THE LIMITS OF CONFORMITY

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ABSTRACT

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By

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A great deal of research on conformity has indicated that many individuals are more than willing to adopt the judgments or opinions of a majority group, even when the majority is wrong. All of the previous research, however, has failed to demonstrate whether the source of the conformity is external group pressure or some internalized value for conformity. This thesis sought to discover the source of conformity by eliminating the possibility of external pressure of any kind.

Using sixty Michigan State University undergraduates as subjects, the researcher posed as a pollster asking for responses to six statements on public issues. The falsified results of an earlier "national college sample" were used as the majority consensus stimulus. A written questionnaire was administered in secret, and then placed in a locked ballot box.

This study found that subjects do not tend to conform in any significant way when responding anonymously. This finding supports the idea that conformity is externally enforced, rather than internalized. Introducing controls for sex, religion, and identification with the false sample frame failed to yield any significant conformity, further supporting the external pressure hypothesis.

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INTRODUCTION

Considerable research has been done on the issue of conformity, much of which would indicate that many of us are more than willing to sacrifice our own judgments or opinions to a majority consensus, even when under considerable pressure to do otherwise. One of the pioneers of such study was Asch.

In his experiments, Asch exposed individuals to lines of varying lengths, asking the subjects to match a test line with a line of equal length (1951). He found that when confederates give incorrect judgments about the length of lines, subjects respond by giving incorrect responses themselves. Depending on the amount of unanimity and the degree of support on the subject's side, a remarkable number of individuals gave in to the group on a large number of judgments.

Specifically, this demonstrated that some individuals who are exposed to the knowledge that others overwhelmingly disagree with him/her, abandon their own conceptions about a particular phenomenon, and agree with the group. The explanation which was posited for this behavior was that individuals have such a fear of appearing wrong or foolish, that they find it safer to be wrong when a group is also

wrong. It also was taken to indicate that, for many individuals, agreement with a group is more important than being singularly right, especially in terms of social risk. Therefore, individuals succumb to social pressure.

Asch's idea was adapted by Crutchfield in a manner which did not require the use of confederates (1954). With each subject seated in a separate booth, the experimenters controlled a panel of lights in each booth visible to each subject. Each subject was told that his panel of lights would indicate the responses of the other subjects to the question being asked, and that his own responses were also visible to the others. The researchers then controlled the lights in such a way that each individual was made to believe that the others were in solid agreement, but had reached a different decision than the subject. Under the illusion that the lights indicated the responses of the other four subjects, each of the subjects was asked to respond.

Confirming the results of the Asch study, a number of subjects agreed with the false consensus. Moreover, by using an "artificial" group agreement, Crutchfield was able to greatly multiply the number of usable observations, since, unlike Asch's study, all people present were genuine subjects. Even with this change, Crutchfield's study resulted in the same conclusions as Asch's experiments, with respect to group pressure and conformity.

Following Crutchfield, Tuddenham (1961) attempted to show the effects of the presence of a known group norm with

less bizarre distortions in judgment than those tested by Crutchfield and Asch. Subjects were tested to find their "acceptable range of variation" on particular visual, general information, and opinion stimuli, by observing a number of responses given by subjects with no peer pressure present. That is, subjects were initially tested to see how far in either direction they would vary their judgments, when allowed to respond under no social pressure. A distorted norm, i.e. the falsified response of others on the same issue, was then introduced.

Where the distortions were within the "acceptable range," conformity was induced. When distortions were of greater magnitude, the subjects conformed as expected, but usually to a lesser degree and still within their own range potentials. A significant portion, however, did shift beyond their range potentials, and sometimes to "grotesque limits."

Luchins and Luchins were interested in the possible implications of Asch's and others' findings on test results (1968). They attempted to find the circumstances or experimental conditions under which subjects would accurately report perceptions. They assumed that the presence of peer pressure leads to distortions and misreporting on the part of subjects.

In one experiment they found that a motivation to tell the truth (three lectures stressing the importance and necessity of accurate reporting of perceptions, plus a grade increment reward for reporting accurately) was ignored

in a significant number of situations, when subjects were confronted with the disagreement of both peers and the experimenters.

They next allowed some peers to agree with the subjects, while keeping the experimenter in disagreement, and found that the experimental motivation did appear to have a significant effect, when tested against an unmotivated control group. Conformity was still present in this set of line experiments, even though the addition of some peer agreement did reduce the subject's conformity with the group.

In another conformity experiment (1954) Goldberg tested the effects of three situational variables--group size, frequency of exposure to the stimulus, and the extent to which the individual sees himself/herself as different from a specified norm--on the conformity behavior of volunteer subjects. Goldberg asked subjects to repeatedly judge the intelligence of nine individuals from their photographs, each time giving them a false report about the group's judgment.

He found that the greater the distance from the norm (group mean guess minus the subject's guess), the more the individual conformed. Group size and frequency of exposure had no noticeable effect. Additionally, by some reasoning which was not clearly explained, Goldberg concluded that a tendency for individuals to conform may not be generalized. That is, conformity was seen as a function of specific situational variables, not as a function of the individual.

He asserted this result as evidence against any general personality characteristics of suggestibility or conformity.

Walker and Heyns (1967) have done some more recent studies which lead them to an entirely different conclusion. In one set of experiments, two groups of subjects were placed in situations where conformity and non-conformity, respectively, were rewarded. One group was consistently rewarded for conformity while the other was rewarded for non-conformity. Each was then tested to determine whether or not they continued to conform or non-conform, accordingly, in a non-reward situation.

Their manipulations were successful in producing the appropriate conformity and non-conformity. Those who were rewarded for conformity, as well as those who were rewarded for non-conformity, continued to exhibit the same behavior, respectively, even when the rewards were absent. This finding was interpreted as meaning that conformity <u>is</u> generalizable.

Specifically, Walker and Heyns are saying that whether or not an individual conforms will be determined by the pattern of rewards he/she has received in the past. If the individual has been rewarded most frequently for conformity, then that person will tend to generalize conformity to non-reward situations. Conversely, if a person has been rewarded most frequently for non-conformity, then he/she will tend to non-conform in non-reward situations.

In contrast, Goldberg claimed that such individual differences are not a factor. His results reportedly show

that situational differences will account for conformity and that individual differences are not significant determinants.

Actually, neither Goldberg nor Walker and Heyns make a very convincing case for their arguments. Goldberg, by using a conclusion, the foundations of which are not adequately spelled out, does not appear to test the question of conformity in any general sense. Rather, the influence of a few situational variables is apparently taken to be evidence that conformity is not a function of individual characteristics. In this case, contrary to Goldberg's conclusion, the presence of one type of influencing factor certainly does not rule out the other.

Walker and Heyns claim, on the other hand, that they found that individuals do generalize not only conformity, but non-conformity as well. While their results, i.e. that subjects continued to conform and non-conform in a non-reward situation, may not be disputed, whether or not the situation is sufficiently "general" to warrant their conclusion is highly questionable. Certainly, the previous behavior was extended to a non-reward situation. However, there was a sufficient number of similarities between the situations to question the use of the term "generalization." Both were conducted in a laboratory and in an experimental setting with observation by the same experimenter. Both situations gave the subjects similar stimuli and information. The only difference was the reward.

In fact, Walker and Heyns have shown only that the behavior which has been rewarded in a specific situation will be extended to other similar situations, not that it will be extended (or generalized) to non-similar or general situations. Thus, the question remains unanswered.

By combining both arguments, i.e. the situational and the individual (generalized), a reasonable synthesis can be presented. That is, Walker and Heyns have demonstrated that behavior will be extended, but not necessarily generalized. In other words, for situations in which a particular distribution of rewards has already been established, one would expect that the individuals will exhibit the behavior appropriate in those specific situations. This is somewhat compatible with Goldberg's findings. Thus, in experiments of this nature, the individuals will continue to behave as their rewards dictate. In different situations, however, individuals may revert to whatever behavior has been previously rewarded in such contacts.

The generalization question is most clearly an issue when the person has neither been rewarded nor told to expect a reward. Otherwise, the individual is conforming (or non-conforming) with respect to a specific set of expectations. It is in the realm of new, unfamiliar, or unrewarded situations that the individual might generalize past conformity or non-conformity. Having no tailored set of expectations as to which behavior will bring a reward, an individual in a new situation may tend to conform (or non-conform) simply

because that behavior has yielded consistently better results in the past.

Now, one might easily infer from a casual examination of the society which surrounds us, that conformity is more frequently rewarded than non-conformity. If this is true, then it is not entirely unreasonable to propose that in new or unrewarded situations, in which the individual is not aware of the basis upon which rewards or penalties, if any will be assessed, individuals will generally tend to conform to the behavior of others, provided that the behavior of others is known to the individual. Using generalization as a basis, the presence of rewards and penalties in such situations need not be a factor in the conformity. Here, it is the generalization which produces the conformity, since the individual does not specifically know what kind of behavior will be rewarded. It should be emphasized that the foregoing argument would additionally apply in the same manner to a person who has been consistently rewarded for non-conformity in most situations. However, such cases would be quite unusual, and consequently, we expect that conformity will be the norm.

This expectation of conformity as a norm depends upon several factors. The first is that individuals are usually rewarded for conformity rather than non-conformity. As suggested above, this does not seem to be an unreasonable assumption. A second assumption is that individuals internalize the desire for conformity in such a way that, even

when external rewards and constraints are not present, they desire to conform with "most other people." Through such a process, individuals associate conformity with rewards, creating internal rewards which effect conformity.

Walker and Heyns, it seems, were trying to demonstrate this phenomenon. That is, to say that conformity (or non-conformity) will be generalized to a situation wherein rewards are not present, is to say that a value for such conformity has been internalized. However, Walker and Heyns erred in one specific and crucial respect which is cause for considerable misgivings about their experiment. They failed to completely isolate the subjects from observation. Such observation, I believe, constitutes a situation in which the subject may still be behaving so as to please the experimenter.

Furthermore, it appears that Goldberg makes the same mistake. In order to demonstrate the presence of such "internal conformity," anonymity of the subjects must be absolutely established.

Therefore, the only general conclusion which can be surmised from the studies which have been discussed is the following: Greater unanimity of opposing consensus increases the probability that individuals will conform to some group norm with which they would ordinarily disagree. This was established very early in the literature, and is supported throughout. In conflict here is the conclusion of Goldberg with that of Walker and Heyns. The logical synthesis of their arguments is one possible basis for the internal conformity

theory presented below. In this view, conformity has been established as an internalized norm in most individuals, possibly by the above process, and need not be enforced by group pressure or other rewards which are external to the individual.

Thus, we have two ways of looking at conformity which are relevant to the studies discussed here. The one which has been focused upon primarily in the literature is the group pressure hypothesis. The individual is considered to be concerned with his/her standing in the group, and views that standing as partially dependent upon his/her reaction to various objective and subjective issues. This concern is seen to exist even in groups which have no history, i.e. which have been created for the sole purpose of the experiment.

When asked to respond to various stimuli, the subject has several priorities. If he/she alone is responding, the first priority is always to be right. If, however, others are responding, his/her perception of correctness may become distorted in order to allow agreement with the group. The individual's concern about group standing often overrides the concern for correctness. Consequently, when an individual reaches a decision which is different from the group's decision, he/she is less likely to maintain that he/she is correct. Rather than face possible ridicule and loss of standing, the individual abandons a correct decision and agrees with the group's wrong decision. As such, the reason for conforming is <u>external</u> to the subject.

The other explanation is one which the experiments have not really considered. This view posits the existence of a second level of conformity. The first is external, and corresponds to the above explanation, i.e. conformity for the sake of appearance to others. The second is internal--conformity for the sake of personal satisfaction. The latter type requires that the individual have an internalized value for conformity, i.e. that disagreement with others is objectionable or uncomfortable. Therefore, the individual seeks to conform, not for appearance's sake, but for internal satisfaction. Clearly, the internal level requires only that the individual be informed of the group's decision or the norm, and not that he/she be exposed to the possibility of ridicule.

We would not, however, expect a person to internally conform with a group with which he/she does not identify. That is, in order for a person to change an opinion or judgment, he/she must be motivated by the knowledge that his/her judgment does not concur with that of a reference group. Therefore, a necessary pre-condition for the internal conformity theory is identification with the particular reference group.

Previous studies of conformiy have the following in common: When tested, the critical subject has always been in a position of being observed, either by the experimenter or by the other subjects, or both. This observation effect may tend to force the respondent into a position of agreeing in order to appear to be in agreement with the group, rather

than for conformity's sake alone. The studies have not attempted to discover to what extent conformity is sought for its own sake.

Of interest here is this failure to consider the internal conformity issue. Having the subject under observation of any kind creates a situation in which the subject may still feel compelled to agree with the consensus, above and beyond any internal desire for conformity, in order to be viewed as "normal" by the experimenter or the group.

Therefore, the study being done here will eliminate both the group observation and the experimenter observation in order to prevent the possibility that the subject's response is a result of anything other than internal conformity. The subject will respond in such a way that he/she is convinced that the experimenter has no way of knowing the subject's response, i.e. in total secrecy.

If the results of this study show that conformity is not produced, then there is strong reason to believe that the social pressure hypothesis is the crucial factor in explaining conformity. This would show that individuals have to be subjected to scrutiny before they retreat from their own judgments.

If, however, these results show that conformity is still produced, even under conditions of secrecy, then some substantial change in the focus of the conformity question comes about; that is, the "social pressure" which accounts for the conformity does not require the presence of the group

whose pressure is being used. Furthermore, it is not even necessary that the subject be observed, i.e. that he/she be concerned with how he/she appears to others. If this is the case, then one of the mechanisms which produces conformity is internal. This, of course, does not rule out the possibility that external pressure is also a cause of conformity.

The theoretical questions being considered in this study also include the possibility that other factors relate to conformity. One such factor is the importance of the issue to the individual. It might be expected that issues which individuals consider important will be less subject to social pressure than unimportant ones. Flexibility on an issue may be a function of its importance, but it may also be a function of expertise, which, on an issue like the economy, may affect one's ability to make a firm decision, while still considering the issue important. While this variable is not a central issue in this thesis, it is one which has not been given much attention in the previous studies and which the following design will attempt to incorporate.

In sum, then, this thesis asks if an artificial consensus will have the effect of producing conformity, even when the subject's response is totally secret. It assumes that conformity may be internalized in part, rather than wholly externally enforced. In essence, it tests the accepted idea that fear of being ostracized from the group is the only mechanism which produces conformity.

THE SURVEY

Design

The thesis was tested by administering four different questionnaire forms to groups of 15 students, each of whom was told that the questionnaire was part of a national opinion survey. Three of the forms gave an ostensible distribution of responses from a recent national sample of college students. The fourth was a control group and gave no such information. The completed form was placed in a locked ballot box.

Each questionnaire consisted of four parts. On the front there was a letter of introduction and an "informational" questionnaire. The letter contained an introduction to the surveyor and it explained the survey and the method being used. The purpose of the letter was threefold. First, it served to help build credibility into the questionnaire by establishing, in writing, a name and address for the polling organization. Third, the explanatory nature of the letter reinforced and justified the secret nature of the poll, i.e. that the subject would respond on a secret ballot.

The other half of the front page consisted of an informational series of questions, in which respondents were asked to give their sex, race, and religion. In addition, the subject was asked to evaluate eight U.S. sub-populations, only one of which, college students, was of interest.

This particular question was asked in order to obtain a measure of identification with college students. As discussed earlier, it is not reasonable to expect internal conformity with a group with which the subject does not identify. Here, we attempt to verify the presence of identification with college students, as a pre-condition.

The reverse side of the questionnaire consisted of the experimental treatments, and a questionnaire designed to detect suspicion about the treatments. The treatments were different on each of the four groups. This part consisted of six statements about public issues. Respondents were asked to respond on a scale of 1 (strongly agree) to 5 (strongly disagree), depending on how they felt about each of the six statements. They were also asked to indicate, on a scale of 1 (very important), 2 (mildly important), and 3 (not very important), how important the particular issues were to them. This was done in order to test a possible relationship between conformity and importance. As suggested earlier, it is possible that subjects who view the issues as important may be less likely to conform to a majority view.

On three of the different forms, the "results" of a recent poll of college students were presented. On each form, results were presented in three ranges: low agreement (15-25%), medium agreement (40-50%), and high agreement (75-85%).[1] Each of the six statements on these three forms was represented with each level of "artificial agreement" (i.e. the recent poll results were fake, and represent the

treatments) an equal number of times. Hence, statement 1 was represented as having high agreement in the "recent poll" in one-third of the treatment forms, low agreement in one-third, and medium agreement in one-third; and so on for statements 2 through 6.

Therefore, each person in the three treatment conditions received a questionnaire which contained all six statements: two with low artificial agreement, two with medium artificial agreement, and two with high artificial agreement. As stated earlier, there was a control group which received no information. The arrangements of treatments were as follows:

Group 1

High Artificial Agreement	Statements 5 and 6
Medium Artificial Agreement	Statements 1 and 4
Low Artificial Agreement	Statements 2 and 3

Group 2

High Artificial Agreement	Statements 1 and 2
Medium Artificial Agreement	Statements 3 and 6
Low Artificial Agreement	Statements 4 and 5

Group 3

High Artificial Agreement	Statements 3 and 4
Medium Artificial Agreement	Statements 2 and 5
Low Artificial Agreement	Statements 1 and 6

Group 4

Control Group: No Information Given

Thus, each critical subject received all three treatments. It was decided that a single treatment per form would not be acceptable for two reasons. First, that practice would provide only one-third as many observations per condition. In order to get as many observations as were obtained in my design, it would be necessary to triple the number of subjects. Second, having the same level of agreement for each statement might produce suspicion, especially with varied issues. It was decided that such false information would stand a much better chance of being believed if it were varied, that is, having some statements receiving strong agreement and others not.

Of the parts of the questionnaire mentioned so far, the "informational" questionnaire was Part I, the treatment questionnaire was Part II, and the final part was Part III. Part III was designed to detect any suspicion. The subject was asked if the interviewer seemed trustworthy, or if the interviewer influenced any answer in any way, and to state the purpose of the survey. In addition, there were two filler items.

To sum up, each questionnaire consisted of the same introduction letter, the same Parts I and III, and one of four different Part II's.

The Subjects

Each questionnaire form was administered to fifteen aubjects. Subjects were randomly selected from undergraduates who reside on the Michigan State University campus. Dormitories, rooms, and floors were randomly selected. All of the names of dormitories from M. S. U. were put into a hat, and ten were drawn at random. Six rooms per dormitory were selected in the following manner. Six numbers were randomly selected (with replacement) for each dormitory, representing floor numbers; and sixty numbers were then drawn representing the rooms which would be selected on each of the floors. When the chosen floor in each particular dormitory was reached, I then counted from the first door on the right, beginning on the south or east hallway, depending on how the building was situated. If more than one person happened to be home when they were called upon, then the final selection was made by reference to a predetermined list of random 1's and 2's (determined by a coin toss), wherein a 1 would indicate the person whose name came first in the alphabet, or a 2 for the name which came last.

It might be objected that this procedure results in a non-random selection of subjects, in that it was selective of only those who happened to be home at a specific time of day. However, return visits were made in cases in which no one happened to be home. Additionally, subjects were

interviewed at three distinct times of day--morning, afternoon, and evening--consequently sampling a wide variety of people, with respect to time.

Forms were arranged in a pre-determined random order so that I was not aware of which form each individual was given. This should have substantially eliminated the possibility of any effect from experimenter expectancy.

The subjects were informed that they had been randomly selected to participate in a national poll of college students, and were then asked if they would do so. If they said yes, I went inside and gave a rehearsed spiel about the poll.[2] They were told that the usual method of polling involves the pollster orally administering the questionnaire, but that many people object to being put on the spot by an unfamiliar person. It was then explained that "we" had developed a different and less objectionable polling method--the ballot box. They were then given the questionnaire which they were told to fill out on their own and then to insert it into the ballot box.

One potential problem was that the respondents might not notice the percentages on the treatment forms. If no questions were asked within a few minutes after the subject began to fill out the reverse side, then the subject's attention was called to the percentages. The explanation used for all respondents was that a 1974 Polling Disclosures Act requires that participants in opinion polls be given full information regarding the purpose of the particular poll and the results

of the most recent version of the same poll being taken. Virtually all of the subjects asked about the percentages and how they were supposed to respond to the questions, thus inviting the "explanation." It was only necessary to spontaneously offer the "explanation" to two subjects, since the rest asked about the items.

When subsequently questioned, none of the respondents thought the results which were presented were false. However, one subject did think that the percentages were inserted in order to influence her responses. That person's questionnaire was subsequently removed from the sample.

Furthermore, the subjects were inconspicuously observed in their motions in answering the questionnaires, and none of the sixty subjects violated the intended answering sequence (i.e. read letter, answer Part I, answer Part II, answer Part III). Thus, it was ascertained that no subject based his or her response to the rating of college students on the artificial poll results.[3]

RESULTS

Manipulations

As mentioned above, in this survey there was no evidence in any of the cases which are used in the final data analysis that the manipulations were not believed or not noticed by the subjects. In every case, the subjects were aware that the poll results were present.

Additionally, three separate pre-tests were administered in order to ascertain that such manipulations of poll results would not foster suspicion. In the first and second pre-tests, questions regarding smoking were used, and the stated source of the poll results was the Gallup Poll. In the third pre-test, the form used for this survey was employed. None of 33 students, a mixture of graduates and undergraduates, found the poll results to be questionable, although some extreme results for each question or statement were presented (90 to 95% agreeing and disagreeing).

Finally, the identification pre-condition was met in 39 out of 45 cases.

The Hypothesis

The major hypothesis can be looked at in two ways. The first separates it into two hypotheses: (1) a positive consensus (high artificial agreement) will raise the

percentage agreeing to some point above the percentage that would be obtained from a control group, and (2) a negative consensus (low artificial agreement) will decrease the percentage agreeing to some point below the percentage that would be obtained from a control group. That is,

(1) $A_h > A_l$, and
(2) $A_c > A_l$

where A_h, A_c, and A_l are the amounts of agreement where artificial agreement is high, not given, and low, respectively.[4]

Another way of looking at the hypothesis combines the two aspects of the first by saying that if (1) and (2) are true, then:

(3) $A_h > A_c > A_l$, and therefore
(4) $A_h > A_l$.

Therefore, a finding that A_h is less than or equal to A_l automatically disproves (3), and consequently renders (1) and (2) superfluous.

Hence, the null hypothesis is: Mean response when national college response is in high agreement (positive consensus) = Mean response when national college response is in low agreement (negative consensus).

Testing the Hypothesis

The experiment was set up in such a way that it may be treated as two Latin Squares. The entries in Figure 1 are L, M, and H, which represent low, medium, and high artificial agreement, consequently giving each treatment in each level of the design exactly once. Thus, the two Latin Squares separately treat Statements 1, 3, and 5 and Statements 2, 4, and 6.

Statement	Form 1	Form 2	Form 3
1	M	H	L
3	L	M	H
5	H	L	M

Statement	Form 1	Form 2	Form 3
2	L	H	M
4	M	L	H
6	H	M	L

FIGURE 1

Latin Squares Design

The resultant analysis of variance tables are shown in Table 1. We note that in each ANOVA there is a significant item effect. This is not surprising. Some items would be expected to have a higher mean agreement than others, as in most public opinion polls.

With respect to forms, it is reasonable to expect that the form which was given would not significantly affect the results, since all questions were asked on each form with treatments equally distributed. As expected, there were no main effects associated with forms, in either ANOVA.

TABLE 1

Analysis of Variance

Statements 1, 3, and 5				
Source of Variation	**df**	**SS**	**MS**	**F**
Question (Statement)	2	19.20	9.60	5.39*
Form (Group)	2	.59	.30	.17
Treatment	2	3.39	1.70	.96
Residual	2	25.07	12.54	7.05*
Within Cells	134	238.27	1.78	--

Statements 2, 4, and 6				
Source of Variation	**df**	**SS**	**MS**	**F**
Question (Statement)	2	47.57	23.78	17.40*
Form (Group)	2	2.79	1.40	1.01
Treatment	2	7.26	3.68	2.65
Residual	2	50.72	25.36	18.40*
Within Cells	134	188.47	1.38	--

*$F_{2,134}(.05) = 3.07$

The thesis being put forward in this paper calls for a significant treatment effect. According to Table 1, however, the treatment main effects could easily be attributed to chance alone. Therefore, the null hypothesis of no treatment effects can not be rejected.

In both ANOVA's, there are significant between cell (residuals) variations, indicating the presence of some interaction effects. Such interaction effects can increase the apparent main effects, thus making it seem as if they exist where they might not. In this case, however, any possible contribution from residuals has still not produced an apparent treatment effect. Hence, we can be reasonably confident that none exists, and need not be concerned with significant residuals.

The interaction effect does make it difficult to interpret the question effect, since the two effects are statistically confused. The fact that the question effect is significant brings the residuals problem into the picture. However, since the issue of whether or not questions had differing amounts of agreement is neither important nor relevant to this study, the technical implications of such a problem need not be discussed here.[5]

In addition to the ANOVA, a set of t tests were done to further test the null hypothesis that there were no differences between the high and low support treatments (positive and negative consensus). This was done in two ways. First, the individual items were tested to determine if support for the null hypothesis would be found on separate items.

The mean response on each item under high treatment is compared with that under low treatment (positive versus negative consensus). Since a high mean (X) is disagreement (5=strongly disagree), a confirmation of the research hypothesis occurs when $X_h < X_l$. This must be kept in mind lest the statement appear contradictory. The results of these t tests are presented in Table 3. From Table 3, it is apparent that the null hypothesis is supported for each item. That is, no conformity was produced in any case. (Those results appearing in Table 2 are the means, variances, and sample sizes which were used to calculate the t values.)

The second way was to combine all of the items into one large t test. This puts all of the smaller tendencies together in order to see if all of the variation combined would support the research hypothesis. The mean response for all questions under high treatment (positive consensus) was compared with the mean response for all questions under low treatment (negative consensus). Again, since a higher mean represents greater disagreement, a confirming result requires that X_h be less than X_l. From Table 4, it is clear that this t test also supports the null hypothesis.

Because of the design used, the usual t test is not completely valid for this second test. This is because all of the observations are not independent; that is, rather than 180 independent observations (90 for X_h and 90 for X_l, two questions from each of the 45 critical questionnaires), we have only 45 independent observations (number of critical S's.)

TABLE 2

Means and Variances

	Statement						
Support Level	1	2	3	4	5	6	Total
n	15	15	15	15	15	15	90
High mean	3.20	2.93	3.00	3.40	3.67	4.13	3.38
variance	2.77	1.49	1.28	1.35	1.66	1.77	1.77
n	15	15	15	15	15	15	90
Medium mean	2.70	2.53	2.67	3.33	3.67	4.07	3.17
variance	1.96	1.28	1.83	1.51	1.83	1.06	1.85
n	15	15	15	15	15	15	90
Low mean	2.87	2.40	3.20	3.67	4.0	4.0	3.36
variance	2.13	1.68	2.16	1.37	1.14	1.28	1.88
n	15	15	15	15	15	15	90
Control mean	2.53	2.87	3.53	3.87	3.87	4.00	3.46
variance	2.69	1.99	1.99	1.41	1.27	1.72	2.02
n	60	60	60	60	60	60	360
Combined mean	2.83	2.64	3.19	3.57	3.80	4.05	3.44

(For a statistical comparison of each pair of variances, see Appendix 3)

TABLE 3

Individual T tests

Statement	X_h	X_l	t	n	$t(.05)^*$
1	3.20	2.87	-.601[1]	30	1.701
2	2.93	2.40	-1.104	30	1.701
3	3.00	3.20	.418	30	1.701
4	3.40	3.67	.646	30	1.701
5	3.67	4.00	.765	30	1.701
6	4.13	4.00	-.255	30	1.701

*Necessary value for significant t

[1]Negative sign indicates that X_h was higher than X_l

TABLE 4

Combined T tests

Statements	X_h	X_l	t	n	$t_{(.05)}^*$
1-6	3.38	3.36	-.049[1]	180	1.645

*Necessary value for significant t

[1]Negative sign indicates that X_h was higher than X_l

However, to modify the test to compensate for this by considering X_h and X_l as having 15 observations each would make the test too conservative, automatically confirming the results shown in Table 4.

To avoid the problem of improper inference, I have deliberately erred in the liberal direction. I have done the test so as to mazimize the probability that a significant difference between X_h and X_l will be found, by considering them as each having 90 observations. Even with this step, the null hypothesis is supported. Therefore, at this point, it is fair to say that the general statement of the main hypothesis has not been supported, and that, based only on the tests done so far, the null hypothesis, i.e. that the manipulations do not produce conformity, can not be rejected.

As stated above, however, there may be some conditions which are conducive to producing conformity. Those conditions which may be tested here are sex, religion, and identification with college students. Due to the presence of too few respondents giving "not very important" responses in high and low treatment groups, the importance issue discussed earlier could not be tested.

Some popular theories hold that females are socialized in such a way that they are more compliant than males. If one holds this belief, then it might be reasonable to expect that females will conform more than males. To test this, the same liberal test which was done for all six questions

combined, above, was done while separating male responses from female responses. As is apparent from Table 5, neither males nor females tended to conform to the artificial consensus. The decision with respect to both males and females, is therefore to reject the research hypothesis, accepting the null hypothesis as in the general case.

Studies on authoritarianism and religion have led some to the conclusion that Protestants and Jews tend to be more "independent" while Catholics tend to be more compliant with respect to outside views, i.e. conforming more readily to stated norms. This is a possible basis for suspecting that Catholics might tend to conform more than the population as a whole, or more than Protestants and Jews.

To test this idea, the same kind of test which was done for males and females was done for Catholics versus non-Catholics. The same liberal t test was performed, and, as shown in Table 5, there is no significant tendency for Catholics to conform. The calculated t-value for non-Catholics also did not indicate any conformity.

A third variable which was considered in the analysis was identification. By recording the respondent's attitude toward college students, it was hoped that some measure of identification with college students would be provided. If a student identifies with the average college student, he or she may tend to express an opinion or attitude similar to the stated national college response.

TABLE 5

T Tests for Controls

Sex	X_h	X_l	t	n*	t(.05)
Male	3.33	3.35	.026	104	1.671
Female	3.39	3.34	-.187	76	1.671
Religion					
Catholic	3.26	3.50	.983	52	1.684
Non-Catholic	3.54	3.10	1.799	128	1.658
Identification					
Positive (1-2)	3.46	3.59	.588	156	1.645
Non-Positive (3-5)	3.57	3.50	.002	24	1.717

(All tests done above are one-tail tests at the .05 level)

*The n given for each category represents the number of applicable statements for each variable; e.g. there were 26 males who answered two high consensus and two low consensus items. 26 X 4 = 104. Hence, there were 19 females, 13 Catholics, 32 non-Catholics, 39 positive identifiers, and 6 non-identifiers.

This hypothesis was tested in the same way as the preceding two variables. Those students with positive attitudes towards U.S. college students were those who responded with 1 or 2. Those who had non-positive attitudes were those with 3, 4, or 5. The same liberal t tests found bothgroups supporting the null hypothesis.

With respect to the preceding three variables, it should be noted that the possibliity existed that an improper distribution of Catholics, females, or positive identifiers could result in a distorted picture. That is, if Catholics are over-represented on a statement about which they are more likely to disagree, due to religious training, it may make the data appear as if no difference or too much difference exists. If, for example, Catholics are concentrated in Group 1 (see page 16), then the statement about pre-marital sex might have been agreed with more often, above and beyond any treatment effect. Such an occurrence would cause an improper inference to be drawn. On the other hand, sub-groups likely to disagree with particular statements might be concentrated in a particular group which gives high agreement for those statements. Such an outcome would minimize any apparent effect.

Consequently, an examination of the groups was made to insure that no one of these categories was concentrated in any group. The results of that examination are shown in Table 6. While some differences do exist between groups, there is no tendency for any category to be over-represented.

TABLE 6

Distribution of Subjects

Control Category	Group 1	Group 2	Group 3
Sex			
Male	7	11	8
Female	8	4	7
Religion			
Catholic	4	4	5
Non-Catholic	12	10	10
Identification			
Positive	13	14	12
Non-Positive	1	2	3

These data indicate the number of subjects that fell into each category, i.e. Group 1 had 7 males, Group 2 had 11, and Group 3 had 8, etc.

DISCUSSION

Main Hypothesis

The results of this study clearly fail to support the research hypothesis, i.e. that subjects will conform to an artificial consensus when they are aware of that consensus and when their responses are completely secret.

As stated earlier, the research hypothesis could have been tested in two ways. The way which was presented throughout the analysis combined the two statements of the hypothesis with respect to the control group ($X_h < X_c < X_l$). Even though no significant demonstration of the validity of the main hypothesis was shown, a subsequent analysis was undertaken to test whether the responses under high and low artificial agreement were significantly different from the control group or the middle category (medium agreement). The results of that analysis appear in Appendices 1 and 2. Those results also overwhelmingly support the null hypothesis.

As far as I know, this is the first conformity experiment in which the respondents failed to conform in any significant way. Each of the other studies have found that a significant number of subjects conform to a group norm, particularly when the consensus supporting that norm is very high. In this study, the subjects were exposed to an artificial consensus which each subject noticed and believed

(except for one who was excluded from the analysis). The fact that they did not conform in this study reflects on the theoretical questions concerning the nature of conformity.

From previous studies, there was no way of concluding whether the conformity was a result of the knowledge of a group norm and a consequent desire on the part of the subject to appear to be in agreement with the group, or whether the conformity was due to an internal desire to conform. This study shows than an individual does not tend to comform when no one observes his or her response. It therefore tends to lend credence to the social pressure hypothesis, in that in order to induce conformity, it is necessary for the subject's actions to be under scrutiny.

Other Factors

Next, an internal analysis of the data was done to see if there were any subgroups of people who did not show conformity. As discussed earlier, there are some theoretical grounds for suspecting that differences may arise in the behavior of males and females. Particularly, it was suggested that males may be less compliant than females. However, when controlling for sex, no such tendency was indicated. In fact, while the results are not nearly significant, if anything, they showed males conforming more than females.

A test which controlled for religion met with similar failure to support the main hypothesis. With respect to

direction, the hypothesis about Catholicism versus non-Catholicism was supported. However, the t test was not significant. It is possible that Catholics might tend to conform under conditions of secrecy in some other circumstances. For example, strong Catholics might tend to conform if the questions concerned religion and the artificial consensus were attributed to some group of priests or church officials. However, this would be more a case of conforming to expert opinion than to majority opinion of a reference group, and our focus here is on the latter.

One area which was fairly important to this experiment, as indicated above, was that of reference group identification. It would not be unreasonable to expect subjects who do not think very highly of other college students to fail to use that group as a basis for responding. The results of this test show, however, that even among those subjects who do rate college students positively, there was no significant tendency for them to sacrifice personal opinions on issues.

A final control variable was the importance of the particular issues to the subjects. An issue which is not considered important might be more subject to outside influence. There were, unfortunately, too few respondents who put "not very important" for issues with which they agreed or disagreed. There seemed to be, rather, a tendency for such questions to be overly represented in the neutral category. Subjects did not seem inclined to agree for

agreement's sake on issues which were not important to them. This was a surprising finding. It was considered that the opinion formation process, for issues in which a person has nothing at stake, might be related to the opinions of reference groups. However, in this study, it appears that subjects who did not find issues to be important did not draw upon one obvious and available source upon which to base his or her opinion. That this group would put their answers in the neutral group instead is surprising.

With respect to issues, it should be emphasized that it might be possible to design a group of statements about issues which would yield conformity with the proper reference group. It is possible that certain issues which have not been tested here are more amenable to internal conformity. While nothing produced in this experiment suggests that issue differences might account for significant amounts of internal conformity, the possibility has not been widely enough examined to rule it out completely either.

SUMMARY AND CONCLUSION

This study clearly does not provide any evidence to support the internal conformity hypothesis. It may, rather, provide support for the social pressure hypothesis, since conformity seems to disappear when social pressure, as operationally defined, is removed.

A Latin Squares design which was analyzed in a standard ANOVA table clearly showed that there were no treatment effects of the independent variable; i.e. providing artificial consensus for a subject does not produce conformity when the subject is free to respond in secrecy.

T tests were done for the overall hypothesis and three subsidiary hypotheses, all of which confirmed the results of the ANOVA tables.

This study does demonstrate the utility of this method of presenting consensus in a non-laboratory setting. The manipulated poll results, while not successful in producing conformity, were wholly successful as a research tool. In the form in which they were presented, they were both conspicuous to the subjects and believed by them.

Another important step which was taken in this study was to remove the experiment from the laboratory. Numerous objections to the Asch type of study centered on the fact the subjects were hired to participate, and might therefore have felt obliged to give Asch and the other experimenters the results they were looking for. While this paper does not

necessarily endorse this objection, it certainly does avoid it as a possible criticism.

With respect to the literature on conformity, this study shows a point at which conformity will not be produced. The results of Asch and others have provided increasing evidence that a person who is being observed, either by an experimenter or by his peers, is likely to sacrifice some judgment to the group by agreeing with its response rather than making an independent judgment. By eliminating the observer and the peer group, this study carries the research to its next logical step.

Thus, it now appears that the individual is not trying to conform for the sake of conformity, but in order to appear to be in agreement with the group. Once the subject is on his own, the individual reverts to making independent judgments.

RECOMMENDATIONS

As suggested in the discussion of the hypotheses and controls, there may be some avenues for further refinement of the question. That is, experiments suggested by these results would entail starting at the point of secrecy and working one's way backwards to the more recent conformity studies, such as those of the Luchins'. The Luchins' tried successively to eliminate the conformity by offering inducements in the form of real rewards in an attempt to find a point at which subjects would not conform. The studies I managed to find showed that all such attempts were basically unsuccessful. Perhaps looking at the question with failure to conform as a starting point would help to further define the nature of conformity.

In terms of this study, there are a few revisions which might be undertaken if it were done over. The principal methodological problem was encountered in deciding the appropriateness of considering the questions or treatment pairs on each form as independent. The particular approach was used in order that each question would have equal exposure to the treatments in the final design.

A possible change would be to use only one treatment per form, in spite of the suspicion issue (see page 17). As it was tested in this study, suspicion could also be detected and possibly overcome by a careful questioning

of each of the subjects following the adminstration of the questionnaire.

Another possible change would be to repeat it as it was done, but keeping the same pairs of items on each form. That is, item 1 would always appear with item 3, item 2 with 5, and item 4 with 6. Each pair would always receive the same treatment. By doing this, all of the data could be analyzed by constructing one Latin Square rather than two. This way would have the advantage of combining all of the effects.

Another possible change would be to expand the study by using other reference groups as the "source" of the artificial consensus. A more rigorous application of identification criteria could then be applied to groups other than college students, and with subjects drawn from a general population, possibly yielding a significant identification effect.

In terms of examining the nature of conformity in this context, since we seem to have reached the limits of conformity, a logical next step would be to repeat this experiment without using the ballot box. If such a procedure produces conformity, and it seems likely to expect such an outcome, then further refinements of the nature of conformity could then be accomplished by examining the avenues suggested here.

FOOTNOTES

FOOTNOTES

1. As indicated later in this paper, high artificial agreement may also be taken as positive consensus, meaning that a majority agrees with the statement. Low artificial agreement corresponds to a negative consensus, meaning that a majority disagrees with the statement. In both cases, there is a consensus in that most of the people in the sample agree with each other, even if not with the statement. Medium agreement is a condition of no consensus, since it has approximately the same percentage of the sample agreeing as disagreeing.

2. Only one subject absolutely refused to participate; all others were persuaded. Most were, in fact, somewhat eager to participate.

3. If a subject held an undetermined attitude towards the average college student, then a distribution of poll results with which the subject is in disagreement or agreement might affect the subject's evaluation of college students on Part I of the Questionnaire. Supposing that Parts I and II were reversed, then it would not be at all unreasonable to expect some subjects to partially base their evaluations of college students on how they responded to certain statements, particularly if the poll results strongly support or go against the subject's own position. Since we are trying to determine if there is any causation stemming from the subject's already-formed attitude toward college students, our independent variable must be measured first, lest it become a dependent variable.

4. This formulation may seem different from that used in the analysis section. This is because the amount of agreement, A, is represented as a function of the mean response, X, and is inversely proportional to X, since 1=strongly agree and 5=strongly disagree. Different symbols are used at this point to avoid confusion, since the operationalization of the hypothesis requires a reversal of the inequalities.

5. The interaction effect can not be tested in this ANOVA table set because the necessary E(MS)'s are absent. This is due to the fact that Treatment, Form, and Question are all fixed, rather than random, factors. Fortunately, however, these interactions are negligible (in the case of T x F and T x Q, as can be seen in the t tests) or are unimportant where they do exist (e.g. F x Q), at least with respect to this thesis.

APPENDICES

APPENDIX 1

Additional T Tests

Statement	T Values				
	X_h-X_m	X_h-X_c	X_l-X_m	X_l-X_c	X_c-X_m
1	1.28	1.57	.46	-.85	.43
2	1.13	.18	.42	-1.34	1.03
3	-1.02	-1.92	1.29	.89	2.41*
4	-.24	-1.64	-1.17	-.71	-1.73
5	0.00	-.65	-1.06	-.88	-.62
6	.19	.33	.32	0.00	.25

*One tailed tests are used for all combinations except X_c-X_m. In order to be significant at the .05 level, the calculated t values must exceed 1.701 for the one tailed tests, and 2.048 for the two tailed tests.

APPENDIX 2

Combined T Tests

Combination	Calculated T	Significant t (.05)
$X_h - X_c$	.271	+1.645
$X_h - X_m$	1.051	+1.645
$X_l - X_c$	-.480	-1.645
$X_l - X_m$	.931	-1.645
$X_c - X_m$	1.492	±1.960

The above analysis uses the same overall liberal test that was used in Table 4. All tests are one-tailed tests except for X_c-X_m, which is two-tailed.

APPENDIX 3

F Tests of Variance

Statement		X_h/X_m	X_h/X_c	X_l/X_m	X_l/X_c	X_c/X_m	X_h/X_l
1	F=	1.41	1.03	1.09	.99	1.37	1.30
2	F=	1.16	.75	1.31	.84	1.55	.89
3	F=	.70	.64	1.18	1.08	1.05	.59
4	F=	.90	.96	.91	.97	.93	.99
5	F=	.89	1.06	.62	.90	.69	1.46
6	F=	1.67	1.03	1.21	.74	1.63	1.38
1-6	F=	.88	.96	.93	1.02	1.09	.94

F's are insignificant (.05) for F: $.33 < F < 3.05$ for individual items, and F: $.59 < F < 1.67$ for 1-6 combined. This table supports and justifies the use of the ANOVA design, since it demonstrates the fact that the data are homoskedastic.

NATIONAL POLLING ASSOCIATES
6400 Virginia Avenue, N.W. Suite 802
Washington, D.C. 20003
202-581-3600

January 2, 1975

Dear Respondent:

This letter is to introduce your interviewer to you. Your interviewer is Herbert L. Tyson. He has been carefully selected to provide you with the highest degree of integrity and courtesy.

In the survey in which you are being asked to respond, the utmost is being done to insure the confidentiality of your response. The ballot box which your interviewer carries can only be opened with one key which is presently stored in a safe in our Washington D.C. office. We believe that this step provides for a degree of confidentiality and trust that no similar research organization can match.

The survey in which you are being asked to respond is part of a national college sample study which is being done. This is a continuation of a study which began in September of 1974. Because of the random sampling technique used, it is possible, but not probable, that you were selected in the Fall of 1974. If you were, please inform your interviewer so that you will not be sampled twice. Since we in no way identify the respondents, this is the only way we have of insuring that we obtain a representative sample.

The questionnaire form is self-explanatory and you should be able to complete it without help from the interviewer. Should you need help, however, do not hesitate to request it. The interviewer has been trained to answer all questions with the least chance of influencing your response. If, however, his response does have some bearing on the question being asked in the questionnaire, and the answer you give, then please indicate the circumstances in the final part of this questionnaire so that we may deal with the matter.

Thank you for your cooperation.

Sincerely yours,

William S. Billings, President

The above was side 1 of the questionnaire. (See page 14.)

PART I

This part of the questionnaire is designed to gain informational and background material to be filed with each response. For your convenience, the short form of this Question Group is being used. Please be candid and accurate, and feel assured that your response is confidential.

1. Race
   a. white/caucasian
   b. black/afro american/negro
   c. oriental
   d. American Indian
   e. Spanish surname
   f. other (specify) _____

2. Sex
   a. male
   b. female

3. Religion
   a. Protestant
   b. Catholic
   c. Jewish
   d. none
   e. other (specify) _____

4. Rate each of the following groups according to the scale indicated. Your response should indicate how positively or negatively you feel towards each group (1= very positive; 2= positive; 3= neutral; 4= negative; 5= very negative).

a. U.S. people as a whole	1	2	3	4	5
b. men in the U.S., as a whole	1	2	3	4	5
c. women in the U.S., as a whole	1	2	3	4	5
d. white people in the U.S.	1	2	3	4	5
e. black people in the U.S.	1	2	3	4	5
f. businessmen in the U.S.	1	2	3	4	5
g. U.S. labor union members	1	2	3	4	5
h. U.S. college students	1	2	3	4	5

The Questionnaire (Continued)

PART II

How strongly do you agree or disagree with the following statements?	National College Response (1-2) agree	(4-5) disagree	(3) no opinion	Indicate your agreement or disagreement by circling your response. strongly agree	agree	no opinion	disagree	strongly disagree	How important is this issue to you? very important	mildly important	not very important
Draft evaders and deserters should be given complete and unconditional amnesty.	15%	78%	7%	1	2	3	4	5	1	2	3
The U.S. should have mandatory wage and price controls.	44%	45%	11%	1	2	3	4	5	1	2	3
Tobacco smoking should be prohibited in all public places.	82%	12%	6%	1	2	3	4	5	1	2	3
The U.S. should have gasoline rationing.	84%	13%	3%	1	2	3	4	5	1	2	3
Possession of small amounts of marijuana should be illegal.	42%	41%	17%	1	2	3	4	5	1	2	3
It is wrong for unmarried people to have sexual relations.	16%	79%	5%	1	2	3	4	5	1	2	3

Interviewer # ___

PART III

Dear Respondent:

The accuracy of any survey depends in large part upon the quality of its interviewers. In order to insure the continued high quality of our staff, we are asking each respondent to answer a few questions about each interview and interviewer. Please be candid and feel assured that your response is completely confidential.

1. Did the interviewer seem to know what he/she was doing?
   ___ Yes, very much so.
   ___ Yes.
   ___ No. (Please explain) _____

2. Was the interviewer courteous?
   ___ Yes, very much so.
   ___ Yes.
   ___ No. (Please explain) _____

3. Did the interviewer seem trustworthy?
   ___ Yes, very much so.
   ___ Yes.
   ___ No. (Please explain) _____

4. Did the interviewer in any way influence your answer to any question?
   ___ No.
   ___ Yes. (Please explain) _____

5. In your own words, briefly describe the purpose of this survey?

The above was side 2 of the questionnaire. (See page 15.)

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BIBLIOGRAPHY

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