Effect of self-differentiation and anonymity in group on deindividuation

3 authors, including:

Arie Nadler
Tel Aviv University
125 PUBLICATIONS **4,339** CITATIONS

Some of the authors of this publication are also working on these related projects:

Project Personality, Cross cultural, motivation View project

Project Reconciliation View project

Effect of Self-Differentiation and Anonymity in Group on Deindividuation

Arie Nadler and Marta Goldberg
Tel-Aviv University
Tel Aviv, Israel

Yoram Jaffe
Bar-Ilan University
Ramat Gan, Israel

The present study investigated the effects of deindividuating conditions (i.e., anonymity) on the behaviors and feelings of self-differentiated and less self-differentiated individuals. Subjects were divided on the basis of their scores on the Portable Rod and Frame Test into self-differentiated and undifferentiated groups. Each subject was exposed to transgressive and prosocial behavior of two group members who were confederates. The exposure to the models' behavior occurred under conditions of anonymity or identifiability. Additionally, measures of subjects' feelings were taken. The data indicate that relative to identifiability conditions, the transgressions and prosocial actions of the models had stronger effects on the behaviors of undifferentiated subjects under anonymity conditions. Also, undifferentiated subjects felt less self-conscious and less inhibited under anonymity than identifiability conditions. The behaviors and feelings of self-differentiated subjects were relatively unaffected by the anonymity–identifiability manipulation. The implications of these findings are discussed and a conceptual link between self-differentiation, self-awareness, and deindividuation is proposed.

The idea that under some conditions individuals may lose their sense of unique self, and may engage in counternormative behaviors is not new in social psychology (e.g., LeBon, 1896). Zimbardo (1969) has developed this idea into a theory of deindividuation, in which he argues that a specific set of input conditions (e.g., anonymity) leads to a state of deindividuation that is characterized by certain internal states (e.g., minimal self-consciousness) and is followed by behaviors that reflect lowering of personal restraints. Research spurred by Zimbardo's conceptualization has followed this line of reasoning by linking conceptually-relevant antecedent conditions (e.g., anonymity) with behavioral consequences (e.g., aggression) (for examples, see Diener, Fraser, Beaman, & Kelem, 1976; Maslach, 1974).

Deindividuation: Situation, Person, or Person × Situation

An assumption implicit in the theoretical statements in this regard (cf. Diener, 1979; Zimbardo, 1969) is that given the specified input conditions (e.g., anonymity, emotional arousal) *all* individuals will become deindividuated and display less inhibited impulsive behaviors. In line with this, with the exception of a few studies (e.g., Cannavalle, Scarr, & Pepitone, 1970), past research has tended to ignore the role of personal dispositions in this context. Yet recent empirical evidence suggests that the assumption that deindividuating circumstances have similar effects on all individuals may not be valid. First, Dipboye (1977) concludes, on a basis of a thorough review of the literature, that deindividuation may be pleasant for some and aversive for others. Further, the data on the effects of anonymity on aggression is less than conclusive in that some studies show that anonymity increases aggression (e.g., Diener et al., 1976; Festinger, Pepitone, & Newcomb, 1952), others show no relationship (e.g., Diener, 1976), while still others

report that anonymity inhibits aggression (e.g., Jorgenson & Dukes, 1976).

This lack of consistent relationship, coupled with Dipboye's suggestion regarding the differential impact of deindividuation on different people, suggests that other variables, in addition to the situational conditions proposed by Zimbardo, determine the behavioral and affective consequences of deindividuation. Specifically, in accordance with an interactive, Person × Situation view of human behavior (cf. Bowers, 1973) the present investigation suggests that while deindividuating circumstances may cause some individuals to be submerged in the group and model their behavior after group activity, others may retain a sense of separate self and may be relatively unaffected by the behavior of others.

Self-Differentiation and Deindividuation: A Conceptual Link

In the realm of personal dispositions, the variable of self-differentiation (Witkin, Dyk, Goodenough, & Karp, 1962; Witkin, Goodenough, & Oltman, 1979) seems most relevant here. In fact, one finds a close conceptual affinity between the personality characteristic of self-differentiation and the situation of deindividuation.

In a recent theoretical analysis (Witkin et al., 1979), self–nonself segregation has been viewed as a basic implication of the self-differentiation construct. Specifically, this dimension is said to reflect one's sense of being a separate entity in the social environment. The self-differentiated individual is said to have definite boundaries between inner characteristics identified as self and the social environment. In the undifferentiated individual, such a distinction is less marked. In this psychological system, there is a greater connectedness between self and other people. Thus, relative to the self-differentiated individual, the undifferentiated individual is more attentive to social sources of information (e.g., Konstadt & Forman, 1965), feels more comfortable at small distances from other people (e.g., Greene, 1976), and is more sensitive to an emotional climate (e.g., Greene, 1976). In all, the self-differentiated individual sems to rely on in-

ternal cues, whereas the undifferentiated person is more socially dependent and tends to rely on external referents as guides for behavior.

Applying this to the phenomenon of deindividuation suggests that the undifferentiated person, who uses changes in the social world as guides for behavior, will be affected by the introduction of deindividuating circumstances. This individual is expected to display marked behavioral and affective changes depending on whether the situation does or does not contain deindividuating circumstances. Specifically, since these individuals rely on external social sources to define appropriateness of behavior, they are expected to refrain from transgression when they are identifiable. However, once the person is allowed the safety of anonymity, these individuals are expected to change their behavior and engage in nonrestrained transgressive behaviors, if others in the group do so.

Different predictions emerge in the case of the self-differentiated individual. This individual, who is more autonomous in social encounters, is expected to rely on internal standards as guides for behavior, regardless of changes in the social context, and is therefore expected to display behavioral consistency across conditions of identifiability and anonymity. The self-differentiated person is expected to resist the disinhibiting effects of deindividuation and to refrain from transgression whether identifiable or anonymous. Moreover, in attempting to assert individuality and resist opposite pressures, the self-differentiated individual may be even more aware of his or her own self as segregated from the social world under deindividuating circumstances (i.e., anonymity).

Further, although past research has centered almost exclusively on the effects of deindividuation on negative behaviors (e.g., transgression, aggression), Zimbardo's theorizing in this regard (1969) suggests that the phenomenon of lowering of personal restraints should affect positive as well as negative forms of social behavior. The present investigation tests this assertion by looking at the frequency of prosocial behavior (i.e., donations to a worthy cause) as a function of the experimental variables. Applying the

previous analysis to the phenomenon of pro-social behavior, it is again expected that self-differentiated persons will display behavioral consistency and donate a similar proportion in both identifiability and anonymity conditions. The undifferentiated individuals, however, are again expected to be affected by the group's behavior under conditions of anonymity. Thus, if the group behaves pro-socially, the undifferentiated person is expected to follow suit when deindividuating circumstances (i.e., anonymity) exist.

In conclusion, it is suggested that dein-dividuation affects different individuals differently. Only undifferentiated individuals are expected to display behavioral contagion and transgress and help more under conditions of anonymity when the group does so. The self-differentiated individuals are expected to continue their reliance on internal standards for behavior even under conditions of anonymity and to resist group pressures for either positive or negative forms of social behavior.

To investigate the effects of deindividuating conditions on behaviors and internal state of individuals with differential degrees of differentiation, a situation that allowed for behavioral contagion of transgressions and prosocial actions was created. Subjects who were preselected as being self-differentiated or undifferentiated were observed under conditions of high or low anonymity. Additionally, measures were administered to tap the internal changes (e.g., lack of self-awareness, minimized inhibitions) postulated to be associated with deindividuating circumstances (cf. Diener, 1979).

Method

Subjects and Overview

Forty male Israeli high-school students 17–18 years of age served as subjects. These subjects were chosen from a larger group of 116 high-school students on the basis of their scores on the Portable Rod and Frame Test (PRFT; for a more detailed description of the PRFT, see Oltman, 1968). The 20 individuals with the highest scores ($M = 6.16$; i.e., undifferentiated) and the 20 with the lowest scores ($M = 1.1$; i.e., self-differentiated) were invited to participate in the experiment.[1] Half of the subjects remained anonymous throughout the experiment, whereas half were fully identifiable. Thus, the experimental design was a 2 (self-differentiated vs. less self-differentiated individuals) × 2 (an-

onymity vs. identifiability in the group) between-subjects design. Each of the four resulting cells contained 10 individuals.

Each subject was under the impression that he was a member of a 3-person group. In actuality, the other group members were confederates of the experimenter.

Each subject was exposed to transgressions and donations made by the confederates. Subjects' subsequent transgressive and prosocial actions served as dependent measures. Also, measures of (a) verbal aggression directed toward the experimenter and (b) measures of internal state of deindividuation were taken.

Procedure

On arrival to the experimental room, each subject met two other subjects who were confederates of the experimenter. Afterward, all three individuals were asked to sit in the experimental room. Each person sat at a separate desk on which there was one candy, given to warm up the atmosphere. On the experimenter's desk sat a bowl of candies intended for other participants in the experiment.

The experimenter, an elderly male, presented himself as in charge of a survey sponsored by the Ministry of Education that was designed to find out the level of general knowledge of high school students of different age groups. Subjects were asked to define items that made up a Fact-Finding Questionnaire. Thirty of these items were defined on the basis of a pilot study as easy items (e.g., "How many members in the Knesset?"-the Israeli parliament) and 10 were unanswerable since they introduced nonexistent concepts (e.g., "What is a me-sulianoscope?").

Further, subjects were told that to increase motivation for successful performance, any correct answer above 30 correct responses would receive a financial bonus above the fee that everyone received for participation in the experiment. Following this, the experimenter handed each subject the payment for his participation. He then took out of his briefcase a number of answer sheets and obtrusively laid them on his desk.

After these instructions, the three individuals were asked to begin the work on the Fact-Finding Questionnaire. After several minutes the experimenter excused himself by telling the participants that he had to introduce the questionnaire to another group and that he would return in 20 minutes.

Independent Manipulations

Anonymity Manipulations

In the anonymity condition, subjects were informed that since the survey was anonymous and only group data were relevant, they were required neither to introduce themselves nor to put their names or any other personal data on the questionnaires. To reach maximal

---

[1] The operationalization of self-differentiation by the PRFT, and the relation of this construct to similar theoretical constructs (e.g., field dependence) is thoroughly discussed elsewhere (i.e., Witkin et al., 1979).

feeling of anonymity, dim lighting was used in the experimental room.

In the identifiability conditions, subjects were instructed to present themselves by full names, school, and class. Additionally, they were asked to respond to several biographical items on each of the questionnaires. To strengthen the manipulation, the experimenter referred to subjects by their names. Finally, to enhance identifiability, bright lighting was used during the experimental session.

Dependent Measures

Transgression: Cheating and Candy Taking

When the first confederate, who sat behind the subject, noted that the subject finished answering the 30 easy items and was trying to find answers for the remaining 10 unanswered items, he started a concealed stopwatch.[2] After 3 minutes had elapsed, and independently of the subject's behavior during this time, the confederate walked to the experimenter's desk and began looking at the answer sheets for the correct answers. While staying at the experimenter's table, he also took a handful of candies from the candy bowl and then returned to his seat. At this point, the second confederate began to time 3 minutes. After 3 minutes had elapsed, this second confederate repeated the behavior sequence displayed by the first confederate.

Five minutes after the second confederate's transgression, the experimenter returned to the room, handed the answer sheets to the subjects, and asked them to score their forms. He then left again, mentioning that he had "to get his pen from the adjoining room." During his absence, one of the confederates said loudly that he would cheat and report a higher score than his actual score so that he could win the promised bonus. The other confederate immediately joined the first and said that he would do the same. A few minutes later the experimenter returned, looked at the score reported by each participant, and handed out the promised bonuses.

Thus, transgression was assessed by (a) number of subjects in each experimental cell who walked to the experimenter's table to look at the answer sheet and (b) number of correct answers over 30 (i.e., answers to unanswerable questions). Another index of transgression was obtained by (a) number of subjects in each experimental cell who took candies from the experimenter's desk and (b) number of candies taken.

In all, each subject had three 3-minute periods in which he could transgress (a) before any modeling occurred, (b) following the transgression of the first confederate, and (c) following the transgression of the second confederate.

Prosocial Behavior

Immediately after the experimenter gave subjects their monetary rewards, he said that he was being asked by the Israeli Committee for the Soldier's Welfare (a well-known organization in Israel) to collect donations to help finance cultural activities for soldiers. After asking "Does anybody want to give?", he handed the do-

nation box so that one of the three participants could take it and donate. If the subjects did not respond, the first confederate took the box, donated, and passed it over to the second confederate who did the same. The box was then returned to the experimenter via the subject who sat at the desk closest to the experimenter's. Thus, each subject could donate either before or after modeling of prosocial behavior occurred.

Pencil-and-Paper Measures: Manipulation Check, Inner State of Deindividuation, Affective State, and Verbal Aggression

After experimental procedures, subjects were asked to respond to a postexperimental questionnaire that was said to be designed to collect participants' impressions of the Fact-Finding Questionnaire. All items in the questionnaire were statements to which subjects were asked to indicate agreement or disagreement on a 7-point scale.

In actuality, this questionnaire was designed to provide (a) a check on the anonymity manipulation, (b) tap conceptually relevant internal experiences, and (c) measure subjects' affective state. Additionally, a 13-item questionnaire was added to measure degree of verbal aggression.

Effectiveness of anonymity manipulation. This was assessed by three items (i.e., "I felt anonymous"; "everybody here knows exactly who I am"; and "I felt identifiable by others"), which were highly intercorrelated (all *r*s above .50) and summed to obtain a single anonymity score.

Inner state of deindividuation. Seven items were used to assess changes in internal states suggested by Zimbardo (1969) to occur under deindividuating circumstances. These items were subjected to a principal-axis factor analysis and the solution was subjected to an orthogonal (varimax) rotation.[3] Three factors were extracted. The first factor was Lack of Self-Consciousness (i.e., "I devoted much attention to my behavior here today"; "I don't care what others think of me"; "I was self-conscious during the meeting here today"),

---

[2] This point in time was easily identified because the subject began to hesitate and discontinued writing.

[3] A stable factor-analytic solution requires a relatively large number of items relative to number of subjects. Therefore, some items were not included in the factor analysis, thus bringing the number of items from 13 to 7. The items excluded were deleted because of redundancy with other items or because of lesser importance to the present context. It should be noted, however, that an analysis of variance performed on the sum of the 13 items that made up the scale for internal feelings of deindividuation revealed the expected Self-Differentiation $\times$ Anonymity interaction, $F(1, 36) = 4.89, p < .05$. In line with the hypotheses, this interaction indicates that the less differentiated individual has a higher deindividuation-feelings score in the anonymity than identifiability condition (*M*s are 49.0 and 40.4, respectively), whereas the opposite tendency was observed for self-differentiated individuals (*M*s are 37.0 and 41.1, respectively).

the second was Minimized Inhibition (i.e., "I don't feel free here"; I did what I wanted"), and the third was Responsiveness to Proximal Others (i.e., "My behavior was affected by others' behavior"; "my behavior here in the group was not hesitant"). All items loaded above .40 on their respective factors.

Feelings about experimental session. To measure subjects' feelings about the experimental session, subjects were asked to rate their agreement or disagreement with three statements on a 7-point scale (i.e., "It was fun"; "I enjoyed the session"; and "the session was pleasant"). Interitem correlations were above an $r = .50$ preset criterion and ratings on these scales were summed to obtain a single score ranging from 3 (least favorable feelings) to 21 (most favorable feelings).

Verbal aggression. This was assessed by a final questionnaire that was said to consist of statements made in the past by participants in the study. Subjects were instructed to express agreement or disagreement with each statement on 7-point scales. Four of the statements were buffer items, whereas nine were all derogatory and verbally aggressive (e.g., "It has no sense at all, and he who proposed it is an idiot"). Responses to the nine derogatory-aggressive statements were used as a measure of verbal aggression.

Upon receiving this questionnaire, one of the confederates began reading aloud the derogatory statements. The second confederate followed immediately. They both continued with this behavior for some time in spite of the experimenter's requests for moderation and silence.

After these procedures the experiment was terminated. Subjects were debriefed after all the data were collected. Steps were taken to insure that the subjects understood the importance of the study and that they had no bad feelings about their participation.

Results

Manipulation Checks

An analysis of variance on the feelings of anonymity revealed an anonymity main effect, $F(1, 36) = 107.5$, $p < .001$, which indicates that subjects in the anonymity conditions felt more anonymous than subjects in the identifiability conditions (Ms were 17.75 and 8.10, respectively). Neither the self-differentiation main effect nor the Anonymity × Self-Differentiation interaction was significant.

Behavioral Measures

Transgression

Frequency of transgressions. The frequency of transgressions (i.e., [a] going to the experimenter's desk to look at the answer sheet and [b] candy taking) by self-differentiated and undifferentiated groups was

assessed at high and low conditions of anonymity. Because of the low frequencies (some cells include frequencies ranging between 1 and 3), the Fisher Exact Probability test was used (cf. Siegel, 1956). This test reveals that within the undifferentiated groups, a greater frequency of going to the experimenter's table ($p < .005$) and unauthorized candy taking ($p < .05$) occurred in the anonymity than in the identifiability conditions (frequencies are 8 and 1 for the first measure, and 6 and 2 for the second). No such difference in frequencies was observed in the self-differentiated groups (frequencies were 4 and 5 for the first measure, and 3 and 4 for the second).

Quantity of transgressions. Analyses of variance performed on the number of answers copied and number of candies taken in each of the experimental cells reveal similar patterns.

A 2(self-differentiated vs. undifferentiated) × 2 (anonymity vs. identifiability) analysis of variance (ANOVA) on the number of answers falsely reported by subjects as correct answers (i.e., maximum score: 10 false reports) revealed a significant Self-Differentiation × Anonymity interaction, $F(1, 36) = 7.05$, $p < .01$. This interaction indicates that undifferentiated subjects cheated more in the anonymity than in the identifiability condition (Ms are 4.8 and 1.9, respectively), whereas a tendency for an opposite pattern was observed with the self-differentiated individuals (Ms are .8 and 2.9, respectively).

An ANOVA on the number of candies taken from the experimenter's table revealed self-differentiation, $F(1, 36) = 5.77$, $p < .05$, and anonymity, $F(1, 36) = 5.7$, $p < .05$, main effects. However, these main effects are qualified by a significant Self-Differentiation × Anonymity interaction, $F(1, 36) = 6.8$, $p < .05$, which indicates that the undifferentiated individuals took more candies under conditions of anonymity than identifiability (Ms are 2.7 and .2, respectively), whereas no such difference was observed with self-differentiated individuals (Ms are .4 and .5, respectively). See Table 1.

Thus, the study's prediction that only the undifferentiated individuals are affected by deindividuating circumstances and that they

Table 1
Frequencies and Quantities of Falsely Reported Answers and Candy Taking

| | Self-differentiation | | | |
| | High | | Low | |
Action	A	I	A	I
No. of subjects who walked to the experimenter's desk	4	5	8	1
No. of subjects who took candies	3	4	6	2
Mean no. of falsely reported answers	.8	2.9	4.8	1.9
Mean no. of candies taken	.4	.5	2.7	.2

Note. For the self-differentiation conditions, A = anonymous and I = identifiable. $n = 40$.

transgress more under these conditions is supported. Further, at least with regard to number of falsely reported correct answers, it seems that the self-differentiated individuals made less false reports under the anonymity than the identifiability conditions.

Before continuing, it should be noted that all subjects who transgressed did so only after the triggering of a model. In neither anonymity nor identifiability conditions did subjects transgress spontaneously.

Prosocial Behavior

Neither the frequency of donations in the four experimental cells nor the amount of donations revealed any significant effects ($p = .50$ for the Fisher test on frequencies, and $F < 1$ for the Anonymity × Self-Differentiation interaction on amount of donations). Both the self-differentiated and undifferentiated subjects donated similar amounts under conditions of identifiability and anonymity (70% of the self-differentiated and 80% of the less differentiated individuals donated).

However, differential patterns emerge when time of donation (i.e., before modeling or after modeling) is taken into account. In fact, a nonparametric interaction (cf. Winer, 1971), $\chi^2(1) = 5.76$, $p < .05$, indicates that within the undifferentiated subjects, under conditions of identifiability, a higher per-

centage of subjects donated before than after modeling occurred (percentages are 86% and 14%, respectively), whereas under conditions of anonymity a higher percentage of subjects donated after than before modeling occurred (percentages are 63% and 37%, respectively). Within the self-differentiated sample, more individuals donated before modeling than after modeling in both identifiability and anonymity conditions (percentages for identifiability are 75% and 25%, respectively; and for anonymity are 85% and 15%, respectively). See Table 2.

Pencil-and-Paper Measures

Verbal Aggression

A 2(self-differentiated vs. undifferentiated) × 2(anonymity vs. identifiability) ANOVA revealed no significant main or interaction effects. However, because of the interest in the two-way interaction, $F(1, 36) = 2.00$, $p < .16$, an examination of the cell means involved in the interaction is warranted. The pattern of means suggests that while self-differentiated individuals' level of verbal aggression was equal under anonymity and identifiability conditions (*M*s are 23.7 and 23.6, respectively), undifferentiated individuals tended to model the confederates' aggression and to be more verbally aggressive when anonymous than when identifiable (*M*s are 24.3 and 14.5, respectively).

Internal State of Deindividuation

The three factors extracted from the factor-analytic procedure (i.e., Lack of Self-Consciousness, Minimized Inhibitions, and Responsiveness to Proximal Others) were analyzed in 2(self-differentiated vs. undif-

Table 2
Percentage of Donation in Each Experimental Cell Before and After Modeling

| | Self-differentiation | | | |
| | High | | Low | |
Condition	Before	After	Before	After
Anonymity	85	15	37	63
Identifiability	75	25	86	14

ferentiated) × 2(anonymity vs. identifiability) multivariate analysis of variance. This multivariate analysis revealed a significant anonymity main effect, $F(3, 108) = 3.55$, $p < .05$, and a significant Self-Differentiation × Anonymity interaction, $F(3, 108) = 4.28$, $p < .01$. The univariate interaction effects resemble the multivariate interaction effect. Specifically, for the Lack of Self-Consciousness and Minimized Inhibition scales, significant Self-Differentiation × Anonymity interactions were observed, $F(1, 36) = 5.8$, $p < .05$; and $F(1, 36) = 7.5$, $p < .01$, respectively. This two-way interaction was not significant for the third scale ($F < 1$; i.e., Responsiveness to Proximal Others). The two-way interaction for the Lack of Self-Consciousness scale is due to the finding that self-differentiated individuals felt similarly self-conscious in both the identifiability and anonymity conditions (Ms are 9.2 and 9.1, respectively), whereas the undifferentiated individuals felt more lack of self-consciousness in the anonymity than in the identifiability conditions (Ms are 14.5 and 8.2, respectively).

For the Minimized Inhibition scale, self-differentiated individuals tended to feel less inhibited in the identifiability than the anonymity conditions (Ms are 7.4 and 6.4, respectively—the higher the score, the more minimized inhibition). For undifferentiated individuals, an opposite tendency was observed. They felt less inhibited when anonymous than when identifiable (Ms are 8.4 and 6.3, respectively).

Feelings About the Session

A 2 × 2 analysis of variance on the feelings-about-experimental-session scale revealed a self-differentiation main effect, $F(1, 36) = 4.65$, $p < .05$, which indicates that self-differentiated individuals expressed less positive feelings than undifferentiated individuals (Ms are 15.0 and 17.65 respectively). Although the Anonymity × Self-Differentiation interaction failed to reach a conventional level of significance, the study's hypotheses warrant the examination of the cell means involved in this interaction. This examination, $F(1, 36) = 2.52$, $p < .12$, indicates that the self-differentiated individuals

Table 3

Means of Pencil-and-Paper Measures in Four Experimental Conditions

| | Self-differentiation | | | |
| | High | | Low | |
Measure	A	I	A	I
Verbal aggression	23.6	23.7	24.3	14.5
Internal feelings of deindividuation factors				
1. Lack of Self-Consciousness	9.2	9.1	14.5	8.2
2. Minimized Inhibition	6.4	7.4	8.4	6.3
3. Responsiveness to Proximal Others	3.8	4.5	4.3	3.3
Feelings about experimental session	13.6	16.4	18.2	17.1

Note. For the self-differentiation conditions, A = anonymous and I = identifiable. $n = 40$.

in the anonymity condition tended to express least favorable feelings toward the experimental session (i.e., cell M of 13.6 vs. 16.4 in the anonymity and identifiability conditions, respectively, for differentiated individuals; in the undifferentiated sample, cell Ms were 18.2 for the anonymity and 17.1 for the identifiability condition, respectively). See Table 3.

Discussion

The present findings support the major hypothesis that deindividuating circumstances precipitate behavioral changes in undifferentiated individuals but have relatively little effect on the behavior of self-differentiated subjects. Looking at the behavioral measures of transgression, a higher proportion of undifferentiated subjects followed the models' transgressions and (a) went to the experimenter's desk to look for the answer sheet and (b) took candies from the experimenter's desk under conditions of anonymity than under conditions of identifiability. Further, undifferentiated individuals (a) made more false reports as to number of correct answers and (b) took more candies under conditions of anonymity than under conditions of identifiability. Further, the

data suggest that undifferentiated individuals were more verbally aggressive when anonymous than when identifiable. The behavior of self-differentiated subjects stayed relatively constant across conditions of identifiability and anonymity. These individuals were relatively unaffected by situational characteristics that were designed to produce deindividuation.

These findings support the idea that self-differentiated individuals are more autonomous in social-interpersonal situations. In fact, these individuals seem to rely on internal cues as guides for behavior even when deindividuating circumstances allow behavioral contagion. In contrast, the undifferentiated individuals are more vulnerable to the changes in social context. When identifiable, they are conscious of self as a source of guidelines for correct behavior. They therefore rely on internal standards and withstand pressures toward transgression. However, when anonymous, they become less conscious of self, less aware of the differentiation between self and social world, and display behavioral contagion with the transgressive behaviors of other group members.

In a similar vein, the data regarding prosocial behavior indicate that donating behavior of self-differentiated individuals was unaffected by conditions of anonymity or identifiability, whereas that of undifferentiated persons was. Specifically, in both the anonymity and identifiability conditions, most helping behavior of self-differentiated individuals occurred before the confederates modeled this behavior. Thus, if the self-differentiated subject chose not to give, the model's behavior had little effect on his subsequent donation. Within the undifferentiated sample, timing of subjects' prosocial behavior (i.e., before or after model) depended on the anonymity/identifiability dimension. Under conditions of identifiability, more donating occurred before modeling, whereas under conditions of anonymity, more prosocial behavior occurred after modeling.

These data suggest that the psychological mechanisms that determine transgressive behavior in this context also affect prosocial behavior. Since donating to the Committee

for the Soldier's Welfare was a normative behavior likely to reflect an internalized standard[4], self-differentiated individuals followed this internal cue and their prosocial behavior was relatively independent of the model's behavior in both the identifiability and anonymity conditions. Undifferentiated individuals seem to have relied on this internal guide for behavior when identifiable. In this condition, their prosocial behavior was relatively independent of the model's behavior. When anonymous, however, these individuals seem to have relinquished their reliance on internal guides for behavior. Instead, in this condition, the undifferentiated individuals waited for the group to define the correct behavioral standard in that context (i.e., donating).

On the whole, these findings indicate that the more self-differentiated individual continues reliance on internal guides for behavior, regardless of changes in the social environment. The self-differentiated individual seems to maintain a clear distinction between self and nonself even when situational conditions (i.e., anonymity) allow for such a distinction to disappear. The undifferentiated individual uses internal cues for behavior when identifiable, but when anonymous, this individual is less conscious of self and uses others' behavior as guides for own actions. For these individuals, the boundaries between self and the outer world are less distinct, and therefore they are more affected by situational conditions that tend to weaken the self–nonself distinction.

Further support for this explanation is available from the findings regarding internal states (i.e., internal state of deindividuation and feelings about the experimental session). In line with the previous findings, undifferentiated individuals reported being less self-conscious and less inhibited in the anonymity than in the identifiability conditions. There was no difference in reported self-consciousness of self-differentiated individuals in the anonymity and identifiability conditions. Moreover, the self-differen-

---

[4] The norm of donating to the Committee for Soldier's Welfare is highly salient in Israeli society. This organization is well-known and sponsors many well publicized fund-raising campaigns.

tiated individuals in the anonymity condition reported being more inhibited and tended to feel less favorable toward the whole session than self-differentiated individuals in the identifiable condition.

These data support Dipboye's (1977) suggestion that a state of deindividuation may be pleasant for some and aversive for others. The present findings indicate that degree of self-differentiation is the personality disposition that determines these differential reactions. Specifically, for the self-differentiated individual who maintains a clear distinction between the self and the social world, conditions that weaken this demarcation line (e.g., anonymity) tend to be aversive. In trying to maintain a sense of unique self, the self-differentiated individual reports more inhibitions vis-à-vis the group's behavior under deindividuating circumstances. On the other hand, for the undifferentiated individual, these conditions are not aversive. This individual feels less self-conscious, less inhibited, and readily models the other members' behaviors.

Conclusions and Implications: Deindividuation, Self-Differentiation, and Self-Awareness

Taken together, the present data indicate that personality dispositions are important for the understanding of deindividuation. In fact, the description of the individual in a deindividuated situation who becomes less aware of self and more prone to engage in group activities (cf. Diener, 1979) is applicable only to the case of the undifferentiated psychological system.

Conceptually, and in line with Diener's (1979) assertion regarding deindividuation and self-awareness, the present findings suggest that differential degrees of self-awareness constitute the psychological link between self-differentiation and deindividuation. Specifically, using the concepts employed by self-awareness theorists (cf. Carver, 1979; Duval & Wicklund, 1972), the self-differentiated individual focuses attention on self and uses internal standards as the guidelines for behavior even when the environmental conditions of deindividuation allow for lesser degrees of self-awareness. In

the words of Witkin et al. (1979), the self-differentiated individual "maintains an internally derived perspective in the face of contradictory behavior of others" (p. 1128). This tendency results in behavioral consistency across individuated and deindividuated situations. The undifferentiated individuals tend to use the social world as a reference for what is a correct behavior in a given context. When identifiable (i.e., others' attention is on the self) this individual is relatively self-aware and relies on internal standards as guides for behavior. When situational conditions foster anonymity, the undifferentiated individual, who is initially more externally oriented, shifts attention to the social world as the source of guidelines for correct behavior. This attention shift results in behavioral contagion.

Paradigmatically, it is proposed that (a) when identifiable, both self-differentiated and undifferentiated individuals are relatively objectively self-aware. This is in line with the theoretical contention that being looked upon by others precipitates a state of objective self-awareness (cf. Carver & Scheier, 1978; Duval & Wicklund, 1972). Thus in these conditions both differentiated and undifferentiated individuals use internal standards as guides for correct behavior and withstand group pressures. However, (b) deindividuating conditions have different effects on the focus of attention of differentiated and undifferentiated persons. In the case of (1) the undifferentiated individual, deindividuation precipitates an attentional shift from the self to the group (i.e., the individual becomes subjectively self-aware), which results in reliance on the group's behavioral standards as guides for behavior. On the other hand, (2) the self-differentiated individual is objectively self-aware even under deindividuating circumstances and consequently continues his reliance on internal standards as guides for correct behavior. This analysis is supported by the finding that undifferentiated individuals reported more lack of self-consciousness in the anonymity than in the identifiability condition.

The present analysis suggests a conceptual link between three approaches to the issue of self–nonself distinction in a social interpersonal context (i.e., self-differentiation,

deindividuation, and self-awareness). Although past research has examined the connection between self-awareness and deindividuation (i.e., Diener, 1979; Ickes, Layden, & Barnes, 1978), and the present study examines the link between self-differentiation and deindividuation, it remains for future research to systematically explore the links between self-differentiation and self-awareness. The implications of such an examination are many. For example, it may be that one could inhibit the behavioral contagion of less differentiated individuals in deindividuating conditions by reminding them of their separate existence in the social world (i.e., increase self-awareness).

To conclude, the present study has conceptual implications on several levels. First, it demonstrates the utility of using a Person × Situation approach to the study of deindividuation. In line with Dipboye's (1977) suggestion, it indicates that antecedent conditions that lead to deindividuation have differential effects on different people. Second, it demonstrates the much needed empirical covariation between behaviors and internal states under deindividuating circumstances (cf. Diener, 1979). Thirdly, it centers on the effects of deindividuation on both negative and positive forms of social behavior (i.e., transgression, aggression, and prosocial action). Finally, it represents a conceptual meeting point for three influential conceptions of the self–nonself distinction (i.e., deindividuation, self-awareness, and self-differentiation) in social psychology.

References

Bowers, K. S. Situationism in psychology: An analysis and a critique. *Psychological Review,* 1973, *80,* 307–336.

Cannavalle, F. J., Scarr, H. A., & Pepitone, A. Deindividuation in the small group: Further evidence. *Journal of Personality and Social Psychology,* 1970, *16,* 141–147.

Carver, C. S. A cybernetic model of self-attention processes. *Journal of Personality and Social Psychology,* 1979, *37,* 1251–1281.

Carver, C. S., & Scheier, M. F. Self-focusing effects of dispositional self-consciousness, mirror presence, and audience presence. *Journal of Personality and Social Psychology,* 1978, *36,* 324–332.

Diener, E. Effects of prior destructive behavior, anonymity, and group presence on deindividuation and aggression. *Journal of Personality and Social Psychology,* 1976, *33,* 497–507.

Diener, E. Deindividuation, self-awareness, and disinhibition. *Journal of Personality and Social Psychology,* 1979, *37,* 1160–1171.

Diener, E., Fraser, S. C., Beaman, A. L., & Kelem, R. T. Effects of deindividuation variables on stealing among Halloween trick-or-treaters. *Journal of Personality and Social Psychology,* 1976, *33,* 178–183.

Dipboye, R. L. Alternative approaches to deindividuation. *Psychological Bulletin,* 1977, *84,* 1057–1074.

Duval, S., & Wicklund, R. A. *A theory of objective self awareness.* New York: Academic Press, 1972.

Festinger, L., Pepitone, A., & Newcomb, T. Some consequences of deindividuation in group. *Journal of Abnormal and Social Psychology,* 1952, *47,* 382–389.

Greene, L. R. Effects of field dependence on affective reactions and compliance in dyadic interactions. *Journal of Personality and Social Psychology,* 1976, *34,* 569–577.

Ickes, W., Layden, M. A., & Barnes, R. D. Objective self awareness and individuation: An empirical link. *Journal of Personality,* 1978, *46,* 146–161.

Jorgenson, D. O., & Dukes, F. O. Deindividuation as a function of density and group membership. *Journal of Personality and Social Psychology,* 1976, *34,* 24–29.

Konstadt, N., & Forman, E. Field dependence and external directedness. *Journal of Personality and Social Psychology,* 1965, *1,* 490–493.

Le Bon, G. *The crowd.* London: Ernest Benn, 1896.

Maslach, D. Social and personal bases of deindividuation. *Journal of Personality and Social Psychology,* 1974, *29,* 411–425.

Oltman, P. K. A portable rod and frame apparatus. *Perceptual and Motor Skills,* 1968, *26,* 503–506.

Siegel, S. *Nonparametric statistics for the behavioral sciences.* New York: McGraw-Hill, 1956.

Winer, B. J. *Statistical principles in experimental design* (2nd ed.). New York: McGraw-Hill, 1971.

Witkin, H. A., Dyk, R. B., Goodenough, D. R., & Karp, S. A. *Psychological differentiation.* New York: Wiley, 1962.

Witkin, H. A., Goodenough, D. R., & Oltman, P. K. Psychological differentiation: Current status. *Journal of Personality and Social Psychology,* 1979, *37,* 1127–1145.

Zimbardo, P. G. The human choice: Individuation, reason and order versus deindividuation, impulse and chaos. In W. J. Arnold & D. Levine (Eds.), *Nebraska Symposium on Motivation* (Vol. 17). Lincoln: University of Nebraska Press, 1969.