STRUCTURE OF LEADERSHIP—DEVELOPMENT AND SPHERE OF INFLUENCE[1]

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In a community, the possibility of influence from one individual to others is as great as the entire population. But between the individual and the possibility of influencing comes his range of emotional expansiveness and the capacity of the individuals who make up the population to receive and respond to the particular feelings projected by the individual sender. The movement of feeling between individuals is called ."tele." Out of an initial population of 493 persons we have traced the phenomena of leader structures as they emerge and develop in the course of 2 years 7 months. Such structures are vastly important in the psychological geography of a community as they are potentially powerful in the influence they may exert. These structures may be visualized as centers where spontaneously large currents of tele focus about a person. Such a person is thus in a position of "leadership"[2]. The extent of possible influence will be determined by both temporal and spacial aspects of the structure. The duration in time and the spread in space are to be seen also as functions of the leadership structure growing out of inter-personal relationships and registered in the psychological organization of the community.

Sometimes the leadership structure arises almost at once upon the entrance into the community of the individual who is to hold it; again, it may emerge slowly and with difficulty. Throughout whatever course it follows, study of its structure in space and time becomes perceptible when we closely watch from step to step, over a long period the reflection in psychological position of a person, in his power to win and retain the emotional loyalty and devotion of others who look to him for support of whatever nature. The sociometric technique makes traceable the emergence, development, and decline of psychological structures, and its use appears to be basic to the study of functions such as leadership since it reaches below exterior relationships to the

[2] Leadership is used here in a sociometric sense as expressing the position an individual has in the specific group studied.

networks of tele in which resides the vehicle for inter-personal influences.

THE PROBLEM

In seeking to study leader structures within the psychological organization of groups through sociometric testing, we have followed three conditions we considered essential to the securing of authentic data over a long period. First, the criterion of the test shall be "strong," that is, shall require the choosing on the basis of person-to-person contact. Second, the criterion of the test shall be such that the choices can be immediately utilized from the subjects' viewpoint, that is, shall be universally put into operation with equal benefit to all in order that the choosing "have sense." Third, the testing upon the criterion selected shall be repeatable at intervals without a lessening for the subjects of the value of choosing.

An examination of the different criteria used in sociometric testing of our community, the New York State Training School for Girls[3], Hudson, N. Y., showed that a significant criterion for face-to-face contact was the choosing of table associates, "eating at the same table." The motivations for choosing table associates showed the choices to be based on the very factors important in intensive relationships: (1) physical proximity,—comfort and ease of being physically near to the chosen person, near to her appearance, stature and physique, and somehow feeling thereby better satisfied; (2) psychological proximity,—psychological closeness in the exchange of thoughts, ideas and moods, the comfort and sympathy of such understanding, (3) the intangible motivation of "makes me feel good while I eat" which expresses something of the situation itself—unsupervised sitting around a table, without adults, in the relaxed occupation of eating a meal together. In this situation, with its relative absence of distraction and restraint, the degree of spontaneity reached in warming up to one another for easy communicating can be estimated as high.

Three choices expressing degrees of preference were allowed to each girl.

The technique worked out for putting the choices into operation consisted of assuring each subject an "optimum of satisfaction" within the possibilities of the psychological organization.

[3] This community consists almost exclusively of girls and women. The economic criterion in the usual sense is absent. The population is supported by the State.

In practice, this resulted in every subject's receiving at her table the highest choice she made which met with reciprocation and if she had no reciprocated choices, then her highest unreciprocated (hence, her first) choice[4]. The tables seated four or rarely more persons and very seldom was a subject given less than optimum either because of a limitation within the structure or because of seating capacity. In other words, every subject, regardless of whether she was shown as isolated[5] (unchosen) through the test or perhaps as much chosen but choosing first someone other than those who chose her, received *optimum* from *her* point of view. It was thus possible to fulfill one or more choices of practically every subject immediately after every testing, and no one subject ever had to have no satisfaction in two successive periods.

An 8-week interval elapsed after each test, during which time a few newcomers might enter or a few girls might go out through reassignment to a different cottage or through leaving the school. The 8-week interval was selected after try-outs with 4, 5, and 6-week periods, since these recorded less change in the psychological organization. The 8-week interim also provided a further interest since the population might be altered by one or more incoming or outgoing persons. The choices stayed in effect in the table set-ups throughout the 8 weeks, providing 56 days with 3 meals a day, or 168 times together across the table with the persons chosen. If, after 168 such reunions, the individual still wants the same person again as a partner, the relationship apparently is based on a real affinity.

An examination of the structures produced showed that the receiving of any number of choices greater than 3 was better than average; that the receiving of 4 choices did not "stand out" sufficiently in point of frequency to be taken even tentatively as a "leader structure;" but the receiving of 5 or more choices, which occurs in about 20 per cent of the structures would provide a good basal distinction for the leader position since it would eliminate from our analysis no one who stood out under this broad stipulation and also for two further reasons. The disturbance made in the psychological organization by an incoming or outgoing person often produces a temporary shifting of tele. Also the social atom of any individual is subject to more or less

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[4] For a discussion of this sociometric technique of placement, see reference 2, pp. 26-40.

[5] In this paper, an individual is called "isolated" who is unchosen by any member of the group in respect to the particular criterion of the test.

shrinkage and expansion for which a basal of 5 choices received provides an allowance. One could, of course, examine leader structures with a basal of 6, 7, 8, 10, 15, or any number of choices, but for our purpose we study structures receiving 5 or more and even though they occur only once or twice in the developmental process over the course of a year or more and notice individuals to whom we would give no attention if the criterion taken for a leader structure were different and the structure less frequent. In any case, the choices expressed are voluntarily, spontaneously given, and we have thus some reason to acknowledge that these are the individuals who draw others to them by influences of one sort or another.

In August 1934, 75 leadership structures appear, under these conditions, on the psychological geography of this community whose population was then 493, of whom 375 were living in cottage groups. These leader positions, although so simply defined above for the purpose of our analysis, are however highly variable in composition—quantitatively, structurally, and qualitatively—one from another and show dynamic changes as we follow them in time and space. Sometimes they spread to include a fourth or more of the entire population and again they may be limited to the bare confines of the immediate tele relations, since the persons attracted are themselves in side currents of the psychological organization. The quantitative aspect, the number of individuals directly linked to the person in a leader position, may expand or shrink from time to time, but the structure of the position may remain potentially powerful because of its indirect linkage to other structures whose magnitude extends broadly throughout the community. Again, the qualitative aspect of the tele bond between individuals may reveal an importance totally out of proportion to the quantitative or structural aspect.

In the present study all the leadership structures which evolved out of a particular cottage group are presented, whether or not they endure throughout the entire period of the survey, August 1934 to February 1937 inclusive, and whether or not their potential influence is great or small, as the structures emanating from this cottage offer us considerable insight into the dynamics of leader development.

This cottage was selected for presentation for a number of reasons: (1) its members, in greater number than any other group's, belong to the main networks of the community; (2) the heterogeneous character of the leader structures evolving

from this group represent "types" of leader development found elsewhere more scattered in the community, and include such a wide variety of types that it would be necessary otherwise to present several groups to cover the same number, this group having a concentration of differentiated types; (3) the variation in population number from one 8-weeks' test to the next, throughout the seventeen tests, is never greater than two members more or two members less than in the previous period tested; 6 times there is no variation, 7 times the variation is only one member, and 3 times the difference is two; hence the group offers a comparatively stable *quantitative* population background out of which the leader structures emerge; (4) at the same time, the influx and exit of members is such that the population consists of 70 different persons for one or another period during the 2 years 7 months covered, making it possible to study the impress made by short-stayers and the reverberation upon the structure of exiting long-stayers, on into the "second generation" of members.

DEVELOPMENT OF LEADERSHIP STRUCTURES

First Test (August 1934)

The psychological organization revealed in Park Cottage in August 1934 shows seven individuals in positions of apparent leadership: Ada, Edna, Martha, Janette, Nora, Mildred, and Betty. Ada receives 9 first choices (besides 2 others), 3 of these coming from Martha, Nora, and Janette, who are themselves in leader positions. Ada's first choice goes to Janette and her second to Nora. Edna's position is singularly independent of the rest of the psychological structure, and appears to function among girls who pay little attention to those who choose Ada. Only one of the 8 girls who choose her also chooses Ada. Edna's own first choice goes to Mildred. Mildred receives only 6 choices, all of which, with the exception of Edna's are from individuals who are either isolated or else very little chosen. Martha receives 8, but only her third, to Nora, is reciprocated, while her first, to Ada, and her second, to Edna, are not. Janette is the center of 6 and has first mutual choices with Ada. She chooses Nora third. Nora, the center of 6, receives Ada's second choice in response to her own first choice, and like Ada has all of her own three choices reciprocated. Betty receives 5, all from individuals inconspicuously located in the organization,

except for the reciprocation of Edna to her first choice. (See Sociogram I.)
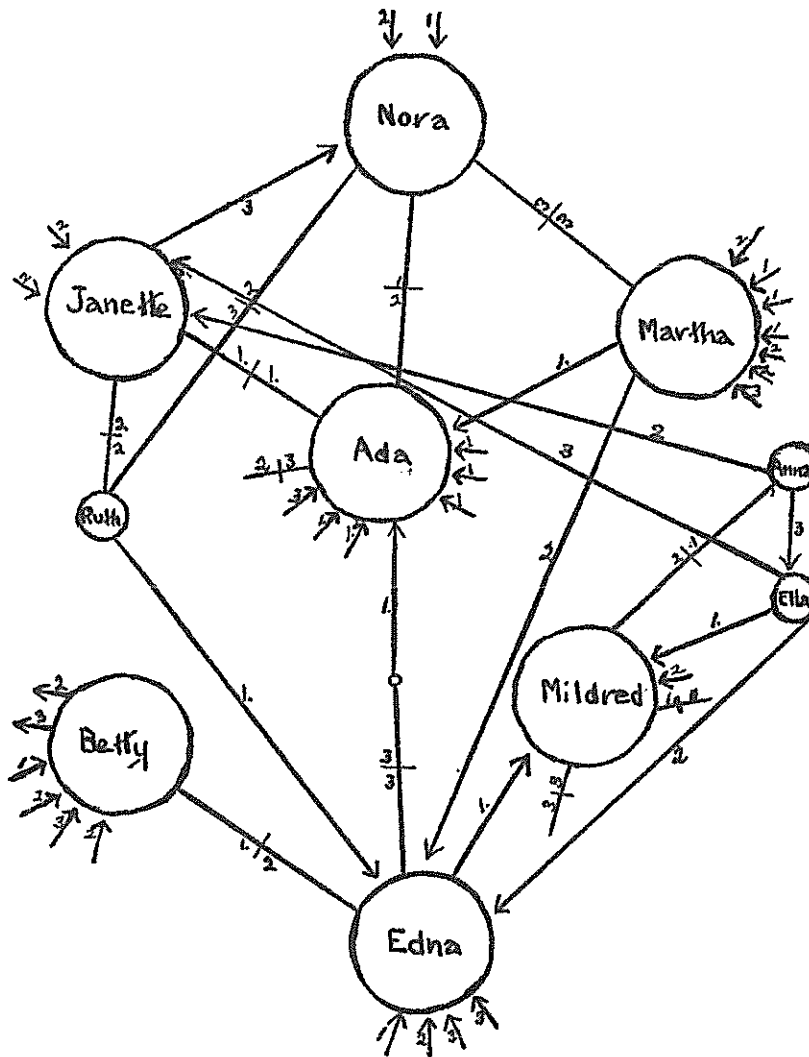
SOCIOGRAM I
Leader Nucleus Lifted from Structure of Park Cottage
1st Test: August 1934

As we glance over the interrelations direct and indirect, Mildred and Betty, although well chosen, appear to be unimportant in the structure of the group as a whole—this because they could be lifted out completely and the remaining structure of the group would still retain direct repositories for the other choices of the individuals who select them. That is, either Ada, Edna, Martha, Janette, or Nora receive choices from all but one of those who choose Mildred and Betty.

Three girls, Ruth, Anna, and Ella, seek practically exclusively to be chosen by the girls in most powerful leader positions. Although they have recently entered the group, without exception they ignore other newcomers and others who are similarly little chosen. Incidentally all three have IQ's ranging well above 107, as have also Ada, Edna, Janette, Martha, and Nora. Nora, who comes from the same city as Ruth, reciprocates her choice as does Janette whom Nora could have reciprocated only if she had been allowed a fourth choice. It is to be noted that Ruth chooses Edna first, who does not respond. Ella also chooses Edna and Janette as well as Mildred, none of whom respond. Anna seeks out Janette, Mildred, and Ella, only Mildred reciprocating. These three girls as newcomers aim high, spontaneously choosing key individuals although they themselves are largely disregarded by those whom they choose, who are already well-steeped in the psychological networks, fortified by the regard of many and not anxiously looking about for reciprocation as are the isolated or less auspiciously situated individuals.

Second Test (September 1934)

In September, Ada is paroled. There appears the strengthening of the positions of Edna, Martha, Janette, and Nora, and a weakening of Mildred's and Betty's, but otherwise no shift in leader structures. Nora and Edna exchange mutual first choices and Martha and Edna mutually choose each other, while Martha chooses Nora who does not respond. Of the four girls, Janette appears to be the most independent of relationships to other leaders but gives Edna her third choice. Betty has dropped to a position of receiving but two choices. Anna and Ella are still unable to break into the structure and mutually choose each other. Ruth continues a mutual relationship to Nora but still gets no response from Martha or Janette, her other choices.

Third Test (November 1934)

In November 1934, the situation is very little altered except that Janette through choosing Ella appears to have precipitated Ella's climb to a leader position. The only other leader structure is that of Dora whom Martha chooses. Both Betty and Mildred continue to decline.

Fourth Test (February 1935)

By February 1935, Edna has gone out of the institution. The psychological organization maintains the same leaders, suppressing for the time being, it appears, the rise of others except Olga. Olga gathers in Mary who chooses her mutually and who formerly had chosen Edna first. Together they hold several who choose both of them. Mary had chosen Edna consistently as her first choice since September 1934.

Fifth Test (April 1935)

By the time of the April test, Martha had been paroled, as well as Mildred and Mary, the latter being older girls re-assigned to the cottage. With the exit of Martha, Dora falls out of the leader position she had had in November, has only 2 choices, then becomes isolated in April and leaves the group. A new girl, Myra, and a re-assigned girl, Jane, enter. Myra makes little impression, but Jane is mutually chosen by leaders Janette and Ella who also choose each other. Leadership positions still remain in the same hands except that Jane has also achieved one.

Sixth Test (June 1935)

By June, Dora and Olga are paroled. Pauline, Catherine, Lucille, and Carol enter. Of these four girls, only Pauline chooses first a leader, Nora. Leader positions are undisturbed except that Jane has fallen from her quickly gained one. Consecutive tests given up until she leaves the group in January 1936 never again reveal her in leadership. The suddenly emerging type of leader structure has to be evaluated with care, for it is not necessarily lasting simply because it appears supported on all sides. It apparently can decline as rapidly as it arises.

Seventh Test (July 1935)

By July the psychological organization is still closely integrated, although Nora has left it. Nora had been Pauline's first choice and also a choice of Janette's. Now Pauline, Janette,

and Ella mutually choose one another and all three remain in leadership. Catherine comes into a leader position cut off from this structure, winning several "rebels" against the content of the social currents within the main networks. Ruth rejects her and loses choices by displacement to Catherine. Ruth remains in a key position, however, chosen mutually first by Anna and choosing Janette and Ella, but has dropped out of a leader position.

Eighth Test (September 1935)

By September, Ruth has worked her way again into leadership and chooses Catherine third, although other leaders ignore her and her split-off structure, as if disciplined by the stronger and older structures, is shown to have broken up. One new girl, Evelyn, enters and builds a leader position through gaining the choices of isolated or nearly isolated individuals. Another new girl, Gertrude, also enters, chooses Evelyn, Betty who has just come into a leader position before leaving, and Janette who has the strongest position among the girls, but Gertrude meets with no reciprocation.

Gertrude is destined to have to build from the ground up the structure in which she can function. At first she is all but isolated, then she wins the choices of several "nobodies," but all the time she aims at key individuals or at individuals in leader positions and although they only slowly come to choose her she gradually herself gains a position of leadership and finally has been chosen also at one or another period by almost every individual who holds a leader position and even by those who rise to it only temporarily, later falling from it. She, is longest ignored by Janette. In view of the later developments within the structure, the fact that Janette had had a choice from Anna more or less continuously since August 1934 will be seen as potentially accounting in part for her indifference to Gertrude.

Ninth Test (November 1935)

In November 1935, a leadership position is still held by Janette who has had it since August 1934, by Ruth who has held one for close to a year, and for the first time by Pauline, Myra, Irene and Carol[6]. We note that although Pauline had had the choice of Janette since July, a first choice which she receives

[6]Regarding Carol, see page 112.
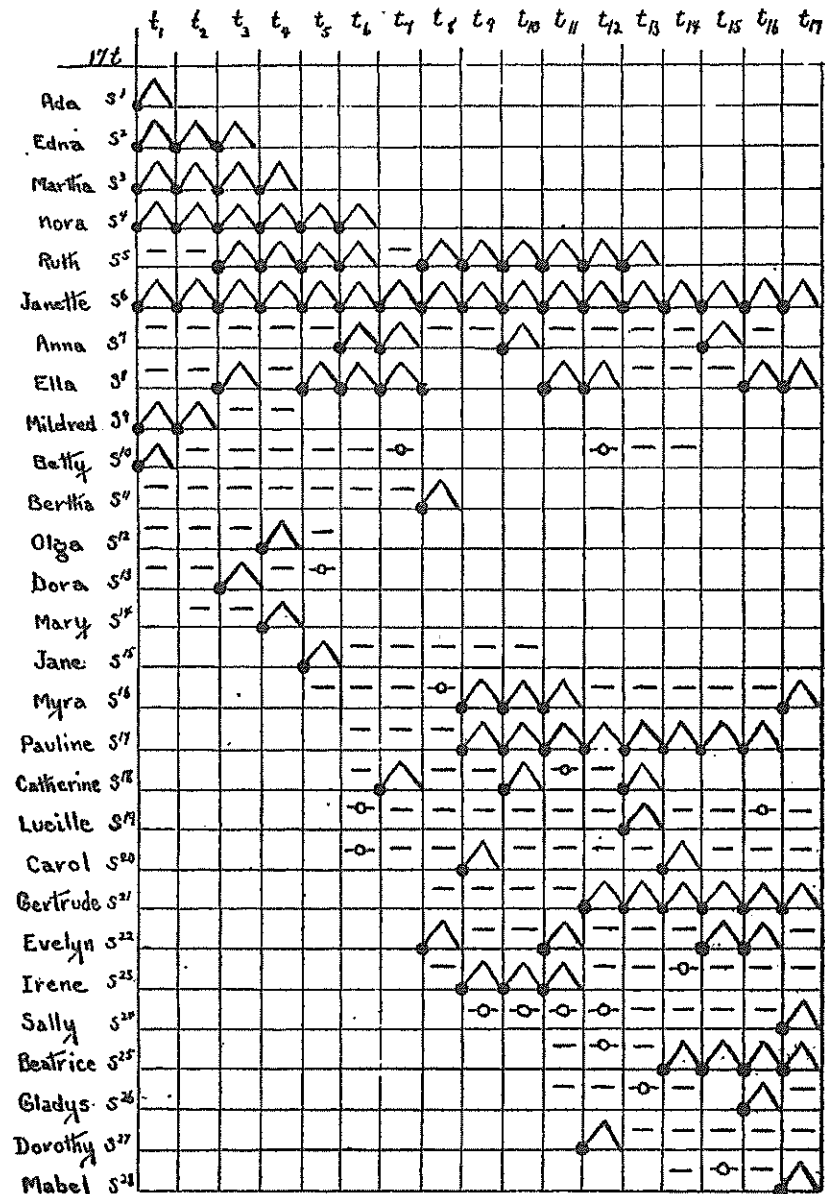
The ∧ was omitted by error for Ella under t8.

SOCIOGRAM S-T
Space-Time Structure of a Leader Group

∧ = State of leadership.
— = pause, present but not in state of leadership.

from Gertrude in November and reciprocates coincides with her rise to a leadership position. The event of Myra's coming into a leadership structure for the first time coincides with her receiving (and reciprocating) for the first time a choice from the leader Ruth although in June she had choices from the leaders Janette and Ella. Irene, who entered in September, immediately forms a mutual first-second relation with the leader Ruth, is chosen also by 3 others, and in November has a leader position.

The relation of crucially located tele structures to the rise in the psychological position of an individual is an uncharted territory in sociometric research, but that it plays a considerable role seems indicated.

To sum up (see Sociogram S-T), there are in November 1935 six leader positions, whereas a year ago there were seven. Only two (Janette and Ruth) of the seven persons in the leader structures of November 1934 are still in the group, Ella being temporarily absent on vacation, and the four others having been paroled. But the traditional form of the structure—highly integrated and with a spreading, ramified outline centers in practically the same number of persons, although the *carriers* have changed. There is no "loss" from a structural point of view. If the names of the former leaders were transposed in strategic positions in the places of the present leaders within the structure, an amazing similarity becomes apparent. There is, however, a development in the capacity of the organization to absorb widely different personalities. An example of this will be discussed when we consider, for instance, Anna.

Tenth Test (January 1936)

In January 1936, Ruth, Janette, Anna, and Pauline are still

–o–= present but isolated.

Blank space = not yet in the group or has left the group.

t = 8 weeks.

17t = total duration: 8 weeks x 17, 136 weeks.

s = unit of spacial proximity.

28s = total spacial extension of leadership states.

● = point of coordination.

The time units on the abscissa express equal temporal distances, in this case, 8 weeks.

The space units on the ordinate express equal spacial distances, in this case proximity of living in the same house.

The axis of the abscissa presents time relation of leader structures. The axis of the ordinate presents space relation of leader structures*.

*This form of sociogram was devised by J. L. Moreno. See Das Stegreif-theater, pp. 83-95.

well entrenched. Catherine is again "acting up" by erecting a structure propelled by herself and linked to the main structure only by distant tele relations. The following test (March) finds her isolated; the next (April), isolated but for one choice; in June she is again producing a leadership structure which is, except for one member, composed entirely of different individuals from those than her two previous successes (July 1935 and January 1936) had held. She was then re-assigned.

Myra maintains the leadership position won in November and seldom thereafter fluctuates far below it. Myra had been chosen by Gertrude in January and by April she begins reciprocating until she comes into a first-first relationship with her in October, a first-second in December and a first-first again in February 1937.

The January 1936 test also shows Irene again in a leader structure. She is the center of 3 second choices from leaders Ruth, Gertrude, and Myra, and has 5 other choices. Although she has 9 choices in March, she thereafter withdraws persistently from those who still seek her until at one period she is shown unchosen (August 1936). She says, "All these girls are nothing to me since I'm studying nursing; it's my life work and it's my pleasure so I've no time for them any more." She appears as an individual capable of leadership and much wanted even by other leaders, who forsakes this role deliberately to devote herself to a personal pursuit in which the group would serve but to dissipate or divert her forces. She is an example of emotional energy directed towards a value, in this case, a definite profession, instead of distributed in the channels in which it ordinarily coursed hitherto[7].

Eleventh Test (March 1936)

In March 1936, leadership is held by Ruth, Janette, Pauline, Ella, and Myra. Another in such a position is Evelyn who has a mutual relation to Gertrude. Thereafter Gertrude is directed away from her for several months, during which time Evelyn loses in position, becomes nearly unchosen, and then begins persistently to gain choices from others who are isolated or

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[7] With the entrance in April 1937 of a re-assigned girl, Rita, who is studying nursing-child care, to whom Irene gives her first choice, the withdrawal breaks down, and in the April 1937 test (not included in this report), we see her again in a leader structure, the focus of 8,—as if her response had been always available only she had not cared to expend it. She remarks, "Rita is the only girl I've met who understands since Anna went out." This one link seems to bridge the gap and to catapult her energies back into the structure.

nearly so. In this she succeeds so well that in October and December 1936 she is again in a leader structure.

Sally, who had entered as a new girl in November 1935, remains isolated until June and receives 1 or 2 choices from then on until December of 1936 when the leader Pauline whom she had sought out since October chooses her. The next test (February 1937) then reveals her in a leader position, the focus of 8 choices, including the second and third choices of Janette and Gertrude. In the meanwhile, Pauline through a vocational assignment is absent from the group during their times together. A second factor may have aided this development. Sally's baby, to whom she was devoted, had been happily placed to her satisfaction outside the institution and she threw herself into completing her training quickly to be with him.

Mabel, who had entered the group in August 1936, chooses and is chosen by girls on the periphery of the psychological organization, so to speak, who are themselves not yet a part of any main network, and there is an almost total lack of clicking in this choosing. After a temporarily isolated position in October, one reciprocation is found in December, this from an individual whose positions have similar characteristics, and together with a third girl, a "sub-group" is formed which chooses among themselves and otherwise has no reciprocations. The isolated who choose them are other than those whom they choose. Mabel eventually through this development has in February 1937 a leader position.

Similar evolutions into fairly well balanced positions are produced by Beatrice and Gladys, two girls who entered in March 1936. All three of these individuals aim consistently within the strata which eventually reciprocates. Such developments are important also because they provide easier structures for the isolated to weave their way into in time. They apparently are not so formidably crystallized and they have not so much temporal age. For as a rule, the isolated do not choose into the highly organized and established structures.

Yet the person who is not readily "satisfied," who seeks beyond what can be immediately obtained from the structure, is also not to be "scorned," however aggravating to any person of "adjustment." The future destiny in psychological position seems often to depend upon such initiation of tele that must wait for belated eventual reciprocation. Although demonstrated in our miniature community, it may be none the less "authentic"

for interrelations in the community at large.

Carol, who entered the group in June 1935, at first isolated, develops a leadership position twice, November 1935 and August 1936. She varies greatly both in the choices she receives and gives, and especially in her fluctuations from one test to another during which she erratically changes her choices from isolated individuals to choices for key persons or for leaders, and her position is accordingly highly unstable. Characteristic is her choosing of Janette when Janette does not respond and Anna's choosing of her to which she does not respond. Anna says of her, "She's really intellectual[8], you can discuss with her." Janette says, "Carol seems like a person with a lot on her mind and yet there isn't anything there, only discontent, and she figures she has to get a lot over on you and then she's safe. It's always a mean trick that's her idea of play." Carol chooses Ella in April and June 1936 unreciprocally. In August and October they choose each other but not again thereafter.

A few individuals in practically all the groups studied[9] are found, like Carol and Catherine, to fluctuate rather wildly for a time until they reach positions which form some sort of balance between the membership's saturation point for them and their saturation point for participation in the cultural and social networks of the group. While all individuals go through some process of finding satisfactory and durable interrelations, there are apparently large individual differences in the facility with which this is accomplished. Some individuals' structures show such continued flux in their composition, both qualitative and quantitative, that their social atoms are distinctly unstable as compared with those most frequently found.

Twelfth Test (April 1936)

In April 1936, there appear the same leaders, Ruth, Janette, and Pauline, mutually choosing each other and supported by Ella, also a leader, and by Anna. And for the first time we find Gertrude in a leader position, the focus of 8 choices, all from moderately well chosen (2-4) persons. There is one newcomer, Dorothy, shown in a leader position, and chosen by Gertrude, Janette, Pauline, and Ruth. Dorothy reciprocates only Ruth

[8]Carol has good academic standing; was the "accountant" and "Bank President" in the institution's store, a project run by the students studying salesmanship.

[9]Sixteen cottages besides a farm group, a hospital group, and a receiving cottage group.

and persists in choosing her first also in June but neither Ruth nor any other person in a leadership position ever chooses her again. Dorothy does not again appear as a leader.

Thirteenth Test (June 1936)

In June 1936 the test shows one new, suddenly emerging, leader structure around an individual Lucille, who had been in the group for one year. In tracing its development, we find Lucille had chosen Gertrude in March and April 1936, and Gertrude reciprocating in June 1936. (Previously she had not chosen key persons.) Thereafter there is no relationship apparent between them and Lucille's position immediately shows a return to its former status, only 1 to 3 girls choosing her. In the process she is shown at one time (December 1936) in an isolated position.

After June 1936, when Ruth has been paroled, no further dynamic changes, not previously indicated, significantly divert or disarrange the main tele of the psychological organization.

Sixteenth Test (December 1936)

To sum up (see Sociogram II), there are in December 1936 seven leader positions. A year ago (end of November 1935) there were six. Two of the previous leaders (Janette and Pauline) are still leaders, but although only one (Ruth) has been lost by parole, the other three remain in the group but out of leadership positions. In their stead are four different individuals (Gertrude, Evelyn, Beatrice and Gladys), besides Ella who had been temporarily absent the November of a year ago. (See Sociogram S-T.) And in the midst of the leader structures is Anna, mutually related to three of them, and otherwise neglected much like a year ago. There is still an interrelated leader nucleus, this time consisting of seven. In general the psychological organization shows about the same degree of complexity, although there are some replacements in the carriers of "top" structures. These replacements, however, are seen to be of persons who had not held leader positions for long—one of them appearing like a deliberate "forsaking" (Irene), one like an "organic" incapacity to retain it (Carol), and the third like an inability to retain it against the forces of the rising structures (Myra). Of the new leader individuals, one appears perhaps only of passing moment (Gladys), two appear with the former in a sub-group (Evelyn and Beatrice), and only one (Gertrude) is well-integrated into the main network.
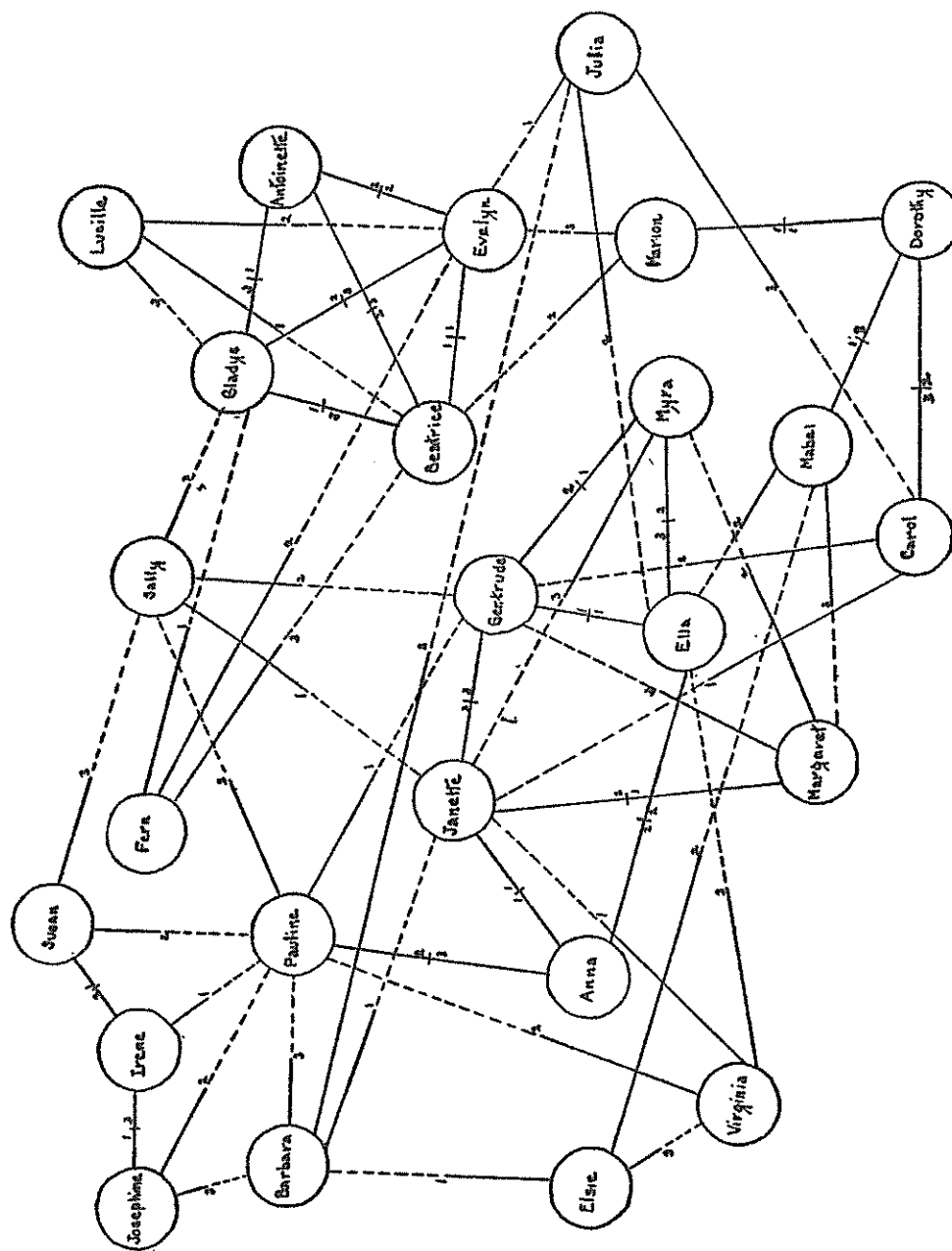
SOCIOGRAM II
Structure of Park Cottage
16th Test: December 1936
Choice ————————————
No reciprocation - - - - - -

Throughout the period of 2 years 7 months a leader nucleus is always in evidence, varying from four to seven persons—only once having so few as four, this being in July 1935, after the loss of Nora, the last of the "older set" and before the growth of the new generation, with Pauline and Gertrude, can come to "maturity" within the psychological structure.

Seventeenth Test (February 1937)

In February 1937, as we look back through all the 447 psychological structures recorded for the 70 different persons since August, 1934, we see that Janette has held leadership for a period of 2 years 7 months consistently, that Ruth has held it practically for 1 year and 7 months until her parole, that Ella has held it almost continuously for nearly 2 years, retaining it despite an intervening vacation, that Pauline after achieving it holds it steadily for the year and 4 months since she has had it, and that there are disparate appearances of leader positions here and there throughout this period, some apparently easily won and as easily lost, some apparently depending upon various exigencies of circumstance or perhaps related to the bolstering produced by powerfully influential tele.

The question confronts us, why does Anna, who comes to be the choice of leaders, who has a key position among them, the recipient again and again of their first or second choice, Anna, who is so completely recognized and sought after by the leaders, herself not attain to a leader position but four times and then not decisively during almost the whole period of 2 years 7 months? Also, why does Gertrude, who had to struggle to leadership but who finally wins both leadership and tele relations with leaders, never choose Anna or Anna her?

The essentially independent and even antagonistic roles of Anna and Gertrude are to be understood through the sociometric position characteristic for each of them in their functioning in the group, as well as through the motivations given by the girls in respect to them and theirs in respect to each other. The leader individuals seek and continue to seek Anna almost at once after her entrance into the group. But Gertrude they avoid even though she seeks them. Gertrude is forced to "win" girls in different psychological positions unimportant to the main structure and only after she has succeeded in this and becomes a person to reckon with do the leader individuals respond to her choice of them. Until she has become important in her own

right, so to speak, she is not "recognized" by them. Anna, on
the other hand, is "included" by them immediately. Almost ex-
clusively she begins to function only among the leader individuals
who need her and Gertrude apparently is not in need of Anna.
The leaders who choose Anna are evidently receptive to her
special capacity to function constructively with and for them, but
Gertrude can function equally well without selective tele-rela-
tions with Anna.

In language and manners Anna has more in common with the
adults in the community than with girls of her own age. Had
the psychological structure not been highly evolved, it is quite
possible that Anna would have had the position of isolation, so
incapable does she appear of direct leadership in this group.
She is able apparently to serve those who serve, that is, the lead-
ers, but the leaders must come to her for otherwise she exists
in a psychological vacuum, unnoticed and unwanted, with the
surrounding group scarcely aware of her potential worth, un-
aware because it is invisible to them and unexpressed towards
them.

To them, she is "not an outstanding personality, not the sort
of person you like to tell things to." "She has an air about her
that she doesn't belong here, here in body but not in mind."

On the other hand, Janette says of her, "She knows the whys
and wherefores of things and makes us understand things, also
the older people (staff) around here. She assumes authority
and kids like Pauline and me take it from her, but lots don't.
She thinks on the right side of life and comes through like noth-
ing had ever happened to her. When the girls ask me what to
do about their troubles I get awfully sensible solutions out of
Anna, you'd be surprised. But the girls mostly won't even con-
sider to mention things to her, funny, isn't it? They feel she's
more apart from them, not selfish exactly but not warm-hearted
either, pretty blunt besides. And Gertrude is so heady herself
that she thinks Anna's ideas are no good just because they're
not hers. I get along great with them because I know them
very very well and I like them both so much. Gertrude is always
pursuing an idea down to the last breath, she can be very aggra-
vating that way. They're not really jealous, though. Anna
wouldn't be jealous of the King of England himself and Ger-
trude doesn't have to bother with her, she's so influential."
Gertrude says of Anna, "Got no nonchalance, too much 'just so'
to suit me. She'd freeze up anybody."

Anna herself says, "I tell Gertrude something and I don't feel maybe she's heard a word, but I tell Pauline and I feel that each little word has sunk down right into her heart. Gertrude hasn't suffered so much as most of us; her mother shielded her from things and that might be why she is this way too. Maybe also, she's like me: when someone tells me what doesn't concern me I might put up a front. She has some good brain—got 100 in arithmetic regents—a lot of common sense behind the big show she puts on, but as a girl she doesn't impress me whatsoever. Too high acting. Even one eyebrow of hers keeps going up. But take Janette—there's something about *her* makes a person look twice and we have mutual interests at heart. She tries to be on everybody's level and to understand things. She can be just like a mother the way she gets the girls to do things. But when she's with me she's just like a baby herself. She gets discouraged with so much to do and then I get her out of it."

The tele produced between Anna and particular leaders is in sociometric terminology called *aristo*-tele——to be effective it can operate *only in a selective sphere of influence and to do so is almost exclusively dependent upon the existing structures* of traditional leaders. In contrast, an *aristo-leader*, like Gertrude, *creates* a leader structure of her own if necessary in order to distribute her energy. It is possible that Ada who appeared in the August 1934 organization as having the strongest leadership of any girl found throughout the total series was also an aristo-leader, but as we did not have occasion to make a serial study of her structures over a period of time it is not possible to determine whether or not this is true. She appears as the first choice of three leaders (Janette, Nora, and Martha), two of whom she reciprocates, and also by other girls who are in a wide variety of psychological structures, including three isolations, giving her the possibility of directly influencing the "general population" and its "aristocracy," the structures at various levels in the stratas of the psychological organization, from the "bottom" to the "top." Consequently her psychological position pictures in miniature the structure typical for an aristo-leader.

LEADERSHIP POSITIONS

Of the 447 psychological positions recorded in Park Cottage during the period of 2 years 7 months, 101 may be classified as leadership positions. The number of different individuals who were in the group during some portion of this time was 70 and

the number of different individuals ever found in leadership positions was 28. When we survey the series of structures, however, we see that 12 individuals reach such a position only once during their time in the group; that 2 individuals held it only twice during the period studied; and that there is a scattering of individuals who intermittently produce such a structure and intermittently fall from it. (See Tables I, II, III, and Sociogram S-T.) We therefore cannot consider such individuals as necessarily leaders in the community. On the other hand, the fact that a person even once has a leader position for however brief a time, may give to her a significance within the leader structure of the group because she may thus gain an influence and standing with other leaders; and if this period of 8 weeks or less in which she has this standing was an eventful one for the community, full of constructive or destructive happenings (in our community such events as building new projects or epidemics of runaways), she may be crucially important as belonging to the *elite*

TABLE I

Frequency of Structures of Leadership, Isolation, or other Positions in Group during 2 years 7 months.

	Population	No. of Leadership Structures	No. of Isolation Structures	No. of Structures Neither of Leadership Nor Isolation
August 1934	27	7	7	13
September	27	5	5	17
November	26	7	. 4	15
February 1935	26	6	5	15
April	27	5	3	19
June	28	5	5	18
July	26	4	5	17
September	25	5	1	19
November	25	6	5	14
January 1936	27	7	6	14
March	27	7	8	12
April	28	6	6	16
June	28	6	5	17
August	26	5	4	17
October	25	6	6	13
December	25	7	3	15
February 1937	24	7	3	14
Totals	447	101	81	265

within the psychological organization at that moment. So it is nevertheless only strictly accurate from the point of view of study of spheres of influence to mention these kaleidoscopic rising and falling structures. There may be periods in the life of any community which, on the other hand, are so uniformly uneventful that leadership of any sort, although present, is dormant so to speak at least from the point of view of the community as a whole.

ISOLATED POSITIONS

Of the 447 psychological positions, 81 are positions of isolation. An analysis of this figure shows that although it equals 18 per cent of the total positions recorded for the group, the

FIG. I

| Isolation Structures | Structures of neither Leadership nor Isolation | Leadership Structures |
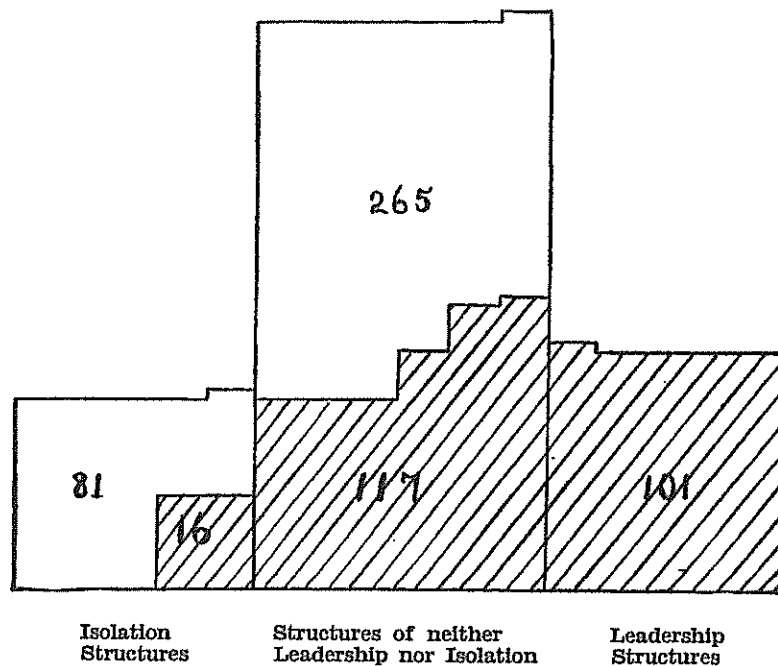
A proportionate representation of the structures of the entire group of 70 individuals with the shaded sections indicating the structures produced by the 28 individuals who ever had a leadership structure. See also Tables II and III.

number of individuals involved in them is 38 or 54 per cent of the total population (70 persons). In point of the number of persons affected, it appears that the structure of isolation is more widespread than the structure of leadership.

Of the 28 different individuals who at one or another time during the 2 years 7 months produced leader positions, 11 at one or another time are found in isolation. Along with 27

TABLE II

Comparison of the Number of Individuals found in Leadership
Structures and in Structures of Isolation
Period: 2 years 7 months
Population: 70 different individuals in the group at
various times

No. of Individuals in Leadership Structure	No. of times	Total No. Leadership Structures	No. of Individuals in an Isol. Structure	No. of times	Total No. Isol. Structures
12	1	12	23	1	23
2	2	4	3	2	6
3	3	9	4	3	12
5	4	20	5	4	20
2	6	12	1	5	5
1	8	8	1	7	7
1	9	9	1	8	8
1	10	10			
1	17	17			
Totals 28		101	38		81

Eleven Individuals in Leadership Structures contributed as follows to the total number of Structures of Isolation:

	No. of Times	Total
8	1	8
2	2	4
1	4	4
11		16

TABLE III

The Per Cent of Time spent in a Leadership Structure and the Per Cent of Time spent in a Structure of Isolation for each of the 70 Individuals present in the group for varying lengths of time during the period 2 years 7 months.

Name	No. of weeks approximately	% of time in a Leadership S.	% of time in an Isolation S.	Name	No. of weeks approximately	% of time in a Leadership S.	% of time in an Isolation S.	Name	No. of weeks approximately	% of time in a Leadership S.	% of time in an Isolation S.
Ada	8	100	--	Patsy	40	--	--	Edwina	48	--	50
Edna	24	100	--	Pearl	24	--	--	Geneva	120	--	47
Martha	32	100	--	Rose	80	--	--	Virginia	80	--	40
Nora	48	100	--	Gilda	64	--	--	Minnie	40	--	20
Ruth	104	77	--	Alice	16	--	--	Grace	72	--	33
Janette	136	100	--	Hilda	48	--	--	Fern	96	--	67
Anna	128	25	--	Vivien	24	--	--	Elsie	24	--	100
Ella	120	60	--	Marian	24	--	--	Josephine	96	--	8
Mildred	32	50	--	Antoinette	16	--	--	Milly	8	--	100
Betty	80	10	20	Margaret	16	--	--	Irma	8	--	100
Bertha	64	13	--	Geraldine	16	--	--	Violet	56	--	14
Olga	40	20	--	Eunice	8	--	--	Susan	72	--	11
Dora	40	20	20	Kate	16	--	--	Julia	72	--	11
Mary	24	33	--	Helen	16	--	--	Louise	16	--	50
Jane	48	17	--	Barbara	24	--	--	Adeline	32	--	25
Myra	104	31	8					Cora	48	--	33
Pauline*	88	73	--		432			Laura	64	--	50
Catherine	64	38	13.					Clara	8	--	100
Lucille	96	8	17					Edith	8	--	100
Carol	96	17	8					Ethel	24	--	33
Gertrude	80	60	--					Marie	80	--	40
Evelyn	80	40	--					Lillian	48	--	17
Irene	80	30	10					Myrtle	48	--	33
Sally	72	11	44					Audrey	24	--	33
Beatrice	56	57	14					Janet	8	--	100
Gladys	48	17	17					Evah	32	--	75
Dorothy	48	17	--					Bessie	40	--	100
Mabel	32	25	25								
	1872								1272		

The difference between 100% and the sum of the two per cents, it is understood, denotes the per cent of time spent in a structure neither of isolation nor of leadership. The symbol - - indicates no per cent of time in the respective structure.

Note:

No. never having a leadership or an isolation structure 15
No. having once or more a leadership structure but never isolated... 17
No. having once or more an isolation structure but no leadership
   structure 27
No. of "leaders" who were once or more in a structure of isolation 11

Total Population 70

*Pauline was present 96 weeks but left just before the 17th test.

other individuals who never attained a leadership structure at any time during this period are these 11 who are involved in both types of structure.

SOCIODYNAMIC EFFECT

The per cents of leadership structures and of isolation structures in the community as a whole are listed in Table IV. There is apparent only slight variability in the per cents of these structures produced over a period of time (2 years 7 months). In fact, they are fairly stable from 8 weeks to 8 weeks throughout the period studied. The consistency of these two indices suggests that these types of structures, under the condition of this experiment, are fairly constant factors in psychological organization. It seems to indicate that the sociodynamic effect operates in groups to a considerable extent even when the population is a fluctuating one; i. e., the community appears unable to sustain more than and seldom less than a certain percentage of leadership structures, regardless of the personal characteristics of the individuals constituting the population. The same factors seem to play a role in regard to the number of individuals who are not chosen, and herein classified as isolated.

The sociodynamic effect is produced by a peculiar phenomenon: a number of individuals receive more choices than they can make use of and a number of individuals less choices than

TABLE IV

Per Cent of Leadership Structures and Per Cent of Isolation Structures in the Community as a Whole During the Period 2 Years 7 Months.

Date of Test	Per Cent of Leadership Structures	Per Cent of Isolation Structures
August, 1934	20	18
September	21	16
November	22	15
February, 1935	21	19
April	22	19
June	22	18
July	24	17
September	23	15
November	26	16
January, 1936	25	18
March	23	17
April	24	17
June	22	15
August	25	16
October	23	16
December	23	14
February, 1937	22	12

they need[10]. The cumulative effect is a trend towards a constant number of social structures, as the number of isolated, the number of leadership structures, etc. This trend towards constancy is probably due to the hangover in the evolution of tele structures and can be held responsible for the resistance of groups against abrupt changes.

THE RATIO OF STABILITY

An analysis of the number of persons by whom the leader individuals are chosen and the sum of choices received during the total number of times in a leadership structure reveals wide variations. See Table V. We can secure a ranking of the individuals by finding the difference between these two tabulations and dividing the difference by the total number of choices received. The result might be called the "Ratio of Stability" of the social atom of the individual since it represents the per cent of persons who repeat their choices for the individual considered, or, in other words, the per cent of retention of the same persons in the nucleus around the subject. See Table VI. A true ratio would take into account the exact fluctuations of population and the size of the population by which it was possible to.be chosen during the period the individual was in the group. Table VI is given simply as a method of reaching an appraisal of "stability" but the variables mentioned which may, of course, affect the results have not been eliminated.

Under these conditions, the coefficient of correlation between frequency of leadership structure and the Ratio of Stability is .88 with a PEr of .16 (Rank Difference Method). Study of Tables III and V indicates that if other variables were ruled out the relationship would still be high and positive. The explanation may be that those who are able to maintain leadership structures repeatedly are also able to a considerable extent to retain the affinity of persons choosing them as expressed by the latter's repetition of choices to them.

Table V on the following page shows choices from persons to the 28 "leader" individuals during the periods they had a leadership structure, compiled from the 17 primary sociograms covering 2 years 7 months.

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[10] This unequal distribution does not become appreciably less unequal when a greater number of choices is allowed. Then, the tendency is to give more to those who already have many choices and few to those who already have few or none.

TABLE V

Column headers (top, written vertically): Ada, Edna, Martha, Nora, Ruth, Janette, Anna, Ella, Mildred, Betty, Bertha, Olga, Dora, Mary, Jane, Myra, Pauline, Catherine, Lucille, Carol, Gertrude, Evelyn, Irene, Sally, Beatrice, Gladys, Dorothy, Mabel

Row labels (left side):

Ada
Edna
Martha
Nora
Ruth
Janette
Anna
Ella
Mildred
Betty
Bertha
Olga
Dora
Mary
Jane
Myra
Pauline
Catherine
Lucille
Carol
Gertrude
Evelyn
Irene
Sally
Beatrice
Gladys
Dorothy
Mabel
Patsy
Pearl
Rose
Gilda
Alice
Hilda
Vivien
Marion
Antoinette
Margaret
Geraldine
Eunice
Kate
Helen
Barbara
Edwina
Geneva
Virginia
Minnie
Grace
Fern
Elsie
Josephine
Milly
Irma
Violet
Susan
Julia
Louise
Adaline
Cora
Laura
Clara
Edith
Ethel
Marie
Lillian
Myrtle
Audrey
Janet
Evah
Bessie

No. chosen by:
No. choices received:

A simple spacial representation of the amount one leader in the psychological organization may be important compared with the other leaders is shown through the extent of overlapping among the persons choosing the respective leaders. See Fig. II.

Of the 28 individuals who are ever found in leader positions, 9 individuals[11] once they attain this structure continue to retain it. And those of whom this is true, appear to achieve this "permanent status" within the psychological organization within approximately 3 to 8 months after entering the group.

[11]Not counting Ada who left almost immediately.

TABLE VI

Tentative Ratios of Stability for the 16 individuals who twice or more had a leadership structure and the respective Frequency of Leadership Structure during the period 2 years 7 months*

	(1) No. of Persons Chosen By	(2) No. of Choices Received	(3) Difference	(4) "Ratio of Stability" Diff. ÷ by No. of Choices Received	(5)** No. of Times in a Leadership Structure
Edna	14	23	9	39.1	3
Martha	20	34	14	41.2	4
Nora	22	46	14	52.2	6
Ruth	28	63	35	55.6	10
Janette	45	141	96	68.1	17
Anna	12	23	11	47.8	4
Ella	30	67	37	55.2	9
Mildred	7	11	4	36.4	2
Myra	15	22	7	31.8	4
Pauline	19	42	23	54.8	8
Catherine	13	15	2	13.3	3
Carol	10	11	1	9.1	2
Gertrude	18	39	21	53.8	6
Evelyn	17	25	8	32.0	4
Irene	14	22	8	36.4	3
Beatrice	15	24	9	37.5	4

*Omitted from this tabulation are the 12 individuals who had a leadership structure only once since the number of choices received and the number of persons chosen by are, of course, equal in these instances.

**See p. 123 for discussion of "Ratio of Stability." Column 2 is directly related to Column 5 by virtue of the definition of leadership. Since Column 2 enters into Column 4 as the denominator, there may be a slight boosting of the correlation of Column 4 with Column 5.

FIG. II
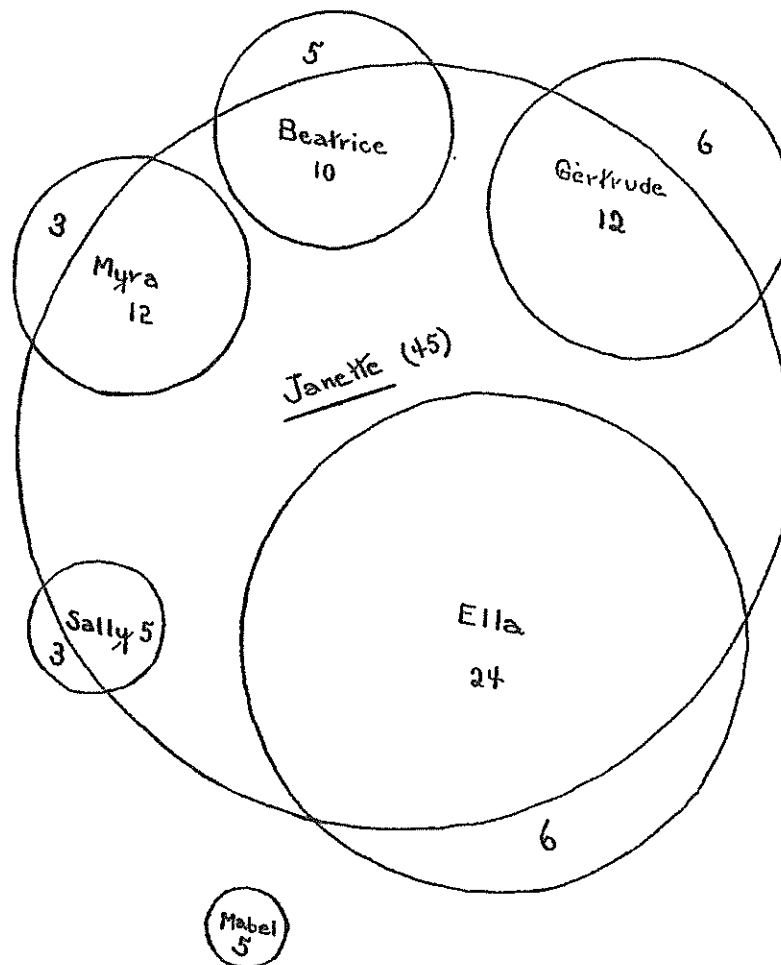
From the (17) primary sociograms, are picked the spheres
of influence (as measured by the *number of persons* from whom
choices are received) of the seven individuals in leadership struc-
tures in February 1937 and shown as they overlap with that
of Janette. The sphere of influence of Janette encloses 45 per-
sons. Of these 45 persons, 24 overlap with Ella, 12 overlap
with Gertrude, 10 with Beatrice, 12 with Myra, and 5 with
Sally. Only Mabel's sphere is totally unincluded by Janette's.
See Table V.

CATEGORIES OF LEADERSHIP STRUCTURES

As we examine their structures, we see that, aside from their projection into time, they can be differentiated quantitatively into 3 categories:

(1) Those whose structure could be said to be *stable*, containing a relatively constant number of other persons, never fluctuating far in the capacity of retaining the same persons in the nucleus, and characterized by only *gradual* expansion or shrinkage. Examples, Janette and Pauline.

(2) Those whose structure could be said to be *unstable*, varying from 5 to almost any number of other persons, unevenly constituted in size at different times, and characterized by relatively sudden expansion and shrinkage. Example, Ella.

(3) Those whose structure could be said to be *erratic*, sometimes composed of the same individuals and again constituted of an entirely different set, a structure of the sort that leaves its past behind, apparently capable of great flexibility and inconstancy, and characterized by relatively great shifts in the qualitative composition even though the quantitative composition may not change radically. Examples, Carol and Catherine.

And then, among these sharply contrasting types of structures there appear now and then varying degrees of overlapping.

Upon further scrutinizing the 28 individuals in leadership positions, we can distinguish roughly 5 general categories:

(1) Persons who have a leadership position only once or twice and otherwise have not a distinguished position within the structure. Examples, Mildred and Betty.

(2) Persons whose leadership positions are very limited and local in their sphere of influence, bound up with a narrow part of the population. The spacial expansion is limited because those who choose them are isolated or without important chains of relations. Example, Beatrice.

(3) Persons whose leadership positions have a sphere of influence spacially very broad, enveloping a large part of the population, but in point of time are momentary. The impression made is rapidly lost as temporal development of the group's structure progresses. Example, Dorothy.

(4) Persons whose leadership positions have a wide spacial and a long temporal development. Example, Janette.

(5) The *aristo-tele* "leader" who has no direct sphere of in-

fluence large enough to constitute leadership, but who has it by indirection, that is, through direct contact with the leaders in Category (4), through whom she can influence. Example, Anna.

LEADERSHIP

Whom then should we really call leaders?

In this community, as in any other, there are individuals who produce or suggest the fundamental patterns of conduct for the community, as expressed in its various standards, its idiomatic language, its customs and ideas. However simple our community at Hudson may be considered compared to the "outside," there are certain standards and notions of "right" and "wrong," "good" and "bad," "mean" and "nice," which have been built up by the population itself and to which the staff or adult members of the community are practically outsiders.

We have observed several instances in which one or another individual among the "leaders" in this survey has actually furnished the decisive factor in the acceptance or rejection of matters crucial to situations and built or destroyed a pattern of conduct. In three instances, through their direct influence upon runaway girls the leader nucleus has forestalled the event. In two instances, they absorbed into their midst and "re-made" two girls whose behavior had been so obnoxious to the community as a whole that no other group would receive them without prejudice. In instances of the housemother's illness, on the other hand, they were haughty and authoritative in running affairs without so much as consultation with the substitute housemother. In these instances the influence was traced to the rebellious attitude of the girl (Anna) who spread aristo-tele influence among three individuals holding the strongest leader positions. An illustration of a strongly negative influence was given by a leader in another group who had been entrenched in a leader structure for over three years. The girl succeeded in so inciting her supporters that they joined with her in outright rebellion against a staff member who hitherto had been a favorite, and went so far as to cast her possessions out of the window. In this instance, the leader was able to exert so potent an influence apparently because her nucleus had been constant, selected, and retained over a period of three years in a group in which no other leader structure was allowed to develop and endure beside the all absorbing power of this traditional leader who "sent"

into rejection and isolation those who attempted to break through.

From such instances we see that the influence different individuals in different leader structures were able to exert was related to their being able to enter into and become convincing carriers of the social-cultural currents in the community, sometimes determining and directing their development. Leadership not being a single process, the study of the whole group appears necessary to see it arise and to trace its sphere of influence.

Coming back to our former question: Whom then should we really call leaders? It would appear that a more accurate stating of the problem is rather: Who then held leadership, for how long, and how wide was their sphere of potential influence?

Among the 28 girls ever holding a position of leadership, the length of time varies from 8 weeks (12 individuals) to 136 weeks of consistent maintenance of a leadership structure. And out of the total number of 101 leadership positions, 56 were contributed by 6 of the 28 girls. The 6 individuals held them for respective periods of 48 weeks (2), 64 weeks, 72 weeks, 80 weeks, and 136 weeks (Nora, Gertrude, Pauline, Ella, Ruth, and Janette). On the psychological geography of the community at large all six of these individuals have a conspicuous position in the networks and their respective spheres of influence at different periods have a range of 78 to 152 persons.

For the purpose of comparison, however, we have studied the respective spheres of influence of the 7 individuals whom we find in leadership positions in February 1937 and those also present at this period who formerly had a leadership structure, as these are the persons whose development in the psychological organization we have been able to follow during the whole period of their time in the group surveyed. To secure these data it was necessary to include the entire population in the study. Therefore the sphere of each individual can·be seen against that of every other person in the community.

SPHERES OF INFLUENCE

In this community, the number of other persons with whom one can be acquainted is practically as large as the population because of the great mobility of the groups and the frequent occasions for everyone to mingle freely. Aside from the psychological currents and networks which the sociometric test makes

perceptible, there can be considered as spheres of influence the reservoirs from which these are drawn. These reservoirs may be said to consist of all the individuals who are present, so to speak, in one's social memory at a given moment, that is, all those whom one has met who have made sufficient impression to be remembered when one is confronted with the question: What people do you remember to have spoken to or who spoke to you? Such a listing of "acquaintances" has been called an individual's "Acquaintance Index."

In February 1937 we asked every girl in this community to list all the other girls in the institution (exclusive of those in her own living-together group) whom she could remember to have spoken to or who had spoken to her. Persons were not to be listed whom the subject knew only by name and with whom she had had no communication and the names listed had to be of individuals constituting the population (then 489) at the date taken. (See footnote to Table VII.) .If a certain name could not be recalled but the subject was able to describe so as to identify the person meant, it was credited.

The Acquaintance Index has been previously found to be related to a number of variables including mental age, chronological age, length of time in the community, etc., and also to show compositional changes for the same individual at different times, being to this extent a measurement of the "emotional expansiveness" of the person at a given moment (1, pp. 137-141).

Our purpose, however, was to study the *spheres of influence* of the individual rather than her expansiveness.

We took the number of times an individual, under the conditions stated, is *listed by others as an acquaintance as constituting a measurement of the volume of impressions she has made upon others* with whom she has directly communicated and *hence as outlining her sphere of direct potential influence.* Whereas the condition of being long in the community is an advantage one girl may have over another who has recently arrived, this may be discounted in this *double* study of the person's Acquaintance Index and the number of times she is counted by others as an acquaintance, every person having equal opportunity on the basis of meeting others and being met by others, or making acquaintances and becoming the acquaintance of others.

TABLE VII

Range of the Sphere of Influence and the Acquaintance Volume
of 467 individuals* in the community February 28, 1937.

Range	Sphere of Influence	Acquaintance Volume
175-179		
170-174	1	
165-170		
160-164	1	
155-159	1	
150-154		1
145-149	2	
140-144	3	2
135-139	1	
130-134		7
125-129	1	2
120-124	7	3
115-119	1	1
110-114	6	7
105-109	3	3
100-104	4	10
95-99	7	4
90-94	9	7
85-89	8	6
80-84	6	8
75-79	15	6
70-74	14	28
65-69	16	15
60-64	19	33
55-59	18	16
50-54	22	35
45-49	38	14
40-44	35	37
35-39	28	22
30-34	26	27
25-29	32	33
20-24	39	43
15-19	41	33
10-14	25	29
5-9	22	23
0-4	16	12
Totals	467	467

*The total population of February 28th was 489, of whom 12 were infants, and the data given by 10 girls were excluded because of errors. The names of these girls when given by others were eliminated and not counted in the respective Acquaintance Index.

The spheres of influence thus obtained are seen to differ wide-ly (see Table VII), showing for the leader individuals a range from 14 to 97 individuals (see Table VIII). Those present in February 1937 who had once produced a leadership structure, Mabel, Gladys, Lucille, Sally, Dorothy, show a sphere respec-tively of 14, 18, 18, 29, and 37 other individuals outside their own group. Carol who had a leader structure twice shows a sphere of 34 and Irene who had three leader structures shows a sphere of 44. Beatrice, Evelyn, and Myra, found four times each in leader positions, show respectively spheres of 43, 60, and 75. Gertrude who had had six leader structures has a sphere of 64. Pauline who for 8 periods and Ella who for 9 periods had leader positions show each a sphere of 97 or po-tentially an influence covering 22 per cent of the total popula-tion, aside from the individuals in the cottage group. Janette had left the institution a few days before this phase of the data

TABLE VIII

Acquaintance Indices and Spheres of Potential Influence of the 27 Individuals in Group February 28, 1937.

13 who had once or more a structure of leadership	Acquaintance Index	Sphere of influence	14 who had no struc-ture of leadership	Acquaintance Index	Sphere of influence
Pauline	109	97	Virginia	36	20
Ella	90	97	Elizabeth*	21	11
Myra	101	75	Marion	96	41
Gertrude	110	64	Juanita*	20	7
Evelyn	53	60	Elsie	60	28
Irene	85	44	Josephine	73	45
Beatrice	64	43	Milly	24	16
Dorothy	93	37	Nancy*	5	19
Carol	101	34	Erma	32	28
Sally	38	29	Violet	68	40
Lucille	60	18	Antoinette	65	21
Gladys	28	18	Susan	69	85
Mabel	17	14	Margaret	28	6
		630			367
			Julia	130	141

*Three girls entered after the sociometric test for February was given two days before; and Janette left on parole before the data above were taken on February 28th.

was secured so we do not have her sphere of influence as of February 1937. From previous data we would estimate it as higher than any other person's in this group.

There appear in general progressively larger spheres of influence in accordance with a progressively greater number of times the individual is found in a structure of leadership.

The finding of most interest to us, however, is the individual differences in spheres of influence from one person to another. When we consider individuals who have been in the group studied for an equal length of time and have had consequently also approximately equal opportunities to make "impressions" upon others as, for example, Pauline, Carol, and Lucille, we find spheres registering from 22 per cent of the total population to 8 per cent and 4 per cent respectively. In the instances of Gertrude, Evelyn, and Irene, who were equally long in the group, we find spheres of 14 per cent, 14 per cent, and 10 per cent respectively. From another angle, when we consider three individuals who spent an equally long time in a structure of leadership (32 weeks each), Myra, Evelyn, and Beatrice, we find their spheres of influence are 17 per cent, 14 per cent, and 10 per cent respectively.

One individual (Julia) in the group who never produced a leader structure although she was present in the group since November 1935 (72 weeks) shows a sphere of 141 other persons or 32 per cent of the population as a whole (outside her own cottage). In the psychological organization of the group she is chosen less than average and frequently chooses leaders who do not reciprocate. She has however a key position in the psychological geography of the community at large and could potentially function as a powerful link between leader individuals in the group and the general population[12].

[12]To gain an estimate of the relation of "popularity" to position in the psychological structure, we took a popularity vote in February 1937. The votes were cast for "The one I consider is most popular." No definition of "popularity" was furnished to the subjects. Julia who had not yet a leader position received 36% of the votes; regarding her, see also p. 132. On the last two tests (December and February) she was chosen only once. 24% were cast for Myra, who is recorded in a leader structure 4 times out of her 13 tests. Janette and Pauline tied with 12% each. The remaining votes were scattered.

It may be that this wide discrepancy between votes received on the basis of "popularity" and choices received on a criterion to be utilized in a life situation is wider in the group presented here than would be revealed in other groups where the history of the psychological organization was shorter or had received less traditional impress from former members upon its pattern. This "popularity vote" is but a meager tapping of the problem which

When we consider as a whole the group in which the leader structures arose (see Table VIII), we see that the combined spheres of influence of the 13 individuals who had held once or many times a leader structure amounts to 630 individuals in the community and the combined spheres of the 13 individuals who have not as yet produced a leader structure number 367 individuals when we do not include Julia who alone has a sphere of 141.

There appears to be considerable relationship between frequency of leader structure and size of the sphere of influence.

For the 13 individuals of the group who were in a leadership structure in February 1937, the coefficient of correlation (Rank Difference Method) between the number of times in such a structure and the Sphere of Influence is .94 with a PEr of .02. It indicates that in our particular group there is an extremely high relationship between the two phenomena. See Fig. 3.

The coefficient of correlation (Product-Moment Method) between the Acquaintance Volume and the Sphere of Influence for the population as a whole (467 persons) is .54 with a PEr of .02. There is evident a positive and reliable relationship. See Table VII and Fig. 4. For the particular group of 27 individuals, the coefficient of correlation (Rank Difference Method) between the Acquaintance Volume and the Sphere of Influence is .85 with a PEr of .04, indicating in this instance a very close correspondence. See Table VIII and Fig. 5.

Study of Table VIII suggests also that the leader individuals apparently have greater capacity than the other members of the group to warm up to and initiate acquaintanceship. In other words, they not only in general make more impressions upon others but they also in general "register" more impressions from others, as indicated by the fact that the Acquaintance Index of these individuals is by and large also greater than that of the other members. The impression made by a leader individual appears reflected in the impression others make upon him.

merits further investigation.

It may be that the "votes" and the "choices" tapped two relatively different things. "Popularity" may be based more on qualities which appeal at distance and become flat within the relatively shorter psychological distance of the intimate group. Leadership shows itself to be in essence a reality test. The leader comes face-to-face with persons and situations and may aid in bearing or interpreting realities. He has to "pass" a proximity test with a number of crucial individuals on the basis of some criterion in life. In some respects it seems that "popular leader" is hardly a precise term.

FIG. III

Spheres of Influence of the 13 "Leader" individuals in the group in February 1937 against the No. of times each held a leadership structure.
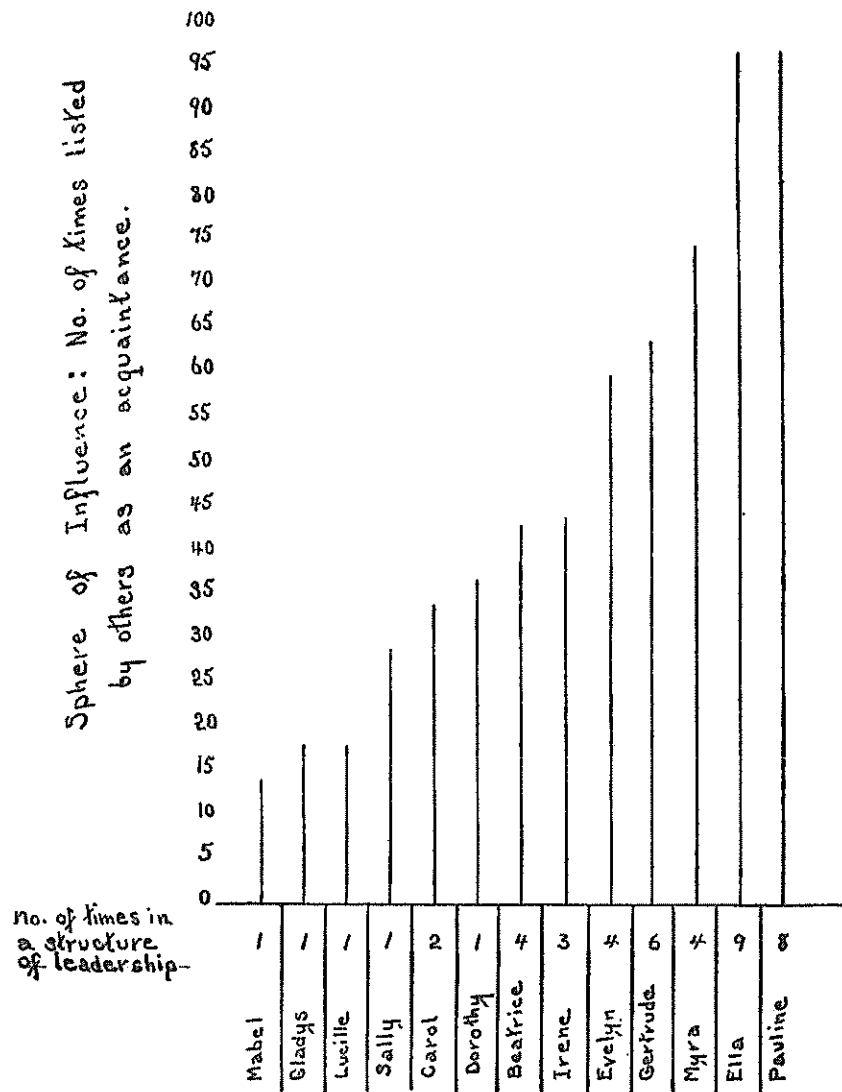
It is to be noted that there is a fairly constant rise in the volume of acquaintances progressively according to the number of times they have had a leader structure; those who have had such a position only once or twice have relatively smaller indices and those who have it frequently have relatively greater indices. Comparison of Table III with Table VIII shows that the individuals who are frequently isolated have relatively small acquaintance indices.

There is to be noted, however, such disparity between Ac-

FIG. IV

Showing the Relationship between the Range of the Sphere of Influence and the Range of the Acquaintance Index of 467 individuals in the community February 28, 1937. See Table VII.

Size of Sphere of Influence ―――――
Size of Acquaintance Index - - - - -
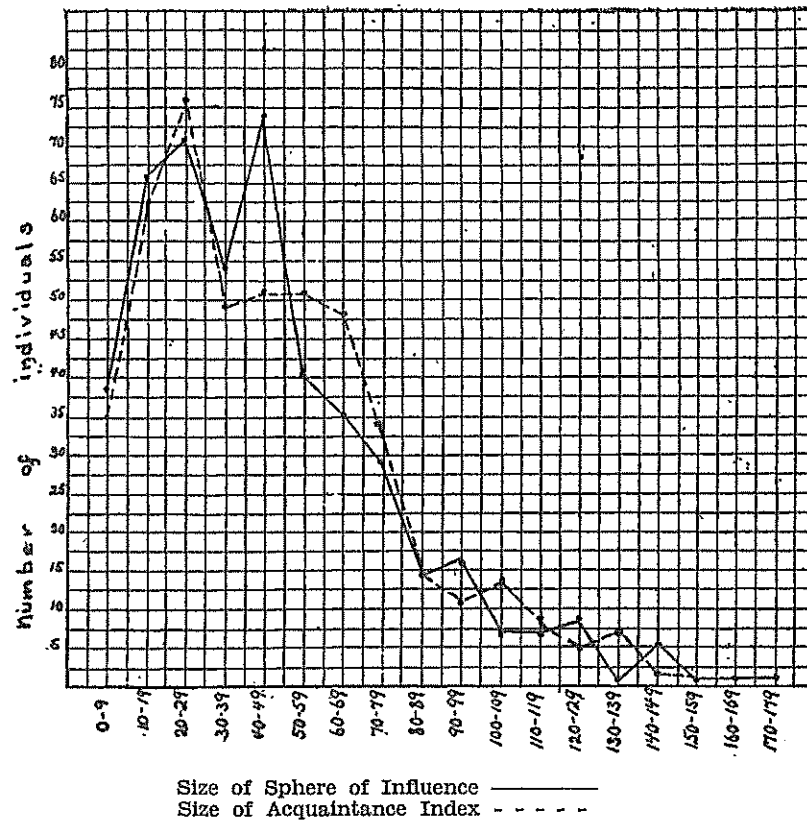
quaintance Index and sphere of influence in so many instances that the matter appears very complex. It seems to indicate that a person may receive a lasting impression from and potentially be influenced by another without himself making such an enduring impression; and, on the other hand, that he may make more impressions than he receives from others. Impressions may not be so lasting from one individual to another although mutual impressions were made at some common point in time in the past. Examination of the composition of the same individual's Acquaintance Index with her respective sphere of potential influence shows much overlapping, that is, many of the same per-

FIG. V

Showing Relationship between Sphere of Influence and Acquaintance Index for the 27 individuals in the group February 28, 1937. See Table VIII.

Acquaintance Index
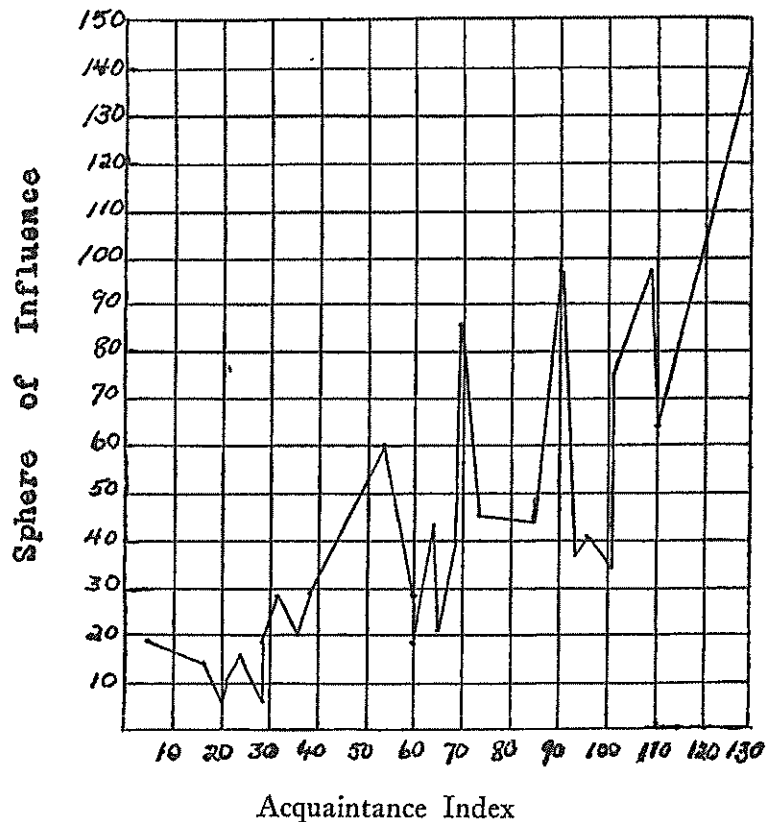
sons, as we should expect, appear in each. But there is almost invariably a number of persons who appear in only one of the tabulations. A qualitative comparison shows that for the most part the impressions made and received fall within the develop- mental and social-psychological stratas in which both groups of individuals are. In many instances the greatest exceptions to this are the leader individuals who apparently seek out and suc- ceed in getting into rapport with a wider range of personalities, —a range which cuts across the roughly set-up barriers that seem to exist for many in the population as a whole[13].

To sum up, the findings show that in both qualitative and quantitative range, the spheres of influence of the individuals holding leadership positions continuously over a period of time is broader than that of others who have a less conspicuous place in the psychological organization of the group. If the popula- tion studied were more homogeneous in a social-psychological sense, it is possible that the Acquaintance Indices and the spheres of influence would often not show such wide disparities as they would have more exclusively to do with more purely sociometric and spontaneity factors.

CONCLUSIONS

It appears that the status which an individual attains in the group he enters depends upon the already existing organization developed by the membership throughout the course of its exist- ence, which cannot be easily shifted into a different pattern of psychological currents, and depends also upon the sort of psychological position the person seeks to attain within it. The spheres of influence, temporal and spacial, aid him or deter him in the carrying out of his aims and probably his aims in turn are frequently determined, encouraged, or blunted by them. If the structure is one that suppresses his inherent tendencies, mental, social, psychological, he may require a transplanting— a re-assignment to another structure—before he can reach his optimum development or grow beyond the stage of inter-per- sonal relations in which he is.

The fact that we find structures of isolation and structures of leadership held at different times by the same individual in the psychological organization over a period of time is an example of the dynamic character of inter-personal relations. The finding that during the 2 years 7 months of our study more

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[13]The data on this matter are so voluminous to present and show so many angles that we cannot treat the subject in this report.

individuals were involved in structures of isolation than of leadership may be an indication that considerable effort on the part of the individual is necessary to weave his way into relationships of any sort. How important the attaining of mutual relations is, we see in the persistent striving for their attainment.

The structure may be too highly evolved, too far "advanced" for the person to enter it and participate. We saw in the instance of Mabel one who had to learn from the "bottom," for whom the more rudimentary sections of the structure offered more of a medium to learn the elementary processes of getting into interrelationships. The highly organized, temporally old structures were seemingly unavailable to her, unapproachable for relationships. For Anna, on the other hand, these same rudimentary "unformed" sections of the structure offered no avenue for penetration. Such structures might be said to be likewise unavailable and unapproachable to Anna in *her* stage of social-psychological development. The tele is not released except in the structures already built into hierarchial proportions and complexity and these she enters from the "top."

The highly developed structures apparently can be hardly "visible," hardly be felt, from below by the members in the rudimentary outskirts, and perhaps the "bottom" may be as hardly understood by those at the pinnacle. By placing an individual in a group whose structure will not permit of his entering psychologically very little seems won. It is quite possible that long isolation over a period of years produces a retarding effect. It appears as if we cannot force or teach such development by artificial stimulation such as a highly organized "unavailable" structure, but that we can make the setting one which makes it possible or at least not impossible.

While there appear to be individuals who more readily than others work their way up to leadership, leadership itself appears to be a process of choosing as well as being chosen. To choose accurately, tellingly, precisely in the realm where there is want for one, and to do so *spontaneously* is to have considerable feeling or sense for *clicking*, upon whatever criterion the choosing be based. Simply to be chosen, when this is by those whom you do not choose, is hardly much compensation. On the other hand, the fact that the psychological structure shows duration and often changes but slowly on the whole may have significance for the "training" of the tele relations, perhaps disciplining them into some stability and intensity in the winning of mutual-

ity with the persons with whom one wishes to have them and providing the necessity of exertion to retain them once they are won.

There appears to be a great difference between the tele which is available in any group and that actually expended. In any group there may be great reserves of tele which the structure in which the members find themselves does not release. On the other hand, there apparently are individuals who are very limited in their capacity to participate in inter-personal tele relations and for whom certain structures are inappropriate. This may account for inability, all other things considered, to stay in a leadership position once it is won. They may only occasionally show themselves able to warm up to a wide variety or large number of persons, and this only under particular circumstances as, for instance, that which powerful aristo-tele exert upon them. When the circumstance changes, the emotional-social tele may likewise shrink back to its former bounds. An optimum environment for the production of tele is so important because the tele apparently depend upon feeling and spontaneity factors very important for development.

How much elasticity there is in the tele-capacity of individuals we are not yet on the way to know even within approximate limits. But the indications of the individual differences are immense, and that they cannot be estimated by a sociometric study of the individual in only one community, even through a long series of studies covering the temporal and spacial aspects of its projection. There needs to be a study of the initial beginnings carried on right through the years, just as Gesell has done for patterns of postural and motor control. Social-psychological coordination with the human environment, integration into the manifold structures of its psychological organization, is a gradually developed function also measurable in some form through painstaking research.

The leader individuals in our study show their caliber, if they are destined to become leaders within the group, within 3 to 8 months of their residence. One indication that they may eventually rise to a position of leadership is the direction in which they choose. Their spontaneous choosing of leader persons, even though they meet with no reciprocation or encouragement, is not found to be characteristic of the ordinary newcomer.

Occasionally the newcomers will seek a leader, but by and large they choose close to their own social level, nearer to a

possible reciprocation in fact. They are not so "impudent" in their choosing. They are "nobodies" and they seek out other nobodies or near-nobodies within the structure, but the potential leader, while he too is a nobody is hardly to be discouraged although he may have to work months and months to divert into his direction the already channeled tele among the important persons of the group. He may persistently refuse to be satisfied with less even under definite rebuffs. He also frequently avoids those who have little to give in bolstering a climb into a psychologically key position, just as the person who wants to revolt against the prevailing social currents feels out those who will receive with equanimity the proposal and aid in fulfilling it. Neither one can afford to be wasteful in the exercise of his choices. Neither one breaks through the already knitted structure of the group without gradually and steadily laying the groundwork among possible allies in the respective plans. The psychological structure appears like a crushing or supporting bulwark.

Sometimes an individual climbs to leadership through the actual or impending exit of leaders and rapidly falls out of this control. Those who apparently ascend through the exigencies of the situation alone do not long remain in ascendence. The void made by the outgoing leader is coveted by others eager to fill it and for the time being there is often much struggle until another "natural" leader crystallizes the affinities within the shattered structure of psychological organization. But leadership appears to be not easily transferred and sometimes there is prolonged shifting before this last development is brought about. The study of a series of charts is very disillusioning to an adventurer for this reason.

The kaleidoscopic nature of psychological organization given by a short-time view is not so kaleidoscopic when we follow it over a period of time. While a person may rise from isolation to a position of leadership (apparently) as if overnight, he may as easily fall out of it. It may have been built by a momentary happening in which he played a role sufficient to cause many for that moment to seek him. As the event passes into history and he is seen in perspective, he sinks again as quickly into the position normal to him. Again, he may be forced into a temporary isolation before winning back his characteristic position—it is as if the persons considered that they had been misled.

Through the survey of a series of sociometric charts, we see

that growth into a durable integrated position is far from a sudden, chance phenomenon. It seems to require persistent sincere output of effort, but once won is apparently equally difficult to destroy. A structure of leadership can be gradually overshadowed by the greater dynamic attraction of an uprising leader, but it cannot be cut off easily. The transfer of relations to another "leader" appears like an unheralded necessity.

To get into a leader position appears to require considerable exertion as shown by the rapidity of decline when the burden of leadership is placed on one unfitted to retain it. The "freak" leader may even fall into isolation and rejection before returning to a position more fitting to his capacity. The unexpansive person can make the necessary effort, it appears, only under particularly inspiring circumstances and then the period is short in which this "mood" suffices to support him. Sometimes the attention of a key individual seems to inspire the rise. Again, the quality and capacity of a person may be evident to some key individual almost at once upon his entrance into the group, and the person is readily built into an integral position.

The question arises, all things considered, how long can leadership be endured? Does it wear a person out? From all our data the answer so far is that apparently it does not. If a person is strongly enough equipped to become a leader, he is, it appears indicated, also strong enough to retain his position over a long period, in fact even for the full length of his stay in the given group. After a person has reached a persisting pattern of leadership, or for that matter any other position characteristic for him which registers his fullest growth within that psychological organization in which he has come to it, there seems to be comparatively little change in this position. If, after a year, for instance, he comes from a position of isolation to one of moderate security and acceptance, choosing and chosen by three or four persons, he does not after this period, however long he remains in this group, ever again become practically isolated nor ever enter into a greatly different position. However, if it is characteristic for him to require an aristo-tele relationship in order to maintain his position, his position will suffer the effects of its loss had he been largely dependent upon it. Ordinarily, however, the psychological currents seem hard to divert and if one once "belongs" to a particular network, it takes unusual, unforseeable events to dislodge one from his position within them.

Superiority of one sort or another does not appear to assure the holding of leadership. There may be so few points of contact that the person remains a stranger to the mass of the population, attractive perhaps only to a number of leaders and to other individuals who are also psychologically distant from the general group. Nevertheless in the course of time, such a person working from the top down, through the leader individuals, may eventually affect the structure and ideology of the group.

Although ours is a relatively small section of population including but a few. hundred persons, the study of the psychological structures built up by them implies how enormous must be the complexities of psychological structure in any large community. Their possible variations are apparently so great that a person living in the midst of them can scarcely foresee the destiny that lives ahead for him.

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Structure of Leadership-Development and Sphere of Influence

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