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Author(s): Muzafer Sherif

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AN EXPERIMENTAL APPROACH TO THE STUDY OF ATTITUDES

MUZAFER SHERIF

Ankara, Turkey

The experiment reported in this paper was carried out in the conviction that we need not leave the main field of experimental psychology (as many psychologists do today) to find concepts adequate for the psychology of attitudes. In the work of the Wurzburg psychologists, we find important experimental beginnings. Here it was found that that aspect of the stimulus field is especially observed which the subject is set to observe. Unfortunately the implications of this experimental work and subsequent investigations which it inspired have not been made an integral part of social psychology.

Taking the stimulus side of the problem into consideration, it will be safe to say this: indefinite, unstructured fields of stimulation are especially useful in getting positive results in experiments dealing with the influence of suggestion and kindred social influence. In such cases the stimulus field more easily yields itself to organization in different ways. In this paper our aim is to show how an indefinite stimulus field can be organized or determined by one kind of social influence.

In our opinion autokinetic movement is a very convenient phenomenon which can be utilized to investigate in the laboratory various kinds of social influence. Experimentally it is easy to produce autokinetic movements. In a completely dark room a single point of light which is fixed at some distance from us and which is physically stationary cannot be localized at a fixed point in space. It moves, and may move in any direction, because there are no other visible points or objects in relation to which it can be localized.

The present experiment is an extension of the results of the previous experiments with the autokinetic movement. It will suffice in this paper to give the main findings of the previous experiments. The technique and procedure are described elsewhere (1, 2). For our present purposes the main findings may be summarized in a few sentences:

When an individual perceives autokinetic movement which lacks an objective standard of comparison, and is asked during

repeated stimulation to report in terms of the extent of movement, he subjectively establishes a range of extent and a point (a standard or norm) within that range which is peculiar to himself, differing from the range and point (standard or norm) established by other individuals.

When individuals face the same unstable, unstructured situation as members of a group *for the first time*, a range and a norm (standard) within that range are established which are peculiar to the group. When a member of a group faces the same situation subsequently *alone*, after once the range and norm of his group have been established, he perceives the situation in terms of the range and norm that he brings from the group situation.

The ranges and norms established in the above cases are not prescribed arbitrarily by the experimenter or by any other agent. They are formed in the course of the experimental period and may vary from individual to individual, or from group to group, within certain limits.

Our concern being the study of social influence, we may go further and put the question: can we experimentally make the subject adopt a prescribed range and norm directed by specific social influences?

Different kinds of social influences may be experimentally utilized to define certain prescribed ranges and norms. Among many possible ones we took the following: (a) The influence of group situations on the individual as a member of the group. We have already mentioned the main conclusion of this previous work. (b) The influence of the direct suggestion of the experimenter in raising or lowering the reported extents of movement. (c) The influence of a fellow member with prestige (cooperating with the experimenter) on another ("naive") member of the group. (d) The influence of one naive member on the judgments of another. In this last case there is no prestige effect, because the subjects have not met each other prior to the experiment.

We shall say only a few words about the experiments under (b). If the subject is distributing his judgments, say, about three inches, without any socially introduced influence, the remark of the experimenter, "you are underestimating the distances" tends to raise the point round which the judgments are distributed to about five or six inches.

The following experiment under (c) shows how the auto-kinetic phenomenon can be utilized as a sensitive index of the prestige effect of one person on another:

Here we report verbatim the account of an experiment with prestige:

"Miss X and I (Assistant in Psychology, Columbia University) were subjects for Dr. Sherif. I was well acquainted with the experiment but Miss X knew nothing whatsoever about it. Since she was a close friend of mine, and I carried some prestige with her, Dr. Sherif suggested that it would be interesting to see if we could predetermine her judgments. It was agreed beforehand that I was to give no judgments until she has set her own standard. After a few stimulations it was quite clear that her judgments were going to vary around five inches. At the next appropriate stimulation, I made a judgment of twelve inches. Miss X's next judgment was eight inches. I varied my judgments around twelve inches and she did the same. Then I changed my judgment to three inches, suggesting to Dr. Sherif that he had changed it. She gradually came down to my standard, but not without some apparent resistance. When it was clear that she had accepted this new standard, Dr. Sherif suggested that I make no more judgments lest I might influence hers. He then informed her on a subsequent stimulation that she was underestimating the distance which the point moved. Immediately her judgments were made larger and she established a new standard. However, she was a little uneasy with it all, and before the experiment had progressed much farther, whispered to me 'Get me out of here.'

"When we were again in my office, I told her that the point had not moved at all during the experiment. She seemed quite disturbed about it, and was very much embarrassed to know that we had been deceiving her. Noting her perturbation, I turned the conversation to other matters. However, several times during our conversation she came back to the subject, saying, 'I don't like that man' (referring to Dr. Sherif) and similar statements indicating her displeasure with the experience. It was not until some weeks later when she was again in my office that I discovered the full extent of her aversion. I asked her to serve as a subject for me in an experiment and immediately she exclaimed, 'Not down in *that* room,' pointing to Dr. Sherif's experimental room."

The experiment which will be given presently deals with the influence of a fellow member in the adoption of a prescribed norm. There were seven groups in this experiment, each group consisting of two members. In every group one subject cooperated with the experimenter, i. e., deliberately distributed his judgments within the range and around the norm assigned to him by the experimenter beforehand. The other subject was unaware of this predetermination. The degree of this "naive" subject's conformity to the norm and range of the cooperating subject may be taken as the index of the social influence. In all the groups the subject who was cooperating with the experimenter was the same person. This was done in order to keep the influencing member constant in all groups.

The range and norm prescribed for every group were different. For the first group, the prescribed range was 1-3 inches, 2 inches being the prescribed norm. For the second group, the prescribed range was 2-4, and 3 inches the norm, and so on to the eighth group for which the range and norm were 7-9 and 8 respectively. It will be observed that the prescribed range was rather narrow; consequently in the course of the experimental period the cooperating subject gave no judgments which deviated from the norm by more than one inch in either direction.

In the first experimental session, both subjects (the cooperating and the "naive") took part. After each exposure of the point of light for two seconds, the subjects spoke their judgments aloud one at a time and the experimenter recorded these on separate sheets of different colored pads. In order not to stress the factor of primacy, the cooperating subject was instructed to let the other subject utter his judgment first, at least half of the time. The social influence in our previous experiments with the autokinetic effect was found to be not so much a function of this and that separate judgments as of the temporal sequence of judgments. Fifty judgments were taken from each subject.

In the second session only the naive subject was present, so that we might see how much of the prescribed range and norm he carried from the first group session. In this individual session also, fifty judgments were taken. As the norm formation in the autokinetic effect is a fragile and, in a sense, artificial formation, such an arbitrary prescription may break down easily beyond a certain number of judgments. Our whole point is that the autokinetic effect can be utilized to show a general psycho-

logical tendency and not to reveal the concrete properties of norm-formation in actual life situations.

In the presentation of results we give the prescribed range and norm, and the number of judgments of the "naive" subject falling within the prescribed range, and his norms (as represented by the median of the distribution of his judgments) in the first (group) and second (individual) sessions. The means and medians of the distributions of the judgments given by the cooperating subject in the group sessions are not exactly identical with the prescribed norms, though the modes and ranges are the same. We did not think it necessary for him to memorize a perfectly normal distribution. Our aim is chiefly to show a fundamental psychological tendency related to norm-formation.

GROUP 1

<i>Prescribed</i>	<i>Experimentally obtained (from "naive" S)</i>	
	<i>Session I (in group)</i>	<i>Session II (alone)</i>
Range 1-3 inches	1.5	1.4
Norm 2	3.36	2.62
No. of the 50 judgments falling within the pre- scribed range	41	47

At the end of the second (individual) session the subject was asked to answer in writing four questions related to the problem. The answers to two of the questions further verify our former results. We shall therefore confine ourselves to the introspections given to the other two questions which are important for our present paper. These questions were: (1) What was the distance that the light most frequently moved? (this was formulated to find out whether the subjects became conscious of the norm formed in the course of the experiment); (2) Were you influenced by the judgments of the other person who was present during the first session? (this question was formulated in order to find out whether the subjects were conscious of the fact that they were being influenced by the cooperating subject).

The introspections of the subject in Group 1 are important for any theory of suggestion and norm formation:

1. "Most frequent distance was 2 inches. Seemed to be more consistently 2 inches second day than on first day.

2. "Yes, they were despite my efforts to be impartial. Probably many of my judgments were inordinately large because of small distances given by other subject. I think this was an attempt at avoiding suggestion and in so doing going to the other extreme. I do not think I was influenced by first day's judgments on the second day. I tried to be impartial in my judgments the first day. I felt resentment toward the other subject the first day because of the successive equal judgments by him. I tried to be objective toward this feeling: that is to banish the thought. But I feel that this resentment caused my judgments to differ from his by a greater amount than they would have if the judgments had been kept separate; that is if I had not heard his judgments. The second day I felt more independence in my judgments and I believe that these judgments were therefore more accurate."

GROUP 2

<i>Prescribed</i>	<i>Experimentally obtained (from "naive" S)</i>	
	<i>Session I (in group)</i>	<i>Session II (alone)</i>
Range 2-4 inches	1-10	1-5
Norm 3 inches	4.25	3.77
No. of the 50 judgments falling within the pre- scribed range	30	43

The introspections to the two questions were:

1. "Three or four inches were the most frequent estimates.
2. "No, I was not influenced by the other person. This I believe was because I stated my estimates first for the most part."

GROUP 3

<i>Prescribed</i>	<i>Experimentally obtained (from "naive" S)</i>	
	<i>Session I (in group)</i>	<i>Session II (alone)</i>
Range 3-5	2-8	3-6
Norm 4	4.61	4.57
No. of the 50 judgments falling within the pre- scribed range	43	49

The introspections follow:

1. "(a) 4 inches yesterday.
"(b) 5 inches today.
2. "Yes, My first judgments are much higher than those following. In a way I scaled them down to ranges nearer to his. The majority of times I gave my judgments first. The same distance seemed shorter after a few trials. My judgments were influenced by yesterday's. I measured them by the same scale both days."

GROUP 4

<i>Prescribed</i>	<i>Experimentally obtained (from "naive" S)</i>	
	<i>Session I (in group)</i>	<i>Session II (alone)</i>
Range 4-6	3-6	3-6
Norm 5	5.20	5.21
No. of the 50 judgments falling within the pre- scribed range	47	46

The introspections:

1. "5 inches.
2. "For the first three or four times. After that, no."

GROUP 5

<i>Prescribed</i>	<i>Experimentally obtained (from "naive" S)</i>	
	<i>Session I (in group)</i>	<i>Session II (alone)</i>
Range 5-7	3-7	3-7
Norm 6	5.50	5.42
No. of the 50 judgments falling within the pre- scribed range	34	35

The introspections:

1. "Five inches both days.
2. "No. I was not influenced by the presence of another person. But I sincerely believe that my partner was exaggerating the distance when he made his estimate. I say this because it seemed to me that he hesitated several seconds after I gave my estimate . . ."

GROUP 6

<i>Prescribed</i>	<i>Experimentally obtained (from "naive" S)</i>	
	<i>Session I (in group)</i>	<i>Session II (alone)</i>
Range 6-8	3-8	4-8
Norm 7	5.94	6.18
No. of the 50 judgments falling within the pre- scribed range	24	27

The introspections:

1. "7 most frequent, 5 next frequent.
2. "No, I was not influenced."

GROUP 7

<i>Prescribed</i>	<i>Experimentally obtained (from "naive" S)</i>	
	<i>Session I (in group)</i>	<i>Session II (alone)</i>
Range 7-9	4-12	6-9
Norm 8	7.40	7.83
No. of the 50 judgments falling within the pre- scribed range	17	40

The introspections:

1. "The most frequent distance was about 8 inches. The next most frequent was about 7 inches.
2. "I think it did make a difference when somebody else was with me. When I gave my judgment first, there was no difference, of course, but when he was with me I sometimes, though not all the time, modified my judgment when it was very far from his, and when I thought that I might easily have been mistaken. Of course, this did not occur frequently, but I cannot deny that it happened sometimes."

GENERAL CONCLUSION

From these results we may conclude that the subjects may be influenced to perceive an indefinite stimulus field in terms of an experimentally introduced norm. The degree of the influence may be different in different subjects. It may be great as is the case of the subject of group 4. It may not be so striking as is the case of the subject of group 5. It may be negligible as is the

case with the subject of group 6. Even in this last mentioned case, an influence on the norm (not in the range) is evident.

The introspections reveal that the subjects become conscious of the norm which develops in the course of the experiment. However, they need not be conscious of the fact that they are being influenced toward that norm by the other member of the group. (See introspections of the subjects in groups 1, 2 and 4.) In connection with this point, it is interesting to note that in some cases, the *conformity* to the prescribed range and norm when the *influencing* person is no longer present (Session II) is closer than the *conformity* produced by his actual presence. (See the results of groups 2, 3, 6, 7.)

It seems to us that the psychological process embodied in these facts may be basic to the daily phenomena of suggestion, especially to the role of suggestion in the formation of attitudes. It is not a rare occurrence in everyday life to react negatively or hesitatingly to suggestion on some topic raised by an acquaintance while in his presence, but to respond positively after leaving him (perhaps there is a disinclination to accept suggestions readily unless there is some strong prestige or pressing demand; to appear easily yielding is not so pleasant for an "ego").

Attitudes, whatever else they may be, imply *characteristic modes of readiness in reacting* to definite objects, situations and persons. Our experiment has demonstrated in a simple way how a *characteristic* kind of readiness may be experimentally obtained in relation to an indefinite stimulus field. Perhaps this may constitute a step in the direction of the truly psychological investigation of attitudes.

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