

# AN INVESTIGATION OF BEHAVIORAL CONTAGION IN GROUPS

NORMAN POLANSKY, RONALD LIPPITT, AND FRITZ REDL<sup>1</sup>

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## I

### CLINICAL AND THEORETICAL ORIENTATION

The spreading of a mood, an attitude, a behavior from one person to another, or through a whole group, is a phenomenon long familiar to the social psychologist. It has frequently been described in connection with studies of "mass behavior"—riots, panics, mobs—always with a sense that something rather important was happening in the communications between the individuals concerned, and always with a sense that what was happening was instantaneous, unpredictable, and somehow rather mysterious. For, characteristically, those involved in such a situation appear to have little conscious awareness of the bases of their actions at the moment the "decision" to act is made. The present series of studies attempts to help reduce the extent of the mystery regarding the phenomenon which we have labelled "Behavioral Contagion".

Our own immediate interest in this problem has grown out of clinical experiences with face to face groups. Over a period of time, it has seemed to us that something very comparable to occurrences in such disorganized mass group situations also happens in groups with more enduring organizational structure and in groups set up for therapeutic purposes.

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### Group Behavioral Contagion Seen Clinically

In previous writings, Redl<sup>2</sup> has discussed the observations made with regard to contagious situations in children's groups.

“ Example : Eighty rather disturbed children between the ages of eight and fourteen are in a large camp mess hall. Johnny, in a fit of temper against one person at his table, throws a plate at him. A minute later, plates fly all through the air, and the place is in an uproar, even though Johnny neither contemplated nor planned such an effect, and is otherwise a rather inconspicuous figure at the camp, without any leadership role.”

Purely as a practical matter of handling a large group situation, understanding the basis for the contagion of Johnny's act would be, of course, of considerable value. Why would his action have “ contagion value ” at this time, and not at others ? How can we plan in advance to handle such situations ?

There are other kinds of happenings, less directly visible but even more important, that involve a similar “ spreading of behavior ”. These are relevant to potentially destructive changes in the children rather than the furniture. In forming groups with whom to work therapeutically, for example, there is the familiar problem of estimating the potential effects of a child with a serious behavior disorder on the other children. The old assumption that “ the rotten apple spoils the barrel ” is too simple. Actually, we find sometimes that disturbed behavior *does* spread, but sometimes it does not, and no attention is paid to it. Sometimes, it may even lead to a *negative* reaction : the other children, far from being seduced into following the delinquent leader, may become anxious in the face of his exploits and show their anxiety in various neurotic symptoms, or they may even make him a scape-goat within the group. Often the group may bring *corrective* pressure to bear on such a deviant member.

Approaching the problem from the standpoint of individual psychology, one might view the behavior which is spread by contagion as due to latent trends within the individual who imitates the behavior. “ If Johnny begins to steal under the contagious influence of Bobby in the same group, there must have been something in Johnny to respond to Bobby's seductive wiles.” Although this is often a useful way of examining the data, experiences in groups have inclined us to believe that the picture is frequently colored by group psychological factors too. Is Johnny's stealing a reflection of his own problems, or does he start to steal in order to retain a respectable position in the group ? Does Bobby's position in the group structure have anything to do with his ability to seduce Johnny ? Until more is known about the group psychological factors involved in such an incident, the clinician is at a disadvantage both in attempting to assess the real meaning of Johnny's behavior

<sup>2</sup> Fritz Redl : “ Group Emotion and Leadership ”, *Psychiatry*, 1942, 5, 573-596.

Fritz Redl : The Phenomenon of Contagion and Shock Effect in Group Therapy, Chapter in *Searchlights on Delinquency*. International Universities Press, 1949, 315-328.

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in terms of his enduring personality structure and in planning the structure of therapeutic situations.

A purely individual psychological approach also seems inadequate by itself for understanding rather common intra-group and inter-group phenomena. For example, it has proved possible in practice to reduce the amount of undesirable behavioral contagion in mass situations by a process of *group insulation*. If the children in a camp come into the situation as cabin groups, and if these groups are staggered in location so as to separate a given group from those most like itself (in age, interests, behavior standards, etc.), the factors of anonymity, unanimity, and ease of communication which might encourage extreme behavior are reduced. Such cases are difficult to conceptualize without the use of group concepts.<sup>3</sup>

Clinical experience in working with children in groups has, then, pointed up the necessity for more information about the conditions under which contagion may take place, and encouraged an interest in understanding more about it from the standpoint of group as well as individual psychological dynamics. In the present study, we have been primarily concerned with the elucidation of group psychological factors.<sup>4</sup>

### **An Operational Definition of Behavioral Contagion and Its Implications**

Behavioral contagion may be seen as a phenomenon within the general area of social influence phenomena. For our purposes, social influence occurs when a change in behavior of one individual appears to produce a change in the behavior of a second individual. The two people involved in this interaction may be called the *actor* and the *recipient*. Social influence, as a problem area, is intersected by a number of different dimensions. Those dimensions which would seem to be relevant for the purposes of "placing" contagion can perhaps best be seen by contrasting that kind of influence which we call contagion with what we have termed "direct attempts at influencing".

A direct influence attempt is defined as an event where the actor deliberately and openly tries to evoke a particular response in the recipient. Thus, he may tell the recipient what he wants him to do (or ask him to do it), or indicate his desires by gesture. His intent, in relation to the recipient, is openly expressed. In the contagious kind of influence, however, the initiator does not evince an intent to be imitated. One dimension, then, along which social influence may vary is the degree to which the actor (or initiator) communicates his intention to produce a change in behavior in the recipient. For purposes of this study, "contagion" is limited by definition to situations in which the initiator did not openly communicate such an intention to influence.

The result of this operational definition is that the "real intent"<sup>5</sup> of the initiator is ambiguous. His failure to communicate intent openly and directly gives no assurance that it does not exist. Similarly, and despite good inter-

<sup>3</sup> Fritz Redl: "The Phenomenon of Contagion and Shock Effect in Group Therapy", *op. cit.*

<sup>4</sup> Such a formulation implies that there is no single theoretical system which is able to cut across both areas of study. We believe that this is the current state of affairs.

<sup>5</sup> That is, the intent of which the initiator is conscious.

observer agreement, the interpretation placed on the initiator's act by the recipient cannot be known directly. What we may presume, however, is that in the case of "direct attempts at influencing" little interpretive leeway is available to the recipient, while in the case of contagious influence more leeway is given, permitting the recipient greater freedom to structure his perception in terms of his own needs. For example, the more *he* wants the initiator to want to influence him, the more he can perceive the initiatory act in that light. The reverse is also true. In contagious influence, the recipient is much more in a "choice" situation.

Another dimension of social influence is the similarity between the behavior of the recipient and that of the actor. In terms of observed behavior, direct attempts at influencing were observed without regard for this dimension; contagion *always involved resultant similarity in behavior.*

An incident of behavioral contagion, for the purposes of the present investigation becomes, then, *an event in which a recipient's behavior has changed to become "more like" that of the actor or initiator. This change has occurred in a social interaction in which the actor has not communicated intent to evoke such a change.*

This definition of the problem area in terms of observable behavior was dictated in part by methodological considerations, but more importantly by the desire to bring the whole phenomenon under investigation without delimiting it as yet in terms of causative dynamics. We assumed that behavioral contagion is not a single entity, but can probably be the product of a variety of factors acting singly or in combinations.<sup>6</sup>

### **Status and the Initiation of Behavioral Contagion**

Out of many possible factors, we have chosen to focus on the relationship between contagion and status in the group. However, because of a lack of specificity in customary definitions of "status", it became necessary to devise ways of measuring it.<sup>7</sup> One way was through a variety of behavioral indices; another was in terms of how any given child is perceived (as compared with the others) by the members of his group. This attribution of group-relevant characteristics we conceive as being a measurement of one type of position in group space. We have referred to this as group prestige.

The general hypotheses and assumptions determining the design of the study and the measurement operations attempted can be presented as follows:

1. That children differ in their ability to influence other children, either "contagiously" or directly (relationship between the two abilities not predicted).

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<sup>6</sup> This would include such variables as:—those relating to the process of communication; the needs of the recipient, for which the act might provide a goal or means; the fact that the act may operate to reduce restraining forces against behavior in a given direction; the relationship between the initiator and recipient—whether the initiator is a "model" out of the recipient's case history, or out of the position which he occupies in the group; etc.

<sup>7</sup> As a matter of fact, this study might be considered, in part, as an investigation of "status". We have discussed problems involved in the operational definition of status in a previous publication. See: Norman Polansky, Ronald Lippitt and Fritz Redl: "The Use of Sociometric Data in Research on Group Treatment Process", *Sociometry* (in the press).

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2. That children differ in their willingness to be influenced, either contagiously or directly (relationship between the two influence-abilities not predicted).

3. That a relationship will be found between the prestige position occupied by a given child in the eyes of his fellow members, and his ability to exercise influence, or to be influenced by others.

4. That his relative prestige position should be otherwise evidenced in their behavior toward him.

5. That the extent to which a child is available to communication from his group will determine both his ability to be influenced and his ability to influence. This may be an enduring characteristic of him as a person, or it may be related to his current group position.

6. That problems of this order can be brought under direct and controlled study in group treatment *milieux* without interference with the normal functioning of the groups involved.<sup>8</sup>

## II

### THE RESEARCH OPERATIONS

#### Selection of Settings

Since we were primarily interested in the "group" aspects of contagion, it was clear that it should be studied in groups, and that, if the group were to be to some extent the sampling unit, it would be desirable to study as many groups as we could afford. Moreover, our basic research interest is in the treatment of disturbed children in and through groups. While findings on "normal" children might not differ from ours in the broad sense, the specifics (e.g., what factors, precisely, contribute to prestige) are of equal interest to us. For this reason, it was decided to try to work with children approximating, clinically, to the children we were having in our treatment groups. We wanted to study groups, of reasonably small size; who were reasonably homogeneous with regard to age, size, and other such gross criteria; who were homogeneous as to sex; who were comparable to our treatment population in general kinds of personality disturbances. Finally, they had to be in settings in which research of this kind would be welcomed and understood, and in which we could hope for contributions to our understanding from clinically oriented staffs. The closest approximation to meeting all these conditions on a geographically compact basis was the summer camp setting, specializing in work with children referred by community agencies for study, for treatment, or because they were considered probably unable to adjust to the more usual kinds of camps.

The camps we chose (and which chose us) were the University of Michi-

<sup>8</sup> For a discussion of the reasons for our feeling this as an important challenge, see: Ronald Lippitt: "Techniques for Research in Group Living", *Journal of Social Issues*, 1946, 2, 55-61.

See also, Norman Polansky, et al.: "Problems of Interpersonal Relations in Research on Groups", *Human Relations*, 1949, 2, 281-292.

gan's Fresh Air Camp for boys, directed by Dr. William Morse, and the Community Service Society of New York Camp Greybarn for girls, directed by Miss Jean Wren. Four groups in each were studied for each of the two four-week sessions conducted by the camps (a total of eight boys' groups, and eight girls' groups). In each camp, the senior four cabins were studied. The age range was about eleven to fifteen years. The older children were chosen for study since it was felt they would be best able to work with some of our sociometric-like interview situations.

### Methods of Data Collection

The area under study here was, basically, the relationship between group status and contagious influence. Instruments were devised to bring both these factors under study. In relation to the latter, at the initial state of our knowledge, we were able to do little more as a first approximation than to bring it under quantitative observation. In relation to the factor of status we aimed to measure it from a variety of different angles. All instruments were pre-tested for feasibility prior to the summer's work.<sup>9</sup>

Data for the study were gathered in three ways :

A. By the use of mobile *observers*, employing pre-categorized data sheets. Except during reliability checks, we followed a policy of attaching one observer to a group at a time, usually for an all-day period. The observer stayed with his group, and followed it through all activities in which it was a distinguishable group, such as dressing in cabin, going swimming, at meals, etc. Three observers were used in each camp, and rotated through the groups, to equalize the interaction of observer and group. Observations were continuous for fifteen-minute periods at a time. Each child, counsellor, and other adult who might frequently be present was assigned a code number, in accordance with the group of which he was a part, and these numbers were used in indicating the source and object of an interaction ; the initiator and "recipients" in a contagion chain. The following categories were observed :

1. Direct attempts at influencing (actor and recipient).
  - a. *Manner*, including : Directs, Demands, Uses force or threat of force, Requests-suggests, Pleads.
  - b. *Goal*, including : Personal (actor's own) goal, Group (or shared) goal, Recipient's own goal, Some third person's goal.
  - c. *Response of the Recipient*, including : Accepts and complies, Accepts in modified form, Acquiesces but does not comply, Ignores, Rejects, Could not be determined.

<sup>9</sup> We should like to express here our gratitude to the following individuals and agencies who were very helpful in the pre-planning and pre-testing phases : Mr. David Wineman, Director, Pioneer House, Detroit ; Miss Mary Lee Nicholson, Director, The Detroit Group Project, for guidance, support, and many favors ; Mr. Herbert C. Shanks, Director, and Miss Frances Jacobson, Case Worker, The Protestant Children's Home, Detroit, and Mr. Donald Dowling, Director, Longview Farm (New England Home for Little Wanderers), Walpole, Massachusetts, for providing resident groups for pre-testing instruments and for understanding support of research in our mutual field ; Merrill-Palmer Schools, Jewish Community Center, and Detroit Area Council, Boy Scouts of America, all of Detroit, for providing observation situations.

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2. Status indicators.
  - a. *Asks Permission.*
  - b. *Implies Superior Knowledge or Skill in the Recipient.*
  - c. *Ridicules.*
3. Incidents of contagion.
  - a. *Initiator.*
  - b. *Recipients (in order).*
  - c. *Content of the Contagion.*

B. By the use of a modified sociometric test. The complete description of this is elsewhere reported.<sup>10</sup> This test was administered through a personal interview with each child. Interviews were held at the end of the first week and again at the end of the third week. Previous studies<sup>11</sup> had indicated that the sociometric structure of these groups might change considerably over the four-week period. Photographs of the children were taken during their first day at camp. These, in combination with variously colored boxes, into which the pictures were sorted, were then used to give the sociometric situation a "game-like" quality, and as an aid to the particularly non-verbal children. Various degrees of liking or rejection were asked for, and the children made a series of "most and least" choices on a variety of prestige dimensions. These dimensions are indicated in tables given below. Results for the two interviews are averaged in computing numerical indices for statistical manipulations.

The questions asked, and reasons for them, were as follows :

1. *Sociometric.* "Who do you like to be with around camp?" Degrees of liking for each other child in the four groups (division) under study were obtained.
2. *Prestige and characteristics questions.*
  - a. "Who is best (worst) at athletics?" (Thought to have influence prestige value in this situation.)
  - b. "Who would be most likely to help you if you needed help?" (Thought to be a determinant of liking; possibly a determinant of influence.)
  - c. "Who is best able to stick up for himself to grown-ups?" (Influence prestige value.)
  - d. "Who is the strongest in your cabin?" (Influence prestige value.)
  - e. "Who do you think is the best-looking?" (Influence prestige value.)
  - f. "Who is best at getting things done?" (Perceived level of personality organization. Would this have influence prestige value?)
  - g. "Who seems to have the best ideas for things that are fun for you

<sup>10</sup> N. A. Polansky, R. Lippitt, and F. Redl, *op cit.*

<sup>11</sup> J. McVicker Hunt and R. L. Solomon: "The Stability and Some Correlates of Group Status in a Summer Camp of Young Boys", *American Journal of Psychology*, 1942, 55, 33-45.

W. I. Newstetter, M. J. Feldstein, and T. M. Newcomb: *Group Adjustment: A Study in Experimental Sociology*, Cleveland, Ohio: Western Reserve University, School of Applied Social Sciences, 1938.

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all to do ?” (Perceived supplier of means for impulse satisfactions. Influence prestige value.)

- h. “ Who knows the score about girls (boys) ?” (Influence prestige value.)
- i. “ Who is it most difficult to talk into things. Who seems to know his own mind ?” (Influence prestige value.)
- j. “ Who is best at getting the others to do what he wants them to do ?” (Wanted as a “ validity ” check on the observational data. Also, to study interrelations between perceptions on this and other factors.)

C. By ratings of counsellors. These were made at four- or five-day intervals, without reference to previous ratings. Ratings were made as rankings of the children on a given dimension. The dimensions involved were :

1. Adult Relatedness.
2. Group Relatedness.
3. Impulsiveness.
4. Group Belongingness Need.
5. Feeling of Acceptance by Group.

Numerical indices on these dimensions, too, are based on an averaging of the rank given the child by his counsellor, over the repeated rankings.

### **The Observational Data**

Of major methodological interest in the present study are the problems involved in the collection and analysis of the observational data. Unfortunately, limitations of space do not permit a detailed statement of the statistical and other techniques. A brief summary will be given, therefore, of controls employed, and of obtained reliabilities. A more complete mimeographed statement can be secured by writing to the authors.

Approximately thirty thousand separate, multiple-coded observations were collected in the course of the summer's work. Of these, about one-fifth were incidents of contagion. Eight groups were studied in the boys' camp. Six of these were of eight children, with one of nine, and one of seven. There were also eight groups in the girls' camp. Four of these were groups of six ; four were reduced by “ go-homes ” to four girls only. All data on girls not present during the whole period were deleted from the analyses.

All frequency indices are corrected for “ time under observation together ” for each pair of children. Differences in visibility of behavior style and observer “ favorites ” were controlled in part by rotating through the groups, per observation period, each time using a different child as focus of attention by the observer. Observers also were rotated around the groups.

#### *A. Kinds of contagious incidents observed.*

A very wide variety of contents is found amongst the notations made by our observers. An illustrative series of incidents in one's boys' group which



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was swimming and playing around the beach at an overnight site away from camp, runs as follows :

<i>Instigator</i>	<i>Recipient(s)</i>	<i>Content</i>
56	53	Playing at being a "sinker".
55	53-56	Testing water's depth.
55	53-56	Repetition of last.
53	58	Singing lewd song.
57	55-56	Standing on hands in water.
55	56	Talk of penis : "Here's a worm."

An anecdotal report of an incident at the girls' camp : "Tent Six had been excitedly and joyously discussing and imitating their favorite radio programs for about ten minutes. They were unified, happy, and for some time had been uninhibitedly verbal and songful. 62 started to sing a radio theme song, and was followed by 65 and 66. 63, 64, and 61 did not join in." In her discussion of the situation, the observer notes the following factors as contributing, she thinks, to this contagion : (1) Status of the initiator (verified later by our "prestige index"); (2) Enthusiasm of initiator; (3) Attractiveness of the content; (4) Congruence of content with group mood. Of those who did not join, she felt : (1) 64 was too involved in a different activity; (2) 61 probably does not listen to such relatively "grownup" radio programs; (3) 63 lives in a Spanish culture, and does not know the song, either. "Almost immediately thereafter, 63 started to sing in Spanish."

*B. Reliability of the observational instrument.*<sup>12</sup>

In the present study, attained reliability (as sampled) was used in the decision as to the level of discrimination in an analysis of behavior our use of the instruments would support. It proved necessary to group some of our categories, eliminating differentiations between categories which the observers apparently had not been able to maintain in practice. "Manner of Influence Attempts" was reduced from five categories to two : *Directive*, including Directs, Demands, Uses Force or the Threat of Force; and *Non-Directive*, including Request-Suggests and Pleads. "Response of Recipient to Attempt at Influencing" was reduced from five categories to two : *Successful*, including Accepts and Complies, and Accepts in Modified Form; and *Unsuccessful*, including Acquiesces but Does Not Comply, Ignores, and Rejects.

In *Table A* are listed the obtained reliabilities of the categorizations used in the analysis. They are given as average *rho*'s for the three pairs of observers in each camp.<sup>13</sup> An additional breakdown, since each interaction involves an actor and one or more recipients, has been to calculate the inter-observer reliability for both pictures they give : The children as actors and the children as the recipients of social acts. Identification of reciprocity is more difficult than of initiation of action.

<sup>12</sup> Mr. Murray Horwitz, Supervisor of the boys' team, assumed major responsibility for planning and conducting reliability checks.

<sup>13</sup> Each *rho* represented the correlation between the ranking of the group obtained from frequencies in the data of one observer, with that of the observer with whom he was paired for that sample.

**TABLE A**  
**Summary of Reliability Calculations for Observational Categories**  
**(Average Rho's) \***

	Direct Attempts at Influencing							Contagion Incid.	
	Manner		Goal			Fate of Att.		Initiation	
	Directive	Non-Directive	Personal	Group	Rec. Own	Suc.	Unsuc.		
Actor :									
1. Boys' Camp	.74	.63	.59	.62	.57	.84	.73	.87	
2. Girls' Camp	.78	.78	.69	.61	.62	.82	.56	.62	
Recipient :								1st Rec.	Other-in-Chain
1. Boys' Camp	.66	.00	.63	.34	.70	.50	.48	.76	.76
2. Girls' Camp	.84	.43	.65	.41	.46	.74	.60	.56	.68

\* Insufficient data were gathered on the "Status Indicators" categories to permit computing reliabilities.

For purposes of studying the reliability of the *observation instrument, per se*, and for training observers, it is advantageous to filter out the unreliability due to differences brought about by the fact that the two observers might not be given proportional *frequency* weighting to the children. Accordingly, we ran a series of reliability checks in which the two observers synchronized their observations of specific interactions. It was then possible to compute a percent-agreement score for each group of categories, based on the number of agreements divided by the total number of *presumably* identical interactions handled. The results of this "stopped clock" reliability check are given in *Table B*. In these calculations, the number of categories are reduced, as in *Table A*.

**TABLE B**  
**Percent-Agreement in Categorizing**

	Direct Attempts at Influencing			Status
	Manner	Goal	Fate of Attempt	Indicators
Boys' Camp ...	79%	88%	83%	85%
Girls' Camp ...	94%	96%	94%	100%

Comparison of the percent-agreement scores (as given in *Table B*) with the *rho's* listed in *Table A* indicates that a large proportion of unreliability was due to difficulties in identification of actors proportionately.

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Since, in many of the findings, there is a considerable similarity between the pattern of relationships of other factors with contagion initiation, and the pattern of such relationships with frequency of successful attempts at influencing, it is important to determine how much these two were being confused. This is a problem having both methodological and theoretical significance. As might be derived from the definition of contagion, it is the question of whether two observers were able reliably to make judgments about the openness of communication of intent to influence, or lack of it, by the actor. Since both of these are frequency measures, one might expect *some* intercorrelation between them, based on the sheer differences in group activity levels of the children, but since they also involve, theoretically, different ways of exercising influence, the extent of their intercorrelation on a child-by-child basis is an empirical question. On the other hand, if the two kinds of influence were being confused seriously in observing, we might well have been measuring only one thing: volume of influencing in a group.

Taking our reliability data, we computed for each observer's material on a given group, two scores for each child: (i) The number of times he was a contagion initiator; (ii) The number of times he made a successful attempt at influencing. We then ran product-moment correlations (as more sensitive to differences in numbers) on the inter-observer reliability for each factor, and the correlation between scores on the factors found by each observer. The results are summarized below:

**TABLE C**  
**Differential Reliability of Frequency of Contagion Initiation**  
(Average "r's")

	<i>Boys</i>	<i>Girls</i>
Observer Reliability: Frequency Successful Attempts at Influencing ... ..	.87	.88
Observer Reliability: Frequency of Contagion Initiations	.71	.92
versus		
Frequency Successful Attempts at Influencing ... ..	.42	.20

For the particular data here involved, the inter-observer reliability is considerably greater than the obtained intercorrelation. It is doubtful, therefore, that the obtained relationship is very much due to confusion in observation of one factor with the other.

*C. The Use of a Specific Concept of "Position" in Analysis.*

The pattern of analysis employed in this study was to regard all data on a "within-group" basis. Indices were established on the basis of a child's interactions with the members of his own group, and children were ranked or "placed on positions" along each dimension only in relation to the members

of their own group-units. The statistical reasons for handling the data in this fashion are quite apparent, in terms of the non-comparability of raw scores as obtained. For example, the children in a group of four might seem to be more frequent contagion initiators than those in a group of eight, unless we take into account that a single observer could keep up better with the individual in a smaller group. Attempts to introduce empirical corrections for group size flounder in the problem of whether the greater frequency is due to limited observer speed, or the psychological meaning of being in a smaller group. And, on other than statistical bases, we are forced to consider that an index representing a child's observed position in a given group cannot be considered representative of his likely "group position", in all groups. A child's effective influence or his "prestige" is, for example, only to be considered with regard to the group in which he is studied.

The simultaneity of occupancy of the same or opposing positions on two or more dimensions of a significant majority of the children may be taken as the index of the interrelationship of the dimensions under investigation. Since, in the present study, our interest has been on the group-relevant aspects of the phenomena being studied, we have been most interested, *not* in the behavior given and received by specific children, but rather in the behavior given and received by typical occupants of certain group positions. The majority of our analyses and statements of findings are phrasable as: "In these groups, those above average on dimension X, also tend to be above (or below) average on dimension Y."

### III

#### FINDINGS<sup>14</sup>

##### Group Influence as a Function of Prestige

The major hypothesis of this investigation has been that influence in groups is a function of prestige. For our purposes, prestige is defined as the possession of a desired position in the group structure, as measured by the *attributions of other members* of the group. In our design, this is measurable by the results of our sociometric-like interview testing. Group influence has been defined as the ability to affect the behavior of another member of the group. This has been measured in two ways: (i) By the frequency (corrected for time) with which an individual was an initiator of contagion; (ii) By the frequency with which an individual was able to make a successful direct attempt at influencing. The relationship between these two kinds of influence and the attributions received by the actor are summarized in *Table D*, below. The statistical hypothesis being tested in each case is that the relationship between an individual's position in the group structure, on the observed influence dimensions, and his attributed prestige by the other members of the group, was due to chance fluctuations in random sampling. The *Chi-Square*

<sup>14</sup> We are grateful to Dr. Leon Festinger for many contributions to statistical design in the analysis.

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test was used, with the groups being divided in terms of being above or below average on the given dimension.

**TABLE D**  
**Prestige and Effective Influence (Level of Confidence) \***

Prestige Factor	Contagion Init.			Direct Influence		
	Boys	Girls	Both	Boys	Girls	Both
1. Ability in Athletics ...	.05	.05	.01	.10	.02	.01
2. Being Helpful ...	.70	.10	.10	.50	.50	.70
3. Independent of Adults ...	.01	.05	.01	.02	.20	.01
4. Strength ...	.10	.01	.01	.10	.20	.20
5. Good Looks ...	.70	.20	.20	.50	.70	.50
6. Organized in Doing Things	.30	.05	.05	.90	.95	.95
7. Having Ideas for Fun ...	.05	.01	.01	.30	.05	.10
8. Sex Sophistication ...	.01	.01	.01	.20	.01	.01
9. Independence of Social Pressure ...	.01	.01	.01	.02	.05	.50
10. Attributed Influence ...	.10	.02	.01	.05	.50	.02
11. Sociometric ...	.50	.05	.05	.70	.99	.70

\* All P's given are at the lower level of the interval. Chi-squares for "both" are computed by combining the raw data. On all factors except the Sociometric, the totaled attributions divide the groups into a High, Middle and Low, which is run against High and Low on the observation data, for a six-cell table. All trends attaining significance are positive, by inspection. The insignificant finding for "both" on Independence of Social Pressure versus Direct Influence was due to two curvilinear positive relationships which canceled each other. N for the eight boys' groups was 64; for the eight girls' groups, 40. Total N was 104 children. Losses of cases reduced the girls' groups from six to four each in the first session.

It appears, then, that relationships *were* found between effective influence in these groups and attributed prestige. It also appears that, to some extent, the level of confidence we may have that a relationship exists depends on the dimension of prestige considered, i.e., the specific attributions studied. The significance of relationship to contagion initiation of being perceived as helpful, or good looking, for example, does not approach the significance of the relationship of being perceived as a good athlete or sex-sophisticated. The relationship between both measures of observed influence in groups and the children's choices of "who is influential in our group" may be taken as an interesting indication of the possibilities for measuring such phenomena by both observation and questioning.

One of the prestige factors, a group of five, was selected to construct a prestige index. This scale consists of the following items: (i) Ability in Athletics and Strength (as one factor); (ii) Independence of Adults; (iii) Having Ideas for Fun; (iv) Sex Sophistication; (v) Independence of Social Pressure. A child's scores on these were combined without weighting; his total score is taken as his attributed prestige in his group, or his *group prestige position*.

These factors were chosen for our index out of the following considerations: (i) The clinical judgment at the beginning of the study that these were

admired attributes in such children's groups ; (ii) Each of them relates significantly to influence as attributed by the children ; (iii) Except for "Having Ideas for Fun", each of these is relatively independent of the liking choice (sociometric).

**Attribution and Self-Perception of Prestige Position**

It was our theory that the effective influence which any child wields in a group is a result of two kinds of factors : (i) The readiness of others to be influenced by him (either "reaching out" imitatively, or responding to his direct attempts) ; (ii) His own readiness to attempt to influence others, to use his own influence potential.

If we take the hypothesis that readiness to be influenced by another person is, at least partially, a function of the prestige one attributes to that person, we should expect a fairly good correlation between prestige and ability to initiate contagion. This would be especially true for contagious influence since reciprocity of contagion is determined almost wholly by the readiness of the recipient to be influenced, and it is the recipient who does the attributing. Frequency of successful direct attempts, on the other hand, has as much to do with the readiness of the actor to make direct attempts as with the readiness of the recipient to accept them. This influence index should correlate somewhat less with attributed prestige. Finally, it is an empirical question whether sheer readiness to *make* influence attempts has anything to do with attributions received.

In *Table E* are given the average *rho*'s for our sixteen groups for the several kinds of observational measures against the prestige index.

**TABLE E**  
**Relationship of Prestige to Observed Influence**

			Frequency of Successful Direct Influence Attempts	Frequency of Direct Influence Attempts
Average <i>Rho</i>	...	...	.61	.49
N = 16 groups, 104 children.				

Although differences in level of correlation are small, the trend is in the predicted direction. The smallness of the differences, however, emphasizes the role which *readiness to make* influence attempts may play in effective group influence—a role whose extent is indicated by the correlation between prestige and frequency of influence attempts.

*A. The Prestige-Influence Syndrome*

These findings suggest that attributed prestige and effective influence position may be seen superficially as a syndrome. We have become curious about the dynamics operating to produce this "syndrome". A further

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hypothesis would be that an individual with high prestige not only finds the others in his group with more readiness to be influenced, but also is more ready to attempt influence. *He is more ready because he is, himself, aware of the group position attributed to him by the others, and can derive it from their behavior toward him.*

Other findings seem to support this formulation. If we study the manner used by the other children in their attempts to influence the prestige-loaded children, we find a correlation of .31 between prestige position and the percent of non-directive attempts at influencing which are received. This correlation, while low, is significantly positive. The other children, in making direct attempts to influence, tended to change their manner in making the attempt in accordance with the prestige of the recipient of the attempt. Material on reciprocity of behavior in which the actor implies that the recipient has superior knowledge or skill was also studied. The results of this analysis are given in *Table F*. One session of each camp was taken as a sample . . . four cabins per camp.

**TABLE F**  
**Average Number of "Implies Superior Knowledge or Skill (ISKS)"  
Received by Each Child**

		Aver. No. for High Prestige	Aver. No. for Low Prestige	No. of Children	P. of Difference	Counsellors
Boys...	...	6.38	2.31	32	.01	23.25
Girls...	...	3.17	2.00	24	.10	48.75

Levels of *P*. were computed by *t*-test. Children above the median on prestige received more ISKS than those below. Additional evidence of the meaning of this behavior is seen in the average amount of reciprocity of such behavior by adult counsellors. In the boys' camp, we found a significant difference (beyond .01) in the amount of "Asks Permissions" received by the high versus low prestige groups. This behavior was not recorded frequently enough in the girls' camp to permit testing. (Whether this is due to a real difference between the groups or is an artifact of the attitude of the girls' observers toward using the instrument is not known.) It is unlikely that reciprocity of more of this kind of behavior is due simply to being more "in the swim", since there is no relationship between prestige position and frequency of receiving influence attempts. The average correlation of these two factors was — .03.

From these combined data, it cannot be concluded that the child with high prestige knows he has it; it can only be said that the opportunity for him to learn he has it is present. What conclusion the child (as opposed to the investigator) will draw from the evidence presented by the group will be, we think, heavily affected by his own enduring perception of his position "in groups". In the present instance, the correlation between counsellors' rankings of "Feeling of Acceptance in the Group" and attributed prestige position is .45.

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In addition to making more direct attempts at influencing, those children high on attributed prestige also make a somewhat higher percentage of *directive* attempts at influencing (Average *Rho* .26).<sup>15</sup> They also tend to be somewhat less open to others' attempts at influencing them. Correlation of prestige and percentage of influence attempts "accepted" (successful for the actor) is — .27.

An over-all view of these combined findings inclines to a conclusion that, by and large, those children to whom prestige position is attributed are aware of the fact; their awareness is facilitated by the behavior of others toward them in a variety of ways including, among other things, a readiness to be influenced either directly or "contagiously". They tend to act on the basis of this awareness by making more direct attempts at influencing, and by other behavior indicative of freedom to act spontaneously in the group. Finally, although this may be the process, it is clear that its regularity of operation for *all* children should not be overemphasized. In addition to factors of sampling and unreliability which undoubtedly reduce the correlations, there are enduring intra-psychic "sets" for some individuals which affect the statistical relationships. The behavior of the prestige-loaded person in a group will, at a minimum, depend on the results of a *dual process*: (i) His ability to recognize the evidence offered him by the group; (ii) His inclinations about the use to which he wishes to put this information. The absence of direct data on self-perception is a clear difficulty in the present analysis; the failure to study it was due in large measure to the unavailability of satisfactory measuring instruments.<sup>16</sup>

#### *B. Intra-Psychic Factors Affecting Accuracy of Perception of Own Position*

Some evidence does exist about the phase of personality which must be measured if the missing linkages in the formulation are to be filled in.

Among the ratings made by counsellors was that on Group Relatedness. This was defined as "the extent to which an individual is aware of, and tends to act in terms of positive feelings for his group". It is a measure combining, then, material on social sensitivity and need for group belongingness. The counsellors also made direct ratings on "Group Belongingness Need".

The children were then sorted into two groups: (i) Those tending to under-use the position attributed them by the group; measured by taking those above average in prestige, but below average in frequency of attempts at influencing. (ii) Those tending to overuse their attributed position; selected by opposite criteria to the former group. There were 19 "under-users", 20 "over-users", the other 65 children fitting a description of appropriateness of usage. Results are given in *Table G*.

<sup>15</sup> It will be recalled that high-prestige children also receive more *non-directive* approaches. Positive relationship of non-directive recipient and directive actor is significant at .05 in boys' camp; .02 in girls'; .01 combined. This contradicts, for these groups, a hypothesis of member-to-member *quid pro quo* in such group behavior. It is further evidence of acting in terms of a "perceived own group position".

<sup>16</sup> We are at present attempting to build an instrument suitable for the study of such self-perceptions. This involves a series of pictures of typical group situations about which the child is asked to "tell a story". Work on the development of appropriate pictures and validating the results obtained is going forward at the time of this writing.



**TABLE G**  
**Use of Attributed Position**  
 (Numbers of Children)

			Number of Over-Users	Number of Under-Users	P. of Difference
Above Median	...	...	5	10	.08
Group Relatedness Below Median...	...	...	15	9	
Above Median...	...	...	10	5	.15
Group Belongingness Need Below Median...	...	...	10	14	

Over-users of influence position, then, are perceived by the counsellors as less sensitive to social process in their groups ; under-users as having less need to be part of their groups. The failure to find simple relationships may be indicative of the dual process postulated as determining resultant behavior in groups.

Another argument for the fact that this is at least a dual process is the following : We found, in general, no relationship between *frequency* of attempts at influencing and the percentage of these which were successful. This was true whether we studied these factors as group-positions, or examined the data to see whether a given child would tend to make more of his attempts on those children with whom he was the more successful. A breakdown of the children in terms of " under or over " use on these factors shows rather similar trends to the material given above, with this addition : Those children making a high number of attempts with a low percentage of success are rated by the counsellors as more *impulsive* (i.e., more likely to act in terms of own needs without considering consequences) than those showing a reverse trend ( $P = .02$ ). There is, in addition, a positive relationship between Group Relatedness and Percent Success ( $.01$ ) and Group Belongingness Need and Percent Success ( $.02$ ). These findings may be schematically represented as follows :

$$\text{Volume of Effective Influence} = f(\text{Attributed Prestige Position and Willingness to Attempt Influencing and Appropriateness of Choice of Target})$$

Where :

1. *Willingness to Attempt Influencing* =  $f(\text{Perceived Own Prestige Position and Group Belongingness Need})$
2. *Accuracy of Perception of Own Position* =  $f(\text{Group Relatedness})$
3. *Appropriateness of Choice of Target* =  $f(\text{Group Relatedness and Group Belongingness Need and (inversely) Impulsiveness})$

This representation is obviously incomplete, in regard to both social and individual psychological processes (e.g., What is the relationship between

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Group Relatedness and Group Belongingness Need?). It indicates our learnings out of the current exploration in this problem area, and exposes gaps requiring further exploration.

### **Susceptibility to Social Influence**

In the material given above, the focus has been on factors determining who will have effective influence in our groups. A variety of individual and group psychological factors has been isolated, and it is clear that a major factor determining who has influence is the willingness of others to be influenced by him. To that extent, we have been simultaneously studying the latter process, too. There is some additional evidence, however, about the process of reciprocity of influence which can be gained from focusing our attention on factors related to willingness to be influenced, or influence susceptibility.

#### *A. Measurement of Susceptibility*

Susceptibility to social influence was also measured in two ways: (1) Percentage of direct influence attempts received which were accepted; (2) Percentage of contagious incidents during which a child was present which he "picked up" (as opposed to being present but apparently not affected). In the latter measure, the contagious act was above some *other* children's limen of perception and interest. The percentage score for a given child is based on the number of times he was present and was among those who proved susceptible. Throughout the analysis of contagious influence, strict comparability of the data has been hampered by the lack of any measure which one might call "possible contagion initiation", in the same sense that it is possible to measure frequency of direct attempts at influencing. The failure to obtain such a measure is due in large part to the near-impossibility of recording *all* acts in a group, and nearly anything may prove to be contagious. We should like to point explicitly to the fact, then, that the percentage of susceptibility to contagion is based on the number of acts which *succeeded* as contagion initiations in one's presence.

In the present instance, *percentages* rather than frequencies are used on the assumption that they will best represent the decisions made by a child faced with a series of possibilities for accepting influence, and to make data on both kinds of susceptibility to influence as comparable as possible. Contagion susceptibility was also measured as a frequency index, and will be identified as such where it is so calculated.

#### *B. Susceptibility—"Active" and "Passive"*

A consideration of the difficulties in measuring contagion as a percentage, however, points up a distinction drawn between the two kinds of influence investigated here. Contagious influence is, really, the result of an *active* process on the part of the "recipient"; direct influence seeks the recipient out. In *Table H* are given the relationships between these two kinds of

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“susceptibility” and prestige position in the group. Under *P* is given the level of confidence that the correlation between factors is in the direction indicated by the sign for Average *Rho*. It is based on the distribution of *rho*'s obtained for the sixteen groups.

**TABLE H**  
**Influence Susceptibility**

<i>Factors Correlated</i>	<i>Average Rho</i>	<i>P</i>
Direct-Influence Susceptibility × Contagion Susceptibility	—·26	·12
Direct-Influence Susceptibility × Prestige ... ..	—·26	·02
Contagion Susceptibility × Prestige ... ..	·37	·01

An hypothesis that the two measures are of the *same* phenomenon can be rejected. Further, the two measures show a differential relationship to prestige position, which difference is significant ( $P = \cdot 01$ ). Other differences indicated between the kinds of susceptibility are summarized in *Table I*. Level of confidence is estimated by *Chi-square* test. Number of children in each case is 104.

**TABLE I**  
**Relationship of Influence Susceptibility and Other Factors**

<i>Factor Compared</i>	<i>Contagion Susceptibility</i>		<i>Direct Influence Susceptibility</i>	
	<i>Direction of Trend</i>	<i>P</i>	<i>Direction of Trend</i>	<i>P</i>
Contagion Initiation ... ..	Positive	·01	Negative	·05
Frequency Attempts at Direct Influencing ... ..	Positive	·05	Negative	·70
Reciency Non-Directive Attempts at Influencing ... ..	Positive	·50	Negative	·05
Feeling of Acceptance in Group ... ..	Positive	·02	None	·99
Group Belongingness Need ... ..	Negative	·20	Positive	·02

Without repeating the formulations of the previous section, it appears, from an over-all view of these results, that both “active susceptibility” to contagious influence and “passive susceptibility” to direct influence are in part a function of perceived own group position. *The children who tend to be more susceptible to contagious influence have, and feel they have, in general a more secure group position than those distinguished by susceptibility to direct attempts at influencing.*

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It was our original hypothesis that those children with a strong group belongingness need, and who were not having it satisfied, would be more susceptible to influence from other group members. This was on the assumption that such children would be anxious to please other group members and to find a way of adjusting to the standards of the group. The present findings indicate that a more specific statement of conditions is probably necessary. While Group Belongingness Need may be a determinant of susceptibility to direct influence attempts, a degree of security in the group (or freedom to act spontaneously without being asked to) is necessary before we are likely to see much in the way of susceptibility to contagious influence of the kind studied.

The new boy entering a group, for example, may want very much to get accepted, and may be very willing to be influenced by those group members whom he perceives as central to the group. But, in the face of a lack of knowledge of who is really central, and what is really acceptable behavior here, he may be inclined to act conservatively until such time as the group picture is clearer to him. In such a case, he would probably wait with his behavior until approached directly.

An interesting additional possibility is that such a child is more likely to be a case of "echo" contagion. That is, he would not imitate spontaneously but only after the number of children who have already been affected by contagion seems to him adequate to show that the particular behavior is clearly group-accepted.

### *C. Susceptibility and General Level of Activity*

The interrelationship between contagion susceptibility, and contagion initiation, however, again raises the question of whether, in these contagion data, we have picked up anything other than *general level of activity* in the group. This is especially a problem since there is also a significant ( $P = .05$ ) relationship between contagion susceptibility and frequency of direct attempts at influencing. Our inclination would be to interpret this frequency of behavior as a common factor, but not the sole determinant. We do not find, for example, any reliable relationship between contagion susceptibility and how a child is treated by the other group members.<sup>17</sup> The correlation of contagion susceptibility with attributed prestige is considerably lower than that of contagion initiation (.61 vs. .20). Finally, in an attempt to equalize for this factor, we set up a new "corrected" contagion initiation index: Frequency of contagion initiation/frequency of being affected by contagion. This corrected initiation index has an average correlation of .42 with the prestige index. It appears that frequency of contagion initiation involves something more than readiness to act, and that one additional element is indicated by attributed prestige.

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<sup>17</sup> With the exception of his inability to make a percentage of successful attempts at influencing in accordance with the frequency of attempts made by him.

### **Behavioral Contagion and the Impulse Control Balance**

Dimensions of personality structure estimated by the counsellors differ considerably from each other on a continuum of relevance of that characteristic for predicting group behavior. Group Belongingness Need or Group Relatedness clearly have more to do with predicting *group* adjustment than does Impulsiveness. Estimates of Impulsiveness were obtained, however, as a beginning step toward relating a characteristic clinical problem in working with such children to the present study. This is the problem of the impulse *versus* control balance in the individual child: the extent to which he is, or is not, at the mercy of his immediate instinctual urges, and is free to show behavior which the other children cannot afford themselves.<sup>18</sup> We have referred previously to this factor as apparently being related to a child's incapacity for choosing an appropriate target child in making his attempts at influencing.

Previous experiences in groups has led us to the belief that such children may frequently act as contagion initiators out of their superior readiness to break through self-imposed or other-person induced controls.<sup>19</sup> They do this, or appear to do this, by acting as guilt bearers for the group. At least, on later interview, the other children will frequently defend themselves by saying that "Johnny did it first". In the present study, an attempt was made to recheck this impression and to learn something about defining the conditions under which such children might be effective contagion initiators.

In terms of the more generalized theory on which the present research is based, it might seem that so-called impulsive children would have a greater likelihood of initiating contagion for the group out of either or both of two functions they might serve: (i) Their superior readiness to act in terms of a current need might make them *means* providers for the rest of the group. Here, they would fulfill simply a trigger function by doing first what the rest of the group is ready for but has not yet done, or found a way to do. (ii) Their superior willingness to break through standards might make them "guilt bearers" for the rest of the group. But an impulsive child can have other group-relevant characteristics which tend to depress his contagion potential. Therefore, it was hypothesized that they would be peculiarly effective in those situations in which there was: (a) A situational requirement to exercise control, and (b) a dominant group mood against being controlled. In such situations, the more usual group positional determinants of ability to exercise influence might fade in the face of a peculiar fitting together of personality structure and group situation.

It proved impossible to sort out, by observation, such situations from the "general run" of contagion situations, to make this comparison. For this reason, it was decided, during the field study, to attempt to set up an

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<sup>18</sup> The counsellors' ratings on this factor can only be regarded as "estimates", since a thorough appraisal would have demanded an additional battery of clinical instruments, if a thorough appraisal by testing can be made at all.

<sup>19</sup> Fritz Redl: "Group Emotion and Leadership", *op cit.*

appropriate situation experimentally in which the "common need" would be known because we had produced it. This was done successfully with four groups at the boys' camp.

The children were brought into a room, knew that they were going to be asked to go through a group interview with the aid of a projective picture. However, as the situation was staged, the picture was to be brought by some outside person who had not arrived as yet with it. His orders to us were that the treats—which were in full and obvious view and enticingly referred to—could not be had until the picture arrived. As had been expected, this situation was adequate for producing frustration, if various sorts of aggression toward each other and toward us may be taken as any index. For the four groups, the average waiting period until we felt that further frustration would be totally disruptive was 18 minutes. Contagion (initiations) as well as running protocol material were recorded during these sessions.

The children in these groups may be divided according to whether they had been above or below median in prestige in terms of the other children's perceptions of them, and above or below median in impulsiveness in terms of the counsellors' ratings. In *Table J* is given the relationship between these two factors for the children in general throughout the four-week period, and in this specific situation (as based on analysis of variance into four components).

**TABLE J**  
**Determinants of Contagion Initiation in General and in a Situation of Group Frustration**

	<i>In General</i>		<i>Experimental</i>	
	<i>Camp</i>	<i>Situation</i>	<i>Situation</i>	
	<i>F</i>	<i>P</i>	<i>F</i>	<i>P</i>
Prestige × Contagion Initiation ...	8.666	.01	2.601	Not sign.
Impulsiveness × Contagion Initiation	.160	Not sign.	4.040	.05
N = 32				

Although the relationship between contagion initiation ability and prestige for these children throughout the four-week period of observation was significant at beyond the 1 percent level, the relationship between these two factors during the experimental situation does not approach significance. On the other hand, although throughout the four weeks of observation the relationship between contagion initiation ability and impulsiveness was not significant, it is significant at just below the 5 percent point during these experiments.

In relation to the question of who is most susceptible to the kinds of contagion which occur in such situations, results are in the same direction. That

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is, there was no relationship found throughout the camp period between the level of impulsiveness and contagion susceptibility. In this particular experimental situation, however, we find that both the general susceptibility to contagion *and* impulsiveness are significantly related to the numbers of contagions "received" at beyond the .01 level. Of the two, "general susceptibility" plays the greater role (ratio of the variances being about 2 : 1). It would seem, then, that the child who was generally susceptible to contagious influence continued to be so in these situations, although the character of the actors and acts imitated as well as of his typical co-contagers had altered.

The results of this small series of experiments indicate that, *under a situation of stress in which there is a dominant group mood, the usual determinant of influence in these groups broke down, and the impulsive child came into his own as an initiator of behavioral contagion, and as a ready follower thereof.*

The clinical hypothesis would appear verified. However, the question of the degree to which the mechanism involved is one of acting as "guilt bearer", or is a simple function of action-readiness in the appropriate situation, will demand further study.

#### **Group Atmospheric Determinants of Volume of Contagion**<sup>20</sup>

We have already seen that freedom to behave spontaneously may be a determinant of ability to initiate—or be susceptible to—behavioral contagion. Further, it appears that differences in this ability may be related to particular momentary group conditions, and also that such differences may relate to enduring characteristics of the person which are not especially "group-relevant". We have also become curious about whether there may not be relatively enduring group conditions, or a "group atmosphere" which would affect volume of contagion in a group, as a whole, and over a period of time.

To scout this problem area for whole-group differences, one of our observers took on the task of studying the two groups which were on the extremes in relation to volume of contagions observed during one session at the girls' camp. This observer was a trained group worker, and had had clinical group-work experience. Since we were interested, also, in studying the extent to which our observational data seemed to be in accord with clinical impressions, she proceeded from a recording of her over-all impressions to an analysis of research indices which only became available after her clinical observations had been completed.

The group with the greatest volume of behavioral contagion was made up of fairly seriously disturbed girls, volatile and with a pattern of "acting out" their feelings. Two of the group had been under psychiatric treatment. They were quite unrelated to their adult counsellor, and non-adult-related in general. The group with the lowest volume of contagion was made up of relatively well-behaved withdrawn girls, some of whom had been specifically

<sup>20</sup> Material for this section is drawn, in large part, from: Lucietta Irwin: *A Study of Some Etiological Considerations in the Distribution of Contagion Frequency in Two Camp Groups*, Master's Thesis, School of Public Affairs and Social Work, Wayne University, 1949.

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referred for a learning experience in relating to other girls their own age. On the manifest level, at least, they were very adult-related.

**TABLE K**  
**Comparison of Groups High and Low in Contagion Volume :  
Member and Leader Behavior**

Child Involved  Low Volume Group Child Number	Member to Member			Member to Leader		Percentage Counsellors Influence Attempts "Directive"
	Index of Frequency Contagion Initiation	Percentage Influence Attempts Successful	Index of Frequency Influence Attempts	No. "Asks Permission"	No. "Implies Superior Know- ledge or Skill"	
11	1.654	75%	2.608	18	11	80%
12	1.896	75%	2.957	1	9	75%
13	2.290	84%	3.400	11	6	93%
14	2.493	79%	4.586	22	13	71%
High Volume Group Child Number						
24	3.212	72%	7.317	4	3	8%
25	2.534	74%	5.711	3	2	42%
26	3.085	67%	5.406	6	3	40%
27	2.428	70%	4.333	3	6	26%

There was also a difference in the leadership style. The leader of the high-volume group was a warm, accepting sort of person, who was liked by the girls, but who counted for little in the intense and active life of the group. The leader of the low-volume group, on the other hand, had a controlling leadership style, inhibiting both to freedom of expression and to growth. There was, then, a situation in which (leaving therapeutic implications out of consideration) there was a peculiar fitting together of leadership style with children's personalities in such a way as to accentuate (within limits) the extent to which these groups might tend to differ from each other with regard to freedom for spontaneous expression.

In *Table K* are compressed some of the observational findings illustrating the obtained differences between groups. The girls in the Low Volume group made fewer direct attempts at influencing, but somewhat more of these were successful. There is almost no overlap between the group ranges on the indices for amount of contagion initiation and frequency of influence attempts. In spite of this, the Low Volume group showed considerably more behavior indicative of status for the counsellor, in terms of asking her permission or implying her superior knowledge or skill in some area. The considerable differences between counsellors are seen in the extent to which they were recorded as directive or non-directive in their attempts at influencing. In addition, the counsellor of the Low Volume group made an average of .751



attempts at influencing per minute under observation ; the counsellor of the High Volume group, .277. We believe these findings to be comparable, since they were contributed to by all three observers independently, and the groups to be selected for more intensive study of records were not known until after contagion tabulations were in. Other tabulations were made much later.

The combinations of leadership style and child-personality factors in these groups tend to lead in the same direction : toward greater freedom to act and to participate in behavioral contagion in the High Volume group. The interaction of these two forces cannot be studied in a sample of only two cases, but the preliminary findings raise some interesting problems about the kind of interrelationships which might obtain. Against how much volatility can controlling leadership act as a damper ? What would have been the pattern if the assignment of leaders had been reversed ? What is the relationship between the personality structure indicated by such volatility and the depth of relationships ? Our observer found no differences between the groups in the amount of making sociometric choices within the group as opposed to outside it, but she felt that interpersonal relationships positive and negative, momentary and enduring, were far more intense and meaningful in the High Volume group. How would this, as yet unmeasurable, kind of factor affect behavioral spread within a group ?

#### **Behavioral Contagion and Communication Possibilities**

In surveying the problem area it seemed quite clear that, in any momentary group situation, behavioral contagion cannot occur unless there is at least the possibility of communication between actor and recipient. The presence of this possibility is in part a function of sheer ecological factors. It relates also to how much real social interdependence there is in the situation, where the focus of attention is, etc. One would postulate, then, that an individual child's contagion initiation score in his group would be in part a function of the extent to which he was found geographically near, and *socially interdependent with*, a greater or lesser proportion of other group members.

To test this rather obvious derivation, recordings of group structure were made on a momentary-situational sampling basis at fifteen-minute intervals. Three levels of interdependence between pairs of children were distinguished : (a) in same sub-group ; (b) in a marginal position to a sub-group, or in a sub-group which is marginal ; (c) apparently isolated from each other.

It was then possible to compute an index for each child of the extent to which he had been found in a socially interdependent position in relation to the other individuals in his group. This was labelled his "group togetherness score". It measures, in general, the communication possibilities as a contagion initiator which he would characteristically have.

The relationship between this measure and contagion initiation was significant at the 5 percent level. That is, those children found to have a high degree of social interdependence with a high proportion of the children in their groups also more often are found to be high contagion initiators.

But what determines whether a child will be low on group togetherness? Is it that he rejects the group or is indifferent to it? Or is it that the group rejects him because of his inability to adjust to their standards of behavior? Or is it the third possibility, that his indifference to the group leads to inappropriate behavior, for which they then reject him? The importance of the missing linkage noted earlier—a detailed knowledge of the relationship between group belongingness need and group relatedness—is seen here. Festinger, *et al.*,<sup>21</sup> in a study of attitudes of residents of a housing project, report that residents whose attitudes were deviant from the majority were less chosen on the sociometric test. They interpret these findings as indicative of rejection by the group. But the problem of how such a situation comes into being cannot be studied on any single time-segment, if cause and effect relationships in the process are sought.

In the present study we have some evidence of relative rejection of the non-group-related individual, although not of the child regarded as low on group belongingness need. It may be that failure in sensitivity to the group's standards is the more important; or it may be that a child who is accepted by the group may show less group belongingness need, so far as the counsellor's rating is concerned (cf. *Table I*, relationship between group belongingness need and contagion susceptibility). Our clinical impression is that all three possibilities mentioned in the paragraph above did, for various children, occur. The objective evidence for the children, in general, is as follows:

A positive relationship was found between counsellor's ratings of group relatedness and the number of choices received on the sociometric ( $P = .01$ ). A negative relationship was also found between group togetherness score and the extent to which a child's direct attempts at influencing were egocentric ("own" as opposed to "group" centered goals).<sup>22</sup> This latter factor also relates negatively to group-relatedness, non-directive reciprocity and the sociometric ( $P = .05$  or less), indicating group rejection of these non-group related children. There is also a negative relationship between impulsiveness and group togetherness score, although the impulsive children *receive* more attempts at induction ( $P = .02$ ). It is our impression that such attempts were frequently motivated by a desire to bring the impulsive child into line. Moreover, since frequency of attempts is based on time with the group, we can interpret this to mean that impulsive children are less often with the group, but more often receive induction attempts when they *are* with it.

It seems quite probable that it is the lack of *communication possibilities* which has contributed to the failure of the impulsive group, as such, to be more frequent initiators of contagion, in view of their other potentialities. There would appear to be, in general, a negative relationship between communication possibilities as measured by social interdependence and the extent to which a child is non-group related in his attitudes or behavior.

<sup>21</sup> Leon Festinger, Stanley Schachter, Kurt Back: *Social Pressures in Informal Groups*. New York: Harper, 1950.

<sup>22</sup> It will be recalled that, along with manner, we made observations of the apparent goal-structure in the attempt at influencing.

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The following formulation, then, might be added to the previous ones : Contagion initiation is a function, among other things, of the child's enduring communication possibilities ; where enduring communication possibilities are, in turn, a function of ability and willingness to relate to other group members and of the attitude of other group members toward oneself. The kinds of group-focused needs and sensitivities previously indicated as important in determining contagion initiation may also affect its likelihood of occurrence indirectly—through affecting the *possibilities* of communication.

For many situations it is this element, specifically, which may defend the group against the "bad apple" phenomenon. The children whose symptomatology or group relevant characteristics are such as to estrange them from the rest of the group are thereby far less likely to be initiators of behavioral contagion. (There still may, of course, be definite effects on the other children.) However, if in addition to symptom pattern or delinquent ambitions, these children are also skilled in establishing and maintaining communication possibilities with the rest of the group, then the group practitioner is facing a far greater likelihood of a symptom epidemic. Clearly, questions of group epidemiology cannot be estimated from a knowledge of the area of disturbance alone, without taking into account the level of functioning of the group relevant aspects of the child's personality.

**Behavioral Contagion and Group Influence Stratification**

The previous findings indicate that ability to initiate contagion in a group is related, among other things, to the prestige position of the initiator. These findings apply to his ability in the group "in general". But what sort of picture emerges if consideration is held to the specific problem of "who in these groups is most contagion susceptible to whom"? To study this, the individual's pattern of susceptibility in his group was analysed to see, specifically, to which other child he was most susceptible. If we consider the *relative prestige positions* of the pairs of children (recipient-highest initiator) we get the following table :

**TABLE I**  
**Relative Prestige Position of Recipient and Child to Whom He Was Most Susceptible (Numbers of Cases)**

<i>Prestige of Recipient</i>	<i>Boys' Camp</i>		<i>Girls' Camp</i>	
	<i>Prestige of Child to Whom Most Susceptible</i>		<i>Prestige of Child to Whom Most Susceptible</i>	
	<i>High</i>	<i>Low</i>	<i>High</i>	<i>Low</i>
High ... ..	21	11	16	4
Low ... ..	22	10	16	4

In both camps, high prestige children tend to be most susceptible to other high prestige children; low prestige children are also most susceptible to high prestige children. These inter-individual results are predictable from the "group in general" results. They serve to re-enforce the notion of the probable existence of "Influence Elites" in these groups, and of fairly effective stratification of ability to wield influence. The lack of mutuality in manner of attempted inductions (cf. footnote 15, *supra*) is taken together with these findings as evidence against notions of relative equivalence in group positions.

Clinically this means to us that the attempt to predict a child's "group adjustment" solely on the basis of information about his characteristic way of behaving is unsound procedure. An over-all estimate demands not only this information, but data also on the likely position he will occupy in a group when the other members are also considered. The items used in the prestige index are tentatively accepted as suggestive dimensions in predicting this aspect of "grouping".

#### IV

#### SUMMARY OF FINDINGS AND CLINICAL IMPLICATIONS

The present paper has been concerned with a study of observed social influence in groups of disturbed children. Pre-categorized observation instruments were developed through pilot analyses. They were used under quite difficult field conditions and displayed satisfactory reliabilities. Data were also obtained regarding children's perceptions of each other, as preferred friends and prestigious companions.

A series of dimensions of group life were designated along which members were located, on the basis of perceptions by fellow members, observations of behavior, ratings by counsellors.

Using this multidimensional conception of group position, it appears that the influence of an individual in a group is a function of his perceived group positions. It is necessary to separate out the individual's *attributed* group position (i.e., others' perceptions of it) from his own perception of his group position. In general, individuals give behavioral evidence of awareness of their own attributed group prestige position. The data suggest that various cues of own position are available to them in the behavior of fellow members. These cues are differentially used by the group members.

Resultants of this process are that: Individuals with high group prestige position appear readier to act spontaneously in their groups, and to make more attempts more directly at influencing others. The willingness to act spontaneously results in their also being somewhat more open to behavioral contagion than those low in prestige. However, those high in group prestige appear better able to afford themselves resistance to direct attempts at influencing them. Thus, although possession of high prestige affords greater ability to be an effective group influencer either directly or by the initiation of

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behavioral contagion, there is a differential relationship so far as susceptibility to these different kinds of influence is concerned. The important difference between these two phenomena appears to lie in the degree of freedom of choice with regard to interpretation of the intent of the initiator so far as the recipient is concerned.

This has a rather odd result if we formulate it in terms of "perceived own power" in the group. The individual who feels secure, perceives himself as having adequate power, is more able to act in general, and hence generally more available to behavioral contagion. For the individual with a self-perceived low power, apparently facilitation to action is encouraged by direct influence of others. Ability to *withstand* direct influence is less.

Exercise of effective influence in these groups is seen as a function of desire or willingness to attempt influence, and willingness of others to be influenced. It appears that mere desire to be influential is no assurance of influence success, and that differing degrees of social sensitivity result in realistic or unrealistic use of influence position.

Likelihood of initiating behavioral contagion is a function of: (i) Security to act spontaneously because of perception of own position; (ii) Attributed group position; (iii) Possibility of communicating with the group, ecologically and psychologically; (iv) Degree to which individual reactions are representative of common states of needs present in the group.

In general, it has proven fruitful to relate material regarding group influence to data on interpersonal perception. Behavior toward a person is a function of perception of that person, and of his group position. Behavior of an individual in a group is a function of perceived own group position and the relevance of that group membership in his life.

The following are some possible clinical implications:

1. Behavior of an individual in a group is a function, at least in part, of the position to which he is assigned in the group. Attempts at prediction of an individual's behavior in terms of "enduring personality characteristics" have to be carefully considered from the standpoint of the possible interaction of such characteristics with those of the rest of the group.

2. So far as we can tell, from this study, the relative "prestige" assigned to an individual in his group will be a fairly powerful determinant of his own behavior. Judging from the measurements of behavior, it appears that the majority of children of above average social sensitivity are aware of the positions of influence potential assigned them by fellow members. The implications of this for grouping, and especially for potential damage which may result for misgrouping of children, are considerable.

3. The potential damage for the other children in groups from the type of child roughly described here as "impulsive", insofar as this results from behavioral contagion, may easily be overestimated on the basis of consideration of the individual alone. Such children's contagious influence is most strongly felt in situations peculiarly adapted, so that their expressional freedom is directly in line with group needs of the moment. In general, however, the effect of

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such children will be felt in accordance with their group prestige position, as a far more important determinant.

4. In assessing the effect of an individual on his group, it would seem important to take into account certain adaptive attributes equally with the careful clinical evaluation of the individual's neurotic or delinquency pattern. His over-all ability to relate to the other children in terms of sensitivity to their standards will be important in determining whether or not he will maintain the possibility of communicating with the other children. Does he, or does he not, possess as abilities some of the strengths and skills necessary to attainment of at least average prestige status in his group? For treatment of the individual in groups, it appears that we are going to have to extend considerably our diagnostic framework to an inclusion of the *group-relevant* aspects of the personality of its current, functioning state.

5. The fact that it has proven possible, in this study, to make a number of generalizations about the behavior of individuals in groups almost independently of any real knowledge of the internal working of the individuals concerned, but solely in terms of functioning group positions, is seen as indicative of the necessity for an interest in *groups* as having dynamic reality in the same sense as do personalities.

The further task of both group clinicians and group researchers is to get evidence on, and experience in, *changing* some of the things about which we have learned, insofar as they interfere with the child's adjustment to his group. Our present plan for continuing work in this area is direct research on the problems of becoming able to change perceptions of group position.

#### **BIOGRAPHICAL NOTE**

N. POLANSKY : A biographical note appeared in Vol. II, No. 3.

DR. RONALD LIPPITT is a Programme Director of the Research Center for Group Dynamics at the University of Michigan. He has served as the Director of Research and Training projects for the Boy Scouts, the Office of Strategic Services and the Federal Security Agency, during which time he became progressively more interested in the relationship between research and action. He is the author of the recently published book *Training in Community Relations*. He was for some time Editor of the *Journal of Social Issues*.

F. REDL : A biographical note appeared in Vol. I, No. 4.