ACTION IDENTIFICATION IN THE EMERGENCE OF SOCIAL BEHAVIOR

DANIEL M. WEGNER
Trinity University

ROBIN R. VALLACHER
Florida Atlantic University

GEORGE W. KIERSTED
Trinity University

DENISE DIZADJI
Illinois Institute of Technology

Emergent action occurs when people find themselves doing something they did not set out to do. According to action identification theory, such action will ensue when people concentrate on the details of an act and then are exposed to information suggesting that the act can be identified in a new way. This prediction was tested in two experiments on the emergence of social behavior. In the first, subjects who identified the act of "participating in an experiment" in terms of its details were found to be more susceptible than others to suggestions that they were "helping" or "being selfish." These subjects continued their emergent action by choosing to participate in subsequent activities consistent with the emergent act identity. The second experiment offered a bogus "computer personality analysis" to subjects, indicating that they were either cooperative or competitive. Those subjects who had initially described their behaviors for analysis at a detailed level, as compared to those who had described their behaviors at a comprehensive level, were found to be more accepting of this feedback and more likely to volunteer for future activities consistent with the feedback.

In the give-and-take of social interaction, it is sometimes hard to tell when one is giving and when one is taking. Although there are some obvious cases of giving (e.g., sacrificing one's life for another), and

some equally obvious cases of taking (e.g., taking the life of another), such extremes of prosocial and antisocial action reside more in the writings of social philosophers than in the ordinary behaviors of everyday life. Many social behaviors are exchanges, and thus admit to both interpretations; on buying a car, for example, one gives money and takes the car. And even behaviors that have little obvious exchange quality (e.g., giving blood) can be entirely undermined in their prosocial or antisocial implications by the mere suggestion of an ulterior motive (e.g., expecting to see an attractive nurse). These observations suggest that the "true" nature of a social behavior may often be uncertain and ambiguous.

This very ambiguity, however, may play an important part in the everyday generation of prosocial and antisocial action. The theory of action identification (Vallacher & Wegner, 1985; Wegner & Vallacher, 1986) suggests that people are faced with a dilemma in determining the meaning of *any* action. Thus at times, people's understanding of their own actions may be channeled toward prosocial meanings, antisocial meanings, or yet others. And, as a result, their subsequent behavior can change to express their new understanding of what they are doing. Mead (1938) suggested that many social behaviors are "emergent" in this sense; they arise not from some biological imperative, but rather from people's developing understanding of what they can do. Action-identification theory concurs with this account, and goes on to specify the circumstances under which the emergence of action should occur. The present research applies this analysis to the emergence of helpful versus selfish action (Experiment 1), and cooperative versus competitive action (Experiment 2).

Action identification theory holds that people know what they are doing. The identifications people have in mind for the actions they perform, however, are not particularly complete, and moreover, may change from one moment to the next. The theory assumes that in any particular moment, a person adopts only a single, prepotent identity for an action, and the theory suggests that this identity serves as a cognitive referent for the initiation of the action. Thus, in some cases, people may undertake an action with a particular understanding of it in mind, and then continue to understand it that way during and after its occurrence. In other cases, though, people may begin an act with one understanding, only to have that understanding change into something quite different later on. The theory indicates, then, that the understanding of action can remain constant, guiding action through its course, or that it can change to lead action on a new course.

The theory proposes that the various identities a person knows for a particular action are organized hierarchically in the person's cognitive

representation of action. Some identities convey the details or specifics of the action; such *lower-level* identities indicate how an action is done. Other identities convey a more general understanding of the action; such *higher-level* identities indicate why or with what effect the action is done. So, for example, "cooking dinner" is lower in level than "preparing for company" because it indicates how "preparing for company" is done; at the same time, "cooking dinner" is higher in level than "stirring the vegetables" because it suggests why or with what effect the "stirring" was done. In general, an identity A is higher in level than identity B if it makes sense to say that one does A *by* B (e.g., one "cooks dinner" *by* "stirring the vegetables"). With this sort of analysis, all the identities a person knows for a particular action can be located in an act identity structure that ranges from the various high-level consequences of the action to the low-level details (Vallacher & Wegner, 1985).

According to the theory, the particular identity for action that will become prepotent for a person is constrained by two general tendencies. One of these is a tendency to identify action at the highest possible level. It is not surprising, after all, that people would want to be informed of their acts in the most encompassing way. Higher-level identifications indicate what one does *by* acting, and so inform the person of the consequences of action. The human proclivity to understand action in this way is thwarted from time to time, however, by a second identification tendency. When an action cannot be performed merely by reference to a high-level identity, the person will have to think of lower-level identities in order to discern how to continue. Action details such as "gripping the club correctly" must come to mind, for example, when the person fails in "driving the golf ball to the green." Having insufficient skill to perform the act as identified, or simply coming upon a source of disruption, leads people to abandon high-level identities to focus on the mechanics of the action.

These tendencies suggest that any change in the identification of an action is constrained to follow a particular pattern: People change their conceptions of what they are doing either by moving from a higher level to a lower one, or by moving from a lower level to a higher one. This means that in moving from one high-level conception of an action (e.g., "I'm helping") to another (e.g., "I'm being selfish"), the person must necessarily pass through a transitional state in which the specifics of the action come to mind (e.g., "I'm moving my arms," "I'm talking," etc.). This formulation indicates that when people hold a fairly comprehensive and general conception of what they are doing, that conception will serve as an intention to act and will remain unperturbed

by suggestions that the act has some alternative general identity. Thus, the theory explains why people are not always willing to believe it when someone suggests to them a new high-level conception of their action. It is only when people come to identify an action in terms of its details that they lose sight of their initial high-level understanding of the act and become susceptible to information indicating that the act can be identified in another high-level way.

Some evidence for this emergence process comes from experiments performed by Wegner, Vallacher, Macomber, Wood, and Arps (1984). In these studies, people were induced to think about the details of some action (e.g., "going to college," "drinking coffee"); this was accomplished either through direct instructions to list the details, or through a disruption of the ongoing action. Then they were exposed to a persuasive communication suggesting that this action could admit to an unexpected alternative high-level identity. In the case of "going to college," for example, some subjects were alerted to the possibility that this act could amount to "improving one's sex life," while others were informed that it could be "impairing one's sex life." As compared with subjects who did not concentrate on the details of the act, those who did were found to be more susceptible to the new high-level identifications that were offered. In the "coffee-drinking" study, subjects were also given the opportunity to act on their new identifications. Participants who were led to consider details of the act, and who were then informed that "drinking coffee" has the effect of "increasing one's search for excitement," proceeded to search for excitement by turning up the volume of music to which they were listening. Subjects who were led to low levels of identification and then informed that their act amounted to "decreasing one's search for excitement," in turn, reduced their volume settings.

These studies served to illustrate the general parameters of the action emergence process. They showed that, at least in two paradigms, emergent identification of action could be produced by the manipulations suggested by the theory. Driving people to think about an action at low levels, and then providing them with information indicating that the action had a new high-level identification, seemed sufficient in these circumstances to promote emergence with the new high-level identity. Yet these studies fell short of providing an assessment of the emergence process in the domain of meaningful social behavior. Because the studies promoted emergence for relatively asocial acts, it has remained unclear whether this process may impinge on the more socially relevant actions of everyday life. The present studies were designed to examine this possibility.

EXPERIMENT 1: EMERGENCE OF ALTRUISM AND EGOISM

Like many of the social behaviors one encounters daily, "taking part in an experiment" contains elements of both altruism and egoism. Subjects often volunteer for experiments under the impression that they will be of some help to psychological researchers; the act could thus be identified as "helping." At the same time, undergraduate student subjects often volunteer as a means of obtaining extra credit in their psychology classes; the act could thus be identified as "being selfish." In this study, we measured subjects' identifications for the act of "participating in an experiment" to find those subjects who understood the act primarily at low levels. We then arranged to expose all subjects to either an "altruistic" or "egoistic" interpretation of their action by filling the last portion of their action identification questionnaires with items pointing toward one or the other interpretation. Following this, subjects were all given the opportunity to volunteer for additional participation in experiments of two types. We expected that subjects with low-level identifications would differ in their actions at this point. Those led to emerge with the altruistic identity of their earlier participation would now opt to take part in experiments that appeared "helpful"; those led to emerge with the egoistic identity of their earlier participation would now choose to participate in experiments that offered much extra credit. Subjects who had not identified their earlier participation at low levels, though, would not emerge with a new identification, and so would not opt strongly for helping or for getting credit.

METHOD

Subjects and Design

A total of 39 undergraduate students (27 females and 12 males) participated in return for extra credit in their introductory psychology classes at Trinity University. Each served in one condition of a 2 (prior low-level identification present vs. absent) × 2 (altruistic vs. egoistic target emergent identity) factorial design. A subject's initial level of identification of the act of "participating in an experiment" served as the criterion for assigning the subject to the condition of low-level identification present or absent. Subjects in each of these groups were then assigned to the condition of either the "altruistic" or "egoistic" target emergent identity on the basis of the random distribution of experimental booklets. One subject expressed suspicion in a postexperimental questionnaire that the manipulation and measurement phases of the experiment were linked, and her data were excluded from the analyses.

The Ostensible Experiment

Subjects arrived at the laboratory in small groups (of four to six) and were each given a booklet containing a series of English-language-usage and clerical tasks. Each subject worked on one page that called for "Crossing out all *t*'s in a paragraph," another that called for choosing which of two words was correct at several points in a paragraph, and another that required circling the misspelled words in a paragraph. Then the booklet presented a series of multiple-choice and matching questions on the content of the earlier paragraphs. This led almost all subjects to believe that the study was concerned with incidental learning, and they regularly voiced this interpretation on a postexperimental questionnaire (e.g., "You were trying to find out what people learn when they are not paying attention"). This activity took approximately 30 minutes, and when subjects were finished, they were given an action-identification questionnaire.

The Action Identification Questionnaire

The questionnaire was constructed to serve both as an assessment of subjects' degree of low-level identification of "participating in the experiment," and as a manipulation of altruistic or egoistic high-level emergence. The assessment portion of the questionnaire was developed through a free-response procedure (cf. Vallacher & Wegner, 1985). Pilot subjects ($n = 10$) were shown the materials for the incidental-learning study and were asked to make a list of "what one does in participating in this experiment." Their most frequent responses were compiled, and a list of 27 that surfaced more than once in their descriptions was isolated. The action identification questionnaire began with this list of 27 identities, and called for the respondent to rate each one according to how well it described the act of "participating in this experiment." Responses were solicited on 7-point scales anchored by "describes very poorly" (1) and "describes very well" (7). It should be noted that for this portion of the questionnaire, we avoided mention of identities strongly relevant to a "helping" or "getting extra credit" interpretation of the action; these identities were reserved for inclusion in the later, manipulation portion of the questionnaire.

A principal-components factor analysis with varimax rotation performed on ratings of the identities revealed a reliable cluster of eight low-level identities as the first factor. The item-loading criterion was .40 for this and other factors, and each factor was found to be internally consistent (mean Cronbach's $\alpha = .83$). Identities loading on this low-level factor included, for example, "crossing out *t*'s," "making marks on paper," and "answering multiple-choice questions." Other

factors that were observed in this analysis corresponded to different higher-level meanings of the act; these included factors representing "testing my skills" (four identities), "participating in an experiment" (four identities), "learning a new subject matter" (three identities), "working" (three identities), and "reading" (three identities). This array of factors indicated that high-level identification was multidimensional, and so could not be measured in a unitary way that would allow us to partition the subject population into "high-level" versus "not high-level" subjects. Because low-level identification represents a unidimensional construct, however, it can be used to measure a person's overall level of identification for an act (Vallacher & Wegner, 1985). Therefore, we computed scores for all subjects as the sum of ratings on the low-level identity cluster. The sample was then split at the median on this measure (40 on a scale that could vary between 8 and 56) into low-level-present and low-level-absent groups.

Approximately half of the subjects in each of these groups then encountered the suggestion that they had behaved altruistically. The last seven items on their action identification questionnaires were arranged to express only this meaning. We appended these identities (e.g., "helping people study psychology," "aiding the experimenter," "helping a student to do research," etc.) to the 27 identities that comprised the initial portion of the questionnaire. The remaining subjects encountered seven egoistic identities at the end of their questionnaires (e.g., "earning extra credit," "getting a better grade in psychology," "picking up some padding in case I do poorly on a psychology test," etc.). These sets of items were expected to suggest to subjects what the high-level meaning of their action might be (cf. Salancik & Conway, 1975). Although the assessment identity set could also have been suggestive in this sense, we trusted that its diversity would be sufficient to prevent any one clear avenue of emergence from developing prior to the subjects' encounter with the seven-item manipulation set.

Measure of Emergent Action

On completing the action identification questionnaire, subjects were thanked for their participation in the experiment. Their booklets were collected, and they were informed of a debriefing session to be held at a later date. The experimenter then explained that the Department of Psychology's Human Subject Pool Coordinator had asked to visit the experiment. He requested that participants "stick around while I let her know we're through" and left the room. A moment later, the coordinator arrived. She was in fact the coordinator for the department, and all subjects were familiar with her from recruitment sessions held earlier in the semester in their classes. She distributed two forms, both of which were reproduced by a noticeably different copying process from that used for the forms associated with the ostensibly complete experiment. The first was called the "Human Subject Pool Preference Form," and contained the primary dependent measures. The second was a postexperimental questionnaire.

On the preference form, subjects were to provide their names and phone numbers. Then they were to browse through a list of "the activities that you may participate in as a member of the Human Subject Pool this semester" and rank the activities from 1 to 10 according to their personal preferences. The described activities varied widely, from "attend an upcoming lecture" to "go to an orientation on psychology materials in the library." Two of the activities, however, were stated in terms that we believed would mark them as clearly altruistic or egoistic. The altruistic choice was to "help by participating in the final study in a series to be included in a psychology book"; preratings by another group of subjects had revealed that this option was seen as very helpful. The egoistic choice, in turn, was to "participate in a research project for 4 extra credit points"; subjects only needed 10 such points to earn their maximum extra credit for the semester, and preratings revealed that this option was seen as attractive to those seeking such credit. The key measures of the study, then, were subjects' rankings of each of these options; the 1–10 rankings were transformed for analysis such that higher numbers indicated stronger preference.

Finally, subjects completed the postexperimental questionnaire. It was introduced as the "Human Subject Pool Committee's means of making sure that experiments are conducted properly," and it called for subjects to respond to open-ended questions on the nature of the experiment in which they had most recently participated. It asked whether subjects felt they had been deceived in the study and gathered their impressions of what the study had been about. Analysis of these responses indicated that only one subject could be regarded as even slightly suspicious of the connection between the study and the coordinator's dependent-measure questionnaire.

RESULTS AND DISCUSSION

Act Identity Ratings

The action identification theory account of emergence indicates that people who are thinking about an act at low levels should be highly susceptible to communications suggesting new high-level identifica-

tions of the act. In this study, the communications that suggested to subjects that they were "helping" or "getting extra credit" were items appended to the action identification questionnaire. Thus, we could examine responses to these items as one way of determining whether subjects at low levels—as assessed by the earlier action identification items—indeed found the message conveyed by the last seven items to be an attractive one.

By this measure, subjects in the low-level group were found to emerge with the target high-level identity. Their summed ratings of the seven high-level identities (suggesting either altruism or egoism, depending on their condition) averaged 31.7, whereas the comparable mean for subjects who were not at low levels was 22.2. In a 2×2 analysis of variance (ANOVA) corresponding to the study design, this main effect of prior identification level was significant, $F(1, 34) = 11.08$, $p < .002$, while other effects were not.

This difference might be interpreted, however, as the effect of a response bias in the action identification questionnaire. Subjects selected as low-level-present were those who rated such identities strongly, whereas those assigned to the low-level-absent group rated such low-level identities only weakly. Because there is a tendency for a subject's rating of any one identity to be slightly correlated with ratings of others (Vallacher & Wegner, 1985), the acceptance of the target emergent identity by subjects in the low-level-present group could reflect only this shared variance. For this reason, we conducted a series of ANOVAs corresponding to the aforementioned ANOVA, in which we partitioned subjects not on their low-level factor scores, but rather on their scores on each of the high-level factors. If the response bias was operating to inflate subjects' ratings of the last seven identities in those groups that rated a particular high-level factor strongly, we would expect the same significant effect observed in the initial analysis. This was not the case, as all main effects for the high-level subject-grouping variable were nonsignificant in these analyses (all F's < 1.0). Apparently, prior low-level identification leads to subsequent acceptance of a high-level act identity, whereas prior high-level identification (at least as measured in this way) does not impinge on such acceptance. If prior high-level identification could be measured as a single dimension, of course, we would expect its presence to *reduce* emergence with the target identity instead of simply having no impact. But, because such identification took the form of a variety of independent dimensions, this predicted feature of high-level identification could not be assessed in this paradigm, and the high-level measures could serve only as points of comparison for the elimination of a response bias interpretation of the low-level measure.

Participation Choices

The participation choices were signed commitments for future action, and were obtained as the principal dependent measures. The mean preferences for the altruistic and egoistic participation opportunities in the four experimental groups are shown in Table 1. The altruistic and egoistic participation choices were treated as repeated measures in a $2 \times 2 \times 2$ ANOVA.

This analysis indicated significant main effects for low-level identification presence, $F(1, 34) = 4.64$, $p < .05$ (stronger preference for participation of any kind was expressed by low-level-present subjects), and preference measure, $F(1, 34) = 7.04$, $p < .02$ (subjects overall preferred the egoistic activity). The interpretation of these main effects must be qualified, however, by a significant three-way interaction corresponding precisely to the action identification theory prediction, $F(1, 34) = 6.09$, $p < .02$.

The form of this interaction shows that only low-level-present subjects were sensitive to the suggested new action direction. Looking first at the preferences for participation in the helpful experiment, we can note that tests of simple simple main effects indicated only a significant difference between low-level-present and low-level-absent subjects in the "helping" target identity condition, $F(1, 34) = 5.00$, $p < .05$. Among subjects who received a communication suggesting that they had "helped" in participating in the experiment, those who understood their participation at low levels were more likely than those who did not to choose to participate in a subsequent "helpful" study.

TABLE 1
Preference for Altruistic and Egoistic Activities

TARGET EMERGENT IDENTITY	LOW-LEVEL IDENTIFICATION	
	ABSENT	PRESENT
PREFERENCE FOR HELPING		
'Helping"	3.00 (8)	5.45 (11)
'Getting extra credit'	4.22 (9)	3.80 (10)
PREFERENCE FOR EXTRA CREDIT		
'Helping"	6.38	5.36
'Getting extra credit'	4.56	7.10

Note. The preference measures could vary from 1 to 10, with higher values indicating greater preference. Parenthetical entries are cell *n*'s.

Turning to the measure of preference for extra credit, we found the expected complementary pattern. In this case, tests for simple simple main effects indicated only a significantly greater preference for subsequent praticipation among low-level-present as opposed to low-level-absent subjects in the "getting extra credit" target identity condition, $F (1, 34) = 5.56$, $p < .05$. So, among subjects who were alerted to the possibility that they had "obtained extra credit" in participating in the experiment, those who understood their participation at low levels were more likely than those who did not to choose to engage in another action with this identity.

An interesting (but nonsignificant) trend in the pattern of means deserves mention. Low-level-absent subjects seem not merely to have ignored the suggestions they were offered on the meaning of their activity. Instead, they appear to have reacted to the suggestions with some signs of opposition. Their participation choices leaned away from helping when helping was suggested to them, and similarly inclined against obtaining extra credit when this was suggested. This phenomenon is not strictly derivable from the theory, but perhaps may signal the strength with which individuals adhere to their more general understandings of action when low levels are not made salient.

Summary

Although egoism and altruism can represent opposing forces in everyday life, the findings of this study indicate that they may have similar beginnings in processes of action identification. Choices to perform the egoistic act of "getting extra credit," like choices to perform the altruistic act of "helping the experimenter," were found here to be dependent on subjects' conceptions of what they had recently done. Those subjects who understood their recent act of "participating in an experiment" in terms of its low-level details were peculiarly sensitive to the suggestion that they had been acting egoistically or altruistically. They adopted the new identification of their action, and then went on to choose subsequent action consistent with that identification. It is noteworthy that these results were observed under conditions arranged to preclude a self-presentation interpretation: Subjects were prevented from recognizing the connection between the manipulation and measurement portions of the experiment (cf. Rosenberg, 1965).

EXPERIMENT 2: EMERGENCE OF COOPERATION AND COMPETITION

Our purpose in conducting this experiment was to determine whether the effect observed in the preceding study would be replicated under markedly different experimental conditions. We arranged for this study to include a situational rather than individual-difference manipulation of identification level, a different means of suggesting an emergent high-level identity, and a focus on a different behavioral domain. The departure from the individual-difference manipulation was particularly important, given the typical interpretational ambiguities associated with any procedure for subject selection that disturbs the random assignment of subjects to conditions. Quite simply, the individuals who were selected in Experiment 1 as having a low-level conception of their act of participating might have had other (unmeasured) personality characteristics that could provide an alternative interpretation of their choice behavior in the experiment.

To allow for a situational manipulation of identification level, we arranged to offer subjects a "computer analysis" of their personalities. Thus, this paradigm took advantage of the fact that high-level act identities such as "being cooperative" or "being competitive" are also apt descriptions of a person—the one doing the act. In the ostensible gathering of information for this analysis, we instituted a manipulation of action identification level. Subjects were to provide a description of five action identification level. Subjects were to provide a description of things they did during a recent interaction. In a high-level condition, they were asked to describe general things they had done, acts that would reflect their opinions, values, and personality traits. In a low-level condition, in turn, subjects were asked to indicate highly specific actions, ones that would indicate their concrete movements and utterances. The computer responded to these inputs with one of two personality profiles—cooperative or competitive—and subjects were then asked to indicate their judgments of the validity of these profiles and to make self-ratings of their cooperativeness and competitiveness. As in Experiment 1, subjects were asked to rank their preferences for participation in a variety of upcoming activities; here, however, the key measures were rankings of a cooperative activity and a competitive activity. We expected that subjects who had given low-level identifications of their actions would express their emergent action identification in several ways—judging the feedback to be more valid, moving their self-ratings in the direction of the feedback, and choosing to participate in subsequent activities consistent with their emergent act identity.

METHOD

Subjects and Design

A total of 49 male undergraduates participated in the experiment in return for extra credit in their psychology classes at Illinois Institute of Technology. Each was randomly assigned to a cell of a 2 (low-level vs.

high-level action description) × 2 (cooperative vs. competitive feedback) factorial design.

Procedure

When a subject arrived at the lab, he was seated before a microcomputer console. The experimenter explained that a computer program had recently been developed that could generate personality profiles on the basis of minimal information, and that the study was concerned with evaluating the validity of the program. At this point, the subject was shown how to use the computer keyboard and was directed to follow the cues provided by the interactive program. The console listed instructions for the subject to "think about an interaction you have had with a person of the same sex within the last week or so. This interaction could be a chat at school, a discussion of some kind, a conversation at a party or at work, and so forth. Any interaction at all is fine."

The subsequent instructions differed, depending on the subject's assignment to the low-level or high-level description condition. Low-level subjects were requested to "try to recall five specific things you did in your interaction with this person. Provide as much detail as you can; that is, indicate the particular comments you made, questions you asked, or behaviors you performed." High-level subjects, in contrast, were requested to "try to recall five things about yourself that you feel you demonstrated in your interaction with this person. Be somewhat general in your answers; that is, indicate what opinions and values you communicated, or perhaps what personality traits you demonstrated." In each case, the subject was given some examples of the action descriptions that were requested, and was directed to enter his answer at the console, using a maximum of two lines for each action description.

After 2 minutes, during which the computer ostensibly processed the information, one of two personality profiles appeared on the screen. In both cases, the computer began as follows: "The input data you provided suggests that you are a relatively sociable and friendly person, and tend to get along with others for the most part. There is no reason to think you are not emotionally stable, and you seem to have above-average intelligence." For the cooperative profile, the description went on to say: "Your responses also indicate that you are somewhat cooperative, more so than most people. You are willing to downplay differences in effort and talent; you enjoy working with others to reach a common goal; and you are concerned that each person is treated equally and gets what he or she needs, even if he or she has not earned it. Your cooperative tendency may well help you succeed in achieving your aspirations in life."

The competitive profile, in contrast, continued by saying: "Your responses also indicate that you are somewhat competitive, more so

than most people. You are sensitive to differences among people in their effort and talent; you enjoy challenging activities; and you are concerned that each person get what he or she deserves, not simply what he or she needs. Your competitive tendency may well help you succeed in achieving your aspirations in life." The two profiles were found in pilot research to be perceived as relatively desirable and similar in their evaluative tone. Each subject had 30 seconds to examine his feedback on the computer screen, after which the program logged off and the experimenter returned to administer two questionnaires.

The first questionnaire asked for judgments of the validity of the computer feedback. Subjects indicated on 9-point rating scales how accurate they felt the feedback was, whether they agreed with the program's assessment of their personality, and whether they felt the program was a valid way of assessing people's personalities. The second questionnaire called for subjects to rate their personalities on 20 dimensions, including competitiveness and cooperativeness. A 9-point response scale anchored by a trait (e.g., "cooperative," "competitive") and its opposite (e.g., "uncooperative," "noncompetitive") was provided for each judgment; subjects had the option of choosing a range of intervals along each scale to characterize themselves, and the mean interval marked served as the measured self-rating.

The final measure was a behavioral-choice ranking much like that used in Experiment 1. Subjects were escorted to a different room for debriefing and assignment of extra credit, and were offered the ranking sheet almost as an afterthought on the part of the experimenter. Here, they were given the opportunity to browse through a list of 10 educational exercises and research projects that were said to be available to undergraduates in psychology courses, and were asked to rank them in order of their preference. Two of the potential activities were of special interest because they represented behavioral manifestations of the personality feedback to which subjects had been exposed. Thus, one project called for the subject to "participate in a study that would involve competing with someone else for a prize," while another asked for the subject to "participate in a study that would involve cooperating with someone else and splitting a prize." Detailed interviews during the final debriefing revealed that subjects saw no connection between the study and the preference form.

RESULTS AND DISCUSSION

Manipulation Effectiveness

The action descriptions that each subject entered at the computer console were recorded by the program. Thus, it was possible to determine whether these descriptions indeed corresponded to the intended higher

and lower levels in the different identification-level conditions. Two undergraduate student judges who were trained in classifying act identities by level, but who were blind to the study design and hence to subjects' condition assignments, coded all subjects' responses. A 3-point scale was employed for coding each description, with 1 representing a clear low level, 2 signifying an intermediate level or uncertainty on the rater's part, and 3 indicating a clear high level. There was identical categorization by the raters on 97% of the responses; in those instances of disagreement, the raters discussed the items and came to a common judgment. An ANOVA corresponding to the study design that was conducted for the raters' judgments of subjects' first responses revealed only a significant main effect for the manipulation of identification level, $F(1, 41) = 148.04$, $p < .0001$; the computer program lost a few responses, so this finding was based on a subsample of the overall subject sample. The descriptions generated by subjects in the low-level condition were nevertheless clearly low in level ($M = 1.18$), while those of subjects in the high-level condition were near the high-level ceiling ($M = 2.83$). Similar significant effects were obtained in parallel analyses for the second through the fifth descriptions subjects had generated. In sum, the manipulation succeeded in inducing subjects to think about a recent interaction in either very low-level or very high-level terms.

Participation Choices

The impact of the emergence procedure on subjects' choices to participate in subsequent activities was analyzed in an ANOVA with the choice type (cooperative vs. competitive activity) included as a repeated-measures factor. Means for this analysis are shown in Table 2.

The three-way interaction predicted by our hypothesis was significant, $F(1, 45) = 11.15$, $p < .002$. Analysis of simple interaction effects revealed no significant interaction of feedback and choice type for subjects in the high-level action-description condition. There was, however, a significant simple interaction of these variables in the low-level action-description condition, $F(1, 45) = 7.16$, $p < .01$. In general, then, the tendency to choose an activity consistent with the feedback—a cooperative activity in the cooperative-feedback condition, and a competitive activity in the competitive-feedback condition—occurred only in subjects who had previously described their action at low levels. A marginally significant main effect for feedback condition in the overall analysis, $F(1, 45) = 3.15$, $p < .09$, revealed that subjects in the competitive-feedback condition found both participation choices somewhat more attractive than did subjects in the cooperative-feedback condition. Perhaps attributable to sampling error, this effect clouds the interpreta-

TABLE 2
Measures of Feedback Acceptance by Experimental Condition

	LOW-LEVEL DESCRIPTION		HIGH-LEVEL DESCRIPTION	
MEASURE	COMPETITIVE FEEDBACK	COOPERATIVE FEEDBACK	COMPETITIVE FEEDBACK	COOPERATIVE FEEDBACK
PARTICIPATION CHOICES				
Competitive	6.33 (12)	3.62 (13)	5.25 (12)	5.12 (12)
Cooperative	5.25	4.77	5.67	4.93
JUDGED FEEDBACK VALIDITY				
Mean	21.67	21.54	16.33	18.25
SELF-RATINGS				
Competitiveness	7.00	6.69	7.25	7.33
Cooperativeness	6.75	7.54	7.58	7.17

Note. Participation measures could vary from 1 to 10, with higher values indicating greater preference. Judged feedback validity could vary from 3 to 27, and self-ratings could vary from 1 to 9. Parenthetical entries are cell n's.

tion of individual comparisons of means between feedback groups. To understand the aforementioned simple interaction effect, then, it is useful to report only two individual comparisons. In the low-level/cooperative-feedback condition, subjects tended to prefer the cooperative choice to the competitive choice, $t(45) = 1.79$, $p < .10$; in the low-level/competitive-feedback condition, subjects tended to prefer the competitive choice to the cooperative choice, $t(45) = 1.93$, $p < .10$. In sum, as in the previous experiment, the suggestion of a high-level identification of action induced subjects to behave in a way consistent with that suggestion only when they were identifying the action at low levels.

Judged Feedback Validity

The three feedback-judgment items (e.g., "Do you agree with the program's assessment of your personality?") were all highly intercorrelated (mean interitem $r = .63$). Thus, they were summed to yield an overall judged validity index. Means for this index are shown in Table 2. Our prediction for this variable took the form of a main effect for identification level. In the 2×2 ANOVA, this effect alone was significant, $F(1, 45) = 14.29$, $p < .001$. Subjects in the low-level condition considered

the bogus personality feedback provided by the computer to be more credible than did subjects in the high-level condition ($M = 21.61$ vs. 17.29). Thus, whether the computer said they were cooperative or competitive, low-level subjects considered this assessment to be more valid than did high-level subjects.

Self-Ratings

Like the participation choices, subjects' self-ratings of competitiveness and cooperativeness were positively correlated, $r(49) = .54$, $p < .01$. An ANOVA paralleling the one conducted for participation choices was thus performed (on the means shown in Table 2), revealing the predicted three-way interaction, $F(1, 45) = 4.60$, $p < .05$. A partition of this interaction indicated a significant simple interaction of feedback condition and self-rating type among subjects in the low-level identification groups, $F(1, 45) = 4.42$, $p < .05$, but no significant simple interaction among subjects in the high-level identification groups. The pattern of means indicates that the general tendency to rate the self in line with the feedback was present only among subjects in the low-level identification conditions. Subsequent individual comparisons within the low-level condition indicated that cooperativeness ratings were greater than competitiveness ratings in the cooperative-feedback condition, $t(45) = 2.12$, $p < .05$, but did not indicate any other significant pairwise differences.

A Note on Diagnosticity

Our preferred interpretation of the present findings, of course, is that they represent the operation of the emergence process. By several different dependent measures, these results appear to show that individuals induced to think about their action at low levels of identification are especially susceptible to new high-level conceptualizations of their action. Yet it is also possible to understand these results in a different way. It might be that people simply see low-level behavior descriptions as somehow more *diagnostic* of their personalities than high-level descriptions. If this were true, the present results would indicate only that individuals volunteering "better" information to a computer program infer that the output will be more valid—and thus tend to behave in line with that output.

To examine this reasoning, we conducted a partial replication of this study in which 31 undergraduate student subjects were asked to provide both a set of high-level action descriptions and a set of low-level descriptions. The order of these was counterbalanced across subjects, and after each description set subjects were asked to answer

several questions. They responded on 7-point scales to questions of (1) whether the descriptions they provided revealed anything about their personalities, (2) whether it would be possible for someone to tell what they were like by reading their descriptions, and (3) whether they would be inclined to believe the conclusions about their personalities reached by a trained psychologist who had studied these descriptions. Ratings on these correlated items (mean interitem $r = .33$) were summed to yield an overall diagnosticity index. By this index, high-level descriptions ($M = 14.66$) were found to be more diagnostic than low-level descriptions ($M = 13.23$), $t(30) = 3.00$, $p < .01$. We also asked subjects to rate after each act identity set the degree to which their descriptions were indicative of their competitiveness and of their cooperativeness. Analysis of these ratings revealed no significant difference between high- and low-level sets. These findings indicate that a simple diagnosticity interpretation of the present results is untenable, and so give us greater confidence in the action identification interpretation.

GENERAL DISCUSSION

These experimental findings are consistent with the action identification theory's account of action emergence. The results of the first study showed that people who happened to identify the action of "participating in an experiment" at low levels were particularly sensitive to suggestions that their behavior had an altruistic or egoistic high-level meaning. This sensitivity, then, appeared to promote further action consistent with the adopted meaning. The second study corroborated this finding, showing that emergent cooperation or competition could be produced in subjects who were led to think about "interacting with someone" in terms of low-level act identities. Behavior choices and self-ratings were influenced to be consistent with the "personality feedback" that subjects were given only when the subjects had previously described their behavior at low levels, and the feedback was judged to be more valid under these conditions as well.

It has not escaped our attention that these results are reminiscent of a long line of research findings in social psychology. Certainly, they resemble the well known "foot-in-the-door" findings of Freedman and Fraser (1966); these researchers showed that once people are induced to perform a small helpful act, they become inclined to perform a larger helpful act on a subsequent occasion. At the same time, the present results bear comparison with the findings of social feedback research (e.g., Jensen & Moore, 1977; Miller, Brickman, & Bolen, 1975); in these studies, people given feedback suggesting that they are certain kinds

of persons have subsequently behaved in ways consistent with that feedback. Our experiment can be counted, then, as another demonstration of the mutability of behavior that ensues when a person is given an opportunity to understand prior behavior in a new way.

The present results differ from these previous ones, however, in two crucial aspects. The immediately obvious difference, of course, is in theoretical emphasis. Rather than suggesting that self-concept change or attitude change underlies emergent behavior, we have stressed the import of action identification change. The second difference between the present and previous findings is in the isolation of a moderator of the effect. Our results indicate that there is an important variable that triggers a person's acceptance of new conceptualizations of action. This variable is the degree of prior low-level identification of the action. Other investigators searching for such a moderator have shown that ill-defined behavior-relevant attitudes can be susceptible to change (see, e.g., Chaiken & Baldwin, 1981). Low-level identities of action, however, are not necessarily ill defined or poorly articulated at all. Rather, they are cognitive representations of action that exist at lower levels of description than the more lofty and abstract self-conceptions and attitudes that theorists have usually implicated in the guidance of action.

Reasoning backward from the present findings, we can thus suggest that some degree of low-level identification of action has characterized the circumstances of previous research paradigms in which such emergence has been observed. This hypothesis might help to resolve the continuing controversy in social psychology on the degree to which the "self" is mutable versus stable. Self theorists such as Bem (1972) and Gergen (1982) have pointed to the results of self-perception and social feedback research in arguing that the self-concept is ultimately mutable; in such studies, people seem to change their self-views at the drop of a hat, and, as a result, come to behave in new ways. But it also seems that people's self-views can be remarkably stable (e.g., Block, 1981; Costa & McCrae, 1980). Indeed, the entire body of self-concept research has been constructed on the assumption that self-concepts are not easily changed, and that they thus represent enduring influences on the person's behavior (Wylie, 1979). We believe that this theoretical impasse in the study of self may be negotiable by means of an action identification analysis. In our view, high-level action identifications such as "being helpful" or "being competitive" are as much person descriptors as action identifications. They clearly reveal something about the "self" of the actor. For this reason, the stability versus mutability of the self-concept is interpretable in terms of the emergence process.

To the degree that a person has a high-level conception of the self's

action in a certain domain, the person should have a stable conception of self in that domain as well. But the person can sometimes identify the self's action at lower levels—whether in consequence of a lack of ability to perform the action without thinking of its details, or as a result of some momentary disruption. When this happens, the self becomes understood in only an impoverished and relatively meaningless way as the author of simple bodily movements and utterances. At this point, the proclivity to identify action at higher levels that is suggested by action identification theory can come into play. The person perceives something in the circumstances of the action, or retrieves a bit of information from memory, and emerges with a high-level action identification once again. This identification may be the one with which the person began the action, in which case the person will return to his or her original self-conception. Or, as demonstrated in the present studies, the emergent identification that is adopted may well depart from prior identifications, and so may give the person an emergent conceptualization of self. The self-concept changes to which emergent action has been traced in prior research are themselves predictable results of the process whereby actions come to have emergent identifications.

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PERSONAL INVOLVEMENT: AN EXAMINATION OF PROCESSING DIFFERENCES

BETH HOWARD-PITNEY, EUGENE BORGIDA,
AND ALLEN M. OMOTO
University of Minnesota

This investigation examined differences in cognitive responding to a debate by individuals who were either personally involved or less involved in a legislative proposal to change the state drinking age. Previous research has suggested that greater personal involvement is associated with increased motivation to engage in careful and extensive processing. The present study examined whether high-involvement subjects were also more likely to process information congruent with their partisan interests than low-involvement individuals. "Personal involvement" was operationalized as both the extent to which the debated issue was important and the degree to which the issue was perceived to have significant consequences for subjects' lives. In addition, a peripheral cue in the form of perceptual salience was manipulated to assess its impact on mode of processing. Results indicated that high-involvement subjects processed pertinent message cues in a more systematic and partisan way than did low-involvement subjects. Low-involvement subjects had proportionally more thoughts tangentially related to the debate presentation. Implications of these processing differences for research on motivated social cognition are discussed.

The portrayal of human inference capabilities in social psychology since the 1930s has been characterized by cyclical swings between cognitive and noncognitive explanations (Markus & Zajonc, 1985). Until recently, research on judgmental heuristics and biases in social cognition, for example, has primarily favored cognitive explanations of intuitive reasoning processes (e.g., Nisbett & Ross, 1980). It has become increasingly clear, however, that motivational and individual difference fac-