and memory subjects more around persons.

Additional Findings. The list structure lead to more nametoitem matches for impression and memory subjects and the transcript lead to more matches for the anticipated interaction subjects.

In conclusion this study addresses the question of the effect of need for cognition and processing goals in a multitarget setting. They suggest again that nametoitem pathways are strengthened by need for cognition. However, the interactive effects of need for cognition and processing goals show that the nametoitem association is strengthened for impression and memory subjects only.

There was no evidence that better recall leads to better organization for need for cognition or processing goals. This suggest that the transcript structure did not enhance all subjects ability to organize around persons. The within person itemtoitem
associations are not strengthened by this presentation format.

Thus, the associative network model that applies to a multitarget setting has limited effects with regards to a competing categories design. This next study will attempt to determine if this is true when only the person node is highlighted.
CHAPTER IV.
STUDY THREE

This study has one main purpose. It will determine if Need for Cognition effects recall, name-to-item matches and organization of information in a multi-target setting with a non competing categories design. The Hastie and Srull models for person memory apply to the role of memory and organization of a single target. The model shows that name-to-item associations are not difficult to form in a single target setting. Therefore, in this study the use of a noncompeting categories design may enable subjects to form name-to-item associations easier. Why? Well, like the single target design there are not any competing organizational schemes subjects might use. In fact if name-to-item associations are not strengthened subjects could potentially form between category item-to-item associations. This will not be likely because there are not any competing
categories. For each of the four subjects there are four different categories of information. Thus, there would be 16 between item categories. This scheme is a great deal harder to form, if not impossible when compared to the nametoitem scheme. Here there are only four person categories to chose from. So will HNC's have higher recall, accuracy and person organization than LNC's.

Method

Subjects

Sixty four subjects enrolled in Psychology 100 at Ohio State University served as subjects. Their participation was in partial fulfillment of a course option.

Stimulus Materials and Dependent Measures

Two stimulus replications were taken from McCann, et al., 1985 (See Appendix P. for examples of the two replication sets). They received four items about four target person. The information was presented randomly such that the likelihood of recalling the information verbatim would lead to chance ARC clustering. There were two random orders made up
for the two replication sets. Thus, 16 subjects were randomly assigned to the each condition. All subjects were given impression set instructions. The instruction page, which came before the stimulus information told subjects that the study was interested in how they formed impressions of others. They were told they would be reading about four individuals (Toni, Chris, Terry & Lee) and to try and form an impression of what each person would be like. These names were chosen because they were gender neutral. In a noncompeting categories design it's important that the the group did not have a conceptual category such as gender in common. They were then told to read one item per page without looking ahead or back. These instructions were iterated by the experimenter before they started the task. The rest of the stimulus information was arranged in two more booklets. Booklet two contained the recall instructions and 16 1/2 sheets of paper for the recall task. The recall instructions told the subjects to recall the information about the four persons they had previously read about. This booklet was followed by the name-to-item matching task and the Need for
Cognition Scale. See Appendices Q. for the instruction page.

Procedure

Subjects were run in groups of 4 to 6. They were escorted to the partitioned cubicles and told to sit at a desk with a gold folder on it. They were told to take the first booklet out that was sticking out the folder. They read the instructions and the experimenter reiterated them. They then read the stimulus items and after two minutes they were given the same distractor task used in the previous studies. They then took the recall booklet and were told to read the instructions at the top and completed the recall task on the following pages. They had five minutes to complete this task. After this they were instructed to place it on the shelf with the first booklet, pull out the final booklet and get started. Lastly, they were debriefed, thanked and let go.

Results

A median split was done here to separate the HNC's from the LNC's. The first replication set and random order had a median of 58 while the first replication set
and second random order had a median of 62. The second replication and first random order had a median of 61 while the second replication and second random had a median of 66.

The tables for the results from this study are in Appendix R.

Recall. A 2 (Replication Set: One, Two) X 2 (Random Order: One, Two) X 2 (Need for Cognition: High, Low) between subjects analysis of variance was computed. Need for Cognition yielded $F(1, 56) = 0.25, p < 0.620$. The means in Table 23. are in the predicted direction. HNC's recalled more items than LNC's.

Name-to-Item-Matching. The 2 (Replication Set: One, Two) X 2 (Random Order: One, Two) X 2 (Need for Cognition: High, Low) between subjects analysis of variance done on the number of correct matches did not yield a significant need for cognition main effect. The means in Table 24. yielded a $F(1, 56) = 0.25, p < 0.62$. The means were also in the right direction.

Clustering The recall protocols were scored for Person ARC-Scores and entered into 2 (Replication Set: One, Two) X 2 (Random Order: One, Two) X 2 (Need for
Cognition: High, Low) between subjects analysis of variance on Need for Cognition. Again need for cognition did not significantly effect person organization, but the means were in the predicted direction. The means in Table 25. yielded a $F(1,56) = 0.06, \ p < 0.81$. However, the grand mean was significant. The $F(1,56) = 590.91, \ p < 0.0001$ show that subjects person organization was better than chance.

**General Discussion**

These nonsignificant findings in this study suggest that Need for Cognition effects may be limited to a multi-target setting with a competing categories design. However, the significant grand mean in the clustering analysis suggest that subjects did form name-to-item associations and/or within person item-to-item associations. Therefore, the last study will attempt to determine if making the target persons salient and adding more subjects will increase the strength of these name-to-item associations in a non competing categories design.
CHAPTER V.
STUDY FOUR

This study will attempt to determine if both Need for Cognition and Processing Goals will affect person memory and organization in a multi-target setting with noncompeting categories. Though study three did not support the notion that need for cognition affects memory and organization, all the effects were in the predicted direction. This study will introduce several additional variables that may affect the relationship between memory and organization of multi-targets with a noncompeting design.

First, in study three the information about the four targets was not made salient. Subjects were only given the name of the target person followed by the stimulus information. McCann, Ostrom, Tyner & Mitchell, 1985 found that race and gender salience increased the total recall, sorting speed and person clustering of multitarget individuals. This study will attempt to
replicate this finding by making occupational status salient. So will subjects show greater recall, name-to-item matches and organization for the targets who are made salient (occupation) as compared to those targets whose who are not (name). This seems particularly likely because the names used are the same as study three. The null effects in study three may be evidence to the fact that the names did not make the target persons salient. McCann, et al., 1985 suggests that group salience facilitates the categorization of social stimulus information. Further, the fact that the target persons will not be from homogeneous groups may add complexity to the task. Thus, HNC's may differ from LNC's on the three memory measures? This will also be tested. Also, the processing goals that subjects are given may affect their memory and organization when the groups are salient or non salient. This too will tested.

Another issue that was not examined in study three was the effect of a random versus a blocked presentation. Only the former was used. This study will attempt to determine if the basic finding that information that is presented in a block format leads to better memory than
information that is presented randomly (Sedikdes et al., 1991 & Srull, 1983). It will also determine if this presentation format will interact with processing goals, need for cognition and target member salience.

**Reading, Recall and Matching Time.**

No previous research has tested the effect of the time it takes subjects to read, recall and accurately match the target with the information the read. Intuitively it seems that impression subjects, who have been known to hold information in working memory longer, may differ on these memory measures from memory subjects. Also, past research has found that block presentations lead to more person organization than the random presentations. Therefore, processing goals may also affect the time it takes subjects to read, recall and match target information. As far as Need for Cognition is concerned, Haugvedt, Petty & Cacioppo (1991) did find that LNC’s attitude and amount of information recalled after a 2-day delay was correlated but not the HNC’s. They suggest that this difference may be due to the fact that HNC are engaging in on-line processing while LNC are using memory based processing. This study will attempt to determine if the effect of Need
for Cognition will affect the time spent on each memory task.

Method

Subjects

One hundred and sixty subjects enrolled in Psychology 100 served as subjects. Their participation was in partial fulfillment of a course option.

Stimulus Materials and Dependent Measures

The design was a 2 (Processing Goals: Impression, Memory) X 2 (Presentation Order: Random, Blocked) X 2 (Target Salience: Salient, Nonsalient) X 4 (Counterbalance: One, Two, Three, Four).

Due to the fact that the two replication sets used in study three did not differ only one replication was used in this study.

The material was presented randomly or blocked by target person. Four counterbalanced conditions were employed to ensure that each set of four noncompeting items were associated with each of the four salient or nonsalient target persons. For the counterbalanced conditions the information was randomly presented to ensure that verbatim recall would lead to
chance clustering. Thus, 5 subjects were randomly assigned to each condition.

The stimulus information was contained in a gold folder, as in previous studies. The folder was comprised of the same three booklets employed in the previous studies. The memory instructions that were used for subjects that received the nonsalient target information (target’s names) was the same as study three and the impression instructions for them were the same as Study Two. However, the memory/impression instructions used for the salient target (target’s occupations) differed slightly. For the memory/impression set subjects instead of being told that they would be reading about four persons named (Chris, Lee, Toni, and Terry) they were told they would be reading about four persons with different professions (Bus-Driver, Teacher, Politician and Tennis Pro. They were told to memorize the information or to form an impression of the four professionals. As in previous studies the instruction page was followed by the stimulus information.
Procedure

Subjects were run in groups of 3 or 4. This made it easy to time or determine when the stopped working on the task. They were bought into the cubicles and given the same instructions as those in study three. However, they were given additional instructions that pertained to assessing the time it took them to read, recall and match the target with the stimulus information. They were told to do two things. First they were told it was very important to raise their hands when they completed each task because the experimenter wanted them to all work on the same task simultaneously. Second, they were told after they finished the task they should turn it over and put on the shelf above them. Half way through the task the experimenter reminded them to do these two things. To ensure that they did not suspect the were being timed the experimenter observed them from a one-way mirror. In no case did the subject forget to engage in one of the two actions. Besides this the methodology was the same as study three. (See Appendix
S. for the verbal instructions given in regards to timing the subjects on the tasks).

**Results.**

Due to the fact that there were only 5 subjects per condition a median split was not done with the counterbalancing condition included. There were two reasons. First, this would leave an unequal number of subjects in each cell. Second, the number of subjects would be 3 in half the cells and only 2 in the other cells. Thus, for the sake of power all analyses were done by collapsing across the counterbalanced conditions. The median for the impression random target salient condition was 55, while the median for the impression blocked salient condition was 58. The median for the impression random nonsalient condition was 54 and while the median for the impression blocked nonsalient condition was 57. The median for the memory, random salient condition and the memory blocked salient condition were both 54. The median for the memory random nonsalient condition was 55 while the memory blocked nonsalient condition was 57.
Thus, for each condition there were 10 HNC’s and 10 LNC’s.

The tables for the results of each analyses can be found in Appendix T.

Recall. A 2 (Processing Goals: Impression, Memory) X 2 (Presentation Order: Random, Blocked) X 2 (Need for Cognition: High, Low) X 2 (Target Salience: Salient, Nonsalient) between subjects analysis of variance was done on the number of items recalled. There were two significant main effects. The Need for cognition main effect was $F(1,144) = 5.75, p < 0.02$ and the Target Salience was $F(1,144) = 8.14, p < 0.009$.

The means in Table 26. show that HNC’s recalled more items than LNC’s and the means in Table 27. show that subjects that received the professional target information recalled more items than those that received the targets name only. The first finding is consistent with study one and Srull et al., 1985, Petty, et al., 1984 and Lassiter, 1991. The second finding is consistent with McCann et al., 1985.

The processing goals main effect was not significant. The means in Table 28 yielded a $F(1,144) = 0.89, p < 0.35$. 
Name-to-Item Matches. The number of correct name to item matches were entered into a 2 (Processing Goals: Impression, Memory) X 2 (Presentation Order: Random, Blocked) X 2 (Need for Cognition: High, Low) X 2 (Target Salience: Salient, Nonsalient) between subjects analysis of variance. There were two significant main effects and one significant interaction.

Need for Cognition yielded a $F(1,144) = 6.33, p < 0.01$ and the Target Salience yielded a $F(1,144) = 146.57, p < 0.0001$. The means in Table 29. show that HNC's had more name to item matches than LNC's and the means in Table 30. show that those subjects that received the professional target information had more matches than those who received the target's name only.

The processing goals main effect was marginally significant. The means in Table 31 yielded a $F(1,144) = 2.77, p < 0.10$. The memory set subjects were more accurate at the matching task than the impression set subjects. Lastly, a Target Salience x Processing Goals interaction, $F(1,144) = 20.18, p < 0.0001$ was significant. The means in Table 32. show that
both the impression and memory set instructions lead to more name-to-item matches for subjects who received the professional instead of the target’s name only information.

The need for cognition main effect is consistent with the findings of studies one and two. The target salience main effect and target salience x processing goals interaction both suggest that making the information meaningful aided all the subjects in matching the correct target with the relevant stimulus information. This is consistent with McCann et al., 1985.

**Clustering.**

The recall protocols were scored for Person ARC-Scores and entered into 2(Processing Goals: Impression, Memory) X 2(Presentation Order: Random, Blocked) X 2 (Need for Cognition: High, Low) X 2(Target Salience: Salient, Nonsalient) analysis of variance with repeated measures on the ARC-Score. This analysis yielded two significant main effects and one interaction. Need for Cognition, $F(1,144) = 8.14$, $p < 0.005$ was significant. The means in Table 33. show that HNC’s
had more person organization than LNC's. The
Presentation Format main effect $F(1,144) = 9.05,$
p < 0.003 was significant. The means in Table 34.
show that the blocked presentation format lead to more
organization than the random format. Lastly, Target
Salience x Presentation Order, $F(1,144) = 6.02,$ p <
0.02 was significant. The means in Table 35. show
that the blocked format enhanced categorical clustering
for both the salient (target's profession) and the
nonsalient (target's name) conditions.

The processing goals main effect was not
significant. The means in Table 36 yielded a $F(1,144) =
0.00,$ p 0.95.

These findings have several important implications.
First, the presentation order and the presentation
order x target salience interaction show the
facilitating effects of the blocked over the random
format. This is consistent with Sedikides et al., 1991
and Srull, 1983. Second, for the first time there was
evidence that Need for Cognition may facilitate
categorical clustering.

**Time Analyses.** The analyses done on the time it took
subjects to complete the reading, recall and name-to-
item matching task used seconds as the unit of analysis. Sixty seconds is equivalent to one minute.

Reading Time: The amount of time it took subjects to read the stimulus information was entered into a 2 (Processing Goals: Impression, Memory) X 2 (Presentation Order: Random, Blocked) X 2 (Need for Cognition: High, Low) X 2 (Target Salience: Salient, Nonsalient) between subjects analysis of variance. This analysis yielded two main effects and one interaction. The main effect for Need for Cognition, $F(1,144) = 26.41, p < 0.0001$ was significant. The means in Table 37. show that HNC’s read the stimulus information faster than LNC’s. The main effect for Processing Goals, $F(1,144) = 5.72, p < 0.02$ was significant. The means in Table 38. show that impression set subjects read the information faster than memory set subjects. Lastly, the Need for Cognition X Processing Goals interaction, $F(1,144) = 3.06, p < 0.08$ was marginally significant. The means in Table 39. show that both impression and memory set HNC’s read the information faster than impression and memory set LNC’s.
These findings suggests that HNC's may be faster at processing and integrating new information than LNC's. This would be consistent with Haugtvedt et al., 1991 who suggests that HNC engage in on-line processing while LNC's engage in memory based processing. This will be discussed further in the general discussion section.

Recall Time: The same analysis done above was done here on the time it took subjects to recall the stimulus information. The was a significant main effect and interaction. The Presentation Format main effect, $F(1,144) = 4.36, p < 0.04$ was significant. The means in Table 40. show that subjects who received the blocked presentation format recalled the information faster than those who received the random format. The Presentation Format X Processing Goals interaction, $F(1,144) = 3.78, p < 0.05$ was significant. The means in Table 41. show that the memory subjects that received the block format recalled the information faster than those that received the random format. However, the impression subjects that received the random format recalled the information
faster than those that received the block format. The need for cognition main effect, $F(1,144) = 0.10$, $p < 0.75$, was not significant. The means in Table 42. are identical. Also, the processing goals main effect was not significant. The means in Table 43. yielded a $F(1,144) = 0.17$, $p < 0.68$. 

It seems likely that the blocked information would be easier to recall than the random information. However, this is not the case for impression set subjects. This may be due to the fact that the information is not as well organized in this condition as in the blocked condition. This would be evidenced in the ARC-Score analysis and will be addressed further in the conclusions and implications section.

Name-to-Item Matching Time. Again the same analysis was done as the previous two. This time the name-to-item matches yielded one main effect. The target salience, $F(1,144) = 16.82$, $p < 0.0001$ was significant. The means in Table 44. show that subjects that received the salient target information were faster at matching the information. The need for cognition main effect, $F(1,144) = 1.21$, $p < 0.27$
was not significant. Again, the means in Table 45 were almost the same. The processing goals main effect was not significant. The means in Table 46 yielded a $F(1,144) = 0.01, \ p < 0.94$.

General Discussion

**Replication of Previous Research**

Several findings from previous research done on using a multi-target design were replicated. First, McCann's et al, 1985 finding that target salience enhances person memory and organization was upheld. Subjects had better memory, more name-to-item matching and person organization when they received the salient versus the non salient target information. Further, information was better organized for the blocked versus the random presentation format. This replicates Sedikides, et al., 1991 & Srull, 1983.

**Need for Cognition Effects**

Need for cognition affected recall, name-to-item matching and person organization. This replicates and expands the findings of the previous studies. This was the only study to found that need for cognition affected all three memory measures. The blocking of the
and the salience of the information likely improved the name-to-item associations.

**Processing Goal Effects**

Processing goals affected the name-to-item matching scores. However, it interacted with target salience. This also suggests that target salience increased the likelihood of forming name-to-item associations.

**Additional Findings**

Additionally, the time analyses done on each dependent measure showed that HNC’s and impression set subjects had faster reading times than LNC’s or memory set subjects. This first finding is consistent with Haugvedt, Petty & Cacioppo, 1991. They suggest that HNC’s are on-line processors and LNC’s are memory based processors. The second finding also suggests that impression subjects are processing on-line. Further, subjects had faster recall time when the information was presented blocked versus random. Lastly, name-to-item matching time was
quicker for the salient versus the non salient information.

These findings suggest that the associative linkages are strengthened by several variables when a multi-target noncompeting categories design is used. These variables are target salience, temporal blocking of the information. These variables enhanced the likelihood that need for cognition would affect person memory and organization. This suggests that the name-to-item linkages are strong.

However, this study and study 3 both examined the effects of need for cognition on memory and organization using a non competing categories design. Yet, there was no evidence that need for cognition affected the three memory measures in study three. What is different about study three and four. Three additional factors were manipulated in this study: a) processing goals b) blocking the information and c) the salience of the targets. By observing the means and difference scores in Tables 47 and 48 there
appears to be to strong explanation for these differences. The impression subjects in study four were compared with the subjects in study three because only an impression set was used in study three. The means between high and low need for cognition in study three are in the right direction. However, they are not very different from one another on all three memory measures. The means for HNC’s in study four, across all three measures are highly different from one another.

So what accounts for the differences in the impression set subjects in studies three and four. A quantitative difference in these two studies is the number of subjects used. Study 3 had 64 subjects and study 4 had 160 subjects. This difference in power may account for the significance findings in study four. Additionally, blocking the information may have been a contributing factor. The lack of interaction between need for cognition and presentation order does not support this. However, by observing the means in Tables 47 and 48 both HNC’s and LNC’s are higher in study four than study three.
This suggests that the blocking of the information and the salience of the target led both HNC's and LNC's to perform better on all three memory measures. Srull, 1983 did find that blocking the information enhances recall.

These findings are promising because they show that need for cognition does affect memory and person organization in a multi-target setting. The implications of this and all other findings in these four studies will be discussed below.
CONCLUSIONS AND IMPLICATIONS

These four studies attempted to shed light on the effects of perceiver’s goals on memory and organization in a multi-target setting. Studies 1-4 examined the effects of need for cognition as a perceiver’s goal. Studies 2 and 4 examined the effects of processing goals as a perceiver’s goal. Additionally, in studies 1-2 the presentation of the information was temporally ordered (competing categories design). Studies 3 and 4 employed a non competing categories design.

The Effects of Need for Cognition

Study one found that need for cognition affected recall and name-to-item matching scores. Study two found that need for cognition only affected name-to-item matching scores. In study three need for cognition did not affect any of the memory measures. However, the means were in the predicted direction on all three memory measures. Lastly, in study four need for cognition did affect all three memory measures.
The findings in study four is different from the other studies in important ways. It differs from studies one and two in that it employed a noncompeting categories design. It differs from study three in that it manipulated target salience, processing goals and the blocking of the target information. This suggest that name-to-item and within person item-to-item associations are strengthened by the use of a noncompeting categories design and the blocking of salient target information.

The Effects of Processing Goals

The use of processing goals in studies two and four did not strengthen both name-to-item and within person item-to-item associations. This is evidenced by a significant of recall in study two but no organization patterns consistent with the recall results. Anticipated interaction and impression subjects had better recall than memory subjects. This is consistent with Sedikides et al., 1991.

Study 4 did not find any difference between impression and memory set subjects on the three
memory measures. This finding is not consistent with Pryor and Ostrom, 1991, who found that recall and organization was better for impression set subjects than memory set subjects. The difference may be due to the fact that study four employed a non competing categories design and Pryor and Ostrom used a competing categories design.

Thus, the effects of processing goals are limited to a competing categories design. Which are in turn limited to person memory and not organization when anticipated interaction sets are used. These findings further suggest that only name-to-item or within person item-to-item associations, but not both are strengthened by processing goals.

Replication of Prior Research

One finding that was obtained in the studies that had competing categories design was the ARC-Type X Person Focus interaction. This finding has been obtained by Cafferty, DeNisi & Williams 1984 and Devine and Ostrom 1985. This consistent finding suggest that the temporal ordering of information
Additional Findings

Two interesting findings that have never gained empirical attention were obtained in this study. The first, found in study two, was that the use of a transcript enhanced name-to-item matching for the anticipated interaction subjects as compared the list format. The list format was most useful to the impression and memory set subjects. This finding is consistent with Sedikides et al., 1991 that anticipated interaction subjects are doing something more than forming an impression. The transcript format seems to help these subjects differentiate the four target persons. The use of this type of presentation format, in conjunction with variables such as target salience may also lead to better recall and organization for anticipated interaction subjects. This could be explored in future studies.

The second finding, obtained in study four was the fact that HNC’s are faster reading stimulus
information than LNC's. This suggest that HNC's may be processing the information on-line while LNC's are attempting to attach previously read items with the information they are currently reading. Haugtvedt, Petty & Cacioppo, 1990 made a similar claim that HNC's may be on-line processors and LNC's might be memory based processors.

Contributions of this Research

These four studies focused on research previously done by Sedikides, et al., 1991 & Srull, et al., 1985. The first examined the effects of processing goals and the latter the effect of need for cognition on person memory and organization. However, only the former examined the effect in a multi-target setting. Thus, the main contribution and reasoning behind conducting the four studies in this paper was to focus on both these perceiver's goals in a multi-target setting. The examination of anticipated interaction, impression formation and memory set has only been examined once in this manner and the examination of need for cognition has never be explored in a multi-target setting. Another
unique contribution of this paper was the comparison of these two perceiver's goals when using a competing versus a noncompeting categories design. The findings in Study 4 suggest that this examination suggest differences in person memory and organization in a multi-target setting when there is not a competing categories design. Further, the results of all four studies suggest that the applicability of the associative network model is limited. Thus, the goals the perceiver's have when reading information about multiple targets does not strengthen interitem associations. However, these findings are not surprising if the conclusions drawn by Sedikides et al., 1991 and Klein and Loftus, 1990 are applied.

Theoretical Implications

Srull, 1985 found that the incongruency effect was strengthened by HNC individuals. This suggest that the challenging part of the task will lead to more processing or holding the information in working memory longer than no challenging items. If this logic were true than the most challenging part of the task for subjects in Study 1 and 2, which used competing categories would be to
try to keep each of the individuals separate. This would predict higher Person ARC's for HNC individuals. This finding was not upheld. Why?

In a competing categories design the subjects could organize the information around the person or some alternative conceptual category. If HNC individuals are challenged they may attempt to use both of the competing organizational schemes. This would suggest that they are attempting to elaborate on each new bit of information. This elaboration may be done in two ways. First, they may attempt to elaborate by comparing each of the target person with one another. This seems likely when they are given anticipated interaction or impression instructions. As they attempt to determine who gets along in the group, whose ideas are most similar to one another this elaboration may lead to additional organizational schemes. So not only are they attempting to organize around person or categories but also around newly created categories. Thus, if knowing what food suggestion person 1 made reminds you of how person
2's suggestion this would facilitate conceptual category organization. Likewise, once the individual retrieves the person 2 suggestion they may go on to retrieve another person 2 suggestion. This would facilitate person organization. So, this elaboration at encoding may interfere with the formation of one type of organizational scheme over the other. The subjects might switch back and forth between alternatives.

This line of reasoning would also be likely if subjects were relating each new item to himself/herself or to a friend or family member. This type of elaboration would appear to lead to more interitem associations. However, these associations might also lead to a switching between categories.

Sedekides et al., 1991 did find that subjects had better recall for multi-targets when told to compare the targets to themselves or to a friend than when told to memorize the information. However, this did not lead to better person organization.

Support for the idea that elaboration effects organization can be found in these studies. The last study was the only one that found that higher
recall for HNC's also meant higher person organization. If subjects were elaborating in all studies the only study that would lead to a switching between the alternative organizational schemes would be Study 1 & 2 (competing categories). In Study 4 the only scheme to organize around was persons. Even if the are elaborating in the manner previously suggested, the fact that the subjects had no conceptual categories in common would lessen the likelihood of comparing them to one another. Thus, if they are relating the items to themselves, family and/or friend, this should be easier to do when they aren't competing categories to chose from.

Also, theoretical support for the notion that elaboration may lead to better recall but not better organization can be found in Klein & Loftus' 1990 independent trace model. They argue that a number of the enhanced memory effects obtained in the person memory literature is not necessarily due to the formation of associative links between the items of information about the person. Rather, certain tasks (impression sets) may lead people to elaborate
extensively on each of the stimulus items presented, thereby rendering these items more accessible in memory. This elaboration occurs when subjects try to make inferences about the stimulus person by evaluating each of the new stimulus items through the use of previously established knowledge structures. For instance, Ann suggested a Muscular Dystrophy Benefit, may lead subjects to infer that she must be dedicated to helping to people. They further suggest that memory set subjects are less likely to engage in this type of elaboration because the task does not ask them to draw any inferences.

Applying this reasoning to the results of the four studies presented in this paper, it seems likely that HNC's, who are challenged and enjoy effortful processing would be the elaborators and LNC's would engage in maintenance rehearsal. Shiffrin (1976) suggest that elaborative rehearsal leads to better memory than maintenance rehearsal. This would explain why HNC's had better memory than LNC's. The model also explains why only Study 4 found that HNC's had better organization than LNC's.
The model assumes that once an inference is made the inference and its corresponding stimulus item is stored together in memory. No associative links are expected to be formed between any two of the stimulus items if the items have led to the same inference about the person. Thus, in a competing categories design the elaboration and independent storage of each item can occur by focusing on each person and the four items associated with him/her or each category and the four persons associated with the category. The strength of the elaboration would be stronger for HNC's than LNC's because the LNC's are engaging in maintenance rehearsal. When it comes to retrieving the items, due to the independent storage, HNC's would switch back and forth. This would only be true for the studies with competing categories. This lack of competing elaboration schemes would also explain why Study 4 was the only one whereby HNC's had better recall and organization that LNC's.
Future Directions

Future studies will be done that will directly manipulate elaborative processing to see if this would lead to better organization in a competing categories design. For instance, subjects would be told to make particular type of trait inferences and their recall and organization will be measured. If HNC's are elaborating more than LNC's when they receive this type of manipulation. When LNC's receive either impression or memory instructions, the HNC's should have better recall and organization. These type of manipulations would shed further light on the notion that HNC's engage in elaborative rehearsal and LNC's engage in maintenance rehearsal.
REFERENCES


Hastie, R., & Park, B. (1986). The relationship between memory and judgment depends on whether the judgment task is memory-based or on-line. Psychological Review. 93, 258-268.


APPENDIX A.

Study 1: An Example of the Backpacking Trip and Sorority Party Stimulus Replications
Descriptors Used in the Backpacking Trip Replication

Al, on the first day, forgot the hammer he needed to pound his tent pegs into the ground.

Al, on the second day, tried to start a fire with green wood.

Al, on the third day, was paralyzed with fear when he saw the bear approach the campsite.

Al, on the fourth day, had to be rescued from the lake when he caught a leg cramp.

Bob, on the first day, tripped over the supporting ropes and knocked it flat to the ground.

Bob, on the second day, sat on the grocery bag and broke the eggs for breakfast.

Bob, on the third day, was the only one who climbed the tree when he saw the bear.

Bob, on the fourth day, fell in the lake with his last set of clean clothes on.

Carl, on the first day, put his tent up inside out.

Carl, on the second day, ate up all the breakfast donuts before the rest of the guys woke up.

Carl, on the third day, took some pictures of the bear.

Carl, on the fourth day, went skinny dipping in the lake.

David, on the first day, put his tent up on the side of a hill.

David, on the second day, burnt the breakfast toast.
David, on the third day, banged the pans together and made the bear leave the campsite.

David, on the fourth day, did a bellyflop in the lake.
Descriptors Used in the Sorority Party Replication

Ann suggested the dance have a *Sadie Hawkins* Theme.
Ann suggested that they provide *potato chips*.
Ann suggested that they *drink beer*.
Ann suggested that the band play *Top 40’s Music*.
Betty suggested the dance should have everyone *dress up like their favorite movie star*.
Betty suggested that they provide *finger sandwiches*.
Betty suggested that they *drink spiked punch*.
Betty suggested that the band play *Rock Music*.
Cathy suggested the dance be a *Benefit for Muscular Dystrophy*.
Cathy suggested that they provide a *vegetable tray*.
Cathy suggested that they *drink soda pop*.
Cathy suggested that the band play *jazz music*.
Denise suggested the dance be a *Toga Party*.
Denise suggested that they provide *chicken wings*.
Denise suggested that they *drink wine*.
Denise suggested that the band play *Raggae Music*.
APPENDIX B.

Study 1: An Example of the Instruction Page
INSTRUCTIONS

This study investigates how you form impressions of others. You will be presented with information about four people. Please read the information very closely, one page at a time, without looking ahead or back.
APPENDIX C.

Study 1: An Example of the Hidden-Words Puzzle Distractor Task
Within the matrix of letters below, names of famous psychologists are hidden. The names can be found on the horizontal or vertical axes as well as on the diagonal. Spellings of the names can be either forward or backward. Circle each name that you find. As an example, "Freud" has been circled for you.

<table>
<thead>
<tr>
<th>W</th>
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<td>A</td>
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<td>O</td>
<td>W</td>
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**PSYCHOLOGISTS**

<table>
<thead>
<tr>
<th>Piaget</th>
<th>Asch</th>
<th>Rogers</th>
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<tr>
<td>Heider</td>
<td>Jung</td>
<td>Harlow</td>
</tr>
<tr>
<td>Zajonc</td>
<td>Kohlberg</td>
<td>Bartlett</td>
</tr>
<tr>
<td>Festinger</td>
<td>Kelly</td>
<td>Helmholtz</td>
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<tr>
<td>Tulving</td>
<td>Hull</td>
<td>Fechner</td>
</tr>
<tr>
<td>Spence</td>
<td>Mead</td>
<td>Maslow</td>
</tr>
</tbody>
</table>
APPENDIX D.

Study 1: An Example of the Recall Instructions
RECALL INSTRUCTIONS

A few minutes ago you learned some facts about four people. Please recall the camping activities engaged in by the group members.

You do not need to remember the names of the persons who did the activities. Recall as many camping activities as you can and write them down on the following pages. Write them down in the order in which they come to mind, placing one and only one activity on each page. Proceed on page at a time and do not turn back to previous items you have recalled.
APPENDIX E.

Study 1: An Example of the Name-to-Item Matching Task (Backpacking Trip Replication)
Below you will find listed the names of the individuals and the facts you read about them. Match the names with the four facts that correspond to each individual by placing the correct letter beside the individuals' names.

Al= A
Bob= B
Carl= C
David= D

_____ Knocked Tent Down
_____ Did a bellyflop in the lake
_____ Forgot hammer needed to put tent pegs in
_____ Banged pans to get bear to leave the campsite
_____ Sat on the grocery bag and broke the breakfast eggs
_____ Fell in the lake with last set of clean clothes
_____ Put tent up inside out
_____ Took some pictures of the bear
_____ Went skinny dipping in the lake
_____ Burnt the breakfast toast
_____ Put tent up on the side of a hill
_____ Paralyzed with fear when he saw the bear
_____ Had to be rescued from the leg because of a leg cramp
_____ Tried to start a fire with green wood
_____ Ate all the breakfast donuts before the rest of the guys woke up
_____ Climb a tree when he saw a bear enter the campsite
APPENDIX F.

Study 1: An Example of the Need for Cognition Scale
For each of the statements below, please indicate whether or not the statement is characteristic of you. If the statement is extremely uncharacteristic of you (not at all like you) please place a "1" on the line to the left of the statement. If the statement is extremely characteristic of you (very much like you) please place a "5" on the line to the left of the statement. You should use the following scale as you rate each of the statements below.

<table>
<thead>
<tr>
<th></th>
<th>Extremely</th>
<th>Somewhat</th>
<th>Neither</th>
<th>Somewhat</th>
<th>Extremely</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>1. I prefer complex to simple problems.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. I like to have the responsibility of handling a situation that requires a lot of thinking.</td>
</tr>
<tr>
<td></td>
<td>3. Thinking is not my idea of fun.</td>
</tr>
<tr>
<td></td>
<td>4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.</td>
</tr>
<tr>
<td></td>
<td>5. I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.</td>
</tr>
<tr>
<td></td>
<td>6. I find satisfaction in deliberating hard for long hours.</td>
</tr>
<tr>
<td></td>
<td>7. I only think as hard as I have to.</td>
</tr>
<tr>
<td></td>
<td>8. I prefer to think about small daily projects to long-term ones.</td>
</tr>
<tr>
<td></td>
<td>9. I like tasks that require little thought once I’ve learned them.</td>
</tr>
</tbody>
</table>
1. The idea of relying on thought to make my way to the top appeals to me.

2. I really enjoy a task that involves coming up with new solutions to problems.

3. Learning new ways to think doesn’t excite me much.

4. I prefer my life to be filled with puzzles that I must solve.

5. The notion of thinking abstractly is appealing to me.

6. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.

7. I feel relief rather than satisfaction after completing a task that required a lot of mental effort.

8. It’s enough for me that something gets the job done; I don’t care how or why it works.

9. I usually end up deliberating about issues even when they do not affect me personally.
APPENDIX G.

Study 1: Tables 1-7
Table 1. Study 1, Number of Items Recalled as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>Mean</th>
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<tr>
<td>High</td>
<td>11.00</td>
</tr>
<tr>
<td>Low</td>
<td>9.20</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>10.10</td>
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</table>
Table 2. Study 1, Number of Items Recalled as a function of Version

<table>
<thead>
<tr>
<th>Version</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Backpacking Trip</td>
<td>8.40</td>
</tr>
<tr>
<td>Sorority Party</td>
<td>11.80</td>
</tr>
</tbody>
</table>

\[ \bar{X} = 10.10 \]
Table 3. Study 1, Percent of Correct Name-to Item Matches as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>73.80</th>
<th>58.76</th>
<th>66.30</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>73.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>58.76</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>66.30</td>
<td></td>
<td></td>
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</table>
Table 4. Study 1, Percent of Correct Name-to-Item Matches as a function of Version

<table>
<thead>
<tr>
<th>Version</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backpacking Trip</td>
<td>56.10</td>
</tr>
<tr>
<td>Sorority Party</td>
<td>76.40</td>
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</tbody>
</table>

\[ \bar{X} = 66.30 \]
Table 5. Study 1, ARC-Scores as a function of ARC-Type

<table>
<thead>
<tr>
<th>ARC-Type</th>
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</thead>
<tbody>
<tr>
<td>Person</td>
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<tr>
<td>Category</td>
<td>0.470</td>
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<tr>
<td>$\bar{x}$</td>
<td>0.230</td>
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</table>
Table 6. Study 1, ARC-Scores as a function of ARC-Type and Person Focus

<table>
<thead>
<tr>
<th>ARC-Type</th>
<th>Person</th>
<th>Category</th>
<th>( \bar{X} )</th>
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<tbody>
<tr>
<td>High</td>
<td>0.150</td>
<td>0.110</td>
<td>0.130</td>
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<tr>
<td>Low</td>
<td>-0.190</td>
<td>0.840</td>
<td>0.325</td>
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<tr>
<td>( \bar{X} )</td>
<td>-0.020</td>
<td>0.475</td>
<td>0.230</td>
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</table>
Table 7: Study 1, ARC-Scores as a function of Need for Cognition and ARC-Type

<table>
<thead>
<tr>
<th>ARC-Type</th>
<th>Person Category</th>
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<th>$\bar{X}$</th>
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</thead>
<tbody>
<tr>
<td>High</td>
<td>-0.040</td>
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<tr>
<td>Low</td>
<td>0.000</td>
<td>0.470</td>
<td>0.235</td>
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<tr>
<td>$\bar{X}$</td>
<td>-0.020</td>
<td>0.473</td>
<td>0.227</td>
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</table>
APPENDIX H.

Study 2: An Example of the Anticipated Interaction Transcript and List Instructions
Anticipated Interaction Transcript/List
Instructions

One goal of this study is to examine how people work collectively to plan activities and solve various problems. We are particularly interested in 5-member groups.

We are interested in seeing how adding a new member to a group will affect the way a group will plan activities and solve problems.

Past research has shown that success in group planning and problem solving is dependent on being familiar with group members. Since you will be meeting them soon, we feel that you should have some information about who the four persons are and how they work together as a group.

On the following pages you will read some information about a group that has been meeting together for the last several weeks. We will ask you to meet with the group during the second session (second half hour of this study). The information you will be reading was taken from the actual transcript that was made by videotaping their group discussion.

Please read the information carefully because it will aid you in working with the group members on a new problem solving task.

STOP!!

DO NOT TURN THE PAGE UNTIL INSTRUCTED TO DO SO
APPENDIX I.

Study 2: An Example of the Blue Group
Anticipated Interaction Transcript
Instructions
Instructions for Subjects Reading the Transcript (BLUE GROUP)

The following information is based on a videotape taken of the first meeting of the BLUE GROUP. This meeting was held during the first week of Spring Quarter, 1991. The group was asked to develop a set of party ideas; including a party theme, type of food, beverages, and band.

You will be reading the actual transcript which describes the ideas proposed the members of the BLUE GROUP, Ann, Betty, Phil and David.
APPENDIX J.

Study 2: An Example of the Blue Group
Anticipated Interaction
List Instructions
Instructions for Subjects Reading the List (BLUE GROUP)

The following information is based on a videotape taken of the first meeting of the BLUE GROUP. This meeting was held during the first week of Spring Quarter, 1991. The group was asked to develop a set of party ideas; including a party theme, type of food, beverages, and band.

You will be given the different party ideas that were proposed by the four members of the BLUE GROUP, Ann, Betty, Phil and David.
APPENDIX K.

Study 2: An Example of the Impression Transcript
Instructions
An Example of the Impression Transcript

Instructions

This study investigates people form impressions about unfamiliar persons. On the following pages you will read some information about a group that has been meeting together for the last several weeks. You will read four responses that the four group members, Ann, Betty, Phil and David made in response to the question below:

"You are planning a party for an organization. Tell me what theme, food, beverage and band you would choose?"

You will be reading the actual transcript which consists of information items that were chosen by the four group members, Ann, Betty, Phil and David. While reading the information, please form an impression of what the four individuals will be like.

Please read the information carefully because it will help you form an impression of the individual group members.

STOP!!

DO NOT TURN THE PAGE UNTIL INSTRUCTED TO DO SO
APPENDIX L.

Study 2: An Example of the Impression List Instructions
An Example of the Impression List Instructions

This study investigates people form impressions about unfamiliar persons. On the following pages you will read some information about a group that has been meeting together for the last several weeks. You will read four responses that the four group members, Ann, Betty, Phil and David made in response to the question below:

"You are planning a party for an organization. Tell me what theme, food, beverage and band you would choose?"

The responses that these four individuals made in regards to each category will appear one per page. While reading the information, please form an impression of what the four individuals will be like. Read each response carefully and do not look ahead or back.

Please read the information carefully because it will help you form an impression of the individual group members.

STOP!!

DO NOT TURN THE PAGE UNTIL INSTRUCTED TO DO SO
APPENDIX M.

An Example of the Memory Transcript Instructions
An Example of the Memory Transcript Instructions

The study investigates how people remember information about unfamiliar persons. On the following pages you will read information taken from a videotape of a 4-member group planning a party for an organization. This group was asked to respond to the question below:

"You are planning a party for an organization. Tell me what theme, food, beverage and band you would choose?"

You will be reading the actual transcript which consists of information items that was chosen by the four group members whose names are Ann, Betty, Phil and David. Before reading the items you will be given the opportunity to read the first page of the transcript that consists of the instructions from the experimenter.

Memorize the information about each person. During a later phase of this experiment you will be given a recall task. Please read each response carefully and do not look ahead or back.

Before turning the page, please be sure to read the item carefully.

STOP!!
WAIT FOR FURTHER INSTRUCTIONS
APPENDIX N.

An Example of the Memory List Instructions
The study investigates how people remember information about unfamiliar persons. On the following pages you will read information taken from a transcript of a 4-member group discussion. You will read four responses that four individuals, Ann, Betty, Phil and David made in regards to the question below:

"You are planning a party for an organization. Tell me what theme, food, beverage and band you would choose?"

The responses that these four individuals made in regards to each category will appear one per page. Memorize the information about each person. During a later phase of this experiment you will be given a recall task. Please read each response carefully and do not look ahead or back.

Before turning the page, please be sure to read the item carefully.
APPENDIX O.

Study 2: Tables 8-22
Table 8. Study 2, Number of Items Recalled as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>12.08</td>
</tr>
<tr>
<td>Low</td>
<td>11.60</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>11.84</td>
</tr>
</tbody>
</table>
Table 9. Study 2, Number of Items Recalled as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Interaction</td>
<td>11.88</td>
</tr>
<tr>
<td>Impression</td>
<td>11.70</td>
</tr>
<tr>
<td>Memory</td>
<td>11.95</td>
</tr>
</tbody>
</table>

$\bar{X}$ 11.84
Table 10. Study 2, Number of Items Recalled as a function of Processing Goals and Communication Structure

<table>
<thead>
<tr>
<th>Communication Structure</th>
<th>Transcript</th>
<th>List</th>
<th>(\bar{x})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Interaction</td>
<td>11.05</td>
<td>12.70</td>
<td>11.88</td>
</tr>
<tr>
<td>Impression</td>
<td>10.85</td>
<td>12.55</td>
<td>11.70</td>
</tr>
<tr>
<td>Processing Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>12.5</td>
<td>11.40</td>
<td>11.95</td>
</tr>
</tbody>
</table>

\(\bar{x}\) 11.47 12.22 11.84
Table 11. Study 2, Number of Items Recalled as a function of Need for Cognition and Processing Goals

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>High</th>
<th>Low</th>
<th>( \bar{X} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Interaction</td>
<td>12.15</td>
<td>11.60</td>
<td>11.90</td>
</tr>
<tr>
<td>Impression</td>
<td>11.30</td>
<td>12.10</td>
<td>11.70</td>
</tr>
<tr>
<td>Processing Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>12.8</td>
<td>11.10</td>
<td>11.95</td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>12.08</td>
<td>11.60</td>
<td>11.85</td>
</tr>
<tr>
<td>Need for Cognition</td>
<td>Percent of Correct Name-to-Item Matches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------</td>
<td>----------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>79.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>69.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>74.41</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 13. Study 2, Percent of Correct Name-to-Item Matches as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Interaction</td>
<td>69.38</td>
</tr>
<tr>
<td>Impression</td>
<td>74.40</td>
</tr>
<tr>
<td>Memory</td>
<td>72.70</td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>71.99</td>
</tr>
</tbody>
</table>
Table 14. Study 2, Percent of Correct Name-to-Item Matches as a function of Need for Cognition and Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th>Need for Cognition High</th>
<th>Need for Cognition Low</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Interaction</td>
<td>75.76</td>
<td>73.25</td>
<td>74.50</td>
</tr>
<tr>
<td>Impression</td>
<td>74.90</td>
<td>63.85</td>
<td>69.38</td>
</tr>
<tr>
<td>Memory</td>
<td>86.40</td>
<td>62.30</td>
<td>74.40</td>
</tr>
<tr>
<td>Mean</td>
<td>79.02</td>
<td>66.47</td>
<td>72.80</td>
</tr>
</tbody>
</table>
Table 15. Study 2, Percent of Correct Name-to-Item Matches as a function of Communication Structure and Processing Goals

<table>
<thead>
<tr>
<th>Communication Structure</th>
<th>Transcript</th>
<th>List</th>
<th>( \bar{X} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Interaction</td>
<td>78.85</td>
<td>70.15</td>
<td>74.50</td>
</tr>
<tr>
<td>Impression</td>
<td>60.75</td>
<td>78.00</td>
<td>69.38</td>
</tr>
<tr>
<td>Memory</td>
<td>69.76</td>
<td>79.10</td>
<td>74.43</td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>69.69</td>
<td>75.75</td>
<td>72.80</td>
</tr>
</tbody>
</table>
Table 16. Study 2, Percent of Correct Name-to-Item Matches as a function of Person Focus and Communication Structure

<table>
<thead>
<tr>
<th></th>
<th>Person Focus</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>Transcript</td>
<td>64.93</td>
<td>74.53</td>
<td>69.73</td>
</tr>
<tr>
<td>Communication Structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List</td>
<td>78.83</td>
<td>72.66</td>
<td>75.75</td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td>71.88</td>
<td>73.60</td>
<td>72.74</td>
</tr>
</tbody>
</table>
Table 17. Study 2, ARC-Scores as a function of ARC-Type

<table>
<thead>
<tr>
<th>ARC-Type</th>
<th>Person</th>
<th>Category</th>
<th>$\bar{X}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-0.017</td>
<td>0.470</td>
<td>0.230</td>
</tr>
</tbody>
</table>
Table 18. Study 2, ARC-Scores as a function of ARC-Type and Person Focus

<table>
<thead>
<tr>
<th>ARC-Type</th>
<th>Person</th>
<th>Category</th>
<th>( \bar{x} )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>0.310</td>
<td>0.170</td>
</tr>
<tr>
<td>Person Focus</td>
<td>Low</td>
<td>-0.120</td>
<td>0.690</td>
</tr>
<tr>
<td></td>
<td>( \bar{x} )</td>
<td>0.095</td>
<td>0.430</td>
</tr>
</tbody>
</table>
Table 19. Study 2, ARC-Scores as a function of ARC-Type and Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th>Anticipated Interaction</th>
<th>Impression</th>
<th>Memory</th>
<th>$\bar{X}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Person</td>
<td>-0.010</td>
<td>-0.020</td>
<td>0.310</td>
<td>0.093</td>
</tr>
<tr>
<td>ARC-Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>0.470</td>
<td>0.480</td>
<td>0.300</td>
<td>0.420</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>0.230</td>
<td>0.230</td>
<td>0.305</td>
<td>0.260</td>
</tr>
</tbody>
</table>
Table 20: Study 2, ARC-Scores as a function of ARC-Type and Communication Structure

<table>
<thead>
<tr>
<th>ARC-Type</th>
<th>Person</th>
<th>Category</th>
<th>\bar{x}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcript</td>
<td>0.050</td>
<td>0.530</td>
<td>0.290</td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>List</td>
<td>0.130</td>
<td>0.310</td>
<td>0.220</td>
</tr>
<tr>
<td>\bar{x}</td>
<td>0.090</td>
<td>0.420</td>
<td>0.260</td>
</tr>
</tbody>
</table>
Table 21. Study 2, ARC-Scores as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Interaction</td>
<td>.185</td>
</tr>
<tr>
<td>Impression</td>
<td>.230</td>
</tr>
<tr>
<td>Memory</td>
<td>.305</td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>.240</td>
</tr>
</tbody>
</table>
Table 22. Study 2, ARC-Scores as a function of Need for Cognition and ARC-Type

<table>
<thead>
<tr>
<th>Person</th>
<th>ARC-Type</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>High .150</td>
<td></td>
<td>.393</td>
</tr>
<tr>
<td>Need for Cognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low .034</td>
<td></td>
<td>.445</td>
</tr>
</tbody>
</table>
APPENDIX P.

Study 3: Examples of the two Replication Sets
Descriptors Used in Replication Set One

Lee collects stamps

Chris is Atheist

Toni is Forgetful

Toni got a speeding ticket

Terry tutors kids

Lee has Asthma

Chris loves to sail

Chris drinks Columbian Coffee

Toni reads the New York Times

Terry plays the piano

Chris watches David Letterman

Lee likes to play monopoly

Toni plays the lottery everyday

Terry likes to iceskate

Terry is from Kansas

Lee cooks Gourmet Food
Descriptors Used in Replication Set Two

Lee is a Newspaper Reporter

Toni has no medical problems

Terry is from San Antonio

Terry drinks Beer

Lee is Sentimental

Terry loves Jazz

Chris has a 2.0 G.P.A.

Toni plays the piano

Chris is Persuasive

Chris is a History Major

Lee is Religious

Toni is a member of the Chess Club

Toni is a Part-time Dance Instructor

Lee watches Saturday Night Live

Chris is a Cross Country Runner

Terry got a Jaywalking Ticket
APPENDIX Q.

Study 3: An Example of the Instruction Page
INSTRUCTIONS

This study investigates how you form impressions of others. On the following pages you will read four descriptions of four individuals (Toni, Chris, Terry and Lee). One item will appear per page.

Please read each description very closely and do not look ahead to future items or back to previous items. You will have two minutes to read the items so make sure you read them carefully.
APPENDIX R.

Study 3: Tables 23-25
Table 23. Study 3, Number of Items Recalled as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>7.01</td>
</tr>
<tr>
<td>Low</td>
<td>6.73</td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>6.87</td>
</tr>
</tbody>
</table>
Table 24. Study 3, Percent of Correct Name-to-Item Matches as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>46.78</td>
</tr>
<tr>
<td>Low</td>
<td>42.53</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>44.66</td>
</tr>
</tbody>
</table>
Table 25. Study 3, ARC-Scores as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0.200</td>
</tr>
<tr>
<td>Low</td>
<td>0.160</td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td>0.180</td>
</tr>
</tbody>
</table>
APPENDIX S.

AN EXAMPLE OF THE VERBAL TIMING INSTRUCTIONS
Within the gold folders that are placed on your desk are several booklets. You will be working on the booklets one at a time. To ensure that you are all working on the same booklet at the same time I am going to ask you to do two things.

First, after you are finished working on a booklet please raise you hand. Then place the booklet that on the shelf above you.

Please do not forget to raise you hand and then put the booklet on the shelf above you. That way I will be certain when to move on to the next booklet.
APPENDIX T.

Tables 26-48
Table 26. Study 4, Number of Items Recalled as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>8.10</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>7.10</td>
<td></td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>7.60</td>
<td></td>
</tr>
</tbody>
</table>
Table 27. Study 4, Number of Items Recalled as a function of Target Salience

<table>
<thead>
<tr>
<th>Target Salience</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salient</td>
<td>8.10</td>
</tr>
<tr>
<td>NonSalient</td>
<td>7.10</td>
</tr>
</tbody>
</table>

\[ \bar{x} = 7.60 \]
Table 28. Study 4, Number of Items Recalled as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impression</td>
<td>7.78</td>
</tr>
<tr>
<td>Memory</td>
<td>7.10</td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>7.60</td>
</tr>
</tbody>
</table>
Table 29. Study 4, Percent of Correct Name-to-Item Matches as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>64.99</td>
</tr>
<tr>
<td>Low</td>
<td>57.30</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>61.20</td>
</tr>
</tbody>
</table>
Table 30. Study 4, Percent of Correct Name-to-Item Matches as a function of Target Salience

<table>
<thead>
<tr>
<th>Target Salience</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salient</td>
<td>79.61</td>
</tr>
<tr>
<td>NonSalient</td>
<td>42.69</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>61.20</td>
</tr>
</tbody>
</table>
Table 31. Study 4, Percent of Name-to-Item Matches a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th>Impression</th>
<th>Memory</th>
<th>$\bar{X}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>58.61</td>
<td>63.69</td>
<td>61.20</td>
</tr>
</tbody>
</table>
Table 32. Study 4, Percent of Correct Name-to-Item Matches as a function of Processing Goals and Target Salience

<table>
<thead>
<tr>
<th>Target Salience</th>
<th>Salient</th>
<th>Nonsalient</th>
<th>( \bar{X} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impression</td>
<td>83.93</td>
<td>33.30</td>
<td>58.62</td>
</tr>
<tr>
<td>Processing Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>75.39</td>
<td>52.08</td>
<td>63.74</td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>79.66</td>
<td>42.69</td>
<td>61.20</td>
</tr>
</tbody>
</table>
Table 33. Study 4, ARC-Scores as a function of Need for Cognition

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>0.450</td>
</tr>
<tr>
<td>Low</td>
<td>0.200</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>0.325</td>
</tr>
</tbody>
</table>
Table 34. Study 4, ARC-Scores as a function of Presentation Order

<table>
<thead>
<tr>
<th>Presentation Order</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random</td>
<td>0.190</td>
</tr>
<tr>
<td>Blocked</td>
<td>0.460</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>0.325</td>
</tr>
</tbody>
</table>
Table 35. Study 4, ARC-Scores as a function of Target Salience and Presentation Order

<table>
<thead>
<tr>
<th>Target Salience</th>
<th>Salient</th>
<th>Nonsalient</th>
<th>$\bar{x}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random</td>
<td>0.330</td>
<td>0.060</td>
<td>0.195</td>
</tr>
<tr>
<td>Presentation Order</td>
<td>0.380</td>
<td>0.530</td>
<td>0.455</td>
</tr>
<tr>
<td>Block</td>
<td>0.355</td>
<td>0.295</td>
<td>0.325</td>
</tr>
</tbody>
</table>
Table 36. Study 4, ARC-Scores as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th>Impression</th>
<th>Memory</th>
<th>( \bar{x} )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.190</td>
<td>0.460</td>
<td>0.325</td>
</tr>
</tbody>
</table>
Table 37. Study 4, The effects of reading time (in seconds) as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>89.80</td>
</tr>
<tr>
<td>Low</td>
<td>120.55</td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>105.17</td>
</tr>
</tbody>
</table>
Table 38. Study 4, The effects of reading time (in seconds) as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impression</td>
<td>98.30</td>
</tr>
<tr>
<td>Memory</td>
<td>112.03</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>105.17</td>
</tr>
</tbody>
</table>
Table 39. Study 4, The effects of reading time (in seconds) as a function of Processing Goals and Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th>High</th>
<th>Low</th>
<th>( \bar{X} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impression</td>
<td>88.15</td>
<td>108.45</td>
<td>98.30</td>
</tr>
<tr>
<td>Processing Goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>91.40</td>
<td>132.65</td>
<td>112.05</td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>89.78</td>
<td>120.55</td>
<td>105.17</td>
</tr>
</tbody>
</table>
Table 40. Study 4, The effects of recall time (in seconds) as a function of Presentation Order

<table>
<thead>
<tr>
<th>Presentation Order</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Random</td>
<td>227.25</td>
</tr>
<tr>
<td>Blocked</td>
<td>208.13</td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>217.70</td>
</tr>
</tbody>
</table>
Table 43. Study 4, The effects of recall time (in seconds) as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impression</td>
<td>219.53</td>
</tr>
<tr>
<td>Memory</td>
<td>215.71</td>
</tr>
<tr>
<td>$\bar{X}$</td>
<td>217.70</td>
</tr>
</tbody>
</table>
Table 44. Study 4, The effects of name-to-item matching time (in seconds) as a function target salience

<table>
<thead>
<tr>
<th>Target Salience</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salient</td>
<td>89.58</td>
</tr>
<tr>
<td>NonSalient</td>
<td>110.63</td>
</tr>
<tr>
<td>( \bar{X} )</td>
<td>100.11</td>
</tr>
</tbody>
</table>
Table 45. Study 4, The effects of name-to-item matching (in seconds) as a function of Need for Cognition

<table>
<thead>
<tr>
<th>Need for Cognition</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>111.74</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>102.46</td>
<td></td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td>107.10</td>
<td></td>
</tr>
</tbody>
</table>
Table 46. Study 4, The effects of name-to-item matching (in seconds) as a function of Processing Goals

<table>
<thead>
<tr>
<th>Processing Goals</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Impression</td>
<td>107.63</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>106.95</td>
<td></td>
</tr>
<tr>
<td>$\bar{x}$</td>
<td>107.10</td>
<td></td>
</tr>
</tbody>
</table>
Study 3: Table 47, Means and Difference Scores as a function of Need for Cognition

Recall Name-to-Item Matching ARC-Scores

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td>7.01</td>
<td>6.73</td>
<td>46.78</td>
<td>42.53</td>
<td>.200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.160</td>
</tr>
<tr>
<td>Difference Score</td>
<td>.280</td>
<td></td>
<td>4.25</td>
<td></td>
<td>.040</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Need for Cognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Study 4: Table 48, Means and Difference Scores as a function of Need for Cognition

Recall Name-to-Item Matching ARC-Scores

<table>
<thead>
<tr>
<th></th>
<th>Means</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recall</td>
<td>8.50</td>
<td>7.08</td>
<td>62.48</td>
<td>54.75</td>
<td>.440</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.210</td>
</tr>
<tr>
<td>Difference Score</td>
<td>1.42</td>
<td></td>
<td>7.73</td>
<td></td>
<td>.230</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Need for Cognition</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>