

Relationships as Natural Categories

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Five experiments assessed the hypothesis that perceivers spontaneously organize social information around relationship categories. Ss were exposed to information items (structured in 3 formats) about each of 8 targets. Half of the Ss were told that the targets were 4 married couples, and the couple members were identified (married couple condition). The remaining Ss received the target information in the same sequence, but were informed that targets were married to an unspecified other (yoked couple condition). Ss free recalled the information and matched the information items with the target names. Ss cognitively organized the information around married couple categories more so than yoked couple categories and confused married couple members with one another more so than yoked couple members. Formation of relationship categories occurred at the encoding rather than the retrieval stage. The hypothesis that relationships serve as natural categories was strongly supported.

Relationships serve as a central organizing principle in many social psychological theories. For example, interdependence theory (Kelley, 1979; Kelley & Thibaut, 1978) posits that social behavior depends not only on the motives and goals of individual actors, but also on the manner in which they integrate both partners' preferences (the "given" matrix) to arrive at joint action (the "effective" matrix). Lewin (1951) considered real or imagined pressure from others, especially those with whom we are in close relationships, to be among the most potent forces in the life space. Unit relationships, or bonds of connectedness with others, provide some of the key constructs in Heider's common-sense psychology (Heider, 1958). Even sociobiological explanations of social behavior rely heavily on genetically based predispositions to seek relationships with others. For instance, Buck and Ginsburg (1991) argued that many forms of social behavior that are traditionally thought to have an evolutionary basis, such as empathy and altruism, may derive from genetically based mechanisms for establishing affectively positive affiliative bonds with others.

Relationships may therefore play a central role in many psychological theories, but it is less clear what role they play in organizing people's spontaneous mental representations of other persons. *Persons* constitute a natural category for simplifying the endless flow of social information. Perceivers, several theorists have assumed (Asch, 1946; Heider, 1958), create a distinct category for each new person they encounter. But how do perceivers further organize their understanding of these per-

sons? Certainly, we encounter many different individuals as we go about our daily business. During social interaction we acquire much information about them, often including such attributes as their background, demographic characteristics, personalities, skills, interests, and their social relationships, that is, to whom they are close, with whom they work, and with whom they are friends.

The purpose of the present research is to examine the role of relationships in organizing spontaneous mental representations of other people. Multiperson, multiattribute social contexts offer several possibilities for mental organization. People might, of course, use any category for organizing information about others (e.g., gender, occupation, or race), or they might use no categories at all, representing each person as a discrete, independent unit. But if relationships are a fundamental unit of social organization, as suggested above, then they should figure prominently in natural social cognition. In the present research we examined this general idea through several specific questions: Do perceivers use people's relationships as categories? Under what circumstances are people more or less likely to use relationships as a category? Are relationships more likely to be used as an organizing category the stronger the perceived bond is? What cognitive processes are responsible for this effect, if it exists?

Organizing Information About People

The assumption that social information is organized around person categories has guided research for several decades (Anderson, 1962, 1981; Asch, 1946; Wishner, 1960). The primacy of this assumption was challenged by Ostrom and his colleagues (Ostrom, Pryor, & Simpson, 1981; Pryor & Ostrom, 1981; Pryor, Simpson, Mitchell, Ostrom, & Lydon, 1982; Sedikides & Ostrom, 1988). These investigators demonstrated that person categories are not necessarily preferred over alternative organizing categories, such as attribute categories (e.g., academic major, place of living, and favorite TV show). When person categories are exclusively available in the stimulus environment, however, they are used by perceivers. In this case, perceivers

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We thank Alan Fiske and several anonymous reviewers for very helpful suggestions. We also thank Chris Camp and Jane Zaretzke for their assistance with data collection and coding.

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spontaneously create cognitive categories for each person they encounter and subsequently integrate new information into the relevant person category.

Prior work on the organization of social information has been primarily concerned with scenarios involving unrelated target persons. Arguably, though, when a person is introduced to others, either through actual interaction or through communication in absentia, this person is accompanied by the real or implied presence of related others. Even with new acquaintances, we typically know who their spouses, relatives, friends, or even acquaintances are. Sometimes this information is inherent in the setting, such as when a stranger is introduced by a common acquaintance or when one meets related others simultaneously. At other times, new acquaintances may name some of their friends and associates, either to identify common friends or perhaps to enhance their self-image (Finch & Cialdini, 1989). Regardless of the exact processes at work, it seems safe to say that we rarely learn much about another person without learning something about his or her social networks. (Perhaps this is why most parents and advice columnists warn people to be careful of whom they choose as their friends!)

Several lines of theorizing and research suggest that relatedness is a widely used concept in social perception. According to balance theory (Heider, 1958; see also De Soto & Albrecht, 1968), for example, people tend to perceive as alike entities that appear connected even in meaningless ways. Thus, on learning that a relationship (i.e., a unit connection) exists between two persons, perceivers should be likely to spontaneously link impressions of them. One consequence of this process is an interpersonal version of the halo effect, whereby the attributes associated with one partner may also be attributed to the other simply by virtue of their relationship (Kernis & Wheeler, 1981).

S. T. Fiske and Cox (1979) content analyzed subjects' free descriptions of others and found that relationships emerged as one major category (the others were appearance attributes, personality characteristics, and behaviors). Bond and his colleagues (Bond & Brockett, 1987; Bond, Jones, & Weintraub, 1985; Bond & Sedikides, 1988) demonstrated that information about acquaintances is stored in memory within their social contexts, rather than as isolated individuals. A. P. Fiske, Haslam, and Fiske (1991; see also A. P. Fiske, 1991) found that others are represented in memory in terms of the type of relationship one has with them, classified according to the four "elementary relational structures": communal sharing, equality matching, authority ranking, and market pricing. It is important to note that the results of the A. P. Fiske et al. studies are limited to types of relationships, rather than specific relationships that people have.

Somewhat closer to the present research is a series of studies by Aron and his colleagues. Aron and Aron (1986) proposed that closeness be conceptualized as "including the other in the self." That is, to the extent that people are close to each other, they include the resources, perspectives, characteristics, and experiences of the other in the self. Aron, Aron, Tudor, and Nelson (1991) found that in several social cognition tasks, judgments about close others resembled judgments about the self to a much greater extent than they resembled judgments about strangers and acquaintances. Similarly, Aron, Aron, and Smolán (1992) showed that the degree of perceived closeness in a

couple is highly correlated with reaction time differences to me-not me decisions about traits that both partners possess. That is, there were slower decisions about traits that only one partner possessed than traits that both or neither possessed, presumably because the former condition engenders greater confusion to the extent that partners are close. The idea of including the other in the self is also similar to the notion of the collective self, as it has recently been discussed (Crocker & Luh-tanen, 1990; Greenwald & Pratkanis, 1984; Markus & Kitayama, 1991). That is, in collective or communal contexts, self-identity is embedded in the larger network of relationships with important group members and is closely linked to the status, qualities, and achievements of the entire group.

The present research goes beyond past studies in several important ways. First, the research examines spontaneous preferences for organizing mental representations of people on the basis of relationship categories. Second, the research is designed to determine whether, and to what extent, perceivers organize their representations of other people in terms of the specific dyadic relationships in which those people participate. Finally, the research is concerned with the dynamic features of processing and integrating incoming social information, as opposed to recalling previously input information. To these ends, a consistent theme in this research is manipulation of the structure of the stimulus field.

Research Overview

For the purposes of this investigation, a *relationship* is defined as two persons sharing a psychological bond. We focus on marriage as a fundamental relationship category both for simplicity and because it represents the strongest adult relationship, at least in western culture. Our research specifically addresses whether people spontaneously create a single relationship category for each married couple they encounter.

We assume that the creation of a relationship category is the result of the process of linking (Srull & Wyer, 1989) characteristics belonging to one spouse to characteristics belonging to the other spouse. We refer to this process as *interitem linkage*. Why should perceivers engage in interitem linkage when presented with couple information? The answer may lie in that couple members are perceived as interdependent (Kernis & Wheeler, 1981). This interdependence can manifest itself in several ways. For example, information about one spouse may be relevant to forming impressions of the other spouse (e.g., if Carl is humorous, does this mean that Sara is also humorous?). Alternatively, information may have spousal implications (e.g., if Greg is a vegetarian, does this make dinners problematic for Mary?). Regardless of the exact mechanism at work, the result will be the formation of stronger interitem links for couple members (thus resulting in stronger relationship categories) than noncouple members.

Is a single exposure to information sufficient for the creation of strong relationship categories, or are multiple exposures required? Additional exposures may bolster couple categories by allowing extra time for the rehearsal of stored interitem links or by providing the opportunity for the creation of new interitem links. Identifying the minimum number of information expo-

asures sufficient for the creation of couple categories is another objective of our research.

In sum, we are interested in examining (a) the spontaneity of category generation for incoming information pertaining to dyadic relationships and (b) the minimal circumstances (i.e., number of information exposures) under which relationship category formation occurs. To assess the spontaneity of category generation, we instructed subjects to attend to each individual target and try to form an impression and memorize information pertaining to her or him. We implemented dynamic processing of information by presenting subjects with new information about unfamiliar targets. We assessed the strength of relationship category formation by informing subjects that consecutive pairs of targets were either married to one another (married couples) or each was married to an unspecified other (yoked couples). Finally, we gauged the minimal circumstances for the formation of relationship categories by displaying target information either once or three times.

As stated previously, a consistent theme in our research was manipulation of the structure of the stimulus field. In Experiment 1, we presented couple members to subjects on contiguous pages of a stimulus booklet (e.g., information about Mary was followed by information about her spouse, Bob). In Experiment 2, we displayed couple members to subjects in a noncontiguous order. In both of the above experiments, all information items about each couple member appeared on a single page. In contrast, in Experiment 3, we pooled information items together, randomized them, and then presented them to subjects one by one on separate pages. In Experiment 4, we presented subjects with targets who were associated with varying degrees of psychological bonds (married couples, acquaintances, common football team fans, and yoked couples). Finally, in Experiment 5, we examined whether the obtained effects could be localized at the encoding versus retrieval processing stage.

Our research is mainly concerned with stimulus fields that are (a) occupied by couple members and (b) presented to perceivers who have the processing objectives of forming an impression and memorizing the information about each couple member. (We consider these to be common processing objectives that perceivers bring to mind when being introduced to others.) We made an effort to isolate and simulate the most crucial (i.e., theoretically relevant) features of such stimulus fields in all five experiments. We deemed that the tactic of stripping down naturalistic reality to its essentials was necessary to identify and study in depth the formation of relationship categories and some of its parameters (Berkowitz & Donnerstein, 1982; Fromkin & Ostrom, 1974; Henshel, 1980; Mook, 1983).

Experiment 1

In many social situations, the perceiver is introduced to related persons in a contiguous manner. For example, you may be introduced to Vivian and strike up a short acquaintance conversation with her. Vivian may next introduce you to her husband, Zach, with whom you will also engage in small talk.

Do perceivers tend to spontaneously form relationship categories when encountering information about related persons in a contiguous fashion? Experiment 1 addressed this question.

Method

Subjects and Experimental Design

Subjects in this and all subsequent experiments were University of Wisconsin introductory psychology students who participated for extra course credit. Subjects were run in small (2- to 9-member) groups. Dividers set in the experimental room prevented subjects from seeing one another while seated.

One hundred subjects were randomly assigned to the cells of the 2 (relationship type: married couples or yoked couples) \times 2 (exposure frequency: single exposure or triple exposure) between-subjects design.

Stimulus Materials

The stimulus materials consisted of information items about eight persons, four women and four men (Table 1). The information items were generated by the experimenters under two constraints. First, the information items should be simple, lucid, and plausible. Second, the information items should belong to nonoverlapping attribute categories. That is, only one information item should represent each attribute category. We avoided prestructuring subjects' stimulus field with attribute categories because we thought that this would add unwanted theoretical complexities at this early stage of our research.

Information about each target person appeared on a single page. The person's name was on the top of the page, followed by five information items. The first information item indicated that the person was married. The order of the remaining four information items was randomized and kept constant throughout the experiment. An impression rating scale appeared at the bottom of each page. The scale was anchored with 1 (*not at all favorable*) and 9 (*extremely favorable*).¹ The presentation order of the four couples was also randomized and kept constant.

Information about married couples and yoked couples appeared in the same sequence. Subjects in the married couple condition were told that each target was married and were provided with the name of the spouse (e.g., Carl is married to Sara). Subjects in the yoked couple condition were only told that each target was married (i.e., no spouse was listed). Additionally, half of the subjects were exposed to the information items once (*single exposure*), whereas the rest of the subjects were exposed to the information items three times (*triple exposure*).

Procedure

Subjects were provided with a booklet containing all stimulus materials and dependent measures. On the cover page of the booklet, subjects were informed that they were participating in a person-perception experiment. Subjects were instructed to form an impression of each target person and memorize the information about each target for a subsequent recall task.

Subjects were given 25 s to read the information pertaining to each target. Subjects were allowed 15 s and 5 s in the second and third trials of the triple-exposure condition, respectively. Then subjects engaged in a distractor task for 2.5 min. Specifically, subjects searched for the names of 15 U.S. presidents embedded in a letter matrix.

Subjects were subsequently provided with another booklet containing 32 blank quarter-pages and were asked to free recall the previous information items. They were instructed to recall as much information as they could as accurately as possible. Subjects were asked to recall the information in any order it came to mind and to place only one infor-

¹ In none of the reported experiments did favorability ratings for related couples significantly differ from favorability ratings for yoked couples.

Table 1
Stimulus Materials

Couple member	Information item			
	2	3	4	5
Carl	Favorite color is burgundy	Hobby is yoga	Is humorous	College major is philosophy
Sara	Is a human rights activist	Has blue eyes	Favorite actress is Glenn Close	Likes to dress casually
Greg	Likes to study in the library	Is Lutheran	Is a vegetarian	Is tall
Mary	Works as a part-time gas station attendant	Favorite U.S. president is John F. Kennedy	Enjoys watching tennis	Listens to jazz
Bill	Lives on Langdon Street	Likes people who are "independent"	Favorite writer is Hemingway	Dreams of owning a Jaguar
Jane	Hometown is Wausau	Pet peeve is cigarette smoke	Is a Democrat	Preferred drink is piña colada
Eric	Is blond	Favorite actor is Robert De Niro	Is a member of the Rotary Club	Has never traveled outside of Wisconsin
Rose	Takes vacation at Daytona Beach	Wakes up at 5 a.m. every day	Favorite TV show is "L.A. Law"	Is fascinated by modern art

Note. The first information item was that the target was married.

mation item on each page of the booklet without turning back to previous pages.

Finally, subjects were given a list of all eight names and all 32 information items and were asked to match each item with the correct person name. (This name-matching task was introduced by Taylor, Fiske, Etcoff, & Ruderman, 1978.) After completing the name-matching task, subjects were thoroughly debriefed, thanked for their participation, and excused.

Results and Discussion

Cognitive Organization

Of central interest to us was whether subjects organized the stimulus information by married couple categories more strongly than by yoked couple categories. Cognitive organization of the stimulus information was assessed through clustering scores in the free-recall task and through confusions in the name-matching task.

Clustering. The clustering index used was the adjusted ratio of clustering (ARC; Roenker, Thompson, & Brown, 1971). The ARC score "represents the ratio of obtained category repetitions above chance to the total possible category repetitions above chance. . . [and is] minimally affected by the number of categories recalled, the total number of items recalled, and the distribution of items across categories" (Ostrom et al., 1981, p. 9). ARC scores typically range from 0 (*chance clustering*: the theoretically relevant categories are not used to organize the list material) to 1 (*perfect clustering*: the theoretically relevant categories are fully used as organizational strategies in recalling the list material), and their reliability is established by significance testing against 0. Negative ARC scores indicate that subjects

used the theoretically relevant categories in recall, but they used them in ways that do not reflect sequential ordering of category items. For example, the recall sequence "Ralph enjoys going to movies," "Yvonne is an engineer," and "Ralph lives in a three-bedroom apartment" would result in a negative ARC score, which would indicate that the categories "Ralph" and "Yvonne" were used consistently but were used interchangeably rather than sequentially. ARC is regarded as the most problem-free index of clustering in free recall (Murphy, 1979; Ostrom et al., 1981; Srull, 1984).

We computed an ARC score for each couple, be it married or yoked. The ARC score was assumed to reflect the degree to which information was cognitively organized around couples. The ARC scores were entered into an analysis of variance (ANOVA).

We first examined whether cognitive organization by married couple categories would predominate over organization by yoked couple categories. A significant relationship type main effect revealed that this was indeed so. Subjects spontaneously organized the stimulus information around married couple categories (M ARC score = .427) more so than around yoked couple categories (M ARC score = .147),² $F(1, 96) =$

² Our coding of the yoked couple categories was based on the assumption that pairs in the yoked couple condition were equally salient to subjects as pairs in the married couple condition. However, it is likely that subjects in the yoked couple condition did not immediately realize that targets were appearing in pairs until after the second or third pair. To control for this possibility, we recoded yoked couple clustering and confusion scores of Experiments 1, 3, and 5 in an alternative manner. Specifically, we paired the second member of the first

24.54, $p < .0001$. (In both cases, the ARC scores significantly differed from zero, M married couple $ARC\ t[49] = 3.71$, $p < .001$, and M yoked couple $ARC\ t[49] = 10.17$, $p < .001$.)

A significant exposure frequency main effect indicated that cognitive organization of the information in terms of couple categories was higher in the triple-exposure condition (M ARC score = .345) compared with the single-exposure condition (M ARC score = .229), $F(1, 96) = 4.24$, $p < .003$. More interestingly, the interaction was not significant, $F(1, 96) = .20$, $p < .66$ (Table 2). Married couple organization predominated over yoked couple organization in both the single-exposure and triple-exposure conditions.

Confusions. Confusions comprise an alternative index of categorization. *Confusions* are defined as incorrect matches of information items with names (Taylor et al., 1978). With any particular information item, a subject could make one of two kinds of confusions: within couple or between couples.

Within-couple confusions occurred when an information item pertaining to one member of a couple was matched with the wrong member of that couple. If the two-person categories corresponding to each married couple are more intermeshed than the two-person categories corresponding to each yoked couple, it follows that a greater number of within-couple confusions would be observed for married as opposed to yoked couples.

An ANOVA on within-couple confusions revealed a relationship type main effect: Subjects made more confusions for married couples ($M = 1.00$) than yoked couples ($M = 0.70$), $F(1, 96) = 4.39$, $p < .04$. This finding reflects the strength of relationship categories. Furthermore, subjects made more confusions in the single-exposure case ($M = 1.16$) than in the triple-exposure case ($M = 0.54$), exposure frequency main effect $F(1, 96) = 18.75$, $p < .0001$. This finding suggests that person categories became more differentiated with repeated exposure. Finally, the interaction was marginally significant, $F(1, 96) = 3.30$, $p < .07$ (Table 2). Subjects tended to commit significantly more confusions for married than yoked couples in the single-exposure condition but made an approximately equal number of confusions for married and yoked couples in the triple-exposure condition. Married couple members were cognitively confused in the single-exposure condition, but became better differentiated as individuals in the triple-exposure condition. Confusion of married couple members in the single-exposure case reflects strong relationship category structure.

Between-couples confusions occurred when an information item belonging to one member of a given couple was matched with a member of a different couple. If married couple categories are more intertwined than yoked couple categories, then a smaller number of between-couples confusions should be observed for married couples than for yoked couples.

An ANOVA on between-couples confusions yielded a rela-

yoked couple with the first member of the second yoked couple, then the second member of the second yoked couple with the first member of the third yoked couple, and so forth. This alternative coding scheme produced slightly weaker yoked couple clustering and confusion scores. Reanalyses using these scores yielded results that were identical to, if not stronger than those reported.

Table 2

Mean ARC Scores, Confusions, and Recalled Items as a Function of Relationship Type and Exposure Frequency: Experiment 1

Measure	Single exposure		Triple exposure	
	Married couple	Yoked couple	Married couple	Yoked couple
ARC score	.356*	.101	.498*	.192*
Confusion				
Within-couple	1.44 _a	0.88 _b	0.56 _b	0.52 _b
Between-couples	15.72 _a	20.96 _b	10.88 _c	11.56 _c
Recalled item	13.48	13.00	16.56	18.84

Note. Within each confusion row, means sharing an uncommon subscript differ significantly from one another at the $p < .05$ level. ARC = adjusted ratio of clustering.

* Score differs significantly from zero ($p < .05$).

tionship type main effect, $F(1, 96) = 8.83$, $p < .004$. Fewer confusions were indeed made for married couples ($M = 13.30$) than yoked couples ($M = 16.26$), demonstrating the strength of married couple categories. An exposure frequency main effect revealed that more confusions were made in the single-exposure case ($M = 18.34$) than the triple-exposure case ($M = 11.22$), $F(1, 96) = 51.06$, $p < .0001$. These effects were qualified by a significant interaction, $F(1, 96) = 5.24$, $p < .02$ (Table 2). Subjects in the single-exposure condition made fewer confusions for married couples than for yoked couples, but subjects in the triple-exposure condition did not significantly differ in the number of confusions they made. This finding reflects higher cognitive differentiation of married couple members with increased familiarity with them and parallels the within-couple confusion results.

Recall

We also examined subjects' memory of the information items. Use of relationship categories does not necessitate greater recall for related than unrelated targets. Indeed, subjects recalled an approximately equal number of information items for married couples ($M = 15.02$) and yoked couples ($M = 15.92$), $F(1, 96) = 1.06$, $p < .31$. Furthermore, subjects recalled more information items in the triple-exposure ($M = 17.70$) than the single-exposure condition ($M = 13.24$), $F(1, 96) = 26.03$, $p < .0001$, thus replicating similar findings from person-organization research (e.g., Pryor et al., 1982). The interaction was not significant, $F(1, 96) = 2.49$, $p < .12$ (Table 2).

Experiment 2

Experiment 1 concentrated on social situations in which perceivers acquire couple member information in a contiguous manner. However, information pertaining to couples often flows randomly. For example, a participant in a social gathering may learn several facts about a member of Couple A, next learn several facts about a member of Couple B, then be introduced to the second member of Couple A, then learn about a member of Couple C, etc. Obviously, this kind of information flow poses

more strenuous cognitive demands on the perceivers. Will perceivers still organize social information on a married couple basis under such circumstances? In Experiment 2, we addressed this question.

Method

The experiment involved 100 subjects. The experimental design and procedure were identical to Experiment 1s. The stimulus materials were also identical to those used in Experiment 1, with one exception: The order of (both married and yoked) couple member presentation was randomized with the stipulation that no couple members occupy adjacent pages in the stimulus booklet. Presentation order was fixed.

Results and Discussion

Cognitive Organization

Clustering. Subjects tended to spontaneously organize the information in terms of married couple categories (M ARC score = .364), $t(49) = 15.17$, $p < .001$, more so than in terms of yoked couple categories (M ARC score = .150), $t(49) = 4.30$, $p < .001$; $F(1, 96) = 25.04$, $p < .0001$. Thus, random presentation of couple members did not prevent subjects from using relationship categories in managing the flow of social information.

The exposure frequency main effect did not reach significance, $F(1, 96) = 1.56$, $p < .22$, although in direction the means were consistent with those in Experiment 1: Cognitive organization of information in terms of couple categories tended to be higher in the triple-exposure condition (M ARC score = .284) than the single-exposure condition (M ARC score = .230). The interaction was not significant, $F(1, 96) = .37$, $p < .54$ (Table 3).

Confusions. Subjects committed more within-couple confusions for married ($M = 1.52$) than yoked couples ($M = 1.02$), $F(1, 96) = 5.81$, $p < .02$. Furthermore, subjects made more confusions in the single-exposure ($M = 1.66$) relative to the triple-exposure condition ($M = 0.88$), $F(1, 96) = 14.13$, $p < .0001$. The interaction was significant, $F(1, 96) = 10.12$, $p < .002$ (Table 3). Subjects committed more married couple than yoked couple confusions in the single-exposure case, but committed an approximately equal number of confusions for both married cou-

ple and yoked couple members in the triple-exposure condition. These results replicate those of Experiment 1.

The analysis of between-couple confusions revealed that subjects made a smaller number of confusions for married couples ($M = 15.96$) than yoked couples ($M = 18.84$), $F(1, 96) = 9.52$, $p < .003$. Furthermore, subjects made more confusions in the single-exposure instance ($M = 19.62$) compared with the triple-exposure instance ($M = 15.18$), $F(1, 96) = 22.63$, $p < .0001$. Finally, a significant interaction, $F(1, 96) = 10.89$, $p < .001$, showed that subjects in the single-exposure case made less confusions for married couples than for yoked couples, but subjects in the triple-exposure case did not significantly differ in the number of confusions they made (Table 3). These results also replicate corresponding findings of Experiment 1. It is interesting to note that although ARC scores were comparable with those of Experiment 1, noncontiguous presentation resulted in somewhat more confusions than in the prior experiment. ARC scores and confusion scores may tap overlapping but partially independent aspects of information storage.

Recall

Subjects recalled an approximately equal number of information items for married couples ($M = 14.30$) and yoked couples ($M = 14.32$), $F(1, 96) = 0.001$, $p < .98$. Subjects also recalled more information items in the triple-exposure ($M = 16.40$) than in the single-exposure ($M = 12.22$) condition, $F(1, 96) = 25.76$, $p < .0001$. The interaction was not reliable, $F(1, 96) = 0.99$, $p < .32$ (Table 3). These results parallel earlier findings.

Experiment 3

The previous experiments documented the use of relationship categories in social contexts where the perceiver is presented with couple-blocked or couple member-blocked information. However, there are still instances in which the temporal flow of social information does not obey either format.

On certain occasions, perceivers may acquire successive bits of information pertaining to different couple members. For example, perceivers may learn that Carl is a politician, Martha enjoys skydiving, Katie (Carl's spouse) travels frequently abroad, Zach reads fiction novels, and Nick (Martha's spouse) frequently donates money to charity. Then, they may learn that Carl reads nonfiction and Mary collects stamps. How do perceivers cope with a relatively unstructured perceptual field? Do they manifest an organizational preference for married couple categories even when faced with randomly presented information items? The aim of Experiment 3 was to address this issue, thereby putting the generalizability and robustness of the previous findings to a stringent test.

Method

The experiment involved 100 subjects. The experimental design was identical to that in the previous experiments, and so were the stimulus materials, with one exception: The order of the information items belonging to (both married and yoked) couple members was randomized and kept constant across subjects. Subjects were provided with a booklet containing one information item per page and were paced through

Table 3
Mean ARC Scores, Confusions, and Recalled Items as a Function of Relationship Type and Exposure Frequency: Experiment 2

Measure	Single exposure		Triple exposure	
	Married couple	Yoked couple	Married couple	Yoked couple
ARC score	.324*	.136*	.403*	.164*
Confusion				
Within-couple	2.24 _a	1.08 _b	0.80 _b	0.96 _b
Between-couples	16.64 _a	22.60 _b	15.28 _a	15.08 _a
Recalled items	11.80	12.64	16.80	16.00

Note. Within each confusion row, means sharing an uncommon subscript differ significantly from one another at the $p < .05$ level. ARC = adjusted ratio of clustering.

* Score differs significantly from zero ($p < .05$).

the booklet at a rate of one information item per 5 s. Exposure intervals in all three trials of the triple-exposure condition were also 5 s.

Results and Discussion

Cognitive Organization

Clustering. Despite the relative lack of perceptual field structure, subjects tended to spontaneously organize the information on the basis of married couple categories (M ARC score = .143), $t(49) = 3.66, p < .001$, rather than yoked couple categories (M ARC score = -.028), $t(49) = -.76, p = ns, F(1, 96) = 9.47, p < .003$. This finding replicates those in Experiments 1 and 2.

Cognitive organization of information around couple categories was slightly higher in the triple-exposure (M ARC score = .102) relative to the single-exposure condition (M ARC score = .013), although the exposure frequency main effect was not significant, $F(1, 96) = 2.60, p < .11$. The interaction was not significant either, $F(1, 96) = 0.06, p < .81$ (Table 4).

Confusions. Subjects tended to commit slightly more within-couple confusions for married couples ($M = 5.08$) than yoked couples ($M = 4.70$), $F(1, 96) = 2.87, p < .09$. Furthermore, subjects made more confusions in the single-exposure ($M = 5.28$) as opposed to the triple-exposure condition ($M = 4.50$), $F(1, 96) = 16.10, p < .0001$. The interaction was reliable, $F(1, 96) = 16.10, p < .0001$ (Table 4), primarily because there were more confusions for married than yoked couples in the single-exposure case, but no difference in the triple-exposure case. The pattern of all these effects replicates previous findings.

Subjects manifested a nonsignificant tendency to make fewer between-couple confusions regarding married ($M = 19.10$) rather than yoked couples ($M = 20.34$), $F(1, 96) = 2.48, p < .12$. The direction of results is consistent with previous findings. Also, subjects made more confusions in the single-exposure case ($M = 22.58$) compared with the triple-exposure case ($M = 16.86$), $F(1, 96) = 52.67, p < .0001$. In contrast to the findings of the previous experiments, the interaction was not significant, $F(1, 96) = 0.84, p < .36$ (Table 4).

Table 4
Mean ARC Scores, Confusions, and Recalled Items as a Function of Relationship Type and Exposure Frequency: Experiment 3

Measure	Single exposure		Triple exposure	
	Married couple	Yoked couple	Married couple	Yoked couple
ARC score	.091	-.065	.194*	.010
Confusion				
Within-couple	5.92 _a	4.64 _b	4.24 _b	4.76 _b
Between-couples	21.60	23.56	16.60	17.12
Recalled items	8.68	9.80	14.64	15.12

Note. Within each within-couple confusion row, means with different subscripts are significantly different from one another ($p < .05$). ARC = adjusted ratio of clustering.

* Score differs significantly from zero ($p < .05$).

Recall

Recall for married couples ($M = 11.66$) did not significantly differ from recall for yoked couples ($M = 12.46$), $F(1, 96) = 1.20, p < .28$. Furthermore, recall in the triple-exposure condition ($M = 14.88$) was higher than in the single-exposure condition ($M = 9.24$), $F(1, 96) = 59.74, p < .0001$. The interaction was not reliable, $F(1, 96) = 0.19, p < .66$ (Table 4). These results are in agreement with prior findings.

Experiment 4

The research reported so far establishes that perceivers prefer to use relationship categories for organizing social information when the stimulus field is (a) blocked around couples, (b) blocked around couple members, or (c) relatively unstructured. In these studies, *relationship category* was operationalized as the married couple, which is one of the strongest unit categorizations in western culture, at least from a psychological standpoint. We do not know whether our findings are limited to this particular linkage. Do perceivers manifest a similar preference for relationship organization when the relationship is weaker? This issue was addressed in Experiment 4.

Method

Experiment 4 involved 200 subjects. The experimental design involved a 4 (relationship type: married couples, acquaintances, common football team fans, or yoked couples) \times 2 (presentation frequency: single or triple) between-subjects factorial.

We assumed that the strongest target association would be married couple members. We further assumed that the next strongest association would involve acquaintances, followed by fans of the same football team. We expected that the yoked couple would show the weakest connection.

The stimulus materials were similar to those used in previous experiments, with the exception of target descriptions. The description of married couple members was left unchanged. Targets in the acquaintances condition were described as "X is an acquaintance of Y." Targets in the football team fans condition were described as "X's favorite football team is _____" (The names of four midwestern professional football teams were used: Minnesota Vikings, Cleveland Browns, Indianapolis Colts, and Kansas City Chiefs.) Finally, targets in the yoked couple condition were not described as "married," but rather as "X is the next person you will get to know about." This was done so that the yoked couple condition could serve as a more balanced control for the acquaintance and football team fan conditions.

Target information was couple blocked, as in Experiment 1. That is, information about a male target was followed by information about his related female target. The procedure was also identical to that in Experiment 1.

Results and Discussion

Cognitive Organization

Clustering. The hypothesized relationship type effect was significant, $F(3, 192) = 9.34, p < .0001$. Tukey's honestly significant difference (HSD) test comparisons ($p < .05$) indicated that subjects tended to use married couple categories (M ARC = .405), $t(49) = 7.22, p < .001$, to a significantly greater extent than acquaintance categories (M ARC = .207), $t(49) = 4.44, p <$

.001, football team fan categories ($M \text{ ARC} = .107$), $t(49) = 3.08$, $p < .01$, and yoked couple categories ($M \text{ ARC} = .131$), $t(49) = 3.69$, $p < .001$. Subjects in the latter three conditions evidenced no statistically significant differences. Thus, the married couple category predominated as a basis for organizing target information.

A significant exposure frequency main effect revealed that cognitive organization by couple categories was higher in the triple-exposure ($M \text{ ARC} = .256$) than single-exposure ($M \text{ ARC} = .169$) condition, $F(1, 192) = 3.90$, $p < .05$. The interaction was not reliable, $F(3, 192) = 0.11$, $p < .95$ (Table 5).

Confusions. The relationship type main effect for within-couple confusions was significant, $F(3, 192) = 3.19$, $p < .03$. Tukey's HSD tests ($p < .05$) showed that subjects committed significantly more confusions in the married couple condition ($M = 1.10$) compared with the football team fan condition ($M = 0.64$) or the yoked couple condition ($M = 0.68$). Subjects also committed more confusions in the married couple than acquaintances ($M = 0.90$) condition, although the difference was not significant. Furthermore, a significant exposure frequency main effect revealed that subjects made more confusions in the single-exposure case ($M = 1.12$) than the triple-exposure case ($M = 0.54$), $F(1, 192) = 23.57$, $p < .0001$.

The results were qualified somewhat by the Exposure Frequency \times Relationship Type interaction, $F(3, 192) = 3.52$, $p < .02$. Tukey's HSD comparisons ($p < .05$) indicated that, in the single-exposure case, the number of married couple confusions was significantly higher than the number of confusions made

for yoked couples, football team fans, and acquaintances. However, in the triple-exposure condition, the number of confusions did not significantly differ across the four relationship type conditions. These results are consistent with our previous findings that showed less cognitive differentiation of couple members in the single-exposure condition (i.e., the condition in which the target information was less well learned).

The relationship type main effect with regard to between couples confusions was significant, $F(3, 192) = 5.55$, $p < .001$. Tukey's HSD analyses ($p < .05$) revealed that subjects made fewer confusions for married couples ($M = 13.40$) than acquaintances ($M = 16.46$), football team fans ($M = 17.60$), or yoked couples ($M = 16.18$). No other mean difference was statistically significant. The exposure frequency main effect was reliable, $F(1, 192) = 44.71$. Subjects made more confusions in the single-exposure ($M = 18.44$) rather than the triple-exposure ($M = 13.38$) condition. Finally, the interaction was not significant, $F(3, 192) = 0.80$, $p < .50$ (Table 5).

Recall

Recall for married couples did not significantly differ from recall for any other relationship type condition, $F(3, 192) = 0.70$, $p < .56$. Subjects recalled a greater number of information items in the triple-exposure compared with the single-exposure condition, $F(1, 192) = 28.49$, $p < .0001$. The interaction was not reliable, $F(3, 192) = 0.60$, $p < .62$. Means are presented in Table 5.

Experiment 5

The prior four experiments demonstrated that marriage plays a strong role in the cognitive organization of information. Experiment 5 intended to provide a better understanding of the processing locus of this finding. That is, does relationship category influence the way information is encoded, or does it primarily affect retrieval? To tackle this issue, we informed subjects about the target relation (i.e., married vs. yoked couples) either simultaneously with information acquisition (encoding) or immediately following the recall instructions and preceding retrieval (retrieval).

Method

Two hundred subjects participated in this experiment. The experimental design involved a 2 (relationship type: married couples or yoked couples) \times 2 (exposure frequency: single or triple) \times 2 (timing: encoding or retrieval) between-subjects factorial.

The stimulus materials were identical to those used in Experiment 1, and so was the procedure, with one exception. For half of the subjects, each target person was designated as married to either a specified or unspecified other, during information acquisition, as in Experiment 1 (encoding). This information was provided to the remaining half of the subjects only after they had read the recall instructions and before they started to retrieve the information (retrieval).

Results and Discussion

Cognitive Organization

Clustering. Subjects spontaneously organized the information on the basis of married couple categories ($M \text{ ARC score} =$

Table 5
Mean ARC Scores, Confusions, and Recalled Items as a Function of Relationship Type and Exposure Frequency: Experiment 4

Exposure frequency	Married couples	Acquaintances	Football fans	Yoked couples
ARC score				
Single	.370*	.141	.071	.093
Triple	.439*	.273*	.143*	.169*
Overall <i>M</i>	.405 _a	.207 _b	.107 _b	.131 _b
Within-couple confusion				
Single	1.72 _a	1.04 _b	0.88 _b	0.84 _b
Triple	0.48 _b	0.76 _b	0.40 _b	0.52 _b
Overall <i>M</i>	1.10 _a	0.90 _{ab}	0.64 _b	0.68 _b
Between-couples confusion				
Single	15.68	18.16	20.80	19.12
Triple	11.12	14.76	14.40	13.24
Overall <i>M</i>	13.40 _a	16.46 _b	17.60 _b	16.18 _b
Recalled item				
Single	12.24	13.12	11.80	13.40
Triple	16.52	15.24	15.44	16.28
Overall <i>M</i>	14.38	14.18	13.62	14.18

Note. Within each within-couple confusion row and column, means with different subscripts differ significantly from one another at the $p < .05$ level. ARC = adjusted ratio of clustering.

* Score differs significantly from zero ($p < .05$).

.156), $t(99) = 5.59, p < .001$, more so than on the basis of yoked couple categories (M ARC score = .047), $t(99) = 2.21, p < .05$, $F(1, 192) = 12.22, p < .001$, thus replicating previous findings. Subjects manifested a nonsignificant tendency to organize information by couples in the triple-exposure (M ARC score = .119) as opposed to the single-exposure (M ARC score = .085) condition, $F(1, 192) = 1.23, p < .27$. The timing main effect was significant: Subjects tended to form couple categories to a greater extent at encoding (M ARC score = .191) rather than retrieval (M ARC score = .013), $F(1, 192) = 32.59, p < .0001$. All means are provided in Table 6.

The above main effects were qualified by two interactions. The Relationship Type \times Timing interaction, $F(1, 192) = 15.31, p < .0001$, was of particular relevance to the purposes of this experiment. This interaction revealed that at encoding, organization by married couple categories (M ARC score = .307) was far more predominant than organization by yoked couple categories, (M ARC score = .075), $t(98) = -4.66, p < .0001$, but organization by married couple (M ARC score = .006) and yoked couple categories (M ARC score = .019) did not differ at the retrieval stage, $t(98) = .33, p < .74$. This finding strongly supports the notion that relationship organization occurs at the encoding stage.

A Relationship Type \times Exposure Frequency interaction indicated that although the strength of married couple categories increased from single (M ARC score = .105) to triple (M ARC score = .208) exposure, $t(98) = -1.86, p < .07$, the strength of yoked couple categories did not essentially increase moving from single ($M = .064$) to triple exposure ($M = .030$), $t(98) = .79, p < .43$; $F(1, 192) = 4.76, p < .03$. The three-way interaction was not significant, $F(1, 192) = 1.68, p < .20$.

Table 6
Mean ARC Scores, Confusions, and Recalled Items
as a Function of Relationship Type, Exposure
Frequency, and Timing: Experiment 5

Exposure frequency	Married couples		Yoked couples	
	Encoding	Retrieval	Encoding	Retrieval
ARC score				
Single	.211*	-.001	.088	.040
Triple	.402*	.013	.062	-.002
Within-couple confusion				
Single	1.92	0.56	0.68	0.73
Triple	0.48	0.40	0.64	0.52
Between-couples confusion				
Single	12.72	20.08	19.20	19.52
Triple	9.76	19.20	11.80	11.88
Recalled items				
Single	17.36	17.04	15.92	16.04
Triple	15.72	17.64	16.08	17.84

Note. ARC = adjusted ratio of clustering.
* Score differs significantly from zero ($p < .05$).

Confusions. Subjects made more within-couple confusions for married ($M = .84$) relative to yoked couples ($M = .64$), $F(1, 192) = 4.76, p < .03$. Furthermore, subjects made more confusions in the single-exposure ($M = .97$) relative to the triple-exposure condition ($M = .51$), $F(1, 192) = 20.98, p < .0001$. These results agree with earlier findings. The timing main effect was significant: Subjects made more confusions when relationship information was provided at encoding ($M = .93$) rather than at retrieval ($M = .55$), $F(1, 192) = 20.90, p < .0001$. All means are provided in Table 6.

These main effects were qualified by several interactions. Of particular interest was the Relationship Type \times Timing interaction, $F(1, 192) = 17.17, p < .0001$. It was only during encoding that subjects committed more confusions for married ($M = 1.20$) than yoked ($M = .66$) couples, $t(98) = -3.64, p < .0001$; during retrieval, this difference largely diminished (means for married-couple and yoked-couple confusions were .48 and .63, respectively), $t(98) = 1.37, p < .17$.

A Relationship Type \times Exposure Frequency interaction, $F(1, 192) = 10.70, p < .001$, showed that subjects made more confusions for married couples ($M = 1.24$) than yoked couples ($M = 0.71$) in the single-exposure condition, $t(98) = -2.95, p < .004$, but this difference was eliminated in the triple-exposure condition (means for married and yoked couples were 0.44 and 0.58, respectively), $t(98) = .82, p < .42$. Finally, an Exposure Frequency \times Timing interaction, $F(1, 192) = 3.92, p < .003$, indicated that confusions at the encoding stage ($M = 1.30$) surpassed those at the retrieval stage ($M = 0.65$) in the single-exposure case, $t(98) = 4.31, p < .0001$, but confusions at encoding and retrieval were essentially equal in the triple-exposure case (means were 0.56 and 0.46, respectively), $t(98) = 1.06, p < .29$. Consistent with this interpretation, the three-way interaction was significant, $F(1, 192) = 15.41, p < .0001$.

Analyses on between-couple confusions were conducted next. The number of married couple confusions ($M = 15.44$) was not significantly lower than the number of yoked couple confusions ($M = 15.60$), $F(1, 192) = 0.20, p < .66$. Subjects made more confusions in the single-exposure ($M = 17.88$) than the triple-exposure condition ($M = 13.16$), $F(1, 192) = 170.78, p < .0001$. And subjects committed a higher number of confusions at retrieval ($M = 17.67$) than at encoding ($M = 13.37$), $F(1, 192) = 141.74, p < .0001$. All means are provided in Table 6.

Most important, the Relationship Type \times Timing interaction was significant, $F(1, 192) = 128.86, p < .0001$. It was only at the encoding stage that subjects made fewer confusions for married ($M = 11.24$) than yoked ($M = 15.50$) couples, $t(98) = 5.39, p < .0001$; the pattern was reversed with regard to the retrieval stage (means for married couple and yoked couple confusions were 19.64 and 15.70, respectively), $t(98) = -5.51, p < .0001$.

Finally, the Relationship Type \times Exposure Frequency interaction indicated that subjects made fewer confusions for married ($M = 16.40$) than yoked ($M = 19.36$) couples in the single-exposure condition, $t(98) = 4.16, p < .0001$, but made more confusions for married ($M = 14.48$) as opposed to yoked ($M = 11.84$) couples in the triple-exposure condition, $t(98) = -3.08, p < .003$, $F(1, 192) = 60.10, p < .0001$.

Recall

Recall for married couples did not reliably differ from recall for yoked couples, $F(1, 192) = 0.78, p < .38$. Surprisingly, sub-

jects did not recall significantly more information items in the triple-exposure ($M = 16.82$) relative to the single-exposure ($M = 16.59$) condition, $F(1, 192) = 0.19$, $p < .67$. The Relationship Type \times Exposure Frequency interaction was not significant, $F(1, 192) = 1.98$, $p < .16$. No effects involving the timing manipulation was significant (ps ranged between .07 and .90). Means are provided in Table 6.

General Discussion

We first summarize the obtained results of these five experiments. We subsequently discuss their theoretical implications and then consider limitations and directions for future research.

We used a converging operations approach (Garner, Hake, & Eriksen, 1956; Pryor & Ostrom, 1981; Srull, 1984) to examine subjects' reliance on relationships as a spontaneous category for organizing social information. Specifically, we used two types of measures. Clustering (ARC) indices reflected sequential ordering of information in free recall, whereas the relative distribution of within-couple and between-couples confusions indicated the strength of category differentiation. Results provided by both types of measures converged strongly and are therefore combined.

1. In all five experiments, subjects relied significantly on relationship categories for organizing information about target persons.
2. Reliance on relationships for organizing person information was independent of presentation order.
3. Although a single presentation was generally sufficient to produce relationship-based organization, such organization was stronger when each piece of information was viewed three times than when it was viewed once.
4. Strong relationships (i.e., marriage) were more likely to be used as organizational structure than weak relationships (i.e., acquaintanceship and co-fanship).
5. Formation of relationship categories occurred at the encoding rather than the retrieval stage.

Our general hypothesis, namely, that relationships represent an important natural category for organizing information about other people, was therefore supported. These findings are consonant with prior research and theory in demonstrating the importance of relationships in organizing perception and representation of the social world (e.g., Bond & Brockett, 1987; A. P. Fiske et al., 1991; Heider, 1958). The present research makes this point more strongly than prior work does, in that relationships dominated spontaneous organization of the stimulus field. Note that subjects were instructed to memorize information about, and form impressions of, each target person. At no point was it suggested, explicitly or implicitly, that couple information would be needed or helpful. Despite this instructional set, which might have been expected to favor person-based organization, subjects spontaneously formed and used relationship categories.

Our results also indicate that specific relationships may be important for organizing impressions of others. Whereas A. P. Fiske et al. (1991) showed that mental representations were organized around the four basic relationship orientations, our find-

ings go further in suggesting that specific dyadic relationships may also be used to organize impressions of individuals.

It therefore appears that relationships play a central organizing role not only in formal, well-articulated theories of social interaction and interdependence, but also in spontaneous lay representations of the social world. This principle may partially reflect strategic (not necessarily conscious) considerations on the part of observers. The perceiver who acquires multiple new data about multiple others is faced with a difficult task, one that may be simplified by considering links between individuals. Members of social groups usually possess attributes in common, including not only those qualities that define the group (e.g., occupation, interests, and nationality), but also nondefining characteristics that covary with group membership (e.g., attitudes and values). Because affiliation is a highly selective and assortative process (Wheeler, 1974), especially in close relationships, it is reasonable for perceivers to expect that close associates would have much in common (as the literature on attitudinal and personality similarity among friends indicates; Berscheid, 1985). Moreover, many activities and life experiences are conducted not in isolation, but with other people, especially relatives, friends, and colleagues. As a consequence, for "cognitive misers" (Cyert, Simon, & Trow, 1956; Taylor, 1981) seeking efficiency in their representations of other people and their attributes, it would make great sense to organize cognitive portrayals along relationship lines.

An important issue not addressed in the current research concerns exactly which relationship characteristics lead perceivers to see a usable connection between individual targets. In all five experiments, close relationships were operationalized as marriage. Only in Experiment 4 did we examine differences between different relationship types, and herein we found that marriage was used to structure memory to a greater extent than were two weaker relationship forms: acquaintanceship and co-fanship. However, we cannot know from these data whether other close relationship types, such as best friends or siblings, would similarly influence mental representation.

We chose to study marriage in the first stage of this research program because it is probably the strongest exemplar of a close adult relationship, at least in western culture. Marriage nevertheless has unique characteristics that make generalization to other sorts of close relationships unclear at this time. That is, marital and other close relationships differ in both qualitative and quantitative terms. For example, the former includes sexuality, economic and legal interdependence, child rearing, and often a sense of possession of the other, whereas differences of degree are common in such processes as commitment, love, liking, and intimacy. Further research is currently being conducted to examine the generalizability of these findings to various other close relationships.

Similarly, we do not know which features of marriage lead perceivers to rely on the couple as a unit for organizing mental representations. That is, are the observed differences between marriage and acquaintance due to bond strength or to the type of bond between partners? In Heider's (1958) and Newcomb's (1961) balance theories, mere association is thought to be sufficient to produce perception of a unit relationship. More recent versions of interdependence theory suggest that the frequency, intensity, diversity, and duration of social interaction may be

responsible for creating perceptions of closeness (Kelley et al., 1983). However, other processes may also be responsible. For instance, the extent to which two people are emotionally bonded to each other may lead observers to link them in memory. Or, drawing from sociobiological theories, shared genetic backgrounds and parental investments may suggest an important association to observers (Buck & Ginsburg, 1991). The interesting question here is not which characteristics define a close relationship, but rather which qualities lead observers to spontaneously connect relationship partners in memory. Thus, with further research, this work has the potential to answer questions about the distinction between perceptions of individuals and dyads.

One potential limitation of the present investigation is the relatively restricted amount of information with which subjects were presented. Subjects received five pieces of information about each target and did not expect to interact with them. It is conceivable that relationships would not be used to structure memory if subjects knew the targets better or if they expected to interact with them individually. However, it should be noted that relationship organization was stronger in the triple-exposure than in the single-exposure condition, when subjects could presumably form clearer images of each target. Moreover, relationship organization was evident in Experiments 2 and 3, in which married partners were not presented contiguously. Thus, minimally, initial representations of newly acquired information may rely on relationships to simplify cognition. It would not be surprising, of course, if couple-based representations became more individualized later on, as more differentiating information was assimilated (as is implied by the impact of diagnostic information on stereotype-based impressions; see Locksley, Borgida, Brekke, & Hepburn, 1980). But even in this instance, the fact that initial encoding may be organized around relationships suggests the potential for lasting cognitive and behavioral effects.

We wish to make another cautionary remark. Our research was designed to be high in internal validity but not necessarily high in external validity. Thus, we are not in a position to make strong claims about generalizability, and we do not wish to make such claims. Nevertheless, we believe that these findings are representative of the manner in which people contend with natural impression-formation tasks. Of course, the nature of these tasks and conditions varies greatly in real life, and these variations may moderate the extent to which relationship information is used to structure person memory. Future research is needed to clarify the moderating variables that influence this phenomenon.

We conclude by noting the relevance of our results to relationship experience. As close relationships develop, partners often bemoan their loss of individual identity. Romantic partners, for example, are often introduced to new acquaintances as one half of a dyad, are invited to activities only as couples, and are spoken to as if they had full access to their partner's memories and calendar. Our findings suggest that the tendency to mentally link close relationship partners may reflect cognitive simplification processes that themselves reflect the importance of relationships to coming to know another person. Thus, organizing mental representations around rela-

tionships may be one way in which perceivers acknowledge the central role of relational activity in human functioning.

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Received January 30, 1992

Revision received June 16, 1992

Accepted July 27, 1992 ■