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The effects of motivation on social information processing

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THE EFFECTS OF MOTIVATION ON SOCIAL INFORMATION PROCESSING

by

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by
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Abstract

Studies examining processing of information which is consistent and inconsistent with an expectancy have not been able to conclusively determine which of these types of items has a memory advantage. Recent research indicates that one important determinant of this may be attention allocation to the different types of items. For example, a recent model of impression formation suggests that people process information along a continuum from using only a category label to using only individual attributes. It is proposed that motivational factors can influence attention allocation and thus memory for and use of consistent and inconsistent information. Two different communication sets were compared to assess their effects on information processing. It was hypothesized that whereas accountability would correspond with an advantage for inconsistent information, transmission tuning would correspond with an advantage for consistent information. Two experiments failed to confirm these hypotheses. There are several possible explanations for results.
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This thesis is dedicated to my grandfathers.
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Introduction

In/Consistency of Information with an Expectancy

Research in social cognition indicates that one's memory for information about a target individual may to some extent depend on its consistency with a subject's schema or expectancy about that target. Researchers in this area have been prolific and have examined the issue in different settings and with the addition of many different factors. This effort to reach some consensus and draw conclusions as to the precise nature of the influence of consistent and inconsistent information has been only somewhat successful, as will be described. Whereas some research has found a memory advantage for consistent information, other studies have found an advantage for inconsistent information.

The former findings are for the most part based on schema theory. A schema can be defined as a cognitive structure that is used to represent knowledge about a particular concept, its attributes, and relationships among the attributes. Fiske and Taylor (1984) describe the effects a schema can have on memory. Essentially, a schema helps a perceiver to remember consistent information to a greater extent than would be possible without the schema. Furthermore, given information which is consistent, inconsistent, and irrelevant with a schema, the schema is said to guide memory such that consistent information will generally be better remembered. This is mainly thought to be due to preferential encoding of consistent information, which is then remembered better than other information which does not fit into the schema or framework as well.

Results of some research have supported the ideas of schema theory. For example, Johnson and Judd (1983) found what they referred to as a
"congruency bias" in a political setting. They found better recognition of consistent than inconsistent items, as well as more accurate attribution of consistent than inconsistent items to their sources. Another example of this type of finding is a study by Cohen (1981). Results of this study indicated that subjects more accurately remembered characteristics of a target person which were consistent than those which were inconsistent with their schema of the target. Similar findings can be seen in experiments by Berman, Read and Kenny (1983) and Rothbart, Evans and Fulero (1979).

The controversy arises due to research by Hastie and Kumar (1979) and others who have found better recall of information that is inconsistent with an expectancy. Specifically, Hastie and Kumar examined the manner in which social information is stored and retrieved. They had subjects form a schema or initial impression of a fictional target person, after which they studied and then recalled consistent and inconsistent behavioral information. Based on the same kinds of schema theory ideas and findings as those described above, the experimenters predicted that they would find better memory for consistent information. However, they instead found the opposite: better memory for the inconsistent information. This was explained with an associative network model, which was later examined in some detail by Srull (1981).

The model proposes that inconsistent behaviors are better recalled because subjects create a greater number of associative linkages in memory among these and other behaviors when trying to integrate all of the information into a coherent impression. When an inconsistent item is encountered, it is hypothesized that the item is more difficult to understand, and thus is kept in working memory for a longer period of time, than a consistent item. While in working memory, the inconsistent item is linked with other items, both previously
and subsequently encountered, in an effort to make sense of it. Because of this enhanced opportunity for inconsistent items to form links with other items, the end result is that there are more associative paths between inconsistent and other items than between consistent and other items, which leads to enhanced recall of the inconsistent items.

There also seem to be certain conditions which promote findings of better memory for consistent or inconsistent information, which may in part explain some of the discrepant previous results. For example, Snell (1981) examined the effects of varying certain experimental conditions on processing of information, and was able to enumerate conditions which tend to favor memory of consistent information. These include testing for recognition, giving subjects memory set instructions, embedding information in an essay and increased task difficulty. Similarly, recall tests, impression formation instructions, serial presentation of information and less difficult tasks tend to favor memory for inconsistent information. All of these findings were seen as evidence for, and explained by, the model proposed by Hastie and Kumar, as was an additional finding that inconsistent information only has a recall advantage when the information applies to a psychologically meaningful unit, such as a single person or a group of people who would be expected to act consistently.

Another example of research in this area which successfully turned the issue towards the effects of particular situational variables is that of Stangor and Ruble (1989), who examined a factor which may be more relevant to real-world situations. They looked at processing of information which was consistent and inconsistent with an expectancy in terms of how strong or well-formed the expectancy was, concluding that inconsistent information may be better recalled
with a loosely held or weaker expectancy (which, it is worth noting, is the type seen in much of the lab research done in the area).

The main point here is the move towards research which looks at the context of the issue, examining boundary conditions in an effort to better explain previous findings. This seems to be an important trend and one which has added a new dimension to explaining when and why processing tends to be more schema-based or attribute-based.

Obviously the Hastie/Srull model suggests that schema-consistent and -inconsistent items are processed differently. More recently, Fiske and Neuberg (1990) have proposed a more general model based on that theme. They speak of schema-based processing as that which indicates a reliance on the schema and a tendency to ignore, discount or in some way pay less attention to inconsistent information. This type of processing is suggested by the studies mentioned above which found evidence for better memory of consistent information. They refer to attribute-based processing as that which indicates that more attention is given to individual items of information. This ties in with the Hastie and Kumar model which proposes that inconsistent items receive extra attention in the sense that they stay in working memory longer than consistent items. Evidence for this mode of processing can be seen in the studies which found a memory advantage for inconsistent information.

It is important to keep in mind that even when processing is referred to as being attribute-based, this in no way implies that the schema no longer plays a central role. It is understood that the schema functions as a framework or organizational structure within which processing takes place. This is the case whether processing is schema- or attribute-based. Given this fact, the point that Fiske and Neuberg (1990) make is that processing can rely to different degrees
on the schema. If processing is more attribute-based, then processing can be viewed as an effort to integrate the individual attributes into the schema. One factor that may vary across situations and people is the extent to which such an effort to integrate inconsistent attributes will be made.

There are many contextual factors that might affect how consistent and inconsistent information is processed. One advantage of the Fiske/Neuberg model is that it draws attention to motivational determinants of how information is processed. In other words, it suggests the question, "what is the effect of different types of motivation or 'encouragement' on processing of information which is consistent and inconsistent with a schema or expectancy?" This ties in with the distinction made between schema-based and attribute-based processing. In this case, the issue is whether certain factors can motivate or encourage processing to be more in one manner or the other.

**Some Known Effects of Motivation on Social Information Processing**

Fiske and Neuberg (1990) propose a model of impression formation which views this process as operating on a continuum from using only category membership, at one extreme, to using only individual attributes, at the other. In the terms mentioned above, processing is described as schema-based to the extent that the category label is used, and attribute-based to the extent that individual items of information are used in forming an impression. Again, it is understood that even at the extreme where only individual attributes are used, processing requires an attempt to integrate the attributes into the schema. It is not the case that the schema no longer exists or is no longer central to processing at the attribute-based end of the continuum.

Given that individuals possess many features that could be used to form impressions, a category label is defined as the feature that a perceiver uses to
organize and understand the remaining features. The remaining features are defined as the attributes. Social categorization, or schema-based processing, is assumed to be efficient compared with an attribute-by-attribute examination of each individual attribute one encounters, and therefore the former type of processing is likely to have priority. Schema-based processing, as described by schema theory, implies preferential processing of consistent information, or that which fits in with the category label. Likewise, attribute-based processing suggests the potential for an advantage of inconsistent information. This is because individual attributes are examined which gives inconsistent ones a better chance of receiving attention.

According to the Fiske and Neuberg (1990) continuum model, any particular instance will be processed somewhere along the continuum from use of only the schema to use of only the individual attributes (but again, no implication is made that the schema is discarded in the latter case). Precise placement of each instance will be dependent on the amount and type of attention which is given to the attributes as compared to the category label. Thus, the manner in which attention is allocated is said to be critical in terms of whether processing tends toward one end or the other of the continuum. On closer inspection, it can be seen that this is in agreement with the model described above by Hastie and Kumar (1979) and Srull (1981). The Fiske and Neuberg model implies that inconsistency will be remembered better (and, indeed, only) if the perceiver attends to it. That is, attention is necessary for the inconsistent information to be perceived as inconsistent, and then to integrate it into a meaningful impression, forming the associative links discussed in and so critical to the Hastie model. It will be recalled that in that model, it is in the attempt to integrate inconsistent items into the whole impression that extra links
are formed. Another indication of the criticality of attention allocation comes from studies in which subjects were prevented from paying extra attention to inconsistent items (e.g., Bargh & Thein, 1985, Srull, 1981). This resulted in a reduced recall advantage of inconsistent over consistent items. For example, Bargh and Thein gave some subjects control over presentation rate of items. Others were given only enough time to read each item. The former group of subjects spent more time on inconsistent than consistent items, and subsequently had better recall for the inconsistent items. The latter group showed no recall differences between consistent and inconsistent items.

The particular manner in which attention is allocated in a given instance is therefore assumed to be the decisive feature in both of the models described above (Fiske & Neuberg, 1990, and Hastie & Kumar, 1979). There are many determinants of attention allocation, which can include situational, personal, or any other characteristics of a given instance. However, Fiske and Neuberg describe what they refer to as the "default option". This is the basic scenario and demonstrates how people are thought to process information with no particular situational constraints altering this process. In this default option little attention is given to inconsistencies and here there is no improved memory of inconsistent information. In other words, when possible one's preference will be to use schema-based processing, interpreting information in terms of relevant categories. This kind of processing is particularly likely when there is a label only, an easily categorized set of attributes, or a label with category-consistent attributes. When there is a label with mixed, ambiguous attributes, subjects still tend to make category consistent judgments.

However, when the attribute information given is not mixed but is clearly inconsistent with the label and relevant to the judgment, the default option
begins to fail. At this point people begin to pay more attention to individual attributes and try to integrate them. Fiske and Neuberg describe situational factors which seem to encourage use of category-inconsistent information (or circumstances which alter the "default option"), such as having sufficient attentional capacity, not reinterpreting inconsistent information as consistent, not being able to discount the inconsistent information, not dwelling on the impression, and finally, having the proper motivation.

**Two Motivational Tendencies**

One basic reason for processing information in terms of individual attributes, rather than a category label, is a desire or goal to process the information accurately. In nearly any situation in everyday life, one of the important goals that seems to affect how we want and need to process information is communication (see Higgins, 1981). However, the influence of any particular communicative goal on motivation and subsequent information processing is an important issue. In looking more closely at research involving these kinds of motivational factors, it is clear that these factors can influence the accuracy of certain kinds of judgments and responses. Motivation has been operationalized and manipulated in several different ways. For example, Zajonc (1960) induced different "tuning sets" such that some subjects believed they would communicate or transmit information whereas others believed they would receive information. In the case of receiving information, one would want to prepare to deal with incoming information and possible cognitive change. In the case of transmitting information, one would be viewing the information with an eye toward finding an easily communicable and coherent message. Zajonc's belief was that these are two basic ways of dealing with information, that is transmitting and receiving, and that people activate different "cognitive
structures" in anticipation of doing one of these or the other. In his study, although all subjects in fact read identical information about a target, results indicated that subjects in the transmission set encoded the information in a way which was more differentiated, complex, unified and organized than did subjects in the receiving set. These measures essentially examined how subjects represented the information. This is an example of how, even though they all in fact had identical information, subjects were "encouraged" to process it differently because they believed they would have to do different things with the information.

Other researchers have followed up on the basic ideas Zajonc used. For example, Cohen (1961) and Brock and Fromkin (1968) compared receivers and transmitters with regard to their tendencies to "polarize" - gather information in support of an extreme position - and "suspend" - minimize contradictions. Both studies found that receivers were more likely to suspend and transmitters were more likely to polarize. This was explained by assuming that transmitters want to have a straightforward message which can easily be communicated. Harvey, Harkins and Kagehiro (1976) compared transmitters and receivers in terms of the attributions they make. These researchers concluded that in some situations, transmitters tend to make relatively high attributions of causality to a plausible causal agent. This was explained with reasoning similar to that mentioned above; that is, because transmitters feel the need to develop a clear interpretation of an event, they tend to seek and use explanations or attributions. Although this has not been directly stated or measured, it is implied in these Zajonc follow-up studies that transmitters seek clear and polarized information even if this is at the expense of accuracy. This suggestion has also been made more recently by others, as will be described below. However, it
will be shown that not all manipulations of motivation, or communication "sets", have this undesirable side-effect.

An example of a manipulation of motivation which may have the opposite effect - that is, an increase in accuracy of processing information - is accountability. Tetlock (e.g., 1985) describes the effects of accountability, the social pressure to justify one's judgments to others, on information processing. Over the course of several experiments, Tetlock has shown the effects of accountability to be fairly pervasive in a variety of tasks and measures. Accountable subjects formed more complex and more accurate impressions than did non-accountable subjects (Tetlock & Kim, 1987, Tetlock, 1983b). Accountability was found to reduce primacy effects (Tetlock, 1983a) and to eliminate the fundamental attribution error (Tetlock, 1985), and in general to make subjects more carefully process information. Similar conclusions regarding the impact of accountability have been reached by Rozelle and Baxter (1981) and by McAllister, Mitchell and Beach (1979). More directly relevant to the issue of processing consistent and inconsistent information, Tetlock and Kim found that accountable subjects "make persistent efforts to integrate contradictory or inconsistent information into their overall impression of the evidence" (p.701). These conclusions indicate the possibility that, if they believe it is sufficiently important, subjects will make judgments which are based more on individual items of information, and less on a label or category. This would also imply, as Tetlock's results show, that inconsistent information would be taken into account and remembered to a greater extent than would otherwise be the case.

As described, there are different ways of manipulating motivation which have been studied in the context of information processing and effects on
memory and impression formation. However, it is important to keep in mind the
different effects of these various manipulations. An interesting distinction which
has been hinted at but never empirically tested is the distinction between
accountability manipulations such as those used by Tetlock, and the cognitive
tuning manipulations used by Zajonc (1960) and others. At first glance, these
two manipulations seem to be similar. Both involve the need to transmit or
communicate information to another person, and to appear coherent while
doing so. However, on closer inspection, this may be where the similarity ends.
Tetlock and Kim (1987) state that these manipulations actually encourage
different manners of processing information, and some of these differences
have been described above. For example, transmission tuning encourages
one to present a coherent and organized impression and therefore to
communicate information that is more polarized, less ambiguous, and therefore
more inaccurate. In reference to the Fiske and Neuberg (1990) model or
continuum described earlier, this would indicate that transmission tuning
encourages schema-based processing. This, in turn, parallels the Hastie and
Kumar (1979) model’s premise that extra attention and time must be expended
on inconsistent items in order for them to form extra links and be better
remembered. Thus, transmission tuning seems to lead to processing which is
schema-based and which implies better memory for consistent items.

On the other hand, accountability encourages presentation of a less
extreme impression which takes ambiguities into account, making the
impression more easily justifiable. The Fiske and Neuberg model would
therefore put this type of processing further along on the continuum towards use
of attributes. Again, with reference to the Hastie/Kumar model, the use of
individual attributes in processing indicates extra attention to these attributes
and therefore the opportunity to form extra links between inconsistent and other items. This implies the possibility of a memory advantage for inconsistent items.

Tetlock and Kim (1987) and Fiske and Neuberg (1990) cite evidence, mentioned above, which indicates that those expecting to transmit information make judgments which are more polarized than those expecting to receive information. Tetlock also cites evidence from his studies indicating that accountable subjects make less extreme attributions than non-accountable subjects and tend to be more cognitively complex, less one-sided, more accurate and less overconfident than non-accountable subjects. In contrast, subjects in a cognitive tuning set who expect to transmit information form impressions which are more organized, more polarized, more fixed and more category-based than those expecting to receive information. However, cognitive tuning and accountability manipulations have not been directly compared in a study in which the information provided and experimental constraints were otherwise identical.

Fiske and Neuberg (1990) discuss this issue as "self-presentation to a third party", describing accountability and similar manipulations as having their effects due to motivation to form accurate impressions based on fear of being negatively evaluated. Similarly, Kruglanski and Freund (1983), in describing the theory of lay epistemology, explain that one's willingness and ability to deal with conflicting information is affected by three needs: The need for structure, the fear of invalidity and the need for specific conclusions. Although these authors do not specifically mention transmission sets or accountability, the needs they describe tie in with the hypothesized differences between these two manipulations. The need for structure parallels the transmission set and the effects it appears to have on information processing. The need here is to have
some knowledge or something to say about a particular event, and anything is deemed better than nothing or ambiguity. Kruglanski and Freund describe this need as being intensified in any situation which pressures one to form a clear opinion, and they describe its effect as "freezing" the seeking of alternative information. This fits in with findings discussed earlier in which transmission seems to lead to polarization. The fear of invalidity can be seen as similar to accountability and its effects. This need emphasizes the costs of committing an error. In contrast to the need for structure, fear of invalidity is said to increase consideration of multiple conflicting items of information, which is similar to some of the effects noted and expected in an accountable situation. (The third need mentioned is not relevant here.)

Kruglanski (1989) similarly discusses the effects of motivation on extent of information processing and type of information processed. Several studies are cited which offer evidence that greater fear of invalidity may lead to a greater extent of information processing before a judgment is reached. In terms of type of information processed, evidence suggests that when the value of accuracy is stressed (as opposed to the ability to make quick decisions), subjects seek items of information which are diagnostic and relevant to both an initial hypothesis and its alternatives (as opposed to having a tendency to ignore alternatives).

Along the same lines, Fiske and Neuberg (1990) state that information inconsistent with an expectancy might be predicted to be taken into account more if the perceiver believes s/he will have to justify impressions. The authors conclude that in an accountability situation, subjects will be more likely to make use of individual attributes in forming impressions. As mentioned earlier, this does not imply a neglect of the schema, but rather an increased effort to
integrate inconsistent items into the schema. However, Fiske and Neuberg conclude the opposite with regard to cognitive tuning. As described above, in this case it is assumed that the subject tries to present an organized impression, and, as Fiske and Neuberg describe this process, the subject therefore settles for "...any minimally acceptable impression..." "...for fear of appearing wishy-washy..." (p.45). This would indicate a tendency to make use of a label or categorization rather than individual attributes, particularly inconsistent ones. The expected subsequent impact on memory has been described.

In reference to the inconclusive results described above of studies examining recall of consistent and inconsistent information, a comparison of transmission tuning and accountability has important implications for beginning to explain how these types of specific factors of the situation may affect results. Although both types of manipulations involve the need to impart information, they make very different and in some cases opposite predictions for the manner in which the information is processed. This would affect memory for the information and any evaluations or judgments made on the basis of the information.

The following study will examine the processing of information which is consistent and inconsistent with a schema and the effects of that processing on several dependent measures to be described below. Importantly, a comparison will be made between subjects in a transmission set and subjects in an accountability set who otherwise receive identical information. A control group will be given no particular motivation or communication goal.

Hypotheses are as follows:

1. Recall:
a. Accountable subjects will recall more information overall than transmitters or control subjects. This is based on previous accountability research which finds enhanced recall for accountable subjects as compared to unaccountable subjects. Because both transmission and control subjects are unaccountable, this difference is predicted here.

b. In terms of type of information recalled, accountable subjects will recall more inconsistent information than control subjects, who in turn will recall more inconsistent information than transmitters. This again refers back to the idea that accountable subjects process information in a more attribute-based manner, thus allowing for linkage of inconsistent and other items. Transmitters are expected to process information in a more schema-based manner, not paying a great deal of attention to inconsistent items. The control group should fall in between.

c. Previous research does not indicate that there is any reason to predict differential recall of consistent information across groups. Therefore, the expected differences in total recall would be explained by the expected differences in recall of inconsistent information rather than differences in recall of consistent information.

2. Evaluation/impression of the target - that is, how polarized the impression is on a Likert-type scale:

Accountable subjects will be the least polarized and closest to the center of the scale. Transmitters will be the most polarized. Control subjects will fall in between the other two groups. The reasoning behind this hypothesis is similar to that described for the recall hypothesis above. Accountable subjects are expected to take multiple conflicting pieces of information into account and thus to end up with a less extreme impression. Transmitters are expected to simply
settle for an impression, and this is predicted to be schema-based and thus more extreme.

3. Recognition:

No differences are predicted. Srull (1984), in describing differences between recall and recognition, explains that recognition is almost always superior to recall. Also, it is stated that any variable that affects the ability to retrieve information should affect recall but not recognition. Here, it is assumed that because accountable subjects pay more attention to inconsistent items and form extra links between these and other items, these subjects will have a recall advantage over transmission subjects. However, this advantage need not extend to the recognition test.

4. Complexity of thought:

Accountable subjects will be have more cognitively complex representations of information than controls, who will be more complex than transmitters. Cognitive complexity has been defined and measured in different ways. One fairly well-developed view of complexity is that of Tetlock (e.g., 1983b). One of the key components of complexity is differentiation, which refers to the number of characteristics or dimensions of a problem that one considers. The other major component is integration, which refers to connections between the differentiated aspects of the problem. However, differentiation is a necessary precondition for integration. In the present research, a card-sorting task is used to measure complexity, focusing primarily on the differentiation aspect. Because accountable subjects are thought to consider more aspects of a problem, they can be expected to view it more complexly. Tetlock's research has shown that accountable subjects are more complex than nonaccountable subjects. Transmitters should be less complex than accountable and control
subjects because of their tendency to pay less attention to conflicting items of information and to quickly settle for an impression.

Experiment 1

Method

Subjects. Forty-seven undergraduate students from Rice University participated in this study. All subjects participated voluntarily in exchange for class credit. Subjects participated in sessions singly and in groups which ranged in size from two to five. This was determined only by the manner in which they signed up for participation, which was also the only means by which they were assigned to conditions. There were 16 subjects in the control condition, 15 in the transmission condition and 16 in the accountability condition. Experimental sessions were slightly less than one hour in length, and subjects signed up for the experiment in one hour increments.

Design. This was a one factor experiment. The factor, motivation, had three levels: Control, transmission and accountability.

Materials. Stimulus materials consisted of 40 sentences read to subjects from a tape recorder, in one of two different orders. Across conditions, one half of the subjects heard one order and the other half heard the other order. This was a safeguard against any sequence effects, such as primacy or recency effects. Each sentence described a behavior related to intelligence and said to have been exhibited by a (fictitious) character named John who was described in the beginning of the experiment as being “at least reasonably intelligent”. Ninety sentences were written and pretested in order to find the 40 which were used. Of the 40 selected, 20 were consistent with, 10 were inconsistent with, and 10 were irrelevant to, the initial expectancy of intelligence. The pretest was completed by 10 graduate students who were
unaware of the research issue. These graduate students were asked to rate each sentence on a scale from -5 to +5 where -5 represented a “very unintelligent” behavior, 0 represented a behavior which was “neither unintelligent nor intelligent” and +5 represented a “very intelligent” behavior. Those behaviors selected for inclusion in the study received a mean rating of at least +2 for consistent items, -2 or less for inconsistent items, and 0 for irrelevant items. Appendix A contains the list of items used and their mean ratings, and the two different orders in which the items were tape recorded. The narration of the items on tape was supplied by a male graduate student who was unaware of both the purpose and the details of the experiment.

Procedure. In the three conditions (control, transmission and accountability), the manipulations took place in the beginning of the experimental session, after which all conditions were treated in the same way. Therefore, the different treatments constituting the manipulations will be described first. This will be followed by a description of the remainder of the experimental session, which is equally applicable to all conditions.

The manipulations were induced through instructions given to subjects regarding what the experiment was purportedly examining and what they would be required to do. Instructions were handed out to subjects to read while the experimenter read them aloud. (See Appendix A for the script used in each condition.) In all conditions, the instructions began with a general description of the research as examining “how people use information to form impressions of other people”. All subjects were told that some information would be read to them about a person “who would probably be described as at least reasonably intelligent”. This was to set up the initial expectancy of the target person. Subjects were told that they need not memorize the information but rather
should attempt to form a general impression of the target. Finally, an outside (fictional) researcher was mentioned as being involved in some way with the experiment. He was described as Dr. Taylor, a professor at Baylor Medical College, and the specific involvement he was said to have in the experiment varied across groups.

In the control condition, it was simply mentioned that the research was being conducted in conjunction with Dr. Taylor. It was also stated that in order to ensure anonymity of data, each subject would be asked to make up a five digit number and put that on the forms he or she filled out. The point was made that they should be sure not to put their names anywhere on the data, and they were informed that at the end of the session they would drop their forms in a box on their way out the door. In this condition, a box was positioned near the door with a label on it which said "Data". Following the reading of instructions, control subjects were asked to sign a "Release Form" which stated their understanding that their data would be used for analysis by the experimenter and that it would be part of a group of data with no individually identifying information.

In the transmission condition, subjects were similarly told that Dr. Taylor would be reading their impressions and using them in a future study; however, no mention was made of any future meetings. After instructions were read, subjects were asked to sign a "Release Form" which stated their understanding that Dr. Taylor would use their data as part of a group of data, but that they would never be asked to explain or justify their responses in any way.

In the accountability condition, subjects were told that they would be writing down their impressions of the target person and that Dr. Taylor would be reading them to get information he needed for another study. It was explained
that because he needed this information and needed to understand how the subjects had arrived at their impressions, he might be phoning them in the next few days to schedule a time when he could meet with each of them. At that meeting, they would be asked to explain and justify anything they had written down that he had any questions about. It was mentioned as an example that they might be asked what specific behaviors they had used to reach certain impressions of the target person. Finally, it was noted that the meeting would be audiotaped for use in future analysis. After the instructions were read, subjects were asked to sign a paper entitled “Release Form” which stated their understanding that Dr. Taylor would use their data and might call them in the next few days to set up a meeting at which they would be asked to explain and justify their responses. Release forms for all conditions are shown in Appendix A.

After instructions had been read and release forms signed and collected, all subjects were treated in the same manner. The tape containing 40 behaviors said to characterize John was played and subjects listened to the behaviors. When the list was over, a series of tasks was completed. Some tasks had specific time limits, whereas others did not. In all cases, subjects were told of any time limits before beginning work on the tasks. Completion of the tasks constituted the dependent measures.

First, subjects were given a distractor task on which to work. This consisted of 65 anagrams to unscramble. Subjects were told that although the relevance of this task might not be immediately apparent to them, it was in fact important and would be explained to them at the end of the experimental session. No subjects were able to complete the list of anagrams in the five minutes allowed. When the time had passed, subjects were asked to stop
working on this task. Next they were asked to freely recall as many behaviors as they could from the taped list. They were asked to try to recall the behaviors verbatim, but were told that if this was not possible, they should write down as much as they could remember. They were given 10 minutes to work on this task. From the recall test, the measures included overall recall as well as recall of consistent, inconsistent and irrelevant items.

Next, subjects were asked to rate their impressions of the target person on five Likert-type scales, which asked how friendly, intelligent, interesting, consistent and extroverted they thought the target was. These scales went from zero to nine. In terms of the issues of this research, primary interest was in the scales which asked about the target's intelligence and consistency. The other scales were included mainly to mask the main purposes of the experiment. After the subjects had completed this form, they were asked to turn it over and, on another sheet, write about their impressions of the target in their own words. They were given five minutes to work on this. The purpose of this task was to use as a measure of complexity of thought. (This measure will not be discussed in this paper, although another measure of complexity will be described.)

Subjects completed a recognition test which included 20 correct behaviors from the list they had previously heard, and 20 lures. The number of correct behaviors and lures from the consistent, inconsistent and irrelevant list items were in proportion to the total number of items in each of those categories. That is, there were 20 consistent items (10 correct and 10 lures), 10 inconsistent items (5 correct and 5 lures), and 10 irrelevant items (5 correct and 5 lures). Subjects were asked to respond to each of the 40 items using a scale which went from one to five. One indicated certainty that they had not heard the item
on the tape and five indicated certainty that they had heard the item. The recognition test is shown in Appendix A.

Subjects were each given a pile of forty 3" x 5" cards. Each card had one of the original behaviors printed on it, and sets of cards were shuffled before they were distributed. Subjects were asked to sort the cards into piles that seemed to them to go together. They were told that they could use any number of piles, any number of cards per pile and any amount of time that they wanted. When they were finished, the experimenter pointed out that each card had a number on the back, and subjects were asked to record which cards they had in each pile.

Finally, subjects answered two manipulation check questions, which are shown in Appendix A. The first question asked subjects to indicate on a zero to nine scale the extent to which they had been thinking about having to communicate their impressions to Dr. Taylor. The second question asked subjects to indicate the extent to which they had been thinking about having to explain and justify their impressions to Dr. Taylor.

Before they left, subjects were thoroughly debriefed and assured that, regardless of condition, they were all completely finished with the experiment and would not be asked to come back or meet with Dr. Taylor at any time. The debriefing can be seen in Appendix A. In addition to being told what the experiment was examining and why, subjects were asked to refrain from talking with any other potential subjects about the experiment.

Results

An analysis of variance was used to examine differences across conditions for all dependent measures. The two manipulation checks will be discussed first, since results for them have direct relevance for all other
variables. The first manipulation check asked about the extent to which subjects had been thinking about having to communicate their impressions. An ANOVA showed that responses did not significantly differ across control ($M = 3.7$), transmission ($M = 2.1$) and accountable ($M = 3.4$) conditions, $F (2, 44) = 1.38, p = .26$. The second question asked about the extent to which subjects had been thinking about having to explain and justify their impressions. These responses did not significantly differ across control ($M = 3.9$), transmission ($M = 1.8$) and accountable ($M = 3.1$) conditions, $F (2, 44) = 2.37, p = .10$.

Given that the manipulation checks did not show the anticipated effect, it was not expected that any of the other dependent measures would do so. This was in fact found to be the case. Measures of number of behaviors recalled (broken down into separate measures of total recall, and recall for consistent, inconsistent, and irrelevant items) did not differ across groups (Table 1 shows means by condition). Total recall did not differ across control ($M = 18.06$), transmission ($M = 18.87$), and accountable ($M = 17.38$) conditions, $F (2, 44) = .60, p < .55$. Similarly, recall of consistent behaviors did not differ across control ($M = 8.75$), transmission ($M = 9.40$), and accountable ($M = 8.31$) conditions, $F (2, 44) = .58, p < .56$. Recall of inconsistent behaviors also did not differ across control ($M = 5.63$), transmission ($M = 5.87$), and accountable ($M = 5.50$) conditions, $F (2, 44) = .23, p < .79$. Finally, for irrelevant behaviors recalled, means did not differ across control ($M = 3.06$), transmission ($M = 3.00$), and accountable ($M = 3.31$) conditions, $F (2, 44) = .21, p < .81$.

Responses to the recognition test were examined by creating new variables for each subject which represented his or her mean scores on each of the six types of items in the test. These were consistent, inconsistent and irrelevant items which had actually been in the original list, and consistent,
Table 1

Mean Recall as a Function of Condition in Experiment One

<table>
<thead>
<tr>
<th>Recall type</th>
<th>Control</th>
<th>Transmit</th>
<th>Accountable</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent</td>
<td>8.75</td>
<td>9.40</td>
<td>8.31</td>
<td>.58</td>
<td>.56</td>
</tr>
<tr>
<td>Inconsistent</td>
<td>5.63</td>
<td>5.87</td>
<td>5.50</td>
<td>.23</td>
<td>.79</td>
</tr>
<tr>
<td>Irrelevant</td>
<td>3.06</td>
<td>3.00</td>
<td>3.31</td>
<td>.21</td>
<td>.81</td>
</tr>
<tr>
<td>Total</td>
<td>18.06</td>
<td>18.87</td>
<td>17.38</td>
<td>.60</td>
<td>.55</td>
</tr>
</tbody>
</table>
inconsistent and irrelevant items which had not (lures). The new variables were then analyzed in a 3 (control, transmission, accountable) x 3 (consistent, inconsistent, irrelevant) x 2 (original item, lure) mixed design ANOVA, which indicated no effect of condition.

Measures of the subjects' impressions of the target did not differ across groups. Ratings of interest were the scales for assessing the target's intelligence and consistency. For intelligence, these were not different across control ($M = 6.8$), transmission ($M = 7.2$), and accountable ($M = 6.6$) conditions, $F (2, 44) = 0.91, p < 0.41$. Similarly, for consistency, ratings did not differ across control ($M = 2.6$), transmission ($M = 2.4$), and accountable ($M = 2.3$) conditions, $F (2, 44) = 0.09, p < 0.92$.

Finally, the number of piles subjects used in sorting the behaviors did not differ across control ($M = 6.6$), transmission ($M = 7.3$), and accountable ($M = 6.9$) conditions, $F (2, 44) = 0.29, p < 0.75$.

**Discussion**

The results of experiment one revealed some important problems, the main one being that the manipulation checks showed no effect of condition. There are two possible explanations for this. First, the manipulations simply did not have their intended effect: Perhaps they had no effect at all. If the manipulations were insufficiently powerful, an effort to strengthen them would be worthwhile.

The second explanation is that the manipulations had the anticipated effect but that the manipulation checks were not sensitive to this. This could occur because subjects did not precisely understand the intended meaning of the questions.
Given the basic finding regarding the manipulation checks, it was not very surprising to find no effects of condition on any of the dependent measures. It seemed necessary, before any conclusions (however tentative), could be drawn, to strengthen the manipulations and change the manipulation checks. However, another problem was revealed in looking at subjects' responses and also from comments some subjects made. There seemed to be a general feeling that the target person, about whom the subjects heard information, was unrealistic almost to the point of being bizarre. As mentioned above, the behaviors heard about the target included some which indicated intelligence and some which indicated a lack of intelligence (as well as some irrelevant behaviors). For example, subjects heard that John did mathematical puzzles as a hobby, could not solve a simple math problem, graduated with honors, and was held back in school for a year. It may seem unlikely that the same person could realistically exhibit these contradictory behaviors. To an extent, this problem is intrinsic to the research area; there is a “catch-22” situation in that behaviors are specifically pretested to be consistent and inconsistent with a certain characteristic, but still are attributed to a single individual.

Another problem with using intelligence in this type of experiment is that Rice students seem to have a strong unwillingness to evaluate another person's intelligence or lack thereof. Following the reactions of subjects to the target, it seemed worthwhile to alter the stimulus materials so that the characteristic used was something other than intelligence. Extroversion was selected to be used instead. It seemed more likely that an extroverted person could act in introverted ways without seeming to be unstable to the point of being bizarre.

Based on the data from experiment one, several changes were implemented. The first was to strengthen the accountability and transmission
manipulations. Secondly, it seemed important to change the manipulation check questions in an attempt to more successfully gauge what the subjects thought. Therefore, two forced-choice manipulation check questions were added to determine whether, at the very least, subjects heard and understood the directions. Finally, the stimulus materials were changed so that the initial expectancy offered about the target regarded his extroverted qualities, and the behaviors subsequently given to subjects were consistent, inconsistent and irrelevant with that initial characteristic.

Experiment 2

Method

Subjects. Seventy-five undergraduate students from Rice University participated in this study. None of them had participated in experiment one. All subjects participated voluntarily in exchange for class credit. Subjects participated in sessions singly and in groups which ranged in size from two to five. As in experiment one, this was determined only by the manner in which they signed up for participation, which was also the only means by which they were assigned to conditions. There were 25 subjects in the control condition, 25 in the transmission condition and 25 in the accountability condition. Experimental sessions were slightly less than one hour in length. However, subjects signed up for the experiment in one and a half hour increments and were led to believe that their participation would take that amount of time. This was one way in which the manipulations were strengthened.

Design. As in experiment one, there was one factor with three levels: Control, transmission, and accountability.

Materials. Stimulus materials consisted of 40 sentences read to subjects from a tape recorder. Each sentence described a behavior said to
have been exhibited by a (fictitious) character named John who was described in the beginning of the experiment as being "fairly outgoing". Seventy-seven sentences were written and pretested in order to find the 40 which were used. Of the 40 selected, 20 were consistent with, 10 were inconsistent with, and 10 were irrelevant to, the initial expectancy of extroversion. The pretest was completed by 10 graduate students who were unaware of the research issue. These graduate students were asked to rate each sentence on a scale from -5 to +5 where -5 represented a "very introverted" behavior, 0 represented a behavior which was "neither introverted nor extroverted" and +5 represented a "very extroverted" behavior. Those behaviors selected for inclusion in the study received a mean rating of at least +1.8 for consistent items, -1.8 or less for inconsistent items, and 0 for irrelevant items. Appendix B contains the list of items used and their mean ratings, and two different orders in which the items were tape recorded. The narration of the items on tape was supplied by a male graduate student who was unaware of both the purpose and the details of the experiment.

**Procedure.** A large part of the procedure is identical to that described above for experiment one and will not be repeated in detail. Any differences will be described. Most of the changes in this experiment involved the induction of the manipulations in the beginning of the experimental session, and the precise scripts used in this experiment can be seen in Appendix B. The particular goals were to strengthen the accountability manipulation and make it more believable, and to make the transmission manipulation more precise, specifically in terms of pointing out its differences from accountability. As in experiment one, the instructions in all conditions began with a few general statements regarding the research and its examination of how people form
impressions. This time subjects were told that the target they would hear information about was fairly outgoing, and it was mentioned that they need not memorize the information but rather should attempt to form a general impression of the target.

This was the extent of what the control group was told. They were asked to make up a five digit number to put on their forms instead of their names, and were told that at the end of the session they would drop their completed data in a box marked "Data". They then were asked to sign a release form stating their understanding that their data would be analyzed as part of a group of data, but that there would be no identifying information on it.

In the transmission condition, the instructions added that part of the research concerned communication of impressions from one person to another, and that specifically, the interest was in communication of impressions from a person who had information about a target to another person who had no information about the target. It was explained that after hearing the behaviors on tape, the subjects would answer a few questions and then would each meet individually with a graduate student in a nearby room, where they would tell the graduate student their impression of the target. These graduate students were said to be assisting the experimenter by each meeting with one subject, and it was specifically noted that the graduate students had no prior information about the target. Their sole knowledge of the target would come from what the subjects told them, and that would be all the subjects would do; simply tell the graduate student their impression of the target, and then they would be free to leave. The experimenter added that this was similar to the idea in the "telephone game" in which a message is passed around to see how it changes. Here, the idea would be to examine how an impression of a target would be
transmitted from a person who had actual information about the target to another who had no such information. Subjects were asked to sign a "Release Form" which stated their understanding that they would meet with a graduate student at the end of the experiment in order to convey to that graduate student their impression of the target, but that they would in no way be asked to explain or justify anything they said. Finally, each subject was given a slip of paper on which a nearby room number appeared. They were told that these were the rooms in which they would meet with the graduate student at the experiment's end.

In the accountability condition as in the transmission condition, it was added that the research examined not only how people form impressions, but also the interpersonal communication of those impressions. However, these subjects were told that the specific interest was in communication of impressions when the person communicating would be held accountable for their judgments. They were told that this meant that the communicator would be required to justify or defend what they said with examples of how they had reached a certain impression. Subjects were told that they would hear the target information, answer a few questions, and then meet individually with graduate students in nearby rooms. At these meetings, they would be asked to explain and justify anything they had written down that the graduate student had any questions about, and it was mentioned again that they might be asked what behaviors they had used to reach certain impressions. It was mentioned that the meeting would be audiotaped for use in future analysis. At this point subjects were told that they would be given an opportunity to read a transcript of one of these meetings from the previous semester in order to get a better idea of what kinds of things were being sought. They were each handed a (phony)
transcript to read, which can be seen in Appendix B. It portrayed the
“interviewer” as requesting specific behavioral information from the “subject” to
back up the latter’s impressions. After subjects had read the transcript, they
were asked to sign a “Release Form” which stated their understanding that they
would meet with a graduate student at the end of the experiment and would be
asked to explain and justify their responses. They were also each given a slip
of paper with the supposed room number where they would meet with the
graduate student. Release forms for all conditions are shown in Appendix B.

As in experiment one, once the manipulations had taken place, all
conditions were treated in the same manner. After hearing the behaviors,
subjects worked on the anagram task for five minutes, after which the same
measures as taken in experiment one were taken in the same ways. Ten
minutes of free recall was followed by five Likert-type scale impressions. These
asked the subject to assess how intelligent, friendly, interesting, extroverted and
consistent they thought the target was. In this experiment, the primary interest
was in the scales which asked about the target’s extroversion and consistency.
This was followed by written impressions (again, not analyzed in this paper), a
recognition test (shown in Appendix B), and a sorting task.

Finally, subjects responded to four manipulation check questions. The
first asked subjects to indicate on a zero to nine scale how much they had been
thinking about having to communicate their impressions to a graduate student
other than the experimenter. The second asked the same question with regard
to having to explain and justify their impressions. The third and fourth questions
employed a forced choice format in order to assess whether subjects had heard
and understood the instructions. Subjects were asked to respond “yes” or “no”
as to whether they had been told that they would be asked to tell another
graduate student about their impressions of the target. They were again asked to select a yes/no response as to whether they had been told that they would be asked to explain and justify their impressions of the target. Manipulation checks used in experiment two are shown in Appendix B. Subjects were thoroughly debriefed at the end of the experiment.

Results

Manipulation checks. An analysis of variance showed that the first manipulation check, which asked subjects to indicate the extent to which they had been thinking about having to communicate their impressions, was different overall across the control ($M = 2.3$), transmission ($M = 5.2$) and accountable ($M = 4.0$) conditions, $F(2, 72) = 8.76, p < .0004$. A Student-Neuman-Keuls (SNK) post hoc comparison of the means indicated that the transmission and accountable groups did not differ from each other, but that they were significantly different from the control group. Since both the transmission and accountable groups did, in fact, expect to communicate their impressions, these results are appropriate.

The second question asked subjects to indicate the extent to which they had been thinking about having to explain and justify their impressions. Again there was an overall difference across the control ($M = 2.5$), transmission ($M = 3.5$) and accountable ($M = 4.7$) conditions, $F(2, 72) = 4.18, p < .02$. A SNK post hoc comparison of the means showed that the transmission and accountable conditions were not significantly different from each other, although, importantly, the trends of their means were in the expected direction. Also, the control and transmission condition means did not differ significantly. However, the control and accountable conditions were significantly different from each other.
The next two manipulation checks used a forced choice format, and with very rare exceptions, every subject responded "correctly" to these. Frequencies of responses to the first forced choice question are shown in Table 2, and an ANOVA showed that these differed significantly across conditions, $F(1, 73) = 41.06, p < .0001$. Similarly, for the second forced choice question, frequencies of responses are shown in Table 3, and the differences were found to be significant, $F(1, 73) = 126.89, p < .0001$.

**Recall measures.** In analyzing recall, the measures were separated into total number of behaviors recalled, number of consistent, inconsistent and irrelevant behaviors recalled. ANOVAs were used to examine differences among the conditions. For total number of behaviors recalled, differences approached significance across the control ($M = 16.4$), transmission ($M = 15.7$) and accountable ($M = 18.4$) conditions, $F(2, 72) = 2.96, p < .0582$. These differences were in the predicted directions. For consistent behaviors recalled, differences were not significant among the control ($M = 8.3$), transmission ($M = 7.6$) and accountable ($M = 9.1$) conditions. Similarly, differences were not significant for inconsistent behaviors recalled among control ($M = 5.5$), transmission ($M = 5.4$) and accountable ($M = 6.0$) conditions. Finally, for the number of irrelevant behaviors recalled, differences approached significance among control ($M = 2.1$), transmission ($M = 2.1$) and accountable ($M = 2.9$) conditions $F(2, 72) = 2.88, p < .0628$. All of the recall measures and their means by condition are depicted graphically in Figure 1.

In order to examine differences in relative recall of consistent and inconsistent items by condition, a 2 (consistent, inconsistent) x 3 (control, transmission, accountable) mixed design ANOVA was used. This indicated that there was no effect of condition. There was, however, a significant effect of type
Table 2

**Percentage Response Frequencies of Forced Choice Manipulation Check Regarding Transmission in Experiment Two**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Control</th>
<th>Transmit</th>
<th>Accountable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>100</td>
<td>76</td>
</tr>
<tr>
<td>No</td>
<td>96</td>
<td>0</td>
<td>24</td>
</tr>
</tbody>
</table>

**Note.** A response of "Yes" indicates that subjects said they were told they would be asked to transmit their impressions.
Table 3

Percentage Response Frequencies of Forced Choice Manipulation Check

Regarding Accountability in Experiment Two

<table>
<thead>
<tr>
<th>Response</th>
<th>Control</th>
<th>Transmit</th>
<th>Accountable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>0</td>
<td>8</td>
<td>92</td>
</tr>
<tr>
<td>No</td>
<td>100</td>
<td>92</td>
<td>8</td>
</tr>
</tbody>
</table>

**Note.** A response of "Yes" indicates that subjects said they were told they would be asked to explain and justify their impressions.
Recall Data, Experiment 2

Figure 1.
of item recalled. That is, collapsing across conditions, there was superior recall of inconsistent items ($M = 5.61$ of 10) to consistent items ($M = 8.32$ of 20), $F (1, 72) = 104.17, p < .0001$. This is a replication of the findings of Hastie and Kumar (1979).

**Impression measures.** Although subjects had rated the target on five scales, the ones of primary interest in this experiment were those examining subjects' ratings of the target's extroversion and consistency. Because differences were expected in terms of how polarized impressions were, interest was in differences between the scales' midpoints and subjects' ratings. For the extroversion scale, mean polarization scores did not differ across control ($M = 1.34$), transmission ($M = 1.34$), and accountable ($M = 1.02$) conditions, $F (2, 72) = 1.04, p < 0.36$. Likewise, for the consistency scale, mean polarization scores did not differ across control ($M = 2.3$), transmission ($M = 2.5$), and accountable ($M = 2.1$) conditions, $F (2, 72) = 0.75, p < 0.48$.

Secondly, group means were examined on these scales in terms of absolute ratings (as opposed to relative-to-midpoint ratings). For extroversion, differences were not significant among the control ($M = 5.2$), transmission ($M = 5.5$) and accountable ($M = 5.2$) conditions. Similarly, for consistency, control ($M = 2.4$), transmission ($M = 2.7$) and accountable ($M = 2.7$) conditions did not differ. The remaining three scales asked subjects to rate how intelligent, friendly and interesting they thought the target was. None of these scales showed any differences among conditions.

**Recognition test.** As in experiment one, recognition test scores were examined by creating new variables for each subject which represented their mean scores on each of the six types of items. These were consistent, inconsistent and irrelevant items which had actually been in the original list,
and consistent, inconsistent and irrelevant items which had not (lures). The new variables were then analyzed in a 3 (control, transmission, accountable) x 3 (consistent, inconsistent, irrelevant) x 2 (original item, lure) mixed design ANOVA which indicated that there was no effect of condition.

**Sorting task.** The difference in the number of piles into which subjects sorted the forty behaviors was not significant. Differences among the control (M = 5.1), transmission (M = 6.4) and accountable (M = 5.9) conditions did, however, approach significance, \( F(2, 72) = 2.47, p < .09. \)

**Discussion**

The data from the manipulation checks indicate that the manipulations may have had their intended effect. Responses to the two forced choice questions clearly indicate that subjects, at the very least, heard and understood what they were told in the instructions. As to whether the manipulations actually led subjects to believe or “think” in the anticipated manner is a more complex question and one that perhaps cannot be conclusively answered based on these data.

The first manipulation check question shows the expected difference between the control and the other two groups. Because this question asked about thoughts regarding communication of impressions, and both transmission and accountable groups were told that this would be part of their task, they would not be expected to respond differently to this question. The control group, however, was told nothing about communication of impressions, and thus responded appropriately to this question.

Responses to the second manipulation check question, regarding thoughts about explaining and justifying impressions, are more difficult to interpret. The overall pattern of mean responses is in the expected direction,
and the accountable group's responses differ significantly from those of the control group. However, although the accountable group's responses are also higher than the transmission group's, they are not significantly so. This may unfortunately indicate that although the transmission group understood that they would not be asked to explain and justify their impressions, they still felt "too accountable" given their condition.

Looking at measures of recall, it was hypothesized that accountable subjects would show higher overall recall than the other two groups. Again, this is largely based on previous research in accountability which has shown that accountable subjects have higher overall recall than do nonaccountable subjects. The data indicate that this was the case, and this difference closely approached significance (p < .0582). The other important prediction regarding recall was that accountable subjects would recall more inconsistent information than control subjects, who would recall more inconsistent information than transmission subjects. Although in fact the means did show the expected pattern, differences were very small and were not significant. Additionally, examination of relative recall of consistent and inconsistent information by condition failed to reveal an interaction. No differences were predicted for recall of consistent and inconsistent information, and none were found. Percentages of consistent and inconsistent behaviors recalled by condition are shown in Table 4. Some possible explanations for these and other unexpected findings will be offered in the general discussion.

One unanticipated result was a difference, which approached significance, regarding recall of the irrelevant behaviors. Accountable subjects recalled more of these items than did either of the other groups. This is an interesting finding in light of Tetlock and Boettger's (1989) conclusions. They
Table 4

Mean Percentages of Recall Type as a Function of Condition in Experiment Two

<table>
<thead>
<tr>
<th>Recall type</th>
<th>Control</th>
<th>Transmit</th>
<th>Accountable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent</td>
<td>41.4</td>
<td>38.0</td>
<td>45.4</td>
</tr>
<tr>
<td>Inconsistent</td>
<td>55.2</td>
<td>53.6</td>
<td>59.6</td>
</tr>
</tbody>
</table>

*Note.* Numbers are percentages of the total possible within each recall type.
examined accountability from the perspective that encouraging people to consider more information does not necessarily correspond with an increase in accuracy of information processing. It is more important that people are good at selecting diagnostic information from among irrelevant or otherwise nondiagnostic information. However, they found that although accountable subjects use more information than do unaccountable subjects, they use more nondiagnostic as well as diagnostic information. The conclusion was that accountable subjects are not particularly good at deciding which information is nondiagnostic and less deserving of attention. This helps to explain the finding here that accountable subjects recalled more of the irrelevant information as well as recalling more overall.

No differences were found for recognition, which was not surprising given that this was the predicted outcome even if differences had been found for recall.

In terms of subjects’ impressions of the target, it was predicted that accountable subjects’ ratings would be closest to the center of the scales, whereas transmission subjects’ would be the most polarized, with control subjects’ falling in between. Examining the scales of main interest, extroversion and consistency, the data indicate that there clearly was no effect of condition. Again, the general discussion will address this finding.

Regarding complexity of thought, it was hypothesized that accountable subjects would be more complex than control subjects, who would be more complex than transmission subjects. However, there was no significant difference in the number of piles into which the groups sorted the behaviors.
General Discussion

Whether people better remember information which is consistent or inconsistent with a prior expectancy is an issue which has been extensively studied and yet which remains largely unanswered. Srull (1981) and others, by viewing the issue in terms of specific situational and other variables, have shown that, in a sense, the question is unanswerable. Instead, it has become important to examine whether and in what ways certain contexts and factors tend to favor an advantage of one type of information over the other. The question, too, is not only about memory but has expanded to include processing of the information and how it is used in forming impressions and judgments of others.

Other things being equal, the way in which information is processed and remembered seems to an extent to depend on what people believe they will be required to do with the information. Higgins, McCann and Fondacaro (1982) referred to this as goal-directed encoding in a study of the “communication game”. Higgins (1981) discussed the “rules” of this game, and the impact that communicative goals can have on memory and other measures. In some cases this impact can be substantial. For example, certain goals lead to a tendency to use verbal encoding of stimulus information to reconstruct original input, rather than simply relying on stored information. That is, communicative goals can influence not only the communication per se, but also the communicator’s subsequent recall of the original information. However, the precise nature of this influence (e.g., facilitation, impairment, specific biases etc.) is dependent on the particular goal.

Two particular goals, accountability and transmission, were compared in the present paper. The nature of each goal's influence on processing has
previously been examined to a greater or lesser extent. Accountability has been studied quite extensively and, across an impressive variety of settings, appears to increase accuracy of information processing when compared to subjects in an unaccountable condition. Accountable subjects seem more ready, willing and able to take conflicting pieces of information into account. Transmission, one kind of “cognitive tuning”, has been studied less, but there seems to be high reliability across results that this goal leads to polarized, concrete thinking, along with the consequences of this kind of information processing, when compared to subjects in a “receiving” condition.

Because these two different communicative goals seem to encourage nearly opposite manners of information processing, and because their differences seem to have particularly interesting implications for the processing of consistent and inconsistent information, the experiments described here intended to assess these differences. Results of Experiment One will not be discussed further due to an apparent lack of effective manipulations. The manipulations in Experiment Two appear to have been more effective. However, assuming that the manipulations had their intended effects, there remains the question of why the anticipated results, for the most part, did not emerge.

There are several possible reasons for these findings. The first is that there simply are no differences between these conditions on the dependent measures, and that the hypotheses were incorrect. However, the accountability and control comparison essentially parallels a typical accountability experiment examining differences between accountable and unaccountable subjects, and it will be recalled that Tetlock and others have consistently found differences between these conditions on measures similar to some used here.
Perhaps one problem was not that the accountability manipulation was too weak, but that the control subjects were not truly unaccountable. Consider the particular population from which subjects were drawn. Rice University is a very selective institution. Its undergraduate students are bright and motivated, and after years of doing well and working hard at any school-related activity, it seems possible that there is a certain level of accountability at which they function, which a one hour long experiment could not alter. One thing that good students learn to do is explain themselves and back up opinions with facts. This is what the accountable group was told they would have to do. Although the other groups were not told this (and were specifically told this was not the case), they may have taken it upon themselves to respond in that manner anyway. This may be the only manner in which they can respond, and it may be nearly impossible to make these students feel unaccountable. The problem with this explanation lies in the responses to the manipulation checks which asked about accountability. Recall that accountable and control subjects differed on the question that asked about accountability: "As you listened to the behaviors being read, how much were you thinking about having to explain and justify your impressions to another graduate student (not the experimenter)?" One possibility is that although the control subjects reported that they were less likely to be thinking about having to explain and justify their responses, when answering the question they were responding to the manipulation instructions. In reality they may have been concerned about such justification, albeit at a less than fully conscious level.

A third explanation of these results, and particularly the failure to find differences between the accountable and transmission subjects, has to do with who the "audience" of the communication is said to be. Previous accountability
research has generally used "the researchers" as the supposed audience. Previous research on transmission has used "other subjects" (that is, peers of the subjects) as the supposed audience. The present study (experiment two) used "other graduate students" as the audience. Given findings described by Higgins (1981) and others of so-called "audience effects", the issue of who the audience is can be seen as critical. Studies have shown that communicators tend to modify their messages to suit various perceived aspects of a recipient (e.g., the recipient's attitude, information needs, etc.). Thus, it was important in the present experiment to keep the audience constant across the accountability and transmission conditions. To have varied the audience would certainly have been a confound. However, keeping audience constant may have had the unintended effect of causing the manipulations (one or both of them) to be less effective (or ineffective).

Since Tetlock's successful accountability manipulations have used researchers as the audience, it is possible that in order for an accountability manipulation to have its effect, the audience needs to be a person with the authority and expertise that undergraduates would confer on these "researchers". They would likely assume these to be professors. Having graduate students as the audience might not have the same impact and may weaken the accountability manipulation. Similarly, successful transmission manipulations have had peers as the audience, but graduate students were used here. This may have altered the transmission manipulation. Since one of the points of this research was to distinguish between accountability and transmission, the audience effect may have been a problem if undergraduate students feel more accountable to graduate students than they do to peers, and less accountable to graduate students than to professors. A follow-up to this
experiment might vary an audience of peers (other subjects) versus researchers (professors) orthogonally across transmission and accountability conditions. It seems feasible that the particular audience chosen here may have diluted both manipulations.

Another possible explanation for the findings involves the expectancy subjects were given before hearing consistent and inconsistent information. They were told the target was "fairly outgoing". However, a potential problem with this expectancy is that it was mentioned only once and was surrounded by other information and task instructions. Therefore, subjects may have attended to it only briefly, if at all. If this were the case, and no real prior belief or schema were established, then the behaviors would not have had an expectancy with which to be consistent and inconsistent. Thus in an effort to ensure that the accountability and transmission manipulations were strong, attention may have been drawn away from the sine qua non of the Hastie/Kumar effect, namely a strong expectancy.

Finally, another explanation for lack of differences, especially between the accountable and other conditions, goes back to a discussion of attention mentioned earlier. Recall the studies, which examined processing of consistent and inconsistent information, in which subjects were prevented from paying extra attention to inconsistent items. In that situation, recall of inconsistent items no longer had an advantage. Because accountable subjects in previous research have been found to pay extra attention to multiple conflicting pieces of information, it was hypothesized that they would better recall inconsistent information. The results indicate that in all three conditions there was better recall of inconsistent than consistent information (see Table 4 for proportional recall of each item type). This is essentially a replication of the original Hastie
and Kumar (1979) findings. However, it was predicted here that beyond that basic finding, accountable subjects would have a recall advantage of inconsistent information over the other groups, and this was not found to be the case. It is suggested that because all subjects heard the behaviors on a tape recorder and had no control over rate of item presentation, it is possible that accountable subjects were prevented from paying extra attention (that is, more attention than the other groups) to inconsistent items. A follow-up study could assess this by presenting items to each subject on a computer and measuring length of time they spend reading each item across conditions.

These are the major explanations for findings reported here. To summarize, hypotheses were essentially not confirmed, and this may have been due to the population studied, audience effects, weakness of expectancy, preventing accountable subjects from extra processing, no actual differences, or some combination thereof. Although the predicted results were not found, the contribution of this research may lie in that lack of differences. Surely there are situations (and this may be one) in which theoretically logical predictions cannot practically be confirmed. This may be the case due to differences in manipulations which, though theoretically sound, are in application too subtle to have a measurable impact.

In terms of the question of whether there is an advantage of processing of consistent or inconsistent information, the answer seems to lie in the realization that “it depends”. One of the things on which it depends is the goal of the processing, especially if there is a particular communication goal. In discussing the “communication game”, Higgins, McCann and Fondacaro (1982) mentioned the surprising lack of research in social psychology on the effects of communication goals, given the obviously central role that this factor plays in
any social domain. This is an area of research which requires further attention. In particular, there are several different (but similar) communicative goals, or motivating factors as they were referred to earlier, which have not been empirically distinguished from one another. In addition to accountability and transmission, others mentioned include outcome dependency and fear of invalidity. Future research should also concentrate on isolating and specifying audience effects.
References


APPENDIX A

Materials for Experiment One
Results of Pretest for Experiment One

Behaviors were rated by 10 people on the following scale:

<table>
<thead>
<tr>
<th>-5</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>+1</th>
<th>+2</th>
<th>+3</th>
<th>+4</th>
<th>+5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Unintelligent</td>
<td>Neither Unintelligent</td>
<td>Nor Intelligent</td>
<td>Very Intelligent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Below, "Intelligent" refers to those behaviors which received an average rating of +2 or higher; "Unintelligent" refers to those which averaged -2 or lower; "Irrelevant" averaged 0. Also listed are the actual averages for each behavior.

**Intelligent** (there are 20, listed in descending order)

4.5  Won the chess tournament
4.0  Helped design a new computer system
4.1  Was a finalist for a Rhodes Scholarship
3.9  Wrote a prize-winning essay on Voltaire
3.9  Took apart a broken TV and made it work
3.7  Wrote computer games as a hobby
3.7  Finished the Times crossword puzzle
3.6  Graduated with honors
3.6  Learned to read French over the summer
3.3  Took several graduate courses as an undergrad
3.2  Started a successful small business
3.1  Doubled his money in the stock market
3.1  Helped a friend debug a computer program
2.9  Read the complete works of James Joyce
2.8  Read Consumer Reports before buying a VCR
2.5  Checked weather reports before planning a hike
2.5  Did mathematical puzzles as a hobby
2.4  Debated politics with his professor
2.3  Taught CPR and first aid to camp counselors
2.1  Wrote an editorial

**Unintelligent** (there are 10, listed in ascending order)

-3.6  Failed his written drivers' license exam three times
-3.2  Scored low on an IQ test
-2.9  Received a low ranking on the SAT
-2.8  Could not follow simple instructions correctly
-2.7  Was held back in school for one year
-2.6  Scheduled his day in accordance with his horoscope
-2.5  Could not solve the simple math problem
-2.3  Believed a traveling salesman and lost money
-2.1  Got lost driving a route he used every day
-2.0  Missed his flight because he went to the wrong gate

**Irrelevant** (there are 10 listed, all averaged 0)

Ironed a shirt
Went for a bike ride
Cashed a check for twenty dollars
Bought stamps at the post office
Moved to a new apartment
Left school early one day with a headache
Attended a goodbye party for a friend
Went for a walk around campus
Received a new watch for his birthday
Ordered a pizza with two toppings for lunch
Experiment One, Reading list, order one:

Took several graduate courses as an undergrad
Ironed a shirt
Read Consumer Reports before buying a VCR
Scheduled his day in accordance with his horoscope
Finished the Times crossword puzzle
Went for a bike ride
Helped a friend debug a computer program
Got lost driving a route he used every day
Graduated with honors
Cashed a check for twenty dollars
Received a low ranking on the SAT
Wrote a prize-winning essay on Voltaire
Bought stamps at the post office
Helped design a new computer system
Scored low on an IQ test
Taught CPR and first aid to camp counselors
Moved to a new apartment
Won the chess tournament
Believed a traveling salesman and lost money
Debated politics with his professor
Left school early one day with a headache
Started a successful small business
Was held back in school for one year
Wrote an editorial
Attended a goodbye party for a friend
Was a finalist for a Rhodes Scholarship
Missed his flight because he went to the wrong gate
Took apart a broken TV and made it work
Went for a walk around campus
Wrote computer games as a hobby
Failed his written drivers' license exam three times
Read the complete works of James Joyce
Received a new watch for his birthday
Checked weather reports before planning a hike
Could not solve the simple math problem
Learned to read French over the summer
Ordered a pizza with two toppings for lunch
Doubled his money in the stock market
Could not follow simple instructions correctly
Did mathematical puzzles as a hobby
Experiment One, Reading list, order two:

Read the complete works of James Joyce
Ordered a pizza with two toppings for lunch
Did mathematical puzzles as a hobby
Failed his written drivers' license exam three times
Learned to read French over the summer
Received a new watch for his birthday
Doubled his money in the stock market
Could not solve the simple math problem
Checked weather reports before planning a hike
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Attended a goodbye party for a friend
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Received a low ranking on the SAT
Taught CPR and first aid to camp counselors
 Helped a friend debug a computer program
Cashed a check for twenty dollars
Finished the Times crossword puzzle
Got lost driving a route he used every day
Read Consumer Reports before buying a VCR
Ironed a shirt
Graduated with honors
Scheduled his day in accordance with his horoscope
Took several graduate courses as an undergrad
Went for a bike ride
Control group instructions, Experiment One

We are interested in how people use information to form impressions of other people. You will be asked to listen carefully as some information is read to you about a person. This person is a guy named John, who would probably be described as at least reasonably intelligent. The information you will hear consists of behaviors exhibited by John. It is not necessary to memorize the information, rather just form a general impression. This research is being conducted in conjunction with Dr. Taylor, a professor at Baylor Medical College, whose interests have to do with how we form impressions of people.
Transmission group instructions, Experiment One

We are interested in how people use information to form impressions of other people, and in the interpersonal communication of those impressions. You will be asked to listen carefully as some information is read to you about a person. This person is a guy named John, who would probably be described as at least reasonably intelligent. The information you will hear consists of behaviors exhibited by John. Afterwards, you will be asked to describe your impression of John. It is not necessary to memorize the information, rather just form a general impression. This research is being conducted in conjunction with Dr. Taylor, a professor at Baylor Medical College, whose interests have to do with how we form impressions of people. The way this works is that you will be writing your impression down for Dr. Taylor to read. He will use this information for a future study which he is conducting. Specifically what he is interested in has to do with how we describe people, our impressions of them and how we arrive at these impressions. Basically, he is interested in reading the kinds of descriptions you will write, and he will use them for studies he conducts. Your task, again, is to describe the impression you have of the person you hear about.
Accountable group instructions, Experiment One

We are interested in how people use information to form impressions of other people, and in the interpersonal communication of those impressions. You will be asked to listen carefully as some information is read to you about a person. This person is a guy named John, who would probably be described as at least reasonably intelligent. The information you will hear consists of behaviors exhibited by John. Afterwards, you will be asked to describe your impression of John. It is not necessary to memorize the information, rather just form a general impression. This research is being conducted in conjunction with Dr. Taylor, a professor at Baylor Medical College, whose interests have to do with how we form impressions of people. The way this works is that you will be writing your impression down for Dr. Taylor to read. He will use this information for a future study which he is conducting. Specifically what he is interested in has to do with how we describe people, our impressions of them and how we arrive at these impressions. Basically, he is interested in reading the kinds of descriptions you will write, and he will use them for studies he conducts. Since he does need this information, that is you impressions, for his study, he may in the next few days be calling each of you. He would want to schedule a time with each of you when he could come here to campus and, at your convenience, meet with you. You would be asked to come in and explain and justify anything that you write down that he has any questions about. That way he can find out more about how you actually arrived at your impressions. For example, he might ask in certain instances what specific behaviors you used to arrive at particular impressions. Of course, you would get extra credit for your time. If you find it difficult to schedule a time that works for you, you are free to decline to come in and talk with Dr. Taylor, but it would be appreciated if you could come in because he does need to get this information. Your task, again, is to describe the impression you have of the person you hear about, and then to explain and justify the impressions and opinions you have formed from hearing the information. If you do meet with Dr. Taylor to justify your impressions, the discussion you have will be audiotaped in order to facilitate our analysis of the communication process.
Release Form (Control)

I understand that my data will be analyzed by the experimenter as part of a group of data, but that there will be no identifying information on any of my data to indicate whom it is from.

Signature __________________________

Date ____________
Release Form (Transmission)

I understand that Dr. Taylor at Baylor College of Medicine will use my data as part of a group of data, but that I will never be asked to explain or justify my responses in any way.

Signature _____________________________

Date _______________
Release Form (Accountable)

I understand that Dr. Taylor at Baylor College of Medicine will use my data as part of a group of data. I also understand that he may call me in the next few days to set up a meeting at which I will be asked to explain or justify my responses. I understand that I will receive extra credit if I can attend this meeting.

Signature ________________________

Date ______________
Below is a list of behaviors. Some of them are identical to those you heard earlier; some were not in the earlier list you heard. Please read through each behavior and place a number from the following scale on the line before each behavior to indicate your certainty about having heard it earlier:

1 = I am very certain I did not hear this behavior earlier
2 = I am reasonably certain I did not hear this behavior earlier
3 = I am neither certain nor uncertain about hearing this behavior earlier
4 = I am reasonably certain I did hear this behavior earlier
5 = I am very certain I did hear this behavior earlier

_____ Did jigsaw puzzles as a hobby
_____ Could not follow simple instructions correctly
_____ Graduated with honors
_____ Bought a shirt
_____ Was a finalist for a National Merit Scholarship
_____ Believed a traveling salesman and lost money
_____ Wrote an editorial
_____ Cashed a check for forty dollars
_____ Read the complete works of Oscar Wilde
_____ Got lost walking a route he used every day
_____ Debated about literature with his professor
_____ Went for a bike ride
_____ Started a successful small business
_____ Scheduled his day in accordance with his biorhythm
_____ Taught arts and crafts to camp counselors
_____ Ordered a pizza with two toppings for lunch
_____ Helped design a new computer system
_____ Could not solve the simple logic problem
_____ Read Consumer Reports before buying a CD player
Went for a walk around campus
Helped a friend debug a computer program
Scored low on an IQ test
Learned to read Italian over the summer
Moved to a new apartment
Wrote computer games as a hobby
Missed his bus because he went to the wrong stop
Wrote a prize-winning essay on Dante
Received a new watch for Christmas
Checked weather reports before planning a hike
Received a low ranking on the GRE
Took several graduate courses as an undergrad
Bought stamps at the post office
Took apart a broken stereo and made it work
Failed his written drivers' license exam three times
Doubled his money in the stock market
Attended a birthday party for a friend
Won the tennis tournament
Was held back in school for one year
Finished the Times crossword puzzle
Left school early one day with a sore throat
Manipulation checks, Experiment one

As you listened to the behaviors being read, how much were you thinking about having to communicate your impressions to Dr. Taylor?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>A great deal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As you listened to the behaviors being read, how much were you thinking about having to explain and justify your impressions to Dr. Taylor?

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>A great deal</td>
<td></td>
<td></td>
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</tbody>
</table>
Debriefing

We are studying the ways in which people use information to form impressions, and in this experiment you were asked to read some information about a person and form an impression based on the information. You probably noticed that although you were told at the beginning of the experiment that John was an intelligent person, there were some behaviors listed which were not what you would typically think of as intelligent behaviors. Of course, that's the way life is in many cases- intelligent people sometimes act in unintelligent ways and vice versa. You can substitute any adjective for "intelligent"- the point is that no one behaves completely consistently at all times. But given that, the question is, "what do people do with information that is inconsistent with an expectancy they hold about another person? How do they process this inconsistent information?"

There are several possibilities of what one might do with inconsistent information. You might simply ignore it or forget about it immediately since it somehow doesn't fit in or make sense. But the opposite is possible, too. If you expect someone to behave in an outgoing way and they do the reverse, perhaps you pay extra attention to that behavior because it stands out and is surprising. Which one of these possibilities represents 'the truth'? This question, in addition to being interesting for its own sake, also has implications for Real Life. A specific example of where this issue might have application is in an organization where a manager evaluates employees. The manager may think of employee X as being a hard worker, but might also notice on reviewing records that on one or two occasions the employee took an excessive amount of time to finish a project, or didn't do a great job. This is inconsistent with the manager's general expectancy of the employee - so what does she do with the information? That's the kind of question we'd like to help answer. To this end, we will be looking at your responses in terms of how the inconsistent information (the introverted behaviors) influenced your impressions and how many of them you remembered.

There was also another element added to this experiment. One way to look at this issue is that maybe the way people process/use/remember inconsistent information depends on what they have to do with the information. This is a very important question because it's possible that there is a way of encouraging people to process information more accurately just by motivating them in a certain way.

Therefore, some subjects in this experiment were told that they should simply form impressions. Others were told that they would communicate their impressions to another person, and others that they would explain and justify their impressions to another person. In fact, none of this is actually going to occur; that is, you are all finished with the experiment and will not receive any further feedback from anyone. Also, the data will only be used for analysis and no one else will have access to it. It was, however, necessary that you really believed you would be using the information in these various ways in order for us to see whether this makes any difference in processing of the information. If you have any further questions or concerns regarding the experiment, please feel free to talk to the experimenter, Liz Kotler (x 2216).
APPENDIX B

Materials for Experiment Two
Results of Pretest for Experiment Two

Behaviors were rated by 10 people on the following scale:

<table>
<thead>
<tr>
<th>-5</th>
<th>-4</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>+1</th>
<th>+2</th>
<th>+3</th>
<th>+4</th>
<th>+5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very introverted</td>
<td>Neither introverted nor extroverted</td>
<td>Very extroverted</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i.e., shy)</td>
<td></td>
<td></td>
<td>(i.e., outgoing)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Below, "Extroverted" refers to those behaviors which received an average rating of +1.8 or higher; "Introverted" refers to those which averaged -1.8 or lower; "Irrelevant" averaged 0. Also listed are the actual averages for each behavior.

Extroverted (there are 20, listed in descending order)
4.2 Was social chairman of his dorm for two years
4.1 Volunteered to assist a comedian on stage at a comedy club
3.4 Asked the person next to him at the bus stop if he could share her umbrella
3.3 Organized a student protest against higher tuition
3.1 Joined a fraternity
2.9 Looked forward to hosting dinner parties
2.7 Asked a passerby on the street to recommend a good restaurant
2.7 Jumped up and started dancing at a concert
2.6 Joined the debate team
2.5 Looked forward to attending his high school reunion
2.5 Chatted with the vendor for a while when he bought a newspaper
2.4 Sang in a barbershop quartet
2.3 Hosted a party for a graduating friend
2.3 Usually enjoyed meeting new people
2.2 Worked as a tour guide for the Historical Society
2.1 Taught CPR and first aid to camp counselors
2.0 Joined a hiking club with some friends
1.9 Smiled at people as he walked around campus
1.9 Invited friends over to watch the game on Sunday
1.8 Preferred studying in a group to studying alone

Introverted (there are 10, listed in ascending order)
-3.4 Walked around the block to avoid bumping into a group he didn’t know well
-3.1 Went on a camping trip by himself for a weekend
-2.7 Sat in the cafeteria with his headphones on so he wouldn’t be disturbed
-2.7 Often rented movies alone instead of going to see them with others
-2.4 Tended to avoid opening up to most other people
-2.1 Spent a lot of time playing computer games in his room
-2.0 Carried a book on airplanes to avoid conversation
-1.9 Left the party early because he didn’t know anyone there
-1.8 Wrote a paper to avoid giving a class presentation
-1.8 Sometimes sat by his window sketching trees for hours

Irrelevant (there are 10 listed, all averaged 0)
Ironed a shirt the night before he needed to wear it
Cashed a check for forty dollars at the bank
Drank three cups of coffee before his first morning class
Put the wrong ingredient in the recipe
Had some x-rays done at the dentists' office
Had a picture framed and then hung it in his room
Xeroxed a few pages from a book for school
Received a new watch from his grandmother for his birthday
Took the elevator to the eleventh floor of an office building
Vacuumed the carpet
Experiment Two, Reading list, order one

Chatted with the vendor for a while when he bought a newspaper
Left the party early because he didn't know anyone there
Smiled at people as he walked around campus
Ironed a shirt the night before he needed to wear it
Hosted a party for a graduating friend
Wrote a paper to avoid giving a class presentation
Asked a passerby on the street to recommend a good restaurant
Cashed a check for forty dollars at the bank
Sang in a barbershop quartet
Walked around the block to avoid bumping into a group he didn't know well
Joined the debate team
Drank three cups of coffee before his first morning class
Jumped up and started dancing at a concert
Tended to avoid opening up to most other people
Organized a student protest against higher tuition
Put the wrong ingredient in the recipe
Looked forward to attending his high school reunion
Spent a lot of time playing computer games in his room
Usually enjoyed meeting new people
Had some x-rays done at the dentist's office
Joined a fraternity
Sometimes sat by his window sketching trees for hours
Looked forward to hosting dinner parties
Had a picture framed and then hung it in his room
Was social chairman of his dorm for two years
Carried a book onto airplanes to avoid conversation
Taught CPR and first aid to camp counselors
Xeroxed a few pages from a book for school
Invited friends over to watch the game on Sunday
Often rented movies alone instead of going to see them with others
Asked the person next to him at the busstop if he could share her umbrella
Received a new watch for his birthday from his grandmother
Preferred studying with a group to studying alone
Went on a camping trip by himself for a weekend
Joined a hiking club with some friends
Took the elevator to the 11th floor of an office building
Volunteered to assist a comedian on stage at a comedy club
Sat in the cafeteria with headphones on so he wouldn't be disturbed
Worked as a tour guide for the Historical Society
Vacuumed the carpet
Experiment Two, Reading list, order two

Volunteered to assist a comedian on stage at a comedy club
Went on a camping trip by himself for a weekend
Asked the person next to him at the busstop if he could share her umbrella
Took the elevator to the 11th floor of an office building
Preferred studying with a group to studying alone
Sat in the cafeteria with headphones on so he wouldn't be disturbed
Joined a hiking club with some friends
Vacuumed the carpet
Worked as a tour guide for the Historical Society
Sometimes sat by his window sketching trees for hours
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Put the wrong ingredient in the recipe
Looked forward to attending his high school reunion
Left the party early because he didn't know anyone there
Asked a passerby on the street to recommend a good restaurant
Drank three cups of coffee before his first morning class
Smiled at people as he walked around campus
Went for a bike ride
Sang in a barbershop quartet
Ironed a shirt the night before he needed to wear it
Chatted with the vendor for a while when he bought a newspaper
Walked around the block to avoid bumping into a group he didn't know well
Hosted a party for a graduating friend
Cashed a check for forty dollars at the bank
(Control group instructions, Experiment Two)

We are interested in how people use information to form impressions of other people. You will be asked to listen carefully as some information is read to you about a person. This person is a guy named John, who would probably be described as being fairly outgoing. The information you will hear consists of behaviors exhibited by John. It is not necessary to memorize the information, rather just form a general impression. My basic research interests have to do with how we form impressions of people.
(Transmission group instructions, Experiment Two)

We are interested in how people use information to form impressions of other people, and in the interpersonal communication of those impressions. You will be asked to listen carefully as some information is read to you about a person. This person is a guy named John, who would probably be described as being fairly outgoing. The information you will hear consists of behaviors exhibited by John. Afterwards, you will be asked to describe your impression of John. It is not necessary to memorize the information, rather just form a general impression.

My basic research interests have to do with how we form impressions of people, but, as mentioned above, I'm also interested in communication of impressions from one person to another. Specifically, I'm interested in communication from a person who has information about a target individual to another person who has no information about the target individual. For example, in this case, you will have heard information about John, and you will communicate your impression of John to another person who has no information about John, except what they hear from you.

The way this works is that you will hear the behaviors about John, then you'll answer some questions in here. After that, you will each meet individually with another graduate student in the department, and this will be in the rooms right around the courtyard. This meeting will take place immediately at the end of the experiment. These other graduate students have agreed to assist me by each meeting with one student. All you will do is tell that person your impression of John, and keep in mind that they have no prior information about John at all, so all they will know about John is what you tell them. That is all you will do, and then you can leave. They won't ask you anything at all, they will simply listen as you talk, and once you are done talking, you are finished.

Your task, again, is to describe the impression you have of the person you hear about. You'll be first writing your impression down in here, and that can be practice for how you want to tell someone afterwards your impression, which you'll do at the end of the experiment. (hand out actual "room assignments" at this point)
(Accountable group instructions, Experiment Two)

We are interested in how people use information to form impressions of other people, and in the interpersonal communication of those impressions. You will be asked to listen carefully as some information is read to you about a person. This person is a guy named John, who would probably be described as being fairly outgoing. The information you will hear consists of behaviors exhibited by John. Afterwards, you will be asked to describe your impression of John. It is not necessary to memorize the information, rather just form a general impression.

My basic research interests have to do with how we form impressions of people, but, as mentioned above, I'm also interested in communication of impressions from one person to another. Specifically, I'm interested in communication of impressions when the person communicating is held accountable for their judgments, that is when they are required to justify or defend what they say with actual examples of how they arrived at that impression.

The way this works is that you will hear the behaviors about John, then you will answer some questions in here and write down your impression of John. After that, you will each meet individually with another graduate student in the department, and this will be in the rooms right around the courtyard. This meeting will take place immediately at the end of the experiment. These other graduate students have agreed to assist me by each meeting with one student. At the meeting, you will be asked to explain and justify anything that you wrote down that the student has any questions about. That way we can find out more about how you actually arrived at your impressions. For example, you might be asked in certain instances what specific behaviors you used to arrive at particular impressions.

Your task, again, is to describe the impression you have of the person you hear about, and then to explain and justify the impressions and opinions you have formed from hearing the information. Also, when you meet with one of the other graduate students to explain and justify your impressions, the discussion you have will be audiotaped in order to facilitate our analysis of the communication process.

Because you will be required to defend your impressions and judgments when you meet with this other graduate student, before we begin I'd like to give you a transcript to look over of what this meeting is like. Please read this example of an interview from last semester. (Hand out room assignments and transcript.)
Transcript # 17: Subject __________________ (a name blacked out)
Interviewer __________________ (a name blacked out)

Subject enters room, sits down, they exchange names and greetings.

Interviewer: I noticed that you wrote down that you felt John was a ________ (blacked out) kind of person. How did you come to that conclusion . . . I mean, any particular behaviors that come to mind?

Subject: Oh, well . . . yeah, there was a sentence about how John ________, and . . . um, it seemed like he handled situations in that way.

Int: OK. Also, in another part you indicated that John seemed to like ________ types of situations and enjoyed doing things of that sort. What led you to that opinion?

Sub: Yeah, I remember that one. Well, I remember at least 2 examples off hand where they said he acted like , ya know, he enjoyed those situations . . . (subject then listed the 2 specific behaviors)
Release Form (control)

I understand that my data will be analyzed by the experimenter as part of a group of data, but that there will be no identifying information on any of my data to indicate whom it is from.

Signature

Date
Release Form (transmission)

I understand that I will meet with a graduate student at the end of the experiment to convey to him/her my information and impressions of John. I also understand that I will never be asked to explain or justify my responses in any way.

Signature

Date

Release Form (accountable)

I understand that I will meet with a graduate student at the end of the experiment and that I will be asked to explain and justify my responses.

Signature ________________________________

Date ____________________
Below is a list of behaviors. Some of them are identical to those you heard earlier; some were not in the earlier list you heard. Please read through each behavior and place a number from the following scale on the line before each behavior to indicate your certainty about having heard it earlier:

1 = I am very certain I did not hear this behavior earlier
2 = I am reasonably certain I did not hear this behavior earlier
3 = I am neither certain nor uncertain about hearing this behavior earlier
4 = I am reasonably certain I did hear this behavior earlier
5 = I am very certain I did hear this behavior earlier

_____     Joined the chess team
_____     Carried a book onto airplanes to avoid conversation
_____     Chatted with the vendor for a while when he bought a newspaper
_____     Received a new alarm clock for his birthday from his parents
_____     Volunteered to assist a comedian on stage at a comedy club
_____     Tended to avoid opening up to most other people
_____     Jumped up and started dancing at a concert
_____     Cleaned his room
_____     Looked forward to hosting cocktail parties
_____     Sometimes sat by his window sketching people for hours
_____     Worked as a tour guide for the local museum
_____     Cashed a check for forty dollars at the bank
_____     Asked a passerby on the street if he could recommend a good restaurant
_____     Spent a lot of time playing card games in his room
_____     Taught arts and crafts to camp counselors
_____     Had some x-rays done at the dentist's office
_____     Organized a student protest against higher tuition
_____     Often rented movies alone instead of going to see them with others
_____     Smiled at people as he walked around the mall
Xeroxed a few pages from a book for school
Prefered studying with a group to studying alone
Wrote a paper to avoid giving a class presentation
Hosted a party for a friend's birthday
Drank three cups of coffee before his first morning class
Looked forward to attending his high school reunion
Walked around the block to avoid bumping into a group he didn't know well
Was social chairman of his dorm for a semester
Bought a shirt the day before he needed to wear it
Usually enjoyed meeting new people
Sat in the cafeteria reading so he wouldn't be disturbed
Invited friends over to watch the game on Sunday
Put the wrong ingredient in the recipe
Asked the person next to him at the busstop if he could see her newspaper
Went on a ski trip by himself for a week
Joined a fraternity
Took the elevator to the seventh floor of his apartment building
Sang in a school play
Didn't attend the party because he wouldn't know anyone there
Joined a skiing club with some friends
Had a picture framed and then gave it as a gift
Manipulation checks one and two, Experiment two

As you listened to the behaviors being read, how much were you thinking about having to communicate your impressions to another graduate student (not the experimenter)?

0 1 2 3 4 5 6 7 8 9
Not at all A great deal

As you listened to the behaviors being read, how much were you thinking about having to explain and justify your impressions to another graduate student (not the experimenter)?

0 1 2 3 4 5 6 7 8 9
Not at all A great deal
Forced choice manipulation checks, Experiment two

Were you told that at the end of the experiment you would be asked to tell another graduate student about your impressions of John verbally?

yes _____
no _____

Were you told that at the end of the experiment you would be asked to explain and justify your impressions of John verbally?

yes _____
no _____