

The Effects of Social Category and Behavior Style on Minority Influence.

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「社会的カテゴリーと行動スタイルが少数者影響に及ぼす効果」

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Summary

This study was conducted to examine the effects of a minority's social category and behavior style on direct influence (in the area to which the minority refers) and indirect influence (in the area to which the minority does not refer).

First, in order to certify an independence of direct and indirect opinion, items where direct and indirect influence occur were classified according to factor analysis of the results of a study given to one-hundred and thirteen subjects (seventy-five male and thirty-eight female university students). Results were used to separate the direct and indirect impact of the minority's advocacy of an issue.

Second, as regards behavior style, it was defined as 'flexible minority' the minority which distinctively advocates their deviate opinion in certain specific issues but agrees with the majority in all other issues, and as 'rigid minority' the minority which throughout all issues insists on a deviate position. In this experiment session, subjects (sixty-nine female junior-college students) were simultaneously exposed to majority and minority opinion using a Crutchfield type apparatus.

Results from the experiment showed that the ingroup-rigid minority and the outgroup-flexible minority had a larger impact than the ingroup-flexible minority and the outgroup-rigid minority on both direct and indirect influence.

One to two months later, some delayed effects and the interaction between social category (ingroup/outgroup) and behavior style (flexible/rigid) were observed.

The success or failure of the influence of the minority and the form of such influence on the individual is thought to be affected by the image or representation of the minority held by the individual. As factors in this thesis, we took up the behavior style and social category of the minority and studied the relationship between the two, as well as their combined effects on the individual in response to an issue.

BEHAVIOR STYLE: In Mugny (1982), flexible consistency and rigid consistency are defined and the

former is shown as having a greater minority influence. However, in Mugny's actual tests, flexible and rigid consistency are basically operated in accordance with the extremity of the message advocated by the minority. Minorities are unable to show normative/informational influence (Deutsch and Gerard, 1955) in the same manner as the majority due to lack of numbers. In order to have impact on an issue in conflict between the majority and minority, it is necessary for the minority to cause the individual to use greater cognitive effort in the consideration of the

issue (Nemeth and Wachtler 1983, Nemeth 1986). Nemeth, Swedlund and Kanki (1974) indicate the importance of attribution in minority influence. They state that when conflict between minority and majority can be attributed to the minority's consistent position on an issue, and the individual begins to focus on the positions of the minority and majority, they begin to reassess their own position on the issue. It is possible that this process of attribution and influence is due to the patterned responses of the minority. In the experiment performed by Nemeth and her colleagues, the responses of the minority were patterned in relation to the luminance of stimulus slides. The dependent variable was a color judgment of slides on a blue - green axis.

The experimental confederate showed minority responses only to slides of a certain brightness. In some contexts, the patterned responses of the minority were even more effective than a simple repetition of deviant responses. However, later research of Nemeth and her colleagues states that one of most important features in minority influence is divergent thinking. This thinking should occur when the basis of the conflict is attributed not to the minority's character (see Papastamou and Mugny, 1990), but to the issue itself (for example, a hidden aspect or unconsidered argument of the issue). Looking at minority influence in accordance with Kelley's ANOVA Model (1967), (1) majority/minority "consensus" is destroyed, but (2) "distinctiveness" and (3) "consistency" both change according to behavior style of the minority. In order to attribute the cause of the minority/majority conflict to the issue itself, a behavior style of 'consistent and distinct breakup of mutual consent in a certain specific issue' by the minority is necessary, in which case the cognitive effort of the individual and the influence of the minority on that individual is thought to occur more easily.

If an individual thinks divergently, the dependent variable should not be restricted within the area where conflict between majority and minority exists. The minority influence in the marginal area of conflict must be examined. Therefore, it should be said that the verification of minority influence should not be done by a simple perceptual task, but by an opinion task of much broader meaning.

In using an opinion task to measure minority influence, the patterning of the minority's responses should be operated not on physical criterion but on the content of the minority's message. In this

research, focusing on the consistent minority opinion in one specific topic (environmental conservation), rigid consistency has been defined as maintaining a minority opinion throughout all issues (even those unrelated to the specific topic), and flexible consistency as agreement with majority opinion in all issues other than the specific topic where the minority shows a deviate position.

SOCIAL CATEGORY: As for the effect of 'social category' on minority influence, the perspective of the ingroup minority having a large impact (Clark III and Maass, 1988; Mugny, 1987; Yoshiyama, Kano, Yoshitake and Kouhara, 1990) and the perspective of the outgroup minority having a large impact (Martin, 1988; Moscovici, 1980) are inconsistent. This could be caused by a problem in the interpretation of the minority influence. Mugny (1982) suggests that minority influence is divided into direct influence, which occurs in regards to the 'direct item' in which the minority specifically advocates their position, and indirect influence, which occurs in regards to the 'indirect item', where, though the minority message has some connection, the minority itself has made no direct reference. Social category may effect the causal attribution of the minority vs. majority conflict. Should the attribution vary, the forms of influence should also vary. In other words, the area in which minority influence occurs should vary in accordance to the social category of minority. In concurrence with Mugny (1982), this study also adopted direct influence and indirect influence as dependent variables.

A review by Mugny and Perez (1987) states that there is a lot of research with results indicating that ingroup minority had a large impact on the public direct influence dimension, and outgroup minority had large impact on the private latent indirect dimension.

However, in Mugny's experiment the relationship between topics defined as direct items and those defined as indirect items was not objectively shown. If there is a strong correlation between direct and indirect items, the strong impact from the insistence in regards to the direct item carries over to the indirect item, thus any influence observed cannot actually be called 'indirect influence'. In this research, the direct and indirect items shall be clearly classified using statistical techniques, and thus the indirect influence of the minority will be clarified.

PRESENTATION OF INFLUENCE SOURCE: In some studies (e.g., Moscovici and Personnaz 1980, Nemeth and Wachtler 1983), a message accompanied by information showing that the message was held by

a numerical minority, or the minority's response without the majority's response was used in order to examine the minority influence. Mugny (1982) proposed a three-sided relation between power, minority, and population. In his context, the minority has no dominant power. In order to accurately examine minority influence, it is necessary that the influence source does not exert normative or informational influence which is proper to the majority. Even when the minority has no normative or informational influence, if they are the solitary influence source for the population (subjects), it is natural that effects from persuasive message, which is regarded as a minority influence, occur to some extent. One important way that the minority exerts their influence is serving as a model to resist the majority (see Mucchi-Faina, Maass and Volpate, 1991). When defining the minority as numerically fewer people who do not have social power, simultaneous existence of the majority and minority is necessary. In this study, we simultaneously exposed the subjects to both the majority and the minority. We examined the effect of the minority's behavior style that relates to cognitive effort and the effect of minority's category that should relate to the attribution of minority-majority conflict on direct and indirect influence.

METHOD

DIRECT/INDIRECT ITEM CLASSIFICATION: In this research, in order to clearly classify direct item and indirect item, forty statements (written by both those in favor of environmental protection and those in favor of the promotion of development) in regards to 20 topics pertaining to the environment were prepared. This "Ecological Conscience Study" was given to 113 university students (75 males and 38 females). For each message the subjects replied on a seven-point scale, ranging from 1 (highly opposed) to 7 (highly in favor). A factor analysis was performed. We adopted four factors and a varimax rotation. The accumulated contribution was 71.21%. In Factor One, those five topics in which the factor loadings of environmental protection sentences were more than 0.3 and the promotion of development sentences were more than 0.5 ('Building Lot Development', 'Solar Energy', 'Energy Conservation', 'Paper Recycling', and 'Rain Forest Logging') were determined to be direct items, while eight topics (sixteen messages) were determined to be indirect items. The indirect items either had the highest factor loadings in factors Two

through Four or did not meet the condition above (the factor loadings of factor one were less than 0.3 for protection and 0.5 for promotion). The remaining seven topics were discarded in order to prevent the group sessions from lasting too long. By classifying the topics through factor analysis, correlation between direct items and indirect items could be reduced and the clarification of each topic as independent was indicated.

SUBJECTS: Seventy female junior-college students were used for the experiment, minus one student who discovered the purpose of the experiment during the experimental period, bringing the total of subjects used for analysis to sixty-nine. The number of subjects for each of the conditions was as follows:

Ingroup/rigid (14), flexible (20)

Outgroup/rigid (20), flexible (15)

The subjects were recruited from an introductory psychology class and asked to participate in "research on college students' opinions on social problems consisting of a questionnaire, group discussions and simple group work".

APPARATUS: In accordance with Crutchfield's experimental apparatus (Crutchfield, 1955), groups of five subjects were formed. They sat in individual seats and were isolated from each other using partitions. Each subject had a terminal display connected to the experimenter's control apparatus, an "electrical confederate". The subjects were instructed to push an appropriate button on the terminal display to indicate their reactions to the topics provided.

TASK: For the group session, five discussion topics pertaining to environmental conservation were prepared as 'direct items' and three discussion topics (maternity leave, eye banks, drug abuse) were prepared as items non-related to conservation. A structure of two-sided presentation was taken by giving each of the subjects two papers written from the standpoint of 'Environmental conservation - Protection' vs 'Development'. The subjects were told to press a button in the order of Subject A to Subject E to indicate their approval or disapproval on a scale of 1 (disapproval) to 7 (approval) in regards to the paper on Development.

CATEGORY OPERATION: Initially, each subject was given a test. The subjects were told that the test would be used to determine their personal thought patterns and informational processing traits in order to distinguish whether they thought logically or intuitively, and that this classification was necessary for later group work after the group session using the

Crutchfield's apparatus. In actuality, the test and feedback of results to the subjects were deceptive, and the group work after the group session was not done. For the ingroup condition, all five subjects in each group were told they had the same thought patterns; for the outgroup condition, all subjects were told that only Subject D (the subject representing the minority in the group sessions) had a different thought pattern from the others.

INFORMATIONAL OPERATION: A typical Crutchfield's experimental paradigm was used: the five naive subjects were each told separately, "You are Subject E; the other 4 people are Subjects A through D. During the group session, the lamps on your terminals will display the answers of the other four people." However, what was actually displayed were deceptive responses operated with an electrical confederate by the experimenter.

OPERATION OF BEHAVIORAL STYLE: For both the rigid and flexible conditions, the deceptive responses of subjects A, B, and C (representing the majority) were consistently shown as being against Development, in favor of Maternity Leave and Eye Banks, and as feeling that Drug Abuse is a problem.

For the rigid condition, deceptive responses were displayed to each subject, showing Subject D (representing the minority) as having consistently different opinions than Subjects A, B, and C on the Environmental topics (Subject D was shown as being in favor of development) as well as all non-related topics (Subject D was shown as being against Maternity Leave and Eye Banks, and as feeling that Drug Abuse is not a problem). For the flexible condition, the deceptive responses of Subject D were shown as agreeing with the majority on the non-related topics, showing minority status in only those topics related to Environment (subject D was shown as being in favor of development).

ORDER OF TASKS: The environmental and non-related topics were presented in the following order: Building Lot Development, Solar Energy, Maternity Leave, Energy Conservation, Newspaper Recycling, Eye Banks, Drug Abuse, Rain Forest Logging.

As the difference between the rigid and flexible conditions does not become apparent until after the third topic (Maternity Leave), the first two topics (Building Lot Development and Solar Energy) were disregarded in further analysis.

DEPENDENT VARIABLES: Public Response- The subjects' responses to Crutchfield's terminal were recorded as public responses. Private Response- After

the group sessions, each subject's private responses were measured by having them answer individually on the same topics (Post Test 1). Delayed Effect - Between one and two months after the experiment, forty-eight of the subjects (9 from ingroup/rigid, 16 from ingroup/flexible, 14 from outgroup/rigid, 9 from outgroup/flexible) responded again to the same topics (Post Test 2). Data collected by giving the same test to 116 female junior college students (recruited from another introductory psychology class and unrelated to the original experiment) was used as the control condition. Both measures were compiled on a 7-point scale.

DEBRIEFING: After Post Test 1, the subjects were instructed on the true purpose and the use of deceptive information in the experiment, and permission to use the data compiled was received.

RESULTS

(1) DIRECT INFLUENCE

PUBLIC RESPONSE: In the public response to the direct items indicated during the use of the Crutchfield's apparatus, significant effects in regards to behavior style and category were not seen in the subjects' responses.

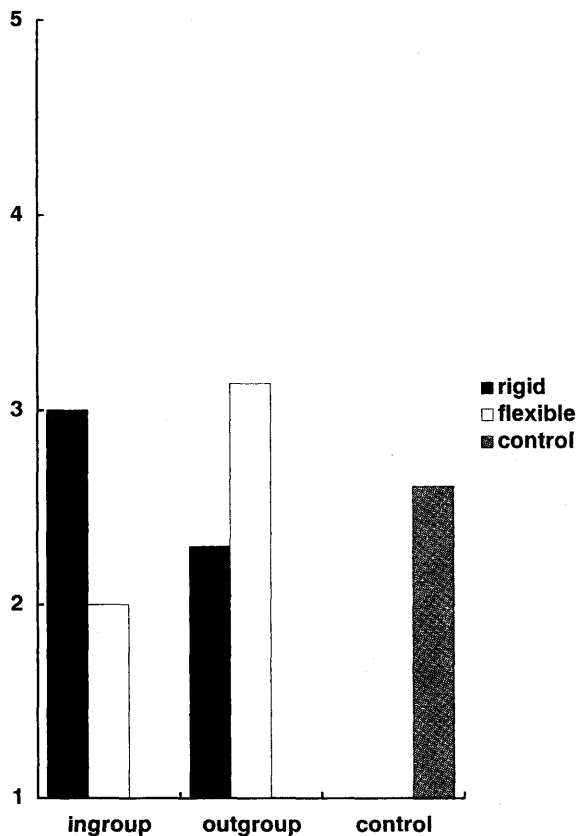


Fig. 1 Direct influence in "Energy Conservation"

PRIVATE RESPONSE: When individual responses to the three 'direct items' on Post Test 1 given directly following the group sessions were analyzed according to 2 (ingroup/outgroup minority) X 2 (rigid/flexible consistency) ANOVA, significant interaction was observed in those items related to 'Energy Conservation' ($F = 11.77, df = 1/65, p < .01$) (Fig.1). In subsequent tests, the rigid minority had greater impact than the flexible minority in the ingroup condition, and the flexible minority had greater impact than the rigid minority in the outgroup condition.

A significant difference was not noted in the other items, and an ANOVA to examine the differences between the control condition and each of the four experimental conditions did not show any difference.

DELAYED RESPONSE: The 'direct items' were analyzed on a 2 (ingroup/outgroup minority) X 2 (rigid/flexible consistency) X 2 (Post Test 1/ Post Test 2) ANOVA. For the topic of 'Energy Conservation', interaction of the three factors was observed ($F = 9.94, df = 1/88, p < .01$) (Fig.2). The result of subsequent tests showed that though social category and consistency had an effect on minority influence in Post Test 1, the effect had disappeared by Post Test 2. There was a weak main effect of time

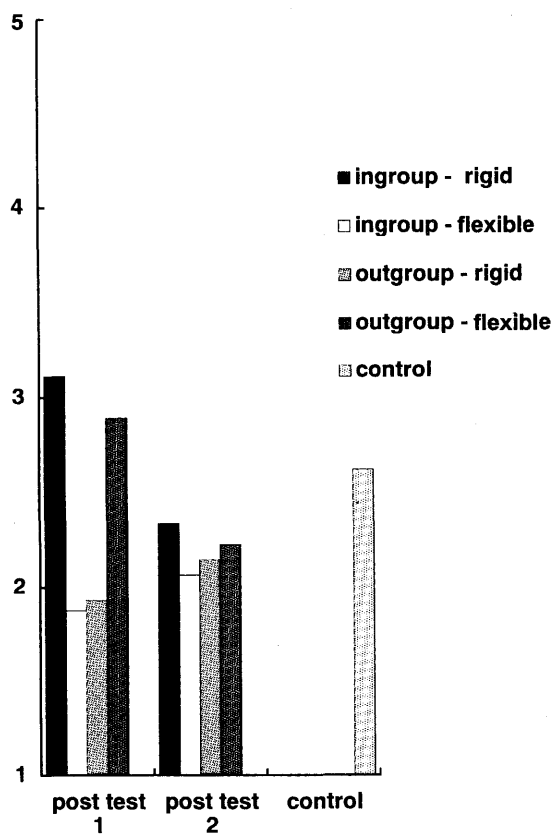


Fig. 2 Delayed effect in "Energy Conservation"

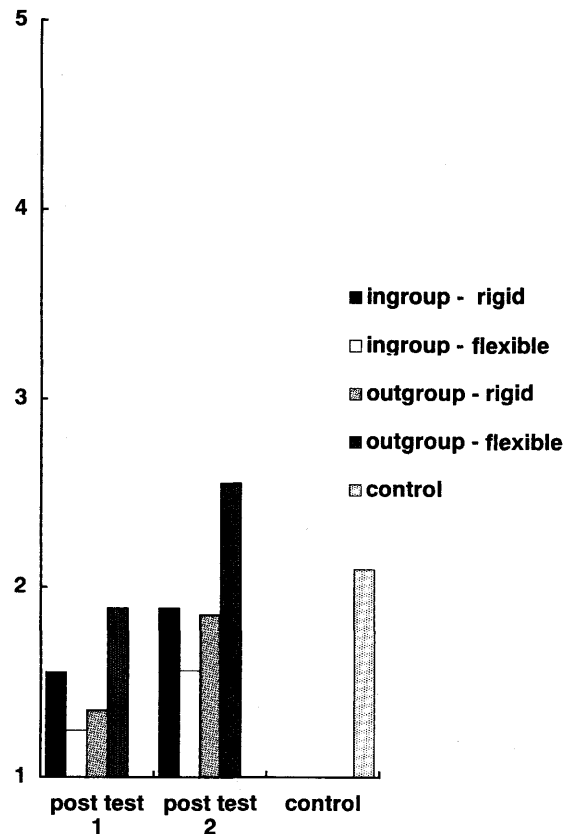


Fig. 3 Delayed effect in "Newspaper Recycling"

sequence ($F = 3.17, df = 1/44, p < .10$) in which the subjects shifted their opinion towards the majority position. In the topic 'Newspaper Recycling', which did not show a statistical effect in the 2 X 2 ANOVA in the private response (Post Test 1), a social category X consistency interaction was observed ($F = 4.07, df = 1/44, p < .05$) (Fig.3). Subsequent tests proved that the out-group minority showing flexible consistency had more influence than the outgroup minority showing rigid consistency. There was a main effect of time sequence ($F = 11.62, df = 1/44, p < .01$) which showed that the subjects had shifted their opinion towards overall the minority in regards to the topics of 'Newspaper Recycling', an opposite shift to the 'Energy Conservation' topic. Significant differences in the other items were not noted.

(2) INDIRECT INFLUENCE

In order to examine whether a consistent behavior style and social category of the minority has an effect on surrounding spheres in which the minority has no direct reference, results from the private response on indirect items on Post Test 1 were analyzed on a 2 (ingroup/outgroup minority) X 2 (rigid/flexible consistency) ANOVA. In the eight indirect items, a

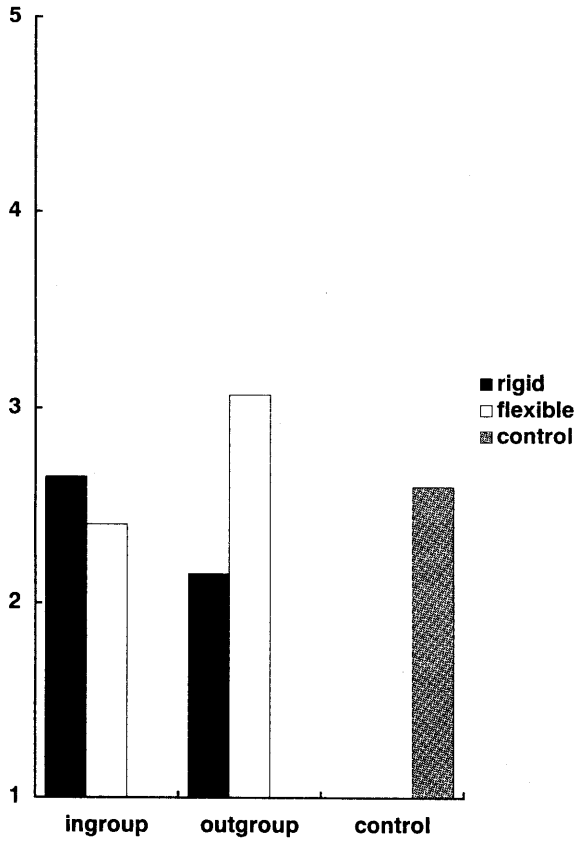


Fig. 4 Indirect influence in “Water Pollution”

tendency towards interaction in the topic of 'Water Pollution' could be seen ($F=3.77, df=1/65, p<.05$). In subsequent tests for the outgroup minority, flexible conditions were shown to have more influence than the rigid condition in placing the private response significantly towards the minority message ($F=4.71, df=1/65, p<.05$) (Fig.4). For 'Water Pollution', a difference between the four experimental conditions and the control condition (measured by an ANOVA between the five conditions) was not seen.

In regards to the other seven topics, a significant difference (2×2 ANOVA) was not noted, and an ANOVA of the five conditions (the four experimental conditions plus the control condition) did not show any statistical difference.

In order to observe the relation between the preceding two variables (social category and behavior style) and delayed response, the results of the private response to the indirect items on Post Tests 1 and 2 were analyzed on a $2 \times 2 \times 2$ (Post Test 1/Post Test 2) ANOVA. Among the eight issues, a significant difference was seen in regards to 'Nuclear Energy' and 'Captive Breeding of Japanese Crested Ibis'. In the former (Nuclear Energy), minority category and behavior style proved to be main effects, ($F=4.42,$

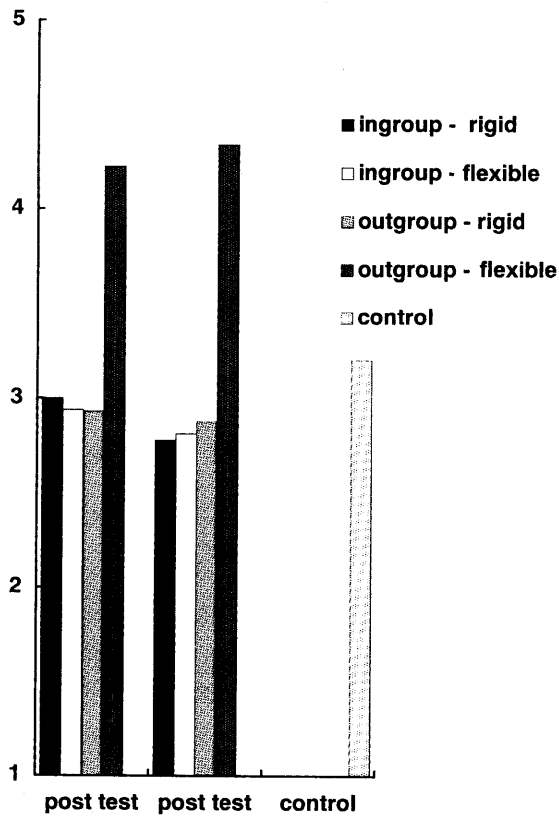


Fig. 5 Delayed effect in “Nuclear Energy”

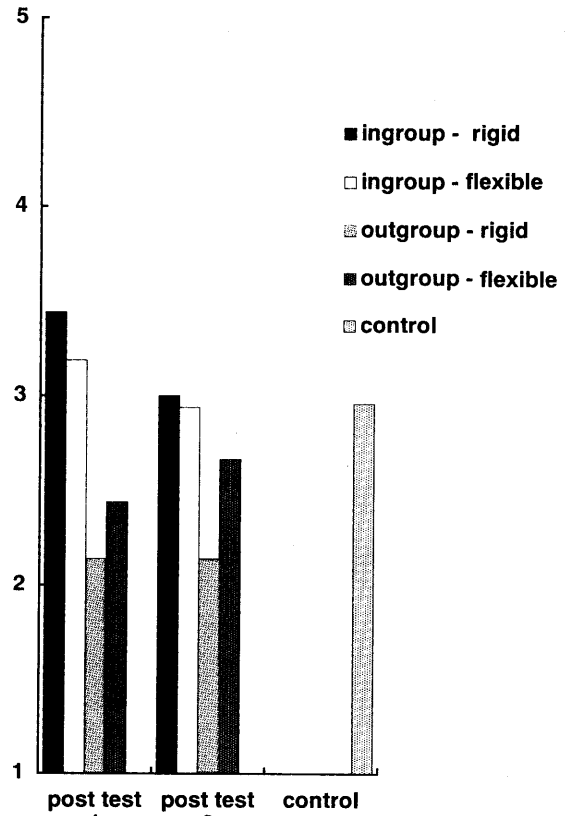


Fig. 6 Delayed effect in “Captive Breeding of Japanese Crested Ibis”

4.20, $df=1/44$, $p < .05$) and the interaction ($F=4.37$, $df=1/44$, $p < .05$) between two was also significant. However, there was no significant difference noted on time sequence between Post Tests 1 and 2. Fig. 5 suggests that the category and behavior style interaction was maintained between Post Tests 1 and 2. Subsequent tests showing similar interaction indicate that the outgroup flexible minority has the largest impact. In regards to minority category, for 'Nuclear Energy', the impact of the outgroup was stronger than that of the ingroup. In regards to the latter (Captive Breeding of Japanese Crested Ibis), a significant difference in the main effect of the minority category was noted ($F=4.12$, $df=1/44$, $p < .05$) (Fig.6). For 'Captive Breeding of the Japanese Crested Ibis', the ingroup had a larger minority effect than the outgroup. However, there was no significant difference noted due to time sequence.

DISCUSSION

In this study, the effects of minority's behavior style and social category are not apparent in the public response dimension, but are apparent in the private response dimension that includes direct and indirect items. Thus ingroup minority does not have impact in public response and the outgroup minority does not always have impact in private response.

There is no difference in the pattern of influence caused by behavior style and social category between the direct and indirect area. Thus the minority's rigid consistency in the ingroup and flexible consistency in the outgroup generally have a large influence on the individual regardless of direct or indirect area.

In the case of the 'direct item' advocated by the minority, in both private response and delayed response, it is easier for the minority to have an impact on the individual when displaying rigid consistency in the ingroup and flexible consistency in the outgroup. However, as the score of these two experimental conditions and the control condition are not statistically different, is it possible to say from these results that there was a minority influence?

The scores of the control condition ranged from 1.77 to 3.71 for the message advocating development ('1' indicating 'extremely against', '7' indicating 'extremely in favor'), and from 3.85 to 6.20 for the message advocating environmental protection. This is an indication of the general favor towards protection supported by today's Japanese college students. Thus the majority opposing the development message are in concurrence with the Zeitgeist (an opinion thought to

be in a position of great validity), while the minority in favor of the development message show an advocacy in opposition to the Zeitgeist. It should be noted that the scores of the control condition were sampled in an individual situation by questionnaire. Therefore, influence of ingroup majority was not possible because the individual did not know the opinions of other people or the distribution of opinion in their classroom.

In group sessions where subjects are given two-sided presentations to represent the majority/minority opinion where not only the minority but the ingroup majority also advocates a 'Zeitgeist' opinion, the opinion advocated by the ingroup majority is usually thought to have more impact in influencing the subjects (cf. Maass, Clark and Haberkorn 1982). Though not statistically significant, the scores of the two conditions (ingroup/flexible and outgroup/rigid) were more often plotted on the majority side than the scores of the control condition where ingroup majority did not exist. This is the evidence of the ingroup majority influence. Thus we can regard the ingroup/flexible and outgroup/rigid conditions as base line scores for group sessions where the ingroup majority exert their influence. Even more than in these two conditions, it can be said that the ingroup/rigid and outgroup/flexible conditions show an effect due to minority influence (the scores of both are significantly on the minority side).

As previously stated, if the minority publicly states an opinion inconsistent with that of the majority, there stands a chance that the individual brought into contact with this might attribute the cause of the conflict between the two groups to the minority's psychological traits. This kind of psychologization (Papastamou and Mugny, 1990) has a negative effect on the minority influence. In other words, a negative perception (the perception that "that minority is a strange person who simply opposes anything") makes the occurrence of minority effect more difficult. As a result, a behavior style of flexible consistency held by the minority should have a better advantage. However, in actuality, results such as these are only existent in the case where the minority is in the outgroup and suggests that a flexible behavior style is not always an advantage. As implied in Moscovici (1980)'s conversion theory, the message from a low credibility group (outgroup) leads to greater carefulness of information processing or consideration on the part of the individual than the message of a high credibility group, thus facilitating an attitude

change. This process fits the outgroup/flexible conditions of this experiment. If the outgroup also shows rigid behavior, it is possible that easy psychologization may occur. Thus, for the outgroup minority, a more moderate, distinctly consistent strategy may encourage the individual to use more cognitive effort in considering an issue.

On the other hand, by standing out in front of the population and attracting attention, it is possible that the ingroup/rigid minority might promote information processing or consideration by the individual. Compared to the out-group minority, it is more difficult to hold a negative impression of the ingroup minority, thus an intense, even forceful appeal holds more chance for impact, leading to minority influence and consideration of the issue by the individual. Of course, in order to make this conclusion, an investigation of the impression of the minority held by the individual and causal attribution of the conflict is necessary.

From the results, it was observed that the minority influence can also be seen in regards to indirect items. Even without the direct advocate of the influence source, in areas with strong correlation to the message of the influence source, an opinion change can be interpreted as the effect of a generalization towards similar stimuli. However, though the direct and indirect items used in this experiment were both about "Environmental Problems" and are on the same axis of "Protection" vs. "Development", their separate and independent relationship towards each other has been clearly determined through factor analysis. This leads to the question of why a shift in manner towards the direction of the minority occurred in the indirect item.

Though there is no relationship between the (minority advocated) direct and indirect items at a concrete level, the conflict occurs in the foundations of the basic issues, as both items are pertaining to world environment "Protection" or "Development".

When the individual comes across the "Protection" versus "Development" conflict of the majority and minority, they may think not just about the specific topic itself, but about the basic Protection/Development issue. This consideration goes beyond the specific topic and the advocacy of the topics by the influence source.

Of course, it is impossible to directly verify whether or not consideration of an argument has actually occurred in the present study. In this experiment, 1-2 months after the explanation of the purpose of the

experiment and the use of deceptive information during the experiment, the attitude shift of the subjects remained in certain issues, showing that the influence of the minority may have had an effect on the cognitive effort of the individual.

Though a pattern of large impact is apparent in the ingroup/rigid and outgroup/flexible minorities, this large impact is not continued throughout all the indirect items, and is not held consistently. Depending on the topic, attitude change is not easily obtained; consideration of the topic may lead to the conclusion that the majority opinion holds the advantage in that specific topic. Due to this, it is possible that an attitude change towards the minority position occurs and is held continuously in certain topics, while in others this attitude change does not occur at all.

This research indicates that effective behavior style of a minority differs according to their social category, and that this minority can have an impact on opinion which spreads to areas surrounding a specific topic. This indirect influence may be the result of the individual's consideration of the basic issue with a wider point of view, and it is an important form of minority influence. In the future, it is necessary to study the variety of minority influence by not only measuring change in the 'in favor of/against' axis, but by using the surrounding opinion area and measures of divergent thinking other than the positions advocated by the majority and minority.

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