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The role of retrieval contexts on memory for expectancy congruent and incongruent social actions

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THE ROLE OF RETRIEVAL CONTEXTS ON MEMORY FOR EXPECTANCY CONGRUENT AND INCONGRUENT SOCIAL ACTIONS

by

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This study investigated the effects of retrieval context on memory for social actions which varied in their degree of consistency and inconsistency with established social prototypes. The pattern of recall of these actions was found to vary as a function of retrieval context (i.e., cued versus free recall tests). The results do not support a model of memory employing cognitive effort as a mediator of social memory. They were interpreted within a shared and distinctive featural analysis.

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CHAPTER I

INTRODUCTION

The history of social psychology is firmly grounded in issues concerning how individuals may differ from groups. Naturally, this concern is also present in the relatively young area of social cognition. Since the field of social cognition is fundamentally concerned with the nature, acquisition, and representation of social information in the mind of the individual, the issue of individual vs. group differences has been approached from a somewhat different perspective. This perspective leads to questions such as how presenting information in an individual vs. group context may lead to differences in the manner in which an individual processes that information (e.g., Wyer & Gordon, 1980). An additional question arises as to how representations of group information may differ from representations of information about an individual (e.g., Srull, 1985).

A growing body of research suggests that there are important differences between these two contexts. One area in which this difference is especially apparent is in the research on memory for behavioral consistency (e.g., Hastie & Kumar, 1979; Hamilton, Katz & Leirer, 1980; Wyer &

Gordon, 1982). In the typical paradigm, subjects are given a list of traits attributed to a fictitious individual and are then presented with behavioral descriptions of the individual in the context of an impression formation task. The descriptions are either consistent, inconsistent or irrelevant with subjects' trait-based expectancies. Incidental memory for these behaviors is then assessed with a free-recall test. The typical finding is that behaviors which are inconsistent with subjects' expectancies are better recalled than either consistent or irrelevant behaviors (e.g., Hastie & Kumar, 1979; Hamilton et al., 1980).

This effect is attributed to the increased processing time devoted to inconsistency. Behaviors which are inconsistent with expectancies are assumed to be thought about more extensively than other kinds of behaviors. Individuals are motivated to reconcile the incongruity of these actions which necessitates more effortful processing (e.g., Hastie, 1984). This entails the maintenance of the item in working memory. In working memory, interitem associations among the inconsistent action and other contiguously present information are established. These interitem associations then provide multiple retrieval routes for the subsequent recall of inconsistent items which are not available for more explicable or expected information (e.g., Hastie, 1984; Srull, 1981; Wyer & Srull, 1980).

Initially, the only published exception to this general finding was a study by Rothbart, Evans & Fulero (1979) in which subjects tended to recall more expectancy-consistent than evaluatively similar but trait irrelevant behaviors; there was apparently no difference between subjects recall of expectancy-inconsistent and evaluatively similar but expectancy-unrelated behavior. Although there were differences in the types of data analyses performed in the Rothbart et al. and Hastie studies (see Hastie, Park & Weber, 1984; Crocker, Hannah & Weber, 1983; Srull, 1981), it appears that the more critical difference in the two paradigms is the fact that in the Rothbart et al. study, the subjects were given an expectation about the characteristics of a group of individuals rather than a single individual (e.g., Srull, 1981; Stern, Marrs, Millar & Cole, 1984; Wyer & Gordon, 1982). When behavioral inconsistency was described in the context of an individual expectancy, these items were highly memorable, but when behavioral inconsistency was presented in the context of a "loose-knit" group of individuals, no recall advantage was observed (e.g., Srull, 1981, Stern et al., 1985). These findings suggest that individuals hold different expectations about the homogeneity of an individual's behaviors versus groups. This difference in expectancies then determines the extent to which the individual attempts to reconcile the perceived inconsistency at input. Since the mechanism presumably responsible for recall is the establishment of interitem associations at input, memory for evaluatively inconsistent items should be poor under these conditions. This reasoning is supported by the finding that under such conditions, consistent information is more memorable than inconsistency (e.g., Srull, 1983; Srull, Lichtenstein, & Rothbart, 1985). Under conditions in which subjects' motivation to reduce inconsistency is minimized (e.g., presentation of inconsistency in the context of nonmeaningful vs. meaningful groups), consistent item recall is superior. Srull et al. (1985) suggest that in the absence of such effortful processing, retrieval is guided by the superordinate cues embodied in the initial expectancy. Since consistent information is more strongly associated with the superordinate, consistency is more accessible in the associative networks.

In sum, the literature on memory for information varying in its consistency with individual's expectations emphasizes the importance of individual vs. group processing contexts. The importance of this factor is in the contextual initiation of processes establishing interitem associative bonds. When the context initiates this process (by promoting reconciliation of inconsistency) subsequent retrieval will be guided by these multiple retrieval routes and inconsistent item recall will be facilitated. In the absence of an initiation of this process, retrieval will be guided by the strength of association between items and their superordinate and consistent item recall will be favored.

A shared and distinctive featural analysis offers a different conceptualization of these issues. Social actions can be conceptualized as sets of features which differ on several important dimensions. One featural dimension which may be critical for an account of an action's memorability is the extent to which the event's features are shared by other events in a complex episode. A shared feature is one which is held in common by two or more events within an episode. A distinctive feature defines the unique aspects of the item in its episodic context. It composes the nonoverlapping informationsl content of a given set. For example, if one reads a description of an individual making racist statements in a bar, specific features implied by this action are activated in the process of comprehension. These features are likely to also be activated if one reads that the individual is a member of the KKK. These features would not be redundantly activated if one reads that the individual is a nun. So, consistency can be conceptualized as the extent to which an item holds features in common with a prototype. Consistent items share features in common with a prototype whereas inconsistent items do not share features in common with a prototype. This is one dimension by which consistency and inconsistency can be distinguished. However, a shared featural dimension does not totally capture the distinction between consistency and inconsistency. Although consistent and inconsistent actions may imply features which are not shared by with a prototype (i.e., distinctive features), inconsistent items are unique in that their distinctive features are ususally bi-polar opposites of the implied features of the prototype. This is not the case for consistent items. Consistent items may have features which are not shared by all exemplars of a class or may vary in their typicality as examples of prototypical behavior (e.g., professors teaching a class vs. winning a national teaching award), but the evaluative implications of the non-shared features are not different from the evaluative implications of the category. When the evaluative implication of the behavior is opposite to that of the prototype, the behavior is inconsistent (e.g., a professor failing a reading test). The features implied by the action are not shared with the prototype and are evaluatively opposite to that of the prototype. As such, inconsistent actions are likely to be more distinctive in relation to the prototype than are consistent actions.

An analysis of events into their composit features has important implications for retrieval. First, retrieval will depend upon the extent to which the encoding of shared and distinctive features has been encouraged at input (Hunt & Einstein, 1981; Hunt & Seta, 1983). If the context has encouraged the encoding of shared features, a potential method of delineating the search set from which the target can be drawn is available. That is, since shared features are inherently common to several events within an episode, the activation of such features at the time of retrieval delineates a large subset of encoded events within memory. This factor alone would not produce optimal memory for the item, however. Optimal memory would require a method of discriminating the target event from other similar items within the set. Activation of shared features cannot serve this important function since they only establish the commonalities among items. Activation of the distinctive features of the target event can serve this function since they specify the event's uniqueness. Thus, activation of distinctive features at retrieval serves a discriminatory function and provides a mechanism for the precise specification of the target event.

Retrieval is viewed as a process of specifying a particular feature set within memory. Shared and distinctive feature activation serve complimentary functions within this process. The activation of shared features directs the retrieval search to a subset of similar events within memory, whereas, the activation of distinctive features provides information necessary to discriminate the target from other members of the set. Thus, both types of features are important for effective recall. Optimal recall results from conditions which encourage the processing and subsequent activation of an item's shared and distinctive features.

Since optimal recall depends upon the presence of both shared and distinctive features, it follows that neither consistency nor inconsistency will be recalled optimally without the supplementation of additional feature content at encoding. That is, without additional attentional direction to distinctive aspects of a consistent item, its memory representation may be weighted by shared features. Thus, the set in which the item is represented will be accessible via a reactivation of these shared features at retrieval but information necessary to aid in its discrimination from other member of the set will be absent. Encoding conditions which establish the presence of distinctive features would then be optimal for recall of consistent information. Conversely, encoding conditions which establish the presence of shared features will produce optimal recall of inconsistent items. This is the case since in the absence of shared features, a method of accessing the target set is unavailable to a guided retrieval process. Thus, optimal recall of consistent actions will be determined by the establishment and reactivation of distinctive features and optimal recall of inconsistent actions will be determined by the establishment and reactivation of shared features. A number of studies which support this reasoning have been conducted. Memory for both consistent and inconsistent information was seen to depend upon the extent to which encoding conditions promoted the processing of shared and distinctive features. In one study, memory for consistent information was superior when subjects were given instructions to concentrate upon the differences between behavioral descriptions and group prototypes (distinctive feature processing) whereas, memory for inconsistent information was superior when subjects were directed to detect the similarities between items and the prototypes (shared feature processing) (Seta & Hunt, 1983).

The relative recall of consistent and inconsistent information was also found to be dependent upon the availability of effective retrieval cues at output (Seta & Hunt, 1985). Retrieval cues facilitate event memory whenever they reactivate features which were extracted during the input stage of information processing. If one considers the shared set of features among items to constitute a part of the prototypical representation of a category, (Tversky, 1977), then prototypical cues should facilitate the reactivation of shared features. This reactivation should be especially important for recall of a distinctive item since it would provide nonredundant access to the set of items in memory within which the behavior is represented. Thus, when attention to shared features has been promoted at input, the presence of a prototype cue should facilitate the recall of inconsistency. In the absence of attentional direction to shared features, inconsistent actions should be poorly recalled when cued with the prototype: the cue would not effectively activate the shared features necessary to delineate the item's representational subset. Under the latter circumstances, consistent information should demonstrate a memorial advantage since this type of behavior by definition shares features in common with the prototype and is, therefore, accessible in retrieval.

These ideas were supported in a study in which the probability of processing shared features was varied by directing subjects to either explain the actions of group members based on their actions or directing them to simply form an impression of the group members based upon the actions. Explain orientation was assumed to facilitate the processing of shared features since in order to explain an action, the action must be considered in relation to prototypical knowledge of causes of behavior. Providing adequate justification should establish shared features between this prototypical information and the action. An impression judgment does not require attention to commonalities between the action and the prototype since it may be based solely on the properties of the action (e.g., its valence). Thus, when cued with a prototype, recall of consistent information was superior under impression orientation conditions, whereas, recall of inconsistent information was superior under explain orientation conditions. Neither type of information demonstrated a memorial advantage when cued with a nonprototypical cue (i.e., a proper name). This study suggests that the availability of shared and distinctive information at input and output are critical factors to be considered in the analysis of memory for consistent and inconsistent social information.

The following study will serve to extend this analysis in several important ways. First, it is designed to determine the degree to which individual's ability to provide adequate justification for a behavior's inconsistency is necessary for inconsistent item memory. Secondly, it is designed to extend the scope of the research program by studying memory for consistency which varies in typicality. In addition, the study is designed to assess the relationship between cued and free recall in this paradigm.

Recall of actions varying in degree of consistency and inconsistency

Items which vary in their degree of inconsistency with a prototype should be differentially distinctive and explicable. That is, behaviors which are slightly inconsistent should be less distinctive and easier to explain than moderately inconsistent actions. Actions which are highly inconsistent with an established prototype may be highly distinctive but not explicable at all. It may be impossible to find adequate justification for actions that are extremely discrepant from prototypical expectations.

These differences in the actions' explicability have important implications for their memorability. From this approach, providing adequate justification for an action's inconsistency serves to establish featural overlap between the action and the prototype. This featural overlap can then function within retrieval as a basis for delimiting the call of events in memory from which the item can be potentially discerned. If an action is not adequately explained, no featural overlap between the prototype and item will be established. Thus, no shared features between the action and prototype will be present in the representation of the item in memory. So, when cued with a prototype, memory for these highly inconsistent actions will be poor.

This prediction is based upon the prototype cue's ability to provide access to the representation of the actions via the activation of shared features. Thus, memory search is constrained to the subset of items in memory which share overlapping features with the prototype cue. In this context, a cue's effectiveness will depend upon its ability to access shared item features. If the experimenter-provided cue does not share features in common with the item, it will be undiagnostic and ineffective. In contrast, free recall allows for subjects' self-generation of cues at output. Therefore, it is possible that more effective cues can be generated by subjects when they are not constrained by experimenter-provided cues. If so, the pattern of recall results would be likely to change in a free recall paradigm.

Specifically, recall may be a direct function of the degree of inconsistency in free recall. This would be likely if subjects, in their attempt to explain the action, relate the item to nonexperimentally presented prototypical information. For example, it is likely that subjects will generate the prototype of which the action is typical when the action is encoded. One may spontaneously generate "rapist" when one reads that a minister raped a six-year old. If so, at the time of recall, one may generate "rapist" as a cue and thereby, access this category of information. In the context of its presentation as an unexpected action of a minister, the action may acquire a distinctive component within the rapist category. It may then be discriminable among other "rape" actions within this category.

This conjecture has some empirical base in a nonsignificant trend for changes in items' perceived inconsistency following explain condition orientation (Seta, 1983). It is probable that any added distinctiveness derived from the context of presentation should carry over to a free recall test. Thus, if subjects are able to generate the nonpresented prototype as a cue, then these highly inconsistent actions may be highly memorable in free recall. If so, a positive relationship between degree of inconsistency and free recall may be observed. The more inconsistent an item, the more distinct it should be in the retrieval context.

These predictions are counter to that made by the associative approach prevalent in the person memory literature. From this perspective, the function of explanation is to induce the maintenance of the item in working memory for a sufficient duration to establish inter-episodic associative links. The mechanism of association in this context is contiguity. Thus, the harder an item is to explain, the longer it should persist in working memory and the more inter-item associations should be built around the item. From this perspective, then, there should be a direct, positive relationship between items' degree of inconsistency and memory, as tested by free or cued recall.

Predictions about the free recall and cued recall of consistent actions are straightforward from a featural analysis. Free recall is assumed to rely heavily upon the availability of relational information. In cued recall access of relational information is insured by presentation of the cue (e.g., Hunt & Einstein, 1981). Free recall requires the self-generation of relational information as a first step in retrieval. Cued recall facilitates this process by supplying the necessary activation of relational information and for this reason, it is usually considered an "easier" memory test.

Items which share a predominance of features in common with a prototype (e.g., consistent actions) have available the relational information necessary to begin the retrieval process in either cued or free recall. Consistent actions may be rich in shared featural content, but they may be relatively impoverished in distinctiveness. Thus, with shared featural overlap held constant, low consistency items may be more memorable than highly consistent, but less distinctive, actions. Thus, under conditions which promote the processing of shared features, low consistency actions may be more memorable than high consistency items. That is, an inverse relationship between degree of consistency and recall may be obtained when retrieval is tested in free or cued recall context. This prediction is contrary to that made from an associative approach. Since consistency is conceptualized as an item's strength of association with a prototype, there should be a positive relationship between degree of consistency and recall in either context.

The present study attempts to extend understanding of issues within person memory in several ways. First, rather than manipulating subject's expectancies by attributing actions to groups or individuals, normative data were gathered which allows for the *a priori* assignment of behaviors to different levels of prototypical consistency (i.e., low, moderate, and high levels of consistency and inconsistency). This allows for a more precise delineation of the role subjects' expectations play in mediating the memory effects described above while eliminating any extraneous variables associated with assigning behaviors to groups vs. individuals. Secondly, rather than concentrating upon conditions of encoding as has typically been the case, this study will consider the nature of the context in which individuals are asked to remember the behaviors (i.e., the retrieval context).

Theoretically, the pattern of recall found across different types of retrieval contexts will help distinguish between these two competing accounts of the memory mechanisms underlying the observed effects of behavioral consistency. In this study, all subjects will be oriented to process the expectancy-consistent and inconsistent actions in an identical manner; only the conditions of retrieval will vary across conditions. Half of the subjects will be asked to write down all of the actions they read about (i.e., free recall), whereas half will be asked to write down the actions beneath the social group heading with which they were paired (i.e., cued recall). The actions presented will vary in consistency and inconsistency with established prototypes.

CHAPTER II

METHOD

Selection of Stimulus Materials

Normative data were collected by means of a three step procedure. In the first phase, 40 trait adjectives were drawn from Anderson's (1968) Norms. Half were positive (within the top 20%) and half were negative (within the bottom 20%). Forms were constructed in which the adjectives were listed beneath 13 socially desirable and undesirable groups (e.g., nurses and KKK members). These traits were listed again beneath 108 socially desirable and socially undesirable behavioral descriptions selected from Rothbart's (1979) normative ratings of social desirability. Subjects were instructed to circle the traits they felt were characteristic of the group or actions. 235 subjects completed the group ratings and an average of 17 subjects circled traits for each of the behaviors.

Traits for which 55% or more of the subjects agreed (i.e., thought were characteristic of the group or behavior) were drawn from this pool and were considered to be stable traits of the group or behavior. Trait overlap between behavior and group was determined by computing the percentage of traits held in common by the group and behavior.

In the second phase, a pool of 86 behaviors were drawn for additional ratings. These behaviors were described as being peformed by a group member and subjects were asked to rate the action's consistency with their expectation of typical group behavior along a 9 point scale. 103 subjects participated in this phase. A total of 18-23 subjects rated each behavior.

In the third phase, 3 consistent and 3 inconsistent were drawn from the pool above. Consistency was determined by the percentage of trait overlap between behavior and group. Consistency was considered to be a 90-100% overlap of traits; inconsistency was no overlap between behavior and trait.

Level of consistency was determined from the consistency ratings obtained in step 2. The nine point scale was divided into intervals defining consistency levels such that ratings of 8-9 defined high consistency, 6.5-7.5 defined moderate consistency, 5-6 defined low consistency and 4-5 defined low inconsistency, 2.5-3.5 defined moderate inconsistency and 1-2 defined high inconsistency.

Using these criteria, a behavior meeting the overlap and level criteria was assigned to the six levels of consistency for each of six social groups. This produces a list of 36 actions; a low, moderate, and high consistency action and a low, moderate, and high inconsistency action for six social groups.

Each of the 36 items was typed on a separate paper and presented to subjects in a randomized order. Two random orders were constructed and equalized across groups. Control condition lists were constructed. These lists were identical to the experimental lists with the exception that the words "a person" were substituted for the name of the social group performing the actions.

Subjects and Design

The design consists of two between group factors and two within-subjects factors. The between factors are treatment (experimental and control) and test-type (free recall and cued recall). The within-subjects factors are consistency (consistent and inconsistent actions as defined by trait overlap) and level (low, moderate, and high consistency and inconsistency as defined by ratings). Thus, the design is a 2 x 2 x 2 x 3 between-within group factorial.

Sixteen subjects were assigned to each between-group conditions resulting in a total of 64 subjects. Subjects participated in groups of 2-4 members and received partial credit towards fulfillment of course requirements.

Procedure

Subjects were told that they were participating in a project directed toward the understanding of various aspects of social perception and that there were several parts of the study. They were informed that the first part of the study involved exploring some characteristics of social information. Then, a tape recorder describing their task was played. The recording indicated that their task was to explain why various actions were performed; that, they would be presented with a list of actions and that they should think of an explanation for the action. After thinking of an explanation they should give a rating as to how hard it was to come up with the explanation. A rating scale was given them, which contained a 9 point scale indicating degrees of effort. They were directed to give a rating as to the amount of effort spent in formulating their explanation. If they were not able to come up with an explanation, they were directed to indicate the degree of effort they had spent in trying to formulate an explanation. Five subjects in each cell were told to circle yes or no to indicate whether they were able to explain the action, whereas, the remaining 11 subjects were told to give a brief account of their explanation. In both cases, the effort ratings were made after this task. Subjects were paced through these tasks at a rate of 30 sec. per action. They were directed to read, explain, and rate each action within the allotted time without going ahead or getting behind the recorded timer.

After completing this input stage, booklets and rating forms were collected. At this time, either a free recall or cued recall test was given. In free recall, subjects were instructed to list all of the actions in a column on a blank sheet of paper. In cued recall, subjects were directed to list the actions they read about beneath the group heading which was paired with the group. In the cued recall-control condition, subjects were told to list the actions beneath the group they felt the action belonged with (as noted, in the control condition, no group membership was mentioned at input). Subjects in these cued-recall conditions were given a sheet of paper containing the six social group readings. Recall was limited to ten minutes in all conditions. Following this task, subjects were debriefed and thanked.

CHAPTER III

RESULTS AND DISCUSSION

The initial analysis consisted of an ANOVA conducted upon the full design including the control group. The purpose of this analysis was to determine whether the pattern of recall in the control group differed from that in the experimental group.

This analysis revealed several significant effects. The analysis revealed a main effect of test $F(1,60)=111.04$, $p<.05$ and of treatment $F(1,60)=45.86$, $p<.05$. More importantly, this analysis revealed several interactions involving the control group [test by treatment $F(1,60)=49.74$, consistency by treatment $F(1,60)=5.22$ and a marginally significant ($p<.10$) test by treatment by degree $F(2,120)=3.42$] and an additional interaction of test by consistency by degree $F(2,120)=7.27$. The presence of these interactions suggests that the pattern of recall in the control group differs from that of the experimental group.

Newman-Keuls post-hoc comparisons of cell means (see Table 1) within the control group revealed differences between the means of free and cued recall conditions across all levels of consistency and inconsistency. Free recall was always better than cued recall. This is expected since in order for an item to be scored as correct recall in the cued recall vs free recall conditions, the item had to be paired with the correct group label. Since the group label was not presented at input in the control group, the likelihood of correctly pairing the item with the group is determined only by chance and guessing factors.

Consistent with this reasoning, the only other signficant differences found in the control group were differences among the means of low, moderate and high consistent item cued recall. As can be seen from Table 1, recall was an increasing function of level of consistency. This finding supports the validity of the level of consistency manipulation in that subjects were able to differentially match low, moderate, and high consistency items with their group prototype even under conditions in which these group-item relationships were not presented at input. These means reflect the ability of subjects to guess the likely pairing of items to group prototypes. As such, the means reflect a guessing bias, not memory, and will be usded as a correction for guessing in further analyses in order to more accurately reflect memory processes per se.

Since the pattern of recall in the control group only differed as a function of the demand and ability to correctly match remembered information in recall, further analyses only considered experimental group data. A 2x2x3

ANOVA was conducted on the between factor of test (free and cued recall) and within factors of consistency (consistent and inconsistent) and level (low, moderate, and high) experimental design (see Table 2). This analysis revealed a main effect of test $F(1,30)=5.28$, $p<.05$. This main effect is due to overall superior recall in the free recall test condition. This main effect was qualified by a significant interaction amont test, consistency, and level $F(2,60)=8.47$, $p<.001$. Orthogonal comparisons among cell means were conducted to determine the nature of this interaction.

In the experimental free recall conditions, high inconsistency actions were better recalled ($p<.10$) than low inconsistent actions (moderate inconsistent action recall did not differe from low or high inconsistent action recall). This finding is consistent with both associative and featureal analyses. From an associative perspective (e.g., Wyer & Srull, 1981), highly inconsistent actions should be more unexpected and should occupy more processing resources at input than less inconsistent items. Thus, a relatively greater number of interitem associative bonds should be established at input which would facilitate their access at output. Recall should be an increasing function of degree of inconsistency from an associative perspective. From the featureal analysis described above, recall of highly inconsistent actions should be very good under these conditions.

Attempting to explain the incongruenty actions of group members should promote the activation of the features of the prototype and features implied by the action. A comparison of these features reveal a marked discrepancy under conditions in which the evaluative implications of each are in opposition. This comparison then adds a distinctive component to the encoded representation of the action. Under conditions in which subjects are free to generate their own retrieval cues (i.e., free recall), recall of an item should be facilitated by this added distinctiveness. Thus, recall should increase as a function of degree of inconsistency.

A different prediction is made under conditions in which the output format is constrained by requirements to match items to presented cues. Under these conditions, correct recall is dependent upon a cue's ability to access features shared with the to-be-remembered item. That is, encoding conditions must have promoted the activation and/or discovery of features of the item which overlap with the cue's features. This establishes a basis for the generation of relational information between cue and item and, thus, allows for cued access in this retrieval context. If no overlapping featural similarity has been established, the cue will not access the item. Thus, the cue's function in promoting successful recall will depend upon the initiation of processes establishing item-cue overlap at input.

Explanation of inconsistency is one type of process which should promote the establishment of overlap between the group cue and the action since it requires the generation of extensive prototypical knowledge to use as a basis for causal attributions. When a successful basis for explanation has been found, featural overlap between the prototype and the action has been established. The presentation of the cue would then access the inconsistent item. Therefore, cued recall of inconsistency should depend upon subjects' ability to explain the actions. When actions are highly inconsistent, successful explanation is unlikely. Therefore, cued recall of highly inconsistent actions may be poor. Consistent with this reasoning, high inconsistent actions were recalled significantly worse ($p<.01$) than either low or moderate inconsistent items in the cued recall condition (see Table 2). And high inconsistent items were better recalled in free recall than in cued recall ($p<.01$). No difference between recall at other levels of inconsistency was found across free and cued recall.

Although the typical paradigm in the person memory area utilizes a free recall test (e.g., Srull, 1981; Srull et al., 1985), from the predominant associative perspective, the mechanisms of retrieval in both cued and free recall are identical. Retrieval in free recall is assumed to originate at the subject node at the highest level of the associative network (e.g., group prototype). A cue simply directs entry into this network, at which time the retrieval search proceeds in the same manner as in free recall. Thus, the pattern of recall should be identical in both free and cued recall. This was clearly not the case in this study.

In cued recall (uncorrected for guessing), low ($p<.10$) and high ($p<.05$) consistent actions were better recalled than moderately consistent actions. When guessing corrections were made (the mean of the cued recall-control group scores were substracted from the corresponding experimental group means), only the low consistency actions were better recalled than moderate and high consistency items ($p<.05$). The difference between these two analyses reflect the ability of subjects to guess the correct pairing of highly consistent actions and groups in this setting. When this factor is included, moderate consistent items are recalled worse than either high or low consistency; when this factor is excluded, high consistent items were not recalled better than either moderate or low consistency.

The findings of either analysis are inconsistent with predictions which would be made from an associative perspective. In this view, consistency is conceptualized as the strenth of association between an item and a prototype. Highly consistent items should be stronger associates of the prototype than either moderate or low consistent items. In this study, an accepted method of establishing strength of association was used in the assignement of items to levels of consistency (i.e., the typicality of an action with respect to group behavior was varied such that high consistent actions were rated as more expected than low or moderate actions). The mechanism of retrieval vis a vis consistency in the associative framework is strength of association (e.g., Srull, 1981). Thus, strong associates of a prototype (i.e., high consistency items) should be recalled better than weaker associates (i.e., low and moderate consistent items). As can be seen from Table 2, this was not the case in either the corrected vs uncorrected analysis.

The results of the free recall condition with respect to consistent item recall is also inconsistent with an associative perspective. As discussed above, the function of a cue is to direct entry at the highest node in an associative network established at encoding. Retrieval originates at the highest level of the network (e.g., Srull, 1981). When an integrated impression set is established at input (e.g., directions to explain the actions of group members), consistent items are assumed to be thought about in relation to the examplified concepts and the actions are assumed to be directly associated to a control (trait, person or group) node (e.g., Wyer & Gordon, 1985). Thus, free recall would originate at this highest, central node. Thus strongly associated, high consistent, actions shoudl be recalled better than less consistent actions. Yet, in this study, low consistent actions tended to be recalled better than either moderate ($p<.25$) or high ($p<.10$) consistent actions under conditions of free recall. Low consistent actions were better recalled than the combined means of the moderate and high consistent action recall conditions ($p<.05$).

These results are expected from a featural analysis. The featural overlap between the group prototype was held relatively constant across all levels of consistency. This factor should ensure the availability of relational information among items and group prototypes in both retrieval contexts (i.e., free and cued recall). Thus, recall of the actions should be a direct function of an action's distinctiveness since the critical factor would be the action's discriminability among similar members of the related set. So consistent actions were rated as less typical group actions than were high and moderate consistent actions. Therefore, they were assumed to be more distinctive in the context of group behavior. Recall of these acrtions was therefore predicted to be superior in both cued and free recall contexts. As can be seen from Table 2, this pattern of recall is supportive of this reasoning.

In sum, the pattern of recall obtained in both free and cued recall conditions is inconsistent with the prevalent associative memory model. Specifically, these data do not support the notion that differences in allocated capacity, and the corresponding induction of associative bonds, mediate the recall of actions varying in their consistency with established expectancies. These data are more consistent with a model of memory which does not assign any necessary causal role to the amount of cognitive effort utilized in the processing of these actions (e.g., a featural analysis).

An additional analysis was done to directly address the issue of the necessary role of effortful (i.e., cognitively demanding) processing within this paradigm. For each subject within experimental conditions, an effort score was computed at each level of consistency and inconsistency. This score was computed by dividing the total of their rated effort for each of the recalled actions (i.e., the total of the scores they had given each item on the effort scale used at input) by the number of items recalled by the subject. For example, if the total rated effort for low-inconsistent items was 6 for subject 1, her score in this condition would be "6" if she only recalled one low-inconsistent item that she had rated as 6 on the input form; if subject 2 had a total score of 6 but had recalled two low-inconsistent items (e.g., one was rated 2 and one was rated 4), her score would be "3". Each subject's effort measure and recall score was then entered into a linear regression analysis to see whether rated effort is related to recall in either condition. According to an associative view, rated effort at input should be positively correlated with recall. This was not the case; the correlation in both conditions was unreliable ($r=.08$ in free recall; $r=.03$ in cued recall). Thus, how hard an item was to explain (i.e., their rated effort) did not predict the item's memorability contrary to the assumptions of the Hastie, Wyer and Srull model.

The results of this study suggest that the prevalent model used for understanding the effects of expectancy confirmation and violation on memory is, at best, incomplete. In doing so, the conceptualization of the nature of consistency and inconsistency implicit in this model may be questioned.

The utility of these models for understanding consistency and inconsistency may be limited for several important reasons. One primary reason is that global models, such as Ham, were developed for the specific goal of constructing operational, comprehensive models of memory (Lochman, Lochman, & Butterfield, 1979). As first approximations toward such models, research has been confined to stimulus materials which are well-defined in terms of their interrelationships (e.g., propositional content and category membership). The interrelationships between social stimuli are not well understood.

For example, is inconsistency equivalent to atypicality? Or is inconsis tency a dimension that is largely constrained to social stimuli?

The primary difference between expectancy inconsistent and consistent behaviors is the extent to which processing inconsistency entails the increased allocation of processing resources. In this sense, expectancy inconsistent behaviors are considered to be a part of a large class of variables which affect memory via their demand for increased processing resources (e.g., hard vs easy tasks, Tyler, Hertel, McCallum, & Ellis, 1979; scaped vs massed presentation of words on a list, Johnson & Uhl, 1979; elaborative vs nonelaborative orienting tasks, Griffith, 1976). As such, the analysis of memory for inconsistency relies heavily upon global models of memory which have been developed to account for a large body of empirical effects (e.g., Ham, Anderson, & Bower, 1976).

Consider both social and nonsocial category members - Joe Doe as a "college professor" and Bluie as a bird. Certain features define each category. College professors have degrees, teach classes and are intelligent. Birds have wings, have feathers and are born from eggs. Tweety cannot lack these features or have features which directly oppose the features of this category (e.g., having live birth from a womb) and be in this category. This is not true for social categories. Joe Doe can lack a degree, not teach and even be dumb and still be a college professor - he can do things that are both descriptively and evaluatively opposite from the features of the category and be in the category. In other words, he can be inconsistent with his social category. He is not merely an atypical member. Although the prevalence of "double-lives" is not abundant in society, it is an occurrence which points to this dimension of the social world. Deception and attitude behavior discrepancies are common in social settings and nonexistent in nonsocial domains.

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Table 1. Mean explanation ratings : The higher the number the less likley to be adequately explained.

	Consistency					
	Consistent			Inconsistent		
Level	low	mod	high	low	mod	high
	3.25	2.57	2.33	4.65	5.44	6.70

Table 2. Mean recall scores in experimental and control conditions.

EXPERIMENTAL CONDITION

		Consistency				
		Consistent			Inconsistent	
Level	low	mod	high	low	mod	high
free recall	3.44	2.81	2.75	2.81	3.06	3.50
Test						
cued recall	2.69	1.94	2.81	3.00	2.94	1.69

CONTROL CONDITION

		Consistency				
		Consistent			Inconsistent	
Level	low	mod	high	low	mod	high
free recall	3.06	3.44	3.00	3.06	3.25	2.81
Test						
cued recall	.31	.81	1.37	0	0	0

Table 3. Mean recall scores in experimental condition including guessing corrections.

	Consistency					
	Consistent			Inconsistent		
Level	low	mod	high	low	mod	high
free recall	3.44	2.81	2.75	2.81	3.06	3.50
Test						
cued recall	2.69	1.94	2.81	3.00	2.94	1.69
guessing correction	2.38	1.13	1.44	3.00	2.94	1.69