

Informational and Normative Social Influence in Buyer Behavior

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An experiment was conducted to clarify the nature of the influence active in most prior marketing research on the social influence process. Experimental subjects were exposed to evaluations of coffee which were attributed to either a similar or dissimilar source. These evaluations were high in uniformity, low in uniformity or of unknown uniformity. Subjects then tasted and evaluated the coffee. The subjects' evaluations were made either under a visible (identifiable) condition or an anonymous condition. The data supported a hypothesis of informational social influence.

One of the most pervasive determinants of an individual's behavior is the influence of those around him. This social influence has generally been referred to as conformity and looked upon as the relatively simple act of going along with or agreeing with a visible majority (Jahoda, 1959).

Much of the work in social influence has followed theoretically from the conformity studies of Asch and his associates (Asch, 1953) and Sherif's (1936) work in social judgment. In a study following from this research, Venkatesan (1966) found that naive subjects were influenced in their public evaluation of men's suits by the prior public evaluations of three confederates of the experimenter who were unanimously and confidently in agreement on their evaluations. He concluded that "group pressure was effective and that individuals tended to conform to the group norm" (Venkatesan, 1966, p. 386). A more recent modified replication of this study achieved similar results (Sims, 1971).

Evidence for this phenomenon has also been found in sociometrically selected social groups. Stafford (1966) examined the influence of social group members on brand choice and found that group members tended to conform (in their choice of bread) to the brand selected by the group leader.¹

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¹ Group leader was defined as the individual having the highest total score on Stafford's attractiveness, expertness and communications centrality measures.

PROBLEM

In each of these studies subjects were called upon to select the most preferable object from several identical objects. The object in each case was a product, such as bread or men's suits, which was beyond the power of these individuals to evaluate completely from direct observation and physical contact alone. It seems reasonable to expect that, under these circumstances, individuals will infer unobservable characteristics of the focal object from the observed behavior of others with respect to that object. That is, it seems likely that the observed behavior of others with respect to the object will be informative about that object.

Thus, when a subject observes three people stating clearly and confidently that suit B is the best suit, he may infer from this that suit B is, indeed, the best of the suits under consideration. An alternative explanation, and the one suggested in prior research, is that the unanimous opinion of the three confederates establishes a norm with which the naive subject complies in his own evaluation of the suit.

It seems necessary, if we are to gain greater insight into the determinants of buyer product evaluation, to come to grips with the role or roles played by the evaluations of relevant others in affecting the individual's product evaluation. Yet studies which address themselves to the specific nature of social influences are relatively rare in the marketing literature (an exception which will be discussed subsequently is Cohen and Golden, 1972).

SOCIAL INFLUENCE

Deutsch and Gerard (1955) have distinguished two types of social influence. They refer to informational social influence as the "influence to accept information

obtained from another as *evidence* about reality," that is, as evidence about the true state of some aspect of the individual's environment. They reserve the term normative social influence for the influence to conform to the expectations of another person or group.²

According to Kelman (1961), social influence operates through one or more of three distinct processes. Internalization is said to occur when the individual accepts influence because it is perceived as "inherently conducive to the maximization of his values"; that is, the content is perceived as being inherently instrumental to the attainment of his goals (Kelman, 1961, p. 65). Identification is said to occur when an individual adopts a behavior or opinion derived from another because the "behavior is associated with a satisfying self-defining relationship" to the other; that is, the role relationship between the individual and the other is beneficial to some portion of the individual's self concept (Kelman, 1961, p. 63). Compliance is said to occur when the individual conforms to the expectations of another in order to receive a reward or avoid a punishment mediated by that other.

Each of Kelman's processes relates to one of Deutsch and Gerard's social influence types. This may be seen by referring to Table 1. The goal orientation relevant to each process is also shown in the table along with the implications of the process for behavior.

The processes may be distinguished in terms of the motivational antecedents salient in the given influence situation. An informational social influence would be accepted if it is perceived as being instrumental to the solution of some problem confronting the individual or because it supports or adds to what the individual already believes about some salient aspect of his environment. Thus, an influence would be internalized if it were perceived as enhancing the individual's knowledge about his environment and/or his ability to cope with some aspect of it.

Internalization would be expected to occur when the individual has adopted a "task set," that is, when he views the others in the group as mediators of fact (Thibaut and Strickland, 1956). In the marketing research on social influence the individual has been given the task of evaluating a product. Here the in-

dividual would be likely to have adopted a task set or to have played what Bauer (1970) calls a "problem-solving game." A presentation would be internalized to the extent that it is perceived as providing information about the product.

Both Kelman and McGuire (1969) point out that the type of source which will most readily lead to internalization is the source perceived as being credible. A credible source is one which is believed to be an expert or very knowledgeable person on the topic under discussion (McGuire, 1969).

Kelley (1967) suggests that the evaluations people make about an object should be informative about that object to the extent that these evaluations are in agreement. Therefore, one would expect more information to be conveyed about the product when the ratings attributed to prior evaluators of the product are high in uniformity than when the ratings are low in uniformity.

Variations in the uniformity of prior product evaluations may provide subjects with information other than that limited strictly to the "true" evaluation of the product. For instance, it may provide subjects with information about how others expect them to behave. If the prior evaluations of others are attributed to a relevant reference group they may provide the subject with expectations about how members of that reference group would behave. These latter possibilities are directly related to the remaining two processes and are discussed below.

A normative social influence may be accomplished through either the process of compliance or identification. If the individual is motivated to realize a reward or avoid a punishment mediated by another, the individual would be expected to conform to the influence of that other. This compliance would occur, however, only if the individual believes his performance will be visible or known to that other. Therefore, the individual in a product evaluation situation would be expected to comply with the prior evaluations of others only where his evaluation is visible to others who are perceived by him as mediators of significant rewards or punishments.

An individual motivated to enhance or support his concept of himself would be expected to accept the influence of a referent by associating himself with positive referents and/or dissociating himself from negative referents. Thus, a person would identify by taking on the behaviors and opinions which he per-

TABLE 1
SOCIAL INFLUENCE

Influence	Process	Goal Orientation	Behavioral Implications
Informational	Internalization	Knowledge	Accept ← X*
Normative	Identification	Self Maintenance or Enrichment	Associate ← X → Dissociate
	Compliance	External Reward	Conform

* X represents the individual's initial position.

ceives as representative of his positive reference groups and/or taking on behaviors and opinions which he perceives as opposite those held by his negative reference groups. Here the individual performs the behavior or adopts the belief due to its enhancing or supporting affect on his self concept and the reward inherent in this enhancement or support.

In contrast to the process of compliance the visibility of his performance would be unrelated to the occurrence of identification. What is crucial here, however, is that the presentation provide information about the behaviors or expectations of others who are significant referents for the individual.

McGuire (1969) points out the source characteristics likely to lead to an influence via the process of identification as follows:

In discussing the source's attractiveness, we deal with the subject's motivation to attain a gratifying self concept through his position on the issue vis-à-vis the position advocated by the source. The crucial point for the subject in adopting the position urged by the source is whether he can enhance his self-esteem through his identification with the source (p. 187).

It follows from this that to the extent a subject agrees with a source because the source is similar (a variable which for McGuire mediates attractiveness) the individual is identifying. In much of the prior research the sources of product evaluations were similar to the individuals they were attempting to influence. This similarity makes it possible to argue that the influence process predominant in these studies is identification even though it may appear somewhat farfetched on logical grounds to maintain that subjects would identify with fellow students in a product evaluation task.

In contrast to the previously cited marketing research, Cohen and Golden (1972) attempted to distinguish between informational and normative social influence in a product evaluation context. They employed a 4×3 factorial design with three levels of interpersonal orientation (Cohen's CAD scale) and four social influence treatments.³ They reported that subjects' evaluations of coffee were significantly related to the uniformity of the prior evaluations to which they were exposed and that visibility per se (that is, the belief by subjects that others who follow them will know how they evaluated coffee) was not a significant source of variation. Although their results indicate that subjects' responses were determined by the degree to which prior responses were informative about the product being evaluated, their design did not permit investigation of possible interaction effects between information and visibility. It may be that in order for

visibility to affect subject evaluations these subjects must have information about the others' expectations.

HYPOTHESES

It is believed that when a person is placed in a product evaluation situation in which he is unable to adequately assess the characteristics of the product from direct observation and contact, he will view the reactions of others as evidence about the "true" nature of the product. Evidence may be provided to support this proposition by systematically varying the information to which subjects are exposed and the context in which they evaluate the product. These manipulations would be designed to separate the processes to which the observed effects may be attributed.

Among the variables which have been discussed as permitting one to distinguish the alternative processes of influence are: (1) the uniformity of prior product evaluations to which subjects are exposed; (2) the source of these prior product evaluations; (3) the visibility, or perceived identifiability by others, of the subject's own subsequent evaluations.

If subjects are exposed to the prior product evaluations of a group of people not at all representative of the type of people these subjects are or would like to become, a positive influence would not be explainable in terms of the process of identification. Compliance with what they perceive as the expectations of the other subjects may occur. However, it would only be expected if the subjects perceived their own evaluations as being visible to and identifiable by these others. Internalization, on the other hand, may be expected to occur in both visible and anonymous conditions if the prior evaluations are perceived as providing information (i.e., reducing subjects' uncertainty) about the "true" characteristics of the product.

Several hypotheses may be stated about the affects these variables would have if product evaluations (obtained after subjects' exposure to the evaluations of others) are actually the outcome of the process of internalization. They are stated here in the substantive form.

- Hypothesis 1: A direct relationship will be obtained between the product evaluations to which subjects are exposed and their own subsequent product evaluations.
- Hypothesis 2: A direct relationship will be obtained between the uniformity of product evaluations to which subjects are exposed and their own subsequent product evaluations.
- Hypothesis 3: The subjects' product evaluations will be more in agreement with the prior evaluations attributed to "experts" not at all like the subjects than

³ The social influence treatments were high uniformity visible, low uniformity visible, no information visible, and no information not visible.

TABLE 2
EXPERIMENTAL CONDITIONS AND THEIR ASSOCIATED INFLUENCE PROCESSES¹

Source	Consensus		Low Uniformity		High Uniformity	
	Anonymous	Visible	Anonymous	Visible	Anonymous	Visible
Similar Nonexpert	Internalization Identification	Compliance Internalization Identification	Internalization Identification	Compliance Internalization Identification	Internalization Identification	Compliance Internalization Identification
Dissimilar Expert	Internalization	Compliance Internalization	Internalization	Compliance Internalization	Internalization	Compliance Internalization

¹ In addition to the charted conditions there is one no-information control condition in which subjects evaluate the product without any information about how others evaluated it.

with the prior evaluations attributed to nonexpert prior evaluators who are similar to the subjects.

Hypothesis 4: Subjects who believe their own product evaluations will be visible to other subjects will not differ significantly in their agreement with the prior evaluations to which they are exposed from subjects who believe their product evaluations will be anonymous.

METHOD

Overview

A $3 \times 2 \times 2$ between-subjects factorial design with a single no-information control group was employed to test the hypotheses. The experimental conditions (diagrammed in Table 2) provided for three levels of the uniformity of prior product evaluations, two levels of the source of prior product evaluations and two levels of visibility of the subjects' own product ratings.

The influence processes said to mediate the dependent coffee evaluations in each condition are shown in Table 2. They follow directly from the earlier discussion on social influence.

Subjects

One hundred forty-three undergraduate students from the University of Illinois at Urbana-Champaign and Illinois State University participated in the experiment. All subjects were males enrolled in undergraduate business courses in their respective institutions. Subjects signed up to participate in the experiment in order to receive extra credit points toward their final course grades. Separate sign-up sheets were employed at each university, and they became the basis for the random assignment of subjects to treatment conditions.⁴ Each subject was assigned to one of the 13 treatment conditions (12 experimental treatments plus one control

⁴ A systematic sampling procedure was employed after taking a random start. The sampling procedure was conducted separately at each institution.

condition) in accordance with his position on his respective sign-up sheet. Thus, subjects from each institution participated in all treatment conditions and were assigned to those conditions at random.

Apparatus

Both the prior product evaluations to which subjects were exposed and their own subsequent product evaluations were recorded on a specially designed product evaluation board. The board, which was originally developed and used by Cohen and Golden (1972), consisted of a large piece of heavy white cardboard divided into five major categories, each of which was further broken down into three subdivisions. This resulted in an equal appearing interval scale varying from one (1) labeled, "Worst I've Ever Tasted," to fifteen (15) labeled, "Best I've Ever Tasted." Under each of these intervals was a column of short finishing nails evenly spaced so as to accommodate the small round tags which the subjects used to signify their product evaluations.

Procedure

Each subject was ushered individually into the experimentation room and informed that a marketing research project was being conducted to predict the likely success of a new brand of instant coffee. He was told that in a moment he would be asked to taste the coffee and indicate how good or bad he thought it tasted by placing a tag on the rating board in front of him.⁵

Uniformity. The uniformity of prior coffee evaluations was manipulated by varying the distribution of tags displayed on the board confronting the individual at the time of his own coffee evaluation. In the high uniformity condition the distribution of tags had a

⁵ Variations in past coffee drinking behavior were controlled through the process of randomization. Rather than matching on this factor or using only coffee drinkers, non-coffee drinkers were considered randomly dispersed through the treatment conditions. If evaluation differences occurred as a result of differences in coffee drinking experience, it would have the effect of increasing error variance.

mean and mode of 12 and a variance of 0.625. In the low uniformity condition the same number of tags were on the board with the mode remaining at 12. Here, however, the mean was 10.74 and the variance was 6.875. The third condition showed only that the consensus was 12. This last condition provided no information about the actual shape of the distribution. The uniformity conditions are shown in Figure 1.

Source. Each subject assigned to the similar non-expert source condition was informed that the evaluations displayed in front of him were made a few days earlier by, "other students like yourself who are taking business courses." Each subject assigned to the dissimilar expert condition was informed that the evaluations were made a few days earlier by, "women in home economics who are majoring in foods and nutrition and serving on the coffee taste testing panel of a major corporation."

Visibility. Each subject assigned to one of the visible treatment conditions was asked to taste the coffee, write his name on a blank tag with the red pen provided and place the tag on the board in the position corresponding to his own evaluation of the coffee. Each subject assigned to one of the anonymous conditions was asked to taste the coffee and then place one of the blank and unidentifiable tags available to him on the board in the position corresponding to his own coffee

evaluation. Both groups were informed that their tags would remain on the board until all coffee evaluations were completed. The tags were actually taken down immediately after they left the room.

Subjects in the visible condition who were exposed to a distribution of prior coffee evaluations found that each tag in the distribution had an individual's name on it in black ink. Subjects in the corresponding anonymous conditions confronted distributions of blank and unidentifiable tags.

Control. Each subject in the control condition was simply asked (without being exposed to any prior information) to taste the coffee and place one of the blank tags on the column of the board corresponding to his own coffee evaluation. He was also informed that immediately after he leaves the room the experimenter will tabulate his score and remove the tag from the board.

After experimental subjects completed the rating procedure, they were ushered into an adjoining room and given a brief questionnaire designed to provide support for the effectiveness of the manipulations. This questionnaire was followed by a post-experimental interview which concluded the experiment. Control subjects were taken directly from the rating procedure to the post-experimental interview.

Plan of Analysis

The evaluation assigned coffee on the product evaluation board constituted the major dependent variable of the experiment. Differences across conditions were assessed by means of analysis of variance using a procedure suggested by Winer (1971) and discussed in the following section.

Significant main effects were anticipated for uniformity and source but not for visibility. It was expected that both the comparison between the control and experimental uniformity conditions and the comparisons among experimental uniformity conditions would achieve significance. In each case the direction of the effect was specified by the hypothesis.

RESULTS

Manipulation Checks

At the conclusion of the experiment all subjects completed a questionnaire designed to provide evidence regarding the effectiveness of the manipulations to which they were exposed. The effectiveness of the visibility manipulation was assessed by the following question: "The students who follow me in the taste testing task will know how I evaluated coffee." The question was responded to by using a nine point equal appearing interval scale anchored by "Probable" given the value nine (9) and "Improbable" given the value one (1). The mean response to this question was

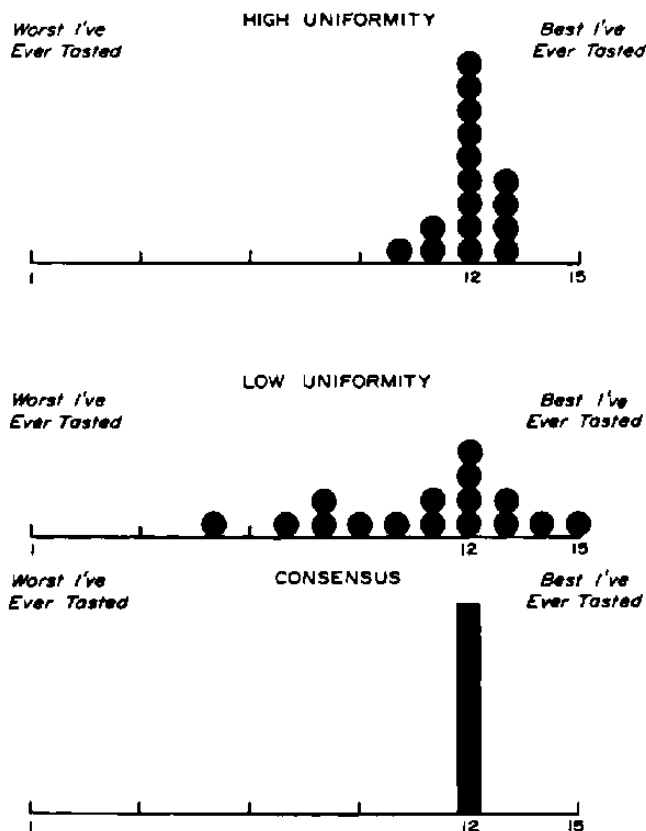


FIGURE 1

5.20 in the visible condition and 2.88 in the anonymous condition. An analysis of variance yielded a significant main effect for visibility ($F = 31.5$, $df = 1/120$, $p < 0.00001$).

The manipulation of the uniformity of prior information was checked by the question: "To what extent did the people who evaluated coffee before you agree with each other about its taste?" This was responded to on a nine point equal appearing interval scale anchored by "Agreed Completely" and "Agreed Not At All." The mean ratings were 5.45 in the low uniformity condition, 5.77 in the consensus condition and 6.41 in the high uniformity condition. An analysis of variance resulted in the finding of a significant effect for the uniformity of information ($F = 3.31$, $df = 2/120$, $p < 0.05$). It was found, using Tukey's h.s.d. test (Kirk, 1968), that only the comparison between high and low uniformity differed significantly ($p < 0.025$, one tail).

Three questions have a bearing on the effectiveness of the source manipulation and all three were responded to using nine point equal appearing interval scales anchored by "Probable" and "Improbable." The first question bearing on this issue was: "The people who rated coffee before me in this test rated it accurately."

An analysis of variance performed on responses to this question failed to yield significant results. A main effect of visibility did approach significance ($F = 3.2$, $df = 1/120$, $p < 0.10$). An examination of the marginal means indicates that subjects in the visible condition ($\bar{X} = 5.44$) thought it somewhat less likely that those who had preceded them rated coffee accurately than did subjects in the anonymous condition.

A significant Pearson product moment correlation coefficient of 0.59 was obtained between coffee evaluation and responses to the previous question. This finding, although not relevant to the source manipulation, will be discussed subsequently.

The second question bearing on the source manipulation was provided subjects in two forms. The question given the dissimilar expert group was: "In general, home economics students majoring in foods and nutrition and serving on a taste testing panel are experts at judging the taste of coffee." Subjects in the similar nonexpert source group were given a statement in which the wording was: "In general, other students like yourself who are taking business courses are experts at judging the taste of coffee." An analysis of variance performed on the results of this question yielded no significant effects. Furthermore, the grand mean score of 3.64 is below the midpoint of the scale. It seems, therefore, that neither source is viewed as "expert."

The third question bearing on the source issue was also provided in two forms. The wording in the dissimilar condition was: "In general, my personal tastes in foods would agree with the tastes of women in home

economics majoring in foods and nutrition and serving on a taste testing panel." In the similar condition the question was stated as follows: "In general, my personal tastes in foods would agree with the tastes of other students like myself who are taking business courses." An analysis of variance performed on the results again failed to yield a significant effect for the source manipulation. The grand mean response of 4.89 was slightly below the midpoint of the scale. A significant main effect ($F = 4.84$, $df = 1/120$, $p < 0.05$) was obtained for visibility. Subjects in the anonymous condition thought it more probable ($\bar{X} = 5.29$) that their tastes in foods would agree with the prior evaluators than did subjects in the visible condition ($\bar{X} = 4.51$). This will be considered further subsequently (see Discussion).

It was concluded from these manipulation checks that the visibility and uniformity manipulations were significant in the intended direction. It was also concluded that the source manipulation was ineffective. There appeared to be no identification with the similar group and no attribution of knowledgeability to the dissimilar group.

After subjects completed the manipulation checks questionnaire, they were interviewed to assess their reactions to the procedure employed in the study. Demand characteristics were checked by asking subjects to provide what they thought was the purpose or objective of the experiment. Group differences in the relative frequency of a normative response were assessed using chi square analysis.⁶ No significant differences were obtained in comparisons among experimental groups. The experimental groups differed significantly ($p < 0.05$), however, from the control condition.

The extent to which the significant differences were due to differences in the coffee evaluation procedure employed between control and experimental groups is not clear. The differences may have been due to the subjects' reassessment (in the post-experimental interview) of the experimental procedure. They may also have been due to cues provided by the manipulation check questionnaire. The approach taken here to assess the effectiveness of the manipulations would seem to be more subject to demand characteristics than the testing of separate groups (Orne, 1962).⁷

In order to assess the effects of demand characteristics on coffee evaluations, a preliminary analysis of variance was performed using "awareness of the

⁶ One hundred twenty-seven of the 143 subjects who participated in the study were included in this analysis. The remaining subjects were omitted from the analysis due to the impossibility of identifying their post-experimental interview responses.

⁷ It was believed that the approach used in this study would provide support for the effectiveness of the manipulations without increasing the necessary sample size beyond the limits of the available subject pool.

normative implications of the study" as an additional factor in the design. This analysis was performed after collapsing over the source factor. No evidence was forthcoming from the manipulation checks to indicate that the source manipulation had any effect. Furthermore, preliminary analysis of the coffee evaluations failed to yield any significant effect in which source participated.⁸

It was found that those who were aware that the experiment had relevance to social influence evaluated the coffee significantly ($p < 0.05$) lower (less in agreement with the provided information) than those who were not aware that the experiment had relevance to social influence. No interaction effects were significant.

Testing the Research Hypotheses

An analysis of variance was performed using coffee evaluation as the dependent variable and uniformity and visibility as the independent variables. The control condition was included in the analysis of variance as a fourth level of uniformity following a procedure recommended by Winer (1971, p. 468) for use in situations in which a single control group is used in conjunction with an otherwise factorial experimental design. Here the within cells mean square is formed by pooling the within cell variation from the factorial part of the analysis with the within cell variation from the control group. That this is appropriate in the present instance follows from a comparison of the control group mean square (8.291) with the within cell mean square produced in the factorial part of the design (6.259).⁹

The analysis yielded a main effect for uniformity which is clearly significant ($p < 0.01$). A significant main effect was also obtained for visibility ($p < 0.05$). The direction of this latter relationship, however, was the opposite of the direction predicted earlier (see table 4). Subjects in the anonymous condition were found to have evaluated coffee more in agreement with the prior evaluation to which they were exposed than subjects in the visible condition.

Tukey's h.s.d. test (Kirk, 1968; Winer, 1971) was used to determine the significance of pairwise comparisons among the four uniformity conditions (three experimental uniformity treatments plus the control group). It was found, using one-tail tests, that the control condition differed significantly from each of the experimental uniformity conditions. The difference

TABLE 3
ANALYSIS OF VARIANCE: COFFEE EVALUATION
(Control Represented as a Level of Uniformity)

Source	df	Mean Square	F
Uniformity (A)	3	32.808	5.199**
Visibility (B)	1	30.068	4.692*
A × B	2		1.546
Within Cell	136		

$p < 0.05^*$
 $p < 0.01^{**}$

was significant at $p < 0.01$ for the control group—high uniformity group comparison and for the control group—low uniformity group comparison. It was significant at $p < 0.05$ for the control group—consensus group comparison. In each case the direction of the difference was as predicted (see table 4).

Pairwise comparisons obtained among the experimental conditions of uniformity failed to reach significance. No significant interaction effects were obtained.

DISCUSSION

A significant direct relationship was obtained, as predicted, between the no information control group and each of the experimental uniformity conditions. The expected direct relationship between the uniformity of the product evaluations to which subjects were exposed and the subjects' own subsequent product evaluations was not forthcoming. Also contrary to expectations, the subjects in the visible condition evaluated the product significantly less in accordance with the prior evaluations of others than subjects in the anonymous condition. No significant interaction effects were obtained.

Subjects were significantly influenced by exposure to prior information about the product. The failure to obtain a significant interaction between information and visibility indicates that the influence was not contingent on the subjects' belief that their own ratings would be visible to others. This combined with the failure to obtain a significant direct relationship between visibility and product evaluation tends to rule out compliance as a significant determinant of the product evaluation.

The absence of identification would seem to be indicated by the evidence in the manipulation checks showing that subjects did not tend to identify with other business students in their tastes in foods. They did not believe their tastes in foods would be more in agreement with other business students like themselves than they would be with women in home economics. Furthermore, the mean response obtained for this question was below the midpoint of the scale provided.

⁸ Source was treated as a third factor in a preliminary $3 \times 2 \times 2$ factorial analysis of variance.

⁹ The sum of squares within cells (shown in table 3) is found by pooling the sum of squares within cells from the factorial part of the experiment (788.6818) with the sum of squares for the control group (82.9091). If each sum of squares is divided by its respective degrees of freedom (126,10) the mean squares of 6.259 and 8.291 respectively are obtained.

TABLE 4
MEAN COFFEE EVALUATIONS

	Similar Nonexpert Source		Expert Dissimilar Source		Uniformity Marginals
	Anonymous (A)	Visible (V)	Visible (V)	Anonymous (A)	
Consensus	9.36	7.64	8.54	9.64	—
Low Uniformity	10.09	10.09	9.27	9.00	—
High Uniformity	11.09	9.54	8.82	10.45	—
Marginal Visibility (V)			8.98		
Marginal Visibility (A)			9.94		
Marginal Source	9.64		9.29		

Grand mean = 9.46.

Control group mean = 6.91.

Evidence was provided which indicated that significantly more experimental than control subjects were aware that the experiment was related to social influence. Those who were aware of the relevance of social influence to the experiment rated coffee significantly less favorably (i.e., significantly less in agreement with the prior information to which they were exposed) than those who were not aware of the relevance of social influence. Therefore, the effect of demand characteristics on the experimental group-control group comparisons was a conservative one. The significant direct relationship between information and coffee evaluation is not explainable in terms of demand characteristics.

It appears that informational social influence was operative in the experiment. This is further supported by the strong correlation ($r = 0.59$) obtained between coffee evaluation and the degree to which subjects believed prior evaluators of the coffee evaluated it accurately. Apparently, people in product evaluation situations use the ratings of others as evidence about the true nature of the product. They view the others as mediators of fact.

The uniformity, or consistency, of the information did not significantly affect subjects' evaluations of coffee. This is somewhat surprising in view of the significant finding on the uniformity manipulation check. Perhaps uniformity has its effect on the certainty with which the evaluation is made rather than on the magnitude of the evaluation. Certainty has been found to be related to consistency in the attribution literature (cf., Kelley, 1967; Jones, et al., 1972).

It may be recalled that subjects in the anonymous condition were significantly more in agreement with the prior evaluations to which they were exposed than subjects in the visible condition. This result seems to be consistent with a finding of psychological reactance. According to Brehm (1966), if an individual's freedom is perceived as being reduced or threatened with reduction, he will become aroused to maintain or enhance his freedom. This motivational state of arousal to reestablish or enhance his freedom is termed

psychological reactance. It is said to be directly related to the importance of the behaviors which are eliminated or threatened with elimination relative to the importance of remaining behaviors and, where there is only a threat of elimination of the behavior, the likelihood of the threat being carried out. The legitimacy and justification for the interference moderate the magnitude of psychological reactance; but, according to Brehm, they are incapable of eliminating it.

If the subjects in the visible condition perceived the requirement that their product evaluations be visible and identifiable by others who follow them as constraining their freedom to act in the situation, psychological reactance may have been aroused. This psychological reactance could have moderated the positive effect of the influence. Brehm seems to agree with this interpretation in his conclusion that the arousal of psychological reactance in a social influence situation will lead to a tendency to disagree with the communicator.

Responses to two questions on the post-experimental interview seem also to be consistent with a psychological reactance interpretation of the results. It may be recalled that subjects in the anonymous condition believed their personal tastes to be significantly more in agreement with those of the prior coffee evaluators than subjects in the visible condition. A similar difference approaching significance was found for their belief that the prior evaluators rated the coffee accurately. While both results are supportive of the obtained group difference in coffee evaluation, they represent additional modes of reactance resolution which may have been easily adopted in the present context. In other words, these mutually supportive responses may have been the result of attempts to reduce the psychological reactance aroused by a manipulation perceived as infringing on their freedom of action.

An alternative, and more parsimonious, explanation may be that, in the present experiment, randomization did not work. In other words, the subjects randomly assigned to the anonymous condition may have initially differed on characteristics which led them to

accept influence to a greater extent than the subjects randomly assigned to the visible condition. That there are individual differences in susceptibility to influence has been discussed elsewhere (e.g., McGuire, 1968).

It might be argued as an alternative to these explanations that visibility increased subjects' involvement and that this increased involvement reduced their susceptibility to influence. This appears unlikely, however, for several reasons. First of all, as Zimbardo (1960) pointed out, most studies which have shown this inverse relationship were actually manipulating issue involvement rather than task involvement. Zimbardo manipulated task involvement and found a direct relationship between it and opinion change. Wright (1971) more recently found no relationship between task involvement and opinion change. Finally an analysis of variance was performed on the results obtained from the question worded: "Giving the right or true answer on the coffee taste test is . . ." The response was recorded on a nine point equal appearing interval scale with the poles labeled "Extremely Important to Me," "Extremely Unimportant to Me." The analysis failed to yield any significant visibility effects.

Additional manipulation checks would be needed to establish whether a process such as reactance, or indeed, some other affects might have been operating. It would have been revealing, for instance, to measure the degree to which the manipulations influenced the subjects' perceived freedom in the task.

CONCLUSION

Evidence was provided to indicate that people use others' product evaluations as a source of information about the product. It appears that, after observing others evaluating a product favorably, people perceive the product more favorably themselves than they would have in the absence of this observation. They use the evaluations of others as a basis for inferring that the product is, indeed, a better product.

This represents a departure from prior research which suggests that the responses of others establish a norm with which the subjects comply. Normative effects (whether compliance or identification) may have been too readily inferred from past observation of unanimous or consensus behavior among the members of a group. The agreement may have been due to attributions subjects are able to make about the product as a consequence of the observed reactions of others. These reactions of others may have served as a basis for making inferences about the product's characteristics.

It seems likely that this same phenomenon occurs regularly in shopping situations and in social groups. People may frequently buy products that others in their groups buy, not to establish some self fulfilling role relationship to the others nor to obtain some reward

or avoid some punishment mediated by the others, but rather to acquire what they perceive as a good product. Similarly, it may be that an individual in a shopping situation will use the reactions of other shoppers as a basis for inferring the value of products he or she is unable to evaluate completely from direct observation.

This is not to say that compliance and identification never occur. What is meant, however, is that the mere demonstration of unanimity or consensus does not warrant an inference that the basis for that agreement is normative. It may be that people go along with others because, as a consequence of observing others' reactions, they perceive the product differently.

It was also found that people whose evaluations of the product were visible to others were actually less in agreement with the evaluations of others than those whose evaluations were anonymous. This points out a danger inherent in attempting to gain compliance in situations in which the inducing agent has little control over the distribution of rewards and punishments. Such a situation would seem to include both advertising and personal selling attempts to gain compliance, for the advertiser (or his source) or personal seller generally has little control over the distribution of rewards (or punishments) to the potential customer. Under these circumstances, a compliance induction perceived as infringing on the individual's freedom may lead to a motivation to react against the perceived infringement which is strong relative to the motivation to comply. The result would, of course, be a boomerang effect producing behavior the reverse of that intended.

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