

Moreno's Sociometric Study at the Hudson School for Girls

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ABSTRACT. This article summarizes J. L. Moreno's sociometric reconstruction of the community at the New York State Training School for Girls at Hudson between 1932 and 1938. It discusses, on the basis of Moreno's *Who Shall Survive?* (1953), the tests Moreno used (acquaintance, spontaneity, situation, roleplaying, parent, and family) with home and work groups and his procedures for reconstruction of the community. By the time Moreno had concluded his work at Hudson, attraction between the girls in the residential cottages had increased and the number of run-aways had decreased.

J. L. MORENO'S VERY ACTIVE CAREER centered on the belief that an individual could be spontaneous and creative only if surrounded by a supportive set of other individuals that he called a social atom. To this end, he developed sociometry as a set of measures to identify social networks, psychodrama as a method of social atom repair when individual therapy was indicated, and sociodrama for group and intergroup therapy (Hare, 1979, 1986; Fox, 1987).

Over the years, Moreno presented his basic ideas in many articles and chapters in books. Fox (1987) edited a comprehensive collection of Moreno's work in one volume. Moreno's description of his major sociometric reconstruction of the community at the Hudson School for Girls, some 300 pages in *Who Shall Survive?* (1953), is out of print and unlikely to be reprinted. For those already familiar with Moreno's research, the following summary will be a reminder of the complexity of his program of intervention. For others, it will serve as an introduction that may motivate them to read the original work in all its detail. Throughout the summary, most of the terms and phrases are Moreno's, and I have used quotation marks only when it is especially important that the reader be aware of Moreno's exact descriptions.

The Hudson School for Girls gave Moreno a chance to develop and use a number of sociometric techniques, including the sociometric test, the test of emotional expansiveness, the acquaintance test, the spontaneity test, the role playing test, and techniques that deal with interaction in small groups. Although he used some or all of these techniques in other educational or community settings, Moreno's work at the Hudson school from 1932 to 1938 represents his most extensive use of these methods. His aim was to balance the spontaneous social forces "to the greatest possible harmony and unity of all."

For Moreno, the work at the Hudson school was the closest he had come to a complete sociometric experiment. He cautioned, however, that one should be aware of how far it was from going the whole way. The school's administrative structure was only partially involved, the profit motive and economic dynamics did not enter into the experimental design, and the paternalistic character of the community made the experiment comparatively easy. A change in the system of values did not enter the experiment because the desire for such a change was not articulated in the membership. All in all, Moreno concluded, the complete sociometric experiment was still a project for the future.

The New York State Training School for Girls, near Hudson, New York, was the size of a small village. The 500 to 600 residents, girls, "still in their formative age," who were sent from every part of New York State by the courts, were to stay at Hudson for several years until their "training" had been completed.

In its organization, the community consisted of two groups—staff members and students. The complex included 16 residential cottages, a chapel, a school, a hospital, a small department store, an industrial building, a steam laundry, an administration building, and a farm. Black and White girls were housed in separate cottages. In education and in social activities, however, the girls mixed freely. In each house, a house-mother functioned as a parent. All meals were cooked in the houses under the direction of a kitchen officer. The girls participated in the houses in various roles—as waitresses, kitchen helpers, laundresses, or corridor girls.

The research at Hudson was first reported in 1934 in *Who Shall Survive?* In that edition, Moreno acknowledged the collaboration of Helen Jennings, who played a major role in collecting and analyzing data. The material in this article is summarized from the second edition of the book (Moreno, 1953, pp. 219–527).

Moreno wished to know about more than the simple social organizational details of the community. He observed that whatever the social structure of a particular cottage might be, it was necessary to determine

the psychological function of each of its members and the psychological organization of the cottage group. A girl's social function, for instance, might be that of supervising the dormitory, but her psychological function was that of the housemother's pet, someone who was rejected by the members of her group and isolated in it.

The social organization of the total community had beneath its outer appearance another aspect. Attractions and repulsions between Black and White girls gravely affected the social conduct of the community. Although the girls were housed separately, emotional currents radiating from White to Black girls and from Black to White had to be ascertained in detail, their causes determined, and their effects estimated. Similarly, emotional currents radiated from one cottage to another among the White trainees, irrespective of their housing and other distinctions. Psychological currents also flowed between the officers and students and among the officers themselves. The sum of all of these currents affected and shaped the character and conduct of each person and each group in the community.

Moreno was aware that his experiment would not be welcomed equally by all segments of the community (1953, pp. 220-222). Although he had the support of the superintendent, he also had to deal with the board of trustees, the staff, and the Department of Social Welfare in the city of Hudson. He sensed that he had friends and enemies in all these sections of the community. To measure his relationship with the various groups, he used a "sociometric self-rating," mapping out in his mind two or three times a day how he was interacting with the key groups upon whom the success or failure of the project depended.

Sociometric Tests of Home Groups

The natural family, the cell of the social organization in the community at large, was missing at Hudson. The girls were separated from their parents and were assigned to a housemother. They were separated from their siblings and placed in groups of girls who were unrelated to them and to each other. For the natural parent, a "social" parent had been substituted; for the natural child, a "social" child. Moreno used the sociometric test, asking individuals with whom they would choose to associate for a given activity, to determine the "drawing power" that one girl had for another or for the housemother and, in return, the drawing power of the housemother for a girl. Through this device, he wished to find out to whom each girl was attracted and by whom each girl was repelled. The analysis of all these attractions and repulsions would give an insight into the distribution of emotions in the community and the position of each individual and group in relation to the emotional currents.

The criterion on the sociometric test used at Hudson was the girls' like or dislike of other members of the community in terms of living in the same house with them. At that time, the school population from which the girls could select home associates was 505. After pretests, Moreno decided that, to provide sufficient data, each girl should be allowed five choices. The test was given to all the girls at the same time. Moreno always insisted that the criterion of choice should be clear and that the group or community should be reorganized on the basis of the results of the test. In this case, the instructions were as follows (1953, p. 104):

You live in a certain house with certain other persons according to the directions the administration has given you. The persons who live with you in the same house are not chosen by you and you are not chosen by them, although you might have chosen each other. You are now given the opportunity to choose persons with whom you would like to live in the same house. You can choose without restraint any individuals in this community whether they happen to live in the same house with you or not. Write down whom you would like first best, second best, third best, fourth best, and fifth best. Look around and make up your mind. Remember that the ones you choose will probably be assigned to live with you in the same house.

Moreno then classified each girl according to the choices she had made and the choices she had received and made a drawing to represent each girl's "social atom." Large circles represented other cottages and small circles represented girls within a cottage who had been chosen by the subject or had chosen her. A line extending halfway from one individual to another represented a choice; if the choice was positive, the line was solid, if negative, the line was dotted.

Larger "sociograms" were constructed to illustrate the choices of members of a single cottage. Moreno could then compare the actual composition of the cottage with the composition desired by its members: Whom would they like to have in and whom out of the cottage? In a typical cottage, Moreno observed that there were some girls who, like stars, captured most of the choices. Others formed mutual pairs, sometimes linked into long mutual chains or into triangles, squares, or circles. Some girls were not chosen at all.

After drawing sociograms to represent the choices for each cottage, Moreno found that the choices crisscrossed throughout the total community, uncovering the invisible dynamic organization that actually existed below the official one. Suddenly, what had seemed blank or impenetrable opened up as a great vista. The choices ran in streams from one cottage to another. Girls in some cottages concentrated their choices within their own group. Others gave so many choices to other cottages that it appeared that the residents desired to disband.

Limits of Emotional Interest

Instead of the 2,525 choices expected on the sociometric test (505 girls \times 5 choices), only 2,285 were actually made. Individuals varied in the extent to which they used their choices. Two hundred girls used only four choices, and some used fewer. Moreno suggested that the process of slowing down of interest and the cooling off of emotional expansiveness represented the sociodynamic decline of interest. After a certain number of efforts, the interest grew fatigued. Extinction, the sociodynamic limit of a person's expansion, Moreno termed *social entropy*.

Sociodynamic Effect

Another process seemed to occur with peculiar regularity. The number of choices was not divided equally among the girls. Some attracted more attention, receiving more choices, whereas some attracted less attention, receiving fewer choices or remaining unchosen. A few girls received more than 40 choices, and 75 girls remained unchosen. Moreno called the process of persistently leaving out a number of persons in a group the *sociodynamic effect*.

Attractions, Repulsions, and Indifferences

Human relations, Moreno commented, could be compared to a two-ended stick. The emotions going from a person are only one half of the stick, those coming back are the other half. To gain information about the motives for each individual's choices, Moreno interviewed each girl to find out how she felt about living with the persons she had chosen or rejected and what her motives for choosing or rejecting them had been. Each of the persons she had named was also asked how she would feel about living with her and what her motives had been. Moreno designated the set of individuals who interlocked with any given individual the *social atom*. The sociometric test was the first attempt to detect these atoms. The interviews attempted to penetrate beneath the surface and determine what motivated the choice. For example, one girl said of her first choice, "We seem to understand each other, although we are very different." Her first choice declared that the individual who had chosen her was "so interesting. She seems to feel things so deeply." Moreno did not categorize the motivations by type.

At the Hudson school, the 505 different atomic structures often differed from the position of the individuals in their home groups. The structures frequently overlapped with one another, and many individuals were part of several structures.

Sociometric Classification

On the basis of the sociometric test, Moreno was able to classify each individual and each group within a community. In contrast to methods of classification that were current at the time, Moreno's approach did not classify individuals separately. Rather, he defined an individual in relation to other individuals and a group in relation to other groups. Moreno constructed a table for each individual that showed choices sent and choices received, within or outside of the group. In each four cells of the tables, the first figure represented attractions and the second (separated by a dash) represented the rejections. The choices and rejections sent and received inside the group represented an individual's position in the group. The choices and rejections given and received outside the group represented an individual's position in the community.

Moreno identified the following eight sociometric classifications; an individual might belong in several categories (1953, p. 235):

Positive or negative. Positive, the subject chooses others; negative, the subject does not choose others.

Isolated. The subject is not chosen and does not choose.

Extroverted or introverted. The extroverted subject sends the majority of her choices to individuals outside her own group; the introverted individual sends the majority of her choices to persons inside her own group.

Attracted. The subject uses more than half of the choices permitted.

Attractive. The subject receives more than half of the choices permitted. (*In* or *out* is added to indicate whether the choices are inside the subject's group or outside; when this is not added, the choices are understood to relate to both inside and outside the group.)

Rejecting. The subject uses more than half of the rejections permitted.

Rejected. The subject receives more than half of the rejections permitted.

Indifference. The subject is indifferent to the individuals who are attracted to her or who reject her.

In classifying individuals, Moreno did not rely on sociometric data alone. For example, the classification of one girl as isolated, rejected, and rejecting was corroborated by an intensive study of her conduct. The negative and isolated situation of another girl in the community was verified by her lack of sociability. In each case, the sociometric classification was substantiated by clinical evidence and further testing. Any change of conduct appeared immediately in the sociometric test. When the sociometric test showed a change in classification, a change in conduct was in evidence.

Even though two individuals might have the same or a similar sociometric classification, one person might be part of a network of individuals who were well adjusted, whereas the other might be chosen by individuals who were practically cut off from the rest of the community. Moreno thus observed that the sociometric position of an individual was not sufficiently defined unless the sociometric test was given to the whole community to which that individual belonged. The surrounding structure might throw new light upon the position of an individual and revise a premature interpretation. At the Hudson school, further differentiations between individuals were obtained by studying their relation to their housemothers and their classification in their own work groups.

Group and Community Organization

Several measures were derived to provide a basis for classifying types of group and community organization. For the cottage groups, the number of choices going inside the group were compared with those going outside the group. If the majority of the group members preferred to remain within the group, then the organization tended to be introverted. If the majority of the members wanted to live outside, then the group tended to be extroverted. Introverted group organizations tend to be warm and overfilled with emotion; extroverted group organizations tend to be cold, with little emotion spent within the group. When members were not interested in whether they lived with each other or with outsiders, Moreno said the organization was one of "solitaires." If the introverted and extroverted tendencies reached equilibrium, the organization was "balanced." On average, the members of the cottages at the Hudson school showed more attraction for members inside the cottage than outside. It was evident, therefore, that the cohesive forces at work in the community were stronger than the forces drawing the girls away from their cottage groupings.

Organization of Work Groups

The first goal of Moreno's research had been to analyze the relationships within and between cottage groups. When the research team next applied the sociometric test to the work situation, an additional factor had to be considered. This was the nature of the work, including the materials, tools, and machines. Two aspects now entered the test: (a) the relations of the workers to each other and their supervisor and (b) the relation of the workers to the particular technological process. A third aspect, the economic, was not evaluated in the test because the girls at Hudson received no monetary compensation.

The sociometric test was varied to fit the new situation. The tester entered the workroom and tried to achieve rapport with the group by explaining that sincere answers to the questions about to be asked might lead to a better adjustment of the work situation to their wishes. Each individual was asked the following questions:

1. Did you choose the work you are doing now? If not, name the work you would prefer to do.
2. Choose five girls from the community whom you would like best of all as co-workers and name them in order of preference: first choice, second choice, third, fourth, and fifth. The individual you choose may at present be in your home group or in this work group or in other groups. Choose without restraint whomever you prefer to work with.
3. Choose three co-workers from the group in which you are now participating whom you prefer to work with. Name them in order of preference: first choice, second choice, and third choice. Consider in choosing that some parts of the work are done by you in association with a second or third person and you may wish other associates instead of the ones you have now.

The test was given to all work groups in the community. Where incompatible individuals were identified, changes were made in the group composition or organization, resulting in an increase in productivity. In the steam laundry, for example, the two girls who had key roles as feeders of the machines were found to reject each other. One of them was the leader of a rebellious gang that had set off a race riot in the school. The two girls who, as catchers, removed the laundry from the machine also rejected each other. When the rebellious girl and one of the catchers were replaced, the relationships between members and with the supervisor improved. The relationship between the new pair of feeders was indifferent, and the relationship between the new pair of catchers was positive. As a result, the output of the whole group improved and interpersonal frictions were much reduced.

In a comparison of home groups with work groups, Moreno noted that a lack of positive choice within a work group may have had a less disturbing effect than lack of choice within a home group. Interest in the work could provide compensation for lack of interest in co-workers.

Acquaintance Test

Once the sociometric test had given information about the network of persons who had a fairly strong positive or negative attraction for each other, Moreno became interested in the number of people within each in-

dividual's range of social contact. To gain this information, Moreno devised the acquaintance test, which measured the volume of social expansion of an individual. The test was given to every incoming girl after she had been living in a cottage for 30 days, conditions were the same for every individual tested, and the test was repeated every 30 days. The instructions were as follows:

Write the names of all the girls whom you can recall at this moment to have spoken to at any time since you came to Hudson. It does not matter how long ago you made an acquaintance, nor if you spoke to her only once or many times. If you do not recall an acquaintance's full name, write her nickname or her first name or identify the person in some way. Do not include girls with whom you live in your cottage.

From an analysis of the data for 16 girls tested over a 6-month period, it was evident that the acquaintance volume varied considerably from individual to individual. Six months after entering the Hudson school, living under the same conditions and having the same opportunity to meet others, one individual had only 8 acquaintances, yet another had 131. The first girl's acquaintances were distributed among five cottages, whereas the second girl's were distributed among 16 cottages. Although the number of acquaintances showed some relation to a girl's intelligence, it was more closely related to her social and emotional skills.

The Spontaneity Test

After analyzing the sociometric network and the motivation of the members of a group, Moreno found that he wished to go more deeply into the structure of the group. He wanted to devise a way of watching how individuals entered into social relations. He felt that arousing and probing the spontaneity of the individual was the alpha and omega of the search.

As an example of the spontaneity test, Moreno presents in his book the case of Elsa, who was one of a group of five in her cottage of 25 girls. On the basis of the sociometric test, Elsa was classified as isolated and rejected. The data from the motivational analysis supported this classification.

The spontaneity test was developed to explore the range and intensity of the spontaneity of individuals in their exchange of emotions. Moreno observed a subject in spontaneous interaction with another person in the test situation and noted the other's type and volume of emotions and their spontaneous reactions to each other.

A subject was instructed as follows:

Throw yourself into a state of emotion towards X. The precipitating emotion may be either [*sic*] anger, fear, sympathy, or dominance. Develop any

situation you like to produce with her, expressing this particular emotion, adding to it anything which is sincerely felt by you at this time. Throw yourself into the state with nothing on your mind but the person who is opposite you. *Think of this person as the real person whom you know so well in everyday life. Call her by her actual name and act towards her the way you usually do.* Once you have started to produce one of these emotional states, try to elaborate the relations towards that person throughout the situation, living out any experience, emotional, intellectual, or social.

The partner received no instructions except to react as she would in actual life to the attitude expressed toward her by the subject. The two persons were not allowed to consult with each other before they began to act.

In his works, Moreno observes that this type of spontaneity test is not entirely unstructured because the two partners know one another. Life has already prepared them for each other and for the test. They do not need any preparation regarding their feelings for each other and the kinds of conflicts they get into. This is different from the psychodramatic situation test, in which the subject faces an auxiliary ego who is an artificial experimental agent.

In the course of the test, the person tested was placed opposite every person who was found to be related to her. After the subject had produced any one of the four states toward a partner, the partner was instructed to produce the state she chose toward the subject. The person tested could choose to produce the same state toward all partners (e.g., sympathy), or she might produce a different state each time. She might start out to be cordial and sympathetic but, before she knew it, her true feeling would show and she would warm up to anger and hostility.

The reaction time, the words spoken, the mimic expression, and the movements in space of both individuals were recorded by the tester. Every 10 seconds, the number of words spoken was recorded. The interaction pattern for each individual was symbolized along a time line of alternating periods of interaction and pauses, with the number of words spoken during each period of interaction indicated (1953, pp. 361-362). Today, we would videotape the exchange.

Situation and Roleplaying Tests

According to plan, Moreno moved with his research into further dimensions of group structure. The situation test was designed to explore the "situation matrix" consisting of space and time relations, locus and movements, acts and pauses, volume of words and gestures, initiation, transfer, and termination of scenes. The roleplaying test was designed to explore the "role matrix" of a group, which consists of private and social roles.

As an illustration, Moreno again described the activities of Elsa, who took part in one of the roleplaying groups that was organized for test purposes. She often acted out different roles—daughter, mother, girlfriend or sweetheart, housemaid or wealthy lady, pickpocket or judge. She acted parts in many different life situations as they had impressed themselves upon her while she was growing up in the slums of a great industrial city. In one of these situations, she was faced with a home conflict in which the mother and father had a heated argument that finally led to their separation. In another situation, she was fired from a job because she came in late; in a third situation, she faced a romantic conflict in which she loved a boy who was as poor and rejected as she was.

An analysis of the text and gestures produced in these roleplaying situations gave Moreno clues to better understand her early family life and the emotional tensions that gradually brought about her status at Hudson school. The roleplays also gave those members of the group who rejected her an opportunity to see Elsa operate in a variety of situations other than those to which they were accustomed.

In *Who Shall Survive?*, Moreno provided a detailed analysis of the data drawn from the spontaneity, situation, and roleplaying tests. He found that what may appear on the surface as an attraction or rejection may actually be a complex mix of emotions. In Elsa's case, he found that the network that contributed to her conflict was so complex that a spontaneous adjustment had become almost impossible for her to attain. An attempt at a cure involved a chain of individuals with whom her position was interlocked. School officials arranged for her to transfer to another cottage where she might be able to establish new relationships with the girls and with the housemother.

Further Sociometric Analysis

Moreno continued his sociometric analysis of aspects of community life with studies of the extent to which the cottage provided a "psychological home" for the girls, the network surrounding two girls who ran away, and the effect of having members of two races and only one gender in the community. One effect in the latter case was that some of the Black girls were cast in the male role by some of the White girls and became the object of infatuations.

As a method for analyzing the sociometric data for the whole community, Moreno made maps of the "psychological geography." The map showed the topographic outlay of the Hudson school and the psychological currents relating each region within it to every other region. Red lines from one cottage to another represented currents of attraction, black

lines currents of repulsion, and lines that were half red and half black represented split currents.

The maps demonstrated a trend of greater friendliness toward cottages and neighborhoods that were more distantly located and feelings of incompatibility toward adjacent groups. Being neighbors, it appeared, gave more occasion for friction because contacts were more frequent and intimate. It seemed that what was present and helpful was often forgotten by neighbors and what was unpleasant turned them away. An exception to the rule was two cottages that were so distant from the rest that they were more dependent upon each other. They developed more like a single family living in two houses because the attitudes of the two housemothers were conciliatory.

Interracial relations between the White and Black groups were another exception, but in the opposite direction. The closer the cottages for White girls were to the cottages for Black girls, the friendlier the attitude was between the groups. The farther the Whites' cottages were from the Blacks' housing, the less was the interest on both sides. Moreno suggested that one explanation for this was that the interracial choices and attractions were largely motivated by sexual interest. For this reason, the sexual current between White and Black girls became strong enough to override antagonistic racial currents.

An analysis of the data on girls who ran away from the school over a 2-year period indicated that girls who ran away lived in cottages ranked among the lowest for interest in living with members of the cottage, that is, the most "extroverted" cottages. Those cottages also tended to have a high number of incompatible pairs. Moreno concluded that it was always the organization of the group that kept an individual within the fold or forced the individual out.

Moreno continued to look in detail at the various types of relationships revealed through the sociometric data. In his book, he suggested how one could construct sociometric indices of these relationships that might provide clues to indicate the possibility of interventions, using group psychotherapy, psychodrama, roleplaying, or sociodrama (1953, pp. 452-455).

Construction and Reconstruction of the Community

Once Moreno had a grasp of the sociometric structure of the Hudson school, he set about the task of constructing compatible households as new girls entered the community and reconstructing old households and work groups as problems became evident. To help him in this task, Moreno devised two more tests, the parent test (1953, pp. 463-464), which allowed him to identify compatible pairs of girls and housepar-

ents, and the family test (1953, pp. 470–471), which allowed him to identify cottages that would welcome new girls.

For the parent test, the new girl was asked to entertain in her room in the reception cottage each of the housemothers who had a vacancy in her cottage. After the series of interviews, the girls and the housemothers were asked about their choices and their motivations for choices. The testing continued with the family test. The procedure was similar, only this time the new girl talked to a girl selected by the housemother who represented the general tone of the cottage. A different girl represented a cottage at each family test.

After completing the parent test and the family test for a new girl, Moreno went over the cottage organization for each potential assignment. The new girl might be placed immediately or, if no compatible situation could be found, she might be asked to remain in the reception cottage until the next test.

Entrance Test: Roleplaying

For the new girl, the tests were not yet over. She still had to go through an entrance test and, at the end of her stay at Hudson, an exit test. If her initial assignments to a cottage and work group did not prove satisfactory, she would have to go through a whole battery of tests again.

The entrance test consisted of three situations: family, work, and community. In each of these situations, newcomers enacted such crucial roles from their daily lives as daughter, sister, co-worker, wife or girlfriend, churchgoer, and student. The housemother and key members of the cottage took part in the roleplays with them. A jury was present to rate their performances. The roleplaying gave Moreno decisive clues for the most advantageous assignment of the newcomer.

Total Effect of Sociometric Reconstruction

Within a period of 18 months, 102 individuals (about one fifth of the population of the school) were initially assigned to a cottage or reassigned from one cottage to another. At the end of this period, the status of each cottage group had changed considerably when compared with its status before Moreno began his program of sociometric reconstruction.

A single case of initial assignment actually involved many more individuals. For example, when 20 new girls were assigned to cottages, more than 200 individuals were involved in some way when one considers the social atoms, the volume of acquaintances, and the positions in the networks of each of these 20 individuals. Moreno presented tables of data to show that

the ratio of interest increased in 15 cottages and decreased in 1. The average ratio of interest increased by about 10 percent. The sum of attractions, expressed in percentages, increased in 12 cottages and decreased in 3. The index of group attraction increased for 4 cottages, decreased for 10, and remained the same for 2.

Moreno indicated the best criterion for measuring the adjustment of individuals in a community such as the Hudson school was the number of girls who ran away, which showed the extent to which the community had become a psychological home for its members. Before the sociometric study, the Hudson school's level of runaways was relatively low in comparison with other state institutions, yet the number of incidents showed a remarkable drop during the years of Moreno's work.

The initial assignments through sociometric techniques had begun on February 22, 1933. After 4 months, the effect of the assignments became evident in the community. The number of runaways gradually dropped. During the following 8 months, only 6 Hudson residents ran away, an unprecedentedly low number. This would be unusual for an open population of an equal number of adolescents outside the institution. Because no essential change in the community setup had been made during this period, either in personnel or in the general character of the population received, the girls' greater inclination to remain at Hudson could be ascribed to the procedure of assignment. Moreno concluded that, because a greater number had reached the minimum of adjustment, few of them ran away.

The Impact of Moreno's Sociometry

After Moreno introduced the sociometric test, the method became so popular that his work was followed by hundreds of articles using some version of a sociometric or "near sociometric" test, primarily during the years 1950 through 1970. Reviews of the substantive findings and the methods are given in Bjerstedt (1963); Bramel (1969); Byrne and Griffitt (1973); Glanzer and Glaser (1959); Hale (1981); Hare (1976); Hare, Blumberg, Davies, and Kent (1992); Lindzey and Byrne (1968); and Moreno et al. (1960).

Since the end of the 1960s, interest in friendship groups and the underlying currents of attraction in formal organizations has continued, but the studies are no longer labeled as "sociometric." The research, now carried out primarily on university campuses with men and women who are dating, engaged to be married, or married, centers on the process of forming intimate bonds. The area of study is now labeled "close relationships" (cf. Kelley et al., 1983; Levinger, 1980). A close relationship is one in which the

two persons are willing to engage in self-disclosure. The function of friendship groups is now studied under the heading of support groups.

Readers of the current literature will find that Moreno had already begun to investigate most of the important aspects of friendship in his work at the Hudson school. For example, distinguishing an acquaintance from a friend, as Moreno did with the acquaintance test, is still necessary if one is to understand the underlying motivations for choice, as Moreno did in his motivation analysis, or to plot on a graph the degree of involvement over time, as Moreno did in his diagrams representing the interaction pattern of two individuals.

Moreno stated clearly that any test, including his own sociometric tests, only revealed the end product of an interaction rather than the interaction itself. He was more interested in the process. He devised the spontaneity test as a way of clarifying what actually went on in relationships between one person and a set of others. In a less complicated format, this procedure is now found in research in roleplays and laboratory experiments in which subjects with different degrees of intimate relationships are observed while they discuss revealing material or carry out other joint tasks.

Moreno did more than design a number of interesting tests. His goal at Hudson was the sociometric reconstruction of the community. By the time a new girl made her way through the situational tests, from entrance to exit test, she had presumably become quite familiar with roleplaying and the fact that Moreno was trying to make her stay at Hudson as productive as possible. She must have received the message that she was important and her social atom was important. She had learned how to adjust her behavior in interactions with different persons in different situations. She was learning the social skills that she had presumably lacked when she was sent to the school for "training."

Anyone currently providing social or psychological services at a residential school, psychiatric hospital, prison, or any other closed community would do well to reread Moreno's work, not only to find suggestions for tests of social relationships that might be adapted to a current situation, but also to absorb Moreno's overall approach to the enhancement of individual creativity through the social construction of reality in the community.

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