

Sociometric Intervention in Family Therapy: A Case Study

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ABSTRACT. This is a case study with an alcoholic family in which Moreno's sociometric test was applied with subsequent therapeutic confrontations (Carvalho, 1986). The task was to diagnose the sociometric structure of the family that had been referred to us, pinpoint the areas of conflict and difficulty, and work them through with the use of therapeutic confrontations between family members (Carvalho, 1987). Preliminary results confirm the usefulness of this methodology as an instrument of therapeutic intervention in families. The purpose of this article is to illustrate (a) the speed of application in a family therapeutic setting; (b) the concretizing of family-systems difficulties (conflicts); (c) the format the family can follow when they return home; (d) the concrete "picture" of their own network (sociogram); and (e) the medium for immediate feedback.

MUCH HAS BEEN WRITTEN in the field of family therapy in the last decades and by many different authors—Jay Haley (1976), Virginia Satir (1976), Napier/Whitaker (1978), Salvador Minuchin (1974), and Robert Spitzer (1975), just to name a few. Haley and Hoffman (1967, p. v) made an interesting point when they wrote :

[B]ecause of the variety of ways families are treated, one cannot call family therapy simply a new method of treatment; it is a new way of conceptualizing. . . . If the individual is to change, the context in which he lives must change. The unit of treatment is no longer the person, even if only a single person is interviewed; it is the set of relationships in which the person is imbedded.

Moreno would have agreed with them. He called this "set of relationships in which the person is imbedded" the social atom, or "that nucleus of persons to whom one is connected" (Hale, 1981, p. 17). The individual is born into "a social group, usually the family," that can be referred to as a kind of "social

placenta” (Bermudez, 1970, p. 47). The family can be considered the first identity matrix and possesses the “fundamental task of transmitting the cultural legacy of the group . . . and preparing the individual so that he or she may be incorporated into society” (Bermudez, 1970, p. 47.) The importance and the influence of the family unit cannot be underestimated.

Moreno had treated a couple in the 1920s, and by 1946, he had written about therapy with couples (Moreno, 1977, p. 233). Treating families can be seen as “group psychotherapy,” a term he coined in 1934 (Hale, 1981), in which the group is the family. This article describes the first experience we have been able to pinpoint that treats families through the use of sociometry. This is offered as a new way of conceptualizing family therapy—diagnosing family relationships and treating them as a specific kind of “group” psychotherapy. This methodology, described by Carvalho (1986), was used in a more traditional psychodrama/psychotherapy group.

Sociometry and Family Therapy

In this case study involving the family of an alcoholic, the therapists used a sociometric test with subsequent therapeutic confrontations (Carvalho, 1987). The task was to diagnose the sociometric structure of the family according to the methodology (Carvalho, 1987) and, taking it a step further, to work out family relationships through therapeutic confrontations.

The family described came voluntarily to the consulting office with all of its members: father, mother, son, and daughter. The contract with the family required that they be present at all sessions. The sessions were 2 hours long, and the family was required to pay for cancellations. A session did not begin until all of the members were assembled. They could contact us in case of emergencies, if necessary. They were told that this was a kind of brief therapy (usually not longer than 8 to 10 sessions) and that the intrarelations of the family members, along with their strengths and their points of conflict, would be a focusing point. The sessions would also give them the opportunity of discovering new forms of relating to one another.

Criteria

Intimacy (portrayed in this case by sharing secrets) was considered a sign of health or, in sociometric terms, greater group cohesion. It was expected that families would demonstrate greater group cohesion for more superficial relationships (going out) than for the more intimate ones. If the family sociograms portrayed significant results in the more intimate criteria, one would expect better intrarelations in the family. Hale has reported Moreno’s explanation of better intrarelations:

Moreno coined the word *tele* to describe that current of feeling which flows between two persons. Tele, an abstraction, is responsible for reciprocity, mutuality and cohesion in groups. . . . Tele exists when the perception one has of another matches the perception that person has of him/herself. (Hale, 1981, p. 11)

The family was tested by using the following sociometric instrument:

1. Whom would I choose from among my family members as the person with whom I would want to go out and enjoy myself? (The perceptual test was: How do I think I was chosen by the different family members?)
2. With whom from among my family members would I choose to share a secret? (The perceptual test was: How do I think my family members chose me?)

Imposing the sociometric criteria on the family instead of letting them choose their own was a means of standardizing data so that, in future studies, these data could be compared to those of other families. It is always interesting to let families choose their own criteria because this brings forth a wealth of information, but for research purposes, this makes it almost impossible to compare results.

The members of the family were required to make positive, negative, or indifferent choices with regard to other members of the family. It was also explained to the family that the choices had hierarchy; for example, the name of the person they placed in the positive column indicated the person that they most wanted to go out with (Criterion 1). To these choices were attributed diminishing values from N-1. The data were tabulated after correction (according to Bustos, 1979), and the sociograms were drawn up. These will be discussed later.

Procedure

Once the test was corrected, the results were shared with the family. The members then read to the others a description of how they had chosen the members of the family according to both criteria, and they reported how they had expected to be chosen. The therapists also shared the sociometric, perceptual, and telic scores for each member, as well as the Family Telic Score (FTS). The mutualities and incongruencies were also shared with the family. The incongruent results and the negative and indifferent mutualities would be worked through in therapeutic confrontations.

In the format for the therapeutic confrontation, the two parties confronting each other sit face to face and read out their answers and reasons for their choices with regard to the other person. They look straight into the other's eyes and explain how they feel about their relationship. Next to each person there should be a cushion or an empty chair where other members of the fam-

ily, or therapists themselves can step in and “translate” the underlying feelings when they are not being clearly expressed. For example, one may say to the other, “I don’t like you. I think you’re worthless.” In truth, what they may really mean is, “You have hurt me so much by what you have done (or said) to me that I just want to get back at you. I want revenge. I want to lash out at you. Because you are very important to me, you have the power to hurt me, and you have used it to do so.”

The “translator” must speak in the first person, as if he or she were the one being interpreted. The “translator” must attempt to express the confronting party’s feelings and not his or her own. The confronting party (let’s say Person A) can agree or disagree with the intervention, and the conversation may continue from there. Once the “translator” has had his or her say, the translator returns to the audience. The confrontation ends when the confronting parties agree that they have said everything they feel they need to say to each other or when the relationship has been cleared up enough so that both parties are satisfied with their comprehension of what goes on between them. Many times, a reconciliation is effected when both parties finally manage to understand the dynamics of the relationship. Other times, past experiences in the individual lives are pointed out as something that is clouding up a person’s present perception and are pointed out as something to be worked on by the individual, perhaps in individual therapy. There are as many endings as there are people to confront.

Case Study

A family contacted the therapists by phone with the complaint that the family was facing difficulties, especially between the father and the son. The mother made the initial contact and appointment for the first interview with the whole family. The family was made up of four members: father (aged 46), mother (46), son (21), and daughter (19). The entire family came to the first interview. Because of space limitations, only the first, second, and seventh sessions will be presented. The complete manuscript is available on request from the authors.

First Session

The consulting room has two movie-director type chairs for the two therapists (director and auxiliary ego), a rectangular stage in the center of the room, and large and small cushions spread around the room, to be used for sitting by the family members. The cushions are in many different sizes, shapes, and colors so that they can also be used in the structuring of images, that is, emotional “photographs,” “pictures,” or “sculptures” onstage.

The mother and the father came in and sat on one side of the room, with about one meter between them. The children sat on the opposite side of the stage, in a similar form. The therapists asked them the reason for their visit, and the mother made the initial presentation: They were having a series of difficulties in the relationship between the father and the son, and she believed that therapy could help them. We then interviewed each member regarding his or her reasons for coming. The father said he had a "bohemian" lifestyle, liked to go out and have his beers with his friends, and thought that this made him an "absent father" (his words). He acknowledged the difficulties that existed and was willing to cooperate in the therapeutic process, especially because his own therapist had recommended it. (He had agreed to interrupt individual therapy while he was in family therapy, as requested by the therapists.)

The son spoke in similar fashion, as did the daughter. However, the son avoided all contact with the father, never directed his words or eye to him. Among the many complaints that the son had about his father (he described several incidents), the sharpest complaint was that the father did not listen to the son and always insinuated that he acted like a child. The father answered that he was very worried about his son, whose birth had been very difficult. (The mother was asked about some of these details.) While the father spoke, the son interrupted an endless number of times. This behavior was eventually pointed out by the therapists.

All were consulted about their willingness to participate together in a therapeutic process and were agreeable to proceeding once the process had been described. The appointment was made for the next session. The son made a fuss about the hour that had been established but finally capitulated and agreed to come at the appointed time.

Second Session

When the family arrived for the second session, they split up into two "couples" and arranged themselves as before; however, the mother and son sat next to each other, and the daughter and father sat next to each other. The father was facing the mother at the far end, and the siblings faced each other, closer to the therapists.

After some brief introductory words, the therapists explained her proposal to do a short test that would help all proceed with therapy. The son complained that if it was "one of those tests that you have to write a lot, I'm not interested." The mother retorted that because "we've already come for help, we might as well do as they say." When the son realized that it was a simple test, he agreed to it.

Sheets of white, letter-size paper were distributed to all of them, folded in three columns, with a positive, a negative, and a positive/negative sign (which

signifies literally “more or less” in Portuguese, a symbol of indifference) at the top (+, -, + -) of each column. On the outside of the sheet, each member was asked to write his or her first name and the word *sociometric*. The members were instructed to fill each column according to the criterion: With which person in my family would I choose to go out? They were to justify their choices in a short phrase beside each name, according to the column chosen. Some explanations were given: First choice in the positive column indicated the person that one would most like to go out with; first choice in the negative column was the person that one would most not want to go out with; a choice in the indifferent column meant it did not matter one way or the other. We emphasized that all members of the family had to be placed in one of the columns along with a the short explanation for the choice.

The same procedure was used for the perceptual test (How do I think the other members of my family chose me? positive, negative, or indifferent). The whole procedure was repeated, using the sociometric and perceptual tests for the second criterion about the family member with whom one would share a secret. All of the sheets were taken up for correction and tabulation. The results can be found in Appendix A and Appendix B.

Because there was still half a session left, the therapists proposed a socio-dramatic complementary exercise in which the family was to make believe that they were to be photographed for the family album and should arrange themselves accordingly. The daughter immediately said, “I know that whatever we do here would be different than if we did it outside the office. I know that we are going to be analyzed as to where each one of us goes.”

The therapists explained that, yes, that was true, but that the location would be taken into consideration. In spite of all the possible “contamination” of the therapeutic situation, the therapists believed that something useful could come out of it. They told the family that they were to do the best they could until all of the family members were in agreement about their positions; each one had the power of veto if he or she was not satisfied with the arrangement. The family members were to work on the arrangement until they arrived at a unanimous agreement on how they were to be arranged for the family picture. In a little more than a minute, they had arranged themselves for the picture (Figure 1).

All family members were smiling. (This fact was so unusual that it elicited a comment from one therapist to the other that it was the first time they had seen the son smile.) Because some of the family members were maintaining a very precarious balance in order to keep the picture as it had been originally envisioned, they soon asked if they could undo the image. We asked them to keep it a bit longer (so that they could feel the precariousness of their positions, especially the women.) We then asked each one to leave the picture, and the other members were to feel what changes occurred with each leave-taking. Finally, we asked each one to come out of his or her place, one at a time,

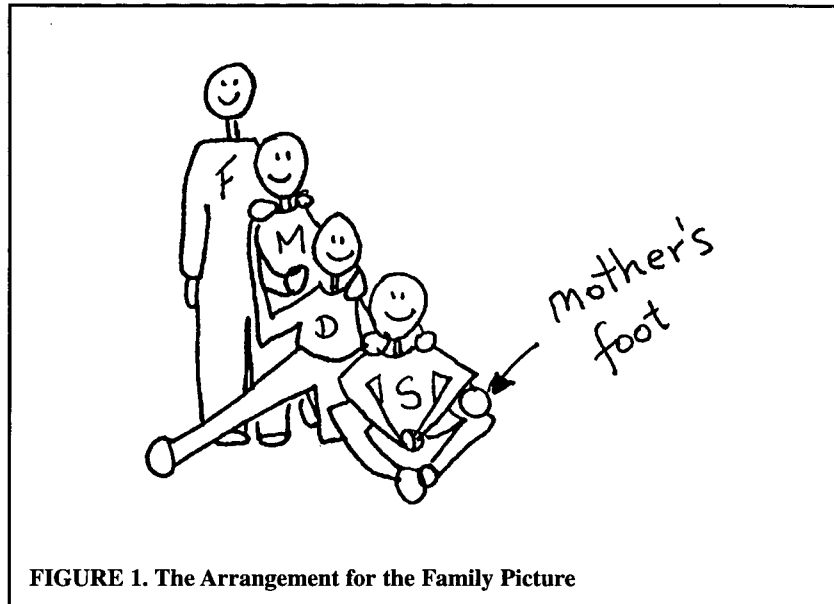


FIGURE 1. The Arrangement for the Family Picture

so that the auxiliary ego/therapist could take up that position. This way they could see the picture from the “outside” as the therapists saw it. The son asked for extra time to observe it when it was his turn because he enjoyed looking at photographs. It was the only moment since the beginning of therapy that he was not agitated and seemed calmed down (a fact that he confirmed while we were discussing the image).

As the family members came out of their positions in the “photo,” we noted their comments and observations:

1. The father made mention of the fact that when he left the picture, very little was altered; the mother just tried to support herself on her children with his exit. He was relieved on one hand, yet saddened to see that he apparently was not so important in the family structure.

2. When the mother left, the link between father and children was undone. (This image confirms the sociometric structure of alcoholic families as studied in previous families [Carvalho, 1987] in which the mother’s role is to serve as the sole channel of communication and linkage between father and children.) The splitting of the family in two was perfectly clear to all. The daughter lost one of her points of support and had to lean more on her brother. Her situation became even more precarious. The situation of the son was little altered, except that the distance was maintained between father and son, but without the mother’s linking presence.

3. When the daughter left, the mother felt an enormous emptiness but continued to maintain her link with the son through her foot. She would have liked him to have come closer. (He did not move.)

4. As one watched from outside, it seemed that the exit of the son would cause the whole “pyramid” to come tumbling down. There really had been many significant modifications: The mother had to look for another point of support for her foot (that had been on his leg). She put it on top of the other foot, as she herself hurried to point out. The daughter lost another of her support points and had to struggle to maintain her position.

Speaking to the family, the therapists made the following observations:

1. The mother was the link between children and father.

2. The children “cooperated” with the mother so as not to have to form a direct link to the father (because they had had the chance to establish this link and did not pursue this possibility).

3. The balance in the “feminine wing” was extremely precarious. The men served as the support points (the father for the mother, the son for the mother and daughter). When the daughter commented that women are always being discriminated against, one of the therapists observed that these had been the positions that they themselves had chosen for themselves.

4. It was very clear that the father–son communication problem was not the only problem. Other relationships were in trouble, and the very structure of the family became a matter of discussion.

The therapists concluded the session by stating that they would correct the test and return the results at the next session. The family left with a much lower level of tenseness than they had had the time before, and they agreed to think over what they had perceived from the “family picture.”

Results of the Sociometric Test

When the test was corrected for both criteria, the results indicated that the family definitely was in need of therapeutic intervention. For Criterion 1 (going out), the family telic score (FTS) was 50%, borderline between critical and adequate. On Criteria 2 (secret), the FTS was 41.5%, within the critical zone (Bustos, 1979). We also found there were two incongruencies: between mother (+ –) and son (+), and daughter (–) and son (+ –). There were also a negative mutuality between father and son and an indifferent mutuality between daughter and father. The results of the queries are shown in Table 1.

As a result of the answers to the questions, the therapists decided that therapeutic confrontations would be needed between the father and daughter, the mother and the son, the son and the daughter, the father and the mother, and

TABLE 1
Results of Criteria 1 and 2

Mutualities	Incongruencies
<i>Criterion 1</i>	
+ Father/Mother	Mother (+ -)/Son (+)
- Father/Son	Son(+ -)/Daughter (-)
+ - Father/Daughter	
<i>Criterion 2</i>	
- Mother/Son	Father (-)/Mother (+)
+ Mother/Daughter	Father (+)/Son (-)
	Father (+ -)/Daughter(-)
	Son (+)/Daughter (+ -)

the father and the son. From these incongruencies, it was clear that the problem between the father and the son, as was originally presented by the family, was not the only problem.

Seventh Session (Final)

All the family members arrived late; first the son, and then the other three. The mother explained that they had not been certain that the son would come because he had been traveling. She also reported that the other members had decided that this would be the last session, whether or not he arrived in time. The son explained that he came directly from a farm where he had been spending a few days, and that he had gone to a lot of trouble to make it. He made it very clear that he thought this session was very important. The mother and the father sat on the same side as before but now sat close together. The relationship between the siblings seemed less tense.

The therapists asked about their homework, and the family described the "pseudo-fulfillments." The father, mother, and daughter went out together on the mother's birthday, and the son ran into them by chance and stayed to talk with them at the bar. The father and mother went to a show with the daughter and her boyfriend. ("But my father and I sat together and talked—that counts, doesn't it?")

The mother described some of her difficulties in attending to the request made by the therapists in a previous session that she not serve as the go-between for father and children. However, twice during the week she caught herself falling into the old pattern. She reported that she decided to continue to make an effort to change this pattern of being the family mediator and that

she wanted to return to her individual therapy, which she had interrupted to do family therapy.

We asked the group for an evaluation of their experiences in therapy. We knew this would be the last session, not only because the family had expressed it but also because the auxiliary-ego therapist was going on maternity leave in the next few days.

The son said that he had not thought much about it but that he had perceived a whole lot of new things about himself, about the other family members, and about his relationships. The mother expressed a certain dissatisfaction because she did not achieve her basic goal (implicit: changes in the father's behavior). She mentioned that she saw her children as growing closer, and they confirmed this, although they were quite surprised at her observation. The daughter said that her relationship with the brother had really improved, but, other than that, she had not seen any great changes. For her, the therapy only clarified what she already knew. The father said that he had gained a better comprehension of the family and that "now I am absent by choice."

The director therapist made her evaluation of each one, confirming what each one had shared and giving her perception of it. To the father, she noted that he now has the option of being absent, that he can now make the conscious choice to drink instead of interacting with his family. We then told the family that they would have to respect his right to choose drinking instead of the family. The therapists told the son that they observed a noticeable increase in his capacity to listen to other people. (During this final session, he had interrupted the mother at one point. When he realized that he had done so, he asked her to continue what she was saying.) The therapists empathized with the mother's suffering and encouraged her to return to her individual therapy as the mother had proposed to do. The director also pointed out to the children the importance that these perceptions can hold for future marital choices and the subsequent family they may come to have. Finally, she observed that it had been worthwhile working together and that she felt privileged for having been entrusted with their confidence.

The auxiliary-ego therapist made a similar evaluation, adding that she admired the mother for her effort to stop changing others and to have invested so much time and effort in her family. She also said that she supported the mother in her desire to invest more in herself now and in the future so that she could relieve some of her frustration with her family, which had not helped her to grow as a person. She also pointed out the similarities between the mother and daughter and noted that what the father called absence was a sign of his difficulty in establishing more profound and intimate personal relationships. She suggested that he could return to his individual therapy and work on this issue. *She underlined the importance of having a more realistic and truthful perception of the family as a form of change.*

The therapists ended the session by asking for a follow-up session in 4 months. Both therapists asked for permission to publish a report of this case study, guaranteeing the family's privacy. All members agreed to this request.

Therapists' Comments About the Sessions

Some real changes had already occurred among some of the members: The mother had expressed her desire to change her mode of interaction and had taken concrete steps toward this goal. The son had shown changes in his family-interaction patterns even within the structure of the therapeutic session. Paradoxically, the family's resistance to change was observed. Between the fifth and sixth sessions, when the mother called the auxiliary-ego therapist to cancel an appointment, she shared with the therapist the information that her son was thinking of going to live with a girlfriend who was pregnant by someone else. This issue was never raised in the session and therefore not mentioned by therapists because the agreement was to work on things brought to the therapy sessions. This report, however, was a sign of the "family secrets" and evidence of the difficulty in managing some very real issues. One aspect of therapy is that it should help members make more conscious choices about how they wish to live. This was obviously accomplished with the father, who now realized that he could continue to drink, but that his doing so had become a conscious choice.

Discussion

At the time this article was being written, the family had not returned to group therapy. Our goal is to repeat this test with another family group and compare the results. At this point, we feel that one can presume from both the therapists' and the family members' evaluations that the tests had been a worthwhile endeavor that helped to clear up the family situation. The family members regained their options of changing or not changing.

The therapists firmly believe that now that the dynamics of these relationships have been exposed, the family cannot go back to living, as before, in its "unconscious bliss." They cannot return to not knowing. The therapists were also able to perceive that the living situation among them had improved: The children were getting along better, the father had made his choice for "absence," and the son learned to listen to other people and respect them even when they think differently from the way he does.

The therapists' initial conclusion is that this manner of intervention can be useful to unveil family relationships. As the therapists explained to the family, this phase of therapy was basically diagnostic. If they wished to achieve further changes, that could become a new goal for therapy. It was pointed out

to them, however, that such changes had not been their final choice. It was possible for everyone involved to see that the sociometric test had been useful for the family's therapy and that the therapeutic confrontations clarified the family relationships and made some changes possible.

Discussion of Data

Criterion 1

The family perception score (PS) was below 50% (49.5%), and only the daughter perceived other family members with clarity (her PS being 100%). She confirmed this at the final session by saying that therapy "only clarified what I already knew." On the other hand, only the messages emitted by the father were clear, something that was also confirmed by the family: "He is absent." The other members' emissions were obscure (33%), which makes relating very difficult. If a person does not emit clear messages, the other person only comprehends him or her with great difficulty. The mother and the son presented the lowest telic scores (average of perception plus emission scores). They, however, were the ones who presented the greatest changes during the therapeutic process.

The family telic score (FTS - the average of all the family members' telic scores, which is a measure of group cohesion) was borderline only because of the inclusion of the daughter's PS (100%) and the father's ES (emission score = 100%). Otherwise, it would have fallen within a critical limit, even on Criterion 1, as a more superficial relationship.

It was very surprising to note that the sociometric star (largest number of mutualities) in this sociogram was the father, a finding that leads us to think that he performed an organizing function in the family. Such an observation we felt confirmed previous studies by Steinglass (1976) about the organizing function of alcohol in alcoholic families and the use of this function in group cohesion.

Criterion 2

The information from Criterion 2 was more discriminatory. Here, a zero score was present (mother, PS; father, ES). The father was well perceived in the more casual relationship but was very poorly perceived in the more intimate one. He demonstrated great difficulty in emitting clearly what it is he really feels. The others had great difficulty in perceiving what it was that really went on inside of him because his emission was so poor or incongruent with what he felt. The mother perceived everyone poorly; the father perceived them much better (PS = 67%). However, the mother emitted very clear messages that were well perceived by all (ES = 100%).

The FTS (41.5%) justified a therapeutic intervention (group cohesion was poor). There was no well-defined sociometric star. The mother and the son had two mutualities each. In this instance, we could propose that the "parentalized" son was the star, but that would have been only as a possibility for investigation because the family group was so small that one could not speak of statistical value. Once again, these data confirmed the data investigated by one of the authors in her thesis (Carvalho, 1987) on alcoholic families and their sociometric structure.

Conclusion

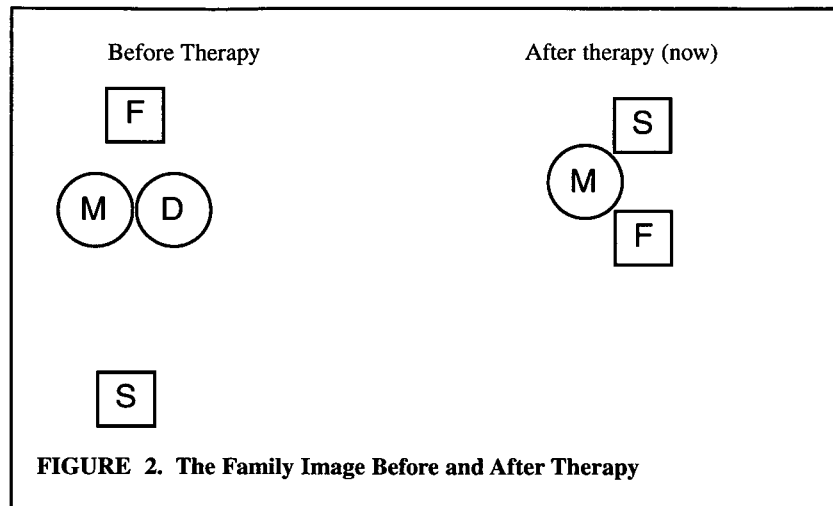
We concluded that the sociometric test can be used as a diagnostic instrument and that the preliminary results seem to confirm the advantage of its use as an instrument of therapeutic intervention in families, to be used in conjunction with therapeutic confrontations.

Epilogue

After submitting this article for publication, the second author was able to interview the family in this case study 3 years after these sessions had been held. The family was more than glad to oblige her in the follow-up interview, which lasted about 2 hours. The daughter had married about 1 year before the interview and had gone to live in a distant town. The wedding had been held on the parents' 25th wedding anniversary. The father had retired and was enjoying every minute of being retired. He stated that now he was better able to give more time to his family. The mother was calmer and less anxious. The son had finished his college degree, had a job in his field, and was living at home.

The therapist asked the three members of the family to put together an image, using the cushions in the consulting room, that would express their perception of what the family was like before and after the therapy of so many years ago. Because the daughter had married and moved away, she was not included in the "after therapy" image (Figure 2).

The family informed the therapist that they now felt better but that they did not attribute this to the family therapy. They felt that the improvement was the result of the crises they went through as a family, which knit them closer together: the daughter's marriage and the son's arrest for giving cover (naively?) to a friend who broke into a car. After the son's arrest, the family appropriately perceived their need to change some aspects of how they related. The father developed a closer relationship with his son, requiring more accountability from him. This change in their relationship helped the son avoid subsequent problems.



The son still complained of personal difficulties and was seriously considering going for individual therapy. The mother missed her daughter and was sometimes annoyed by the fact that her husband was at home all the time. She also confessed that she was a bit jealous of the close relationship that the father and son have now developed. The father's drinking no longer seemed to be a problem, although the mother was still taking medication for anxiety, and the father had been on lithium at one point. This information is something that would be worth pursuing if the opportunity should arise.

We two therapists have concluded that the sociometric confrontations helped open up channels of communication that led to the possibility of better resolutions of the crises. The presenting problem—the father/son relationship—was obviously resolved, and the family became freer to come and go. The daughter was able to get married. The son did not marry the pregnant girlfriend as a means of getting away from home, although he did finally get his father to come around by getting himself arrested. The father's problem drinking had cleared up. Most of the feelings expressed in this interview seem to be congruent with their circumstances.

The fact that the family was able to make the necessary changes at appropriate times makes one think that there is now greater flexibility in the family. The mother is mourning the loss of her "control" over the children and probably has a bit of empty-nest syndrome because she and the daughter were especially close.

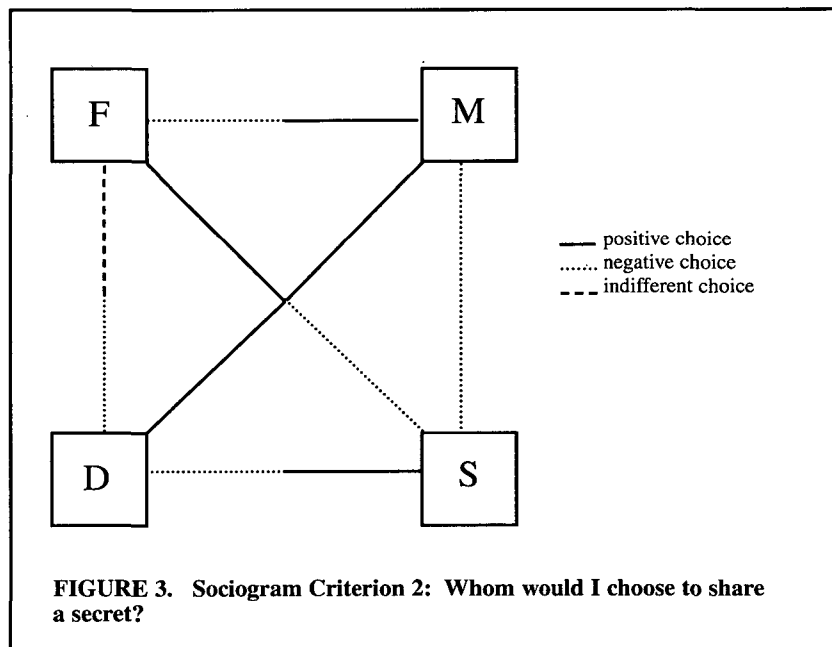
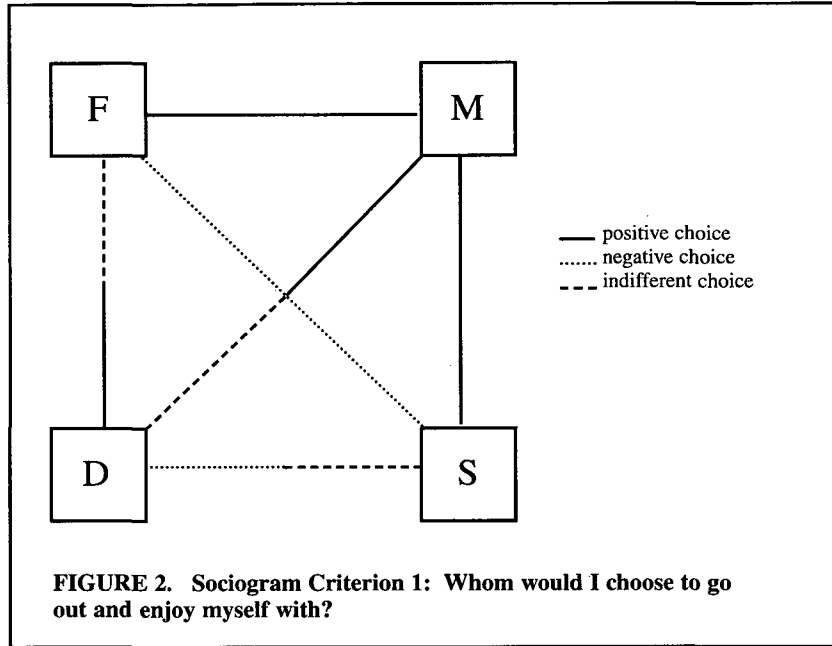
The authors believe that the preliminary results of using Moreno's sociometric test in conjunction with therapeutic confrontations are promising enough to justify further research and investigation.

APPENDIX 1 – CRITERION 1

These are the choices made by each family member on Criterion 1 for the sociometric and the perceptual test described earlier.

Appendix A
Choices Made by Each Family Member on Criteria 1 and 2 of the
Sociometric and the Perceptual Tests Described Earlier

Sociometric	Perceptual	
<i>Criterion 1</i>		
Father chose/mother	1+	1+
/son	1-	1+ -
/daughter	1+ -	1+ -
Mother chose/father	1+	1+
/son	1+ -	2+ -
/daughter	2+	1+ -
Son chose/father	1-	1-
/mother	1+	1+
/daughter	1+ -	1+ -
daughter chose/father	1+	1+ -
/mother	1+ -	1+
/son	1-	2+ -
Mutualities (when the sociometric choices between two members coincide): F = 3, M = 1, S = 1, D = 1.		
Incongruencies (when the sociometric choices do not coincide): F = 0, M = 2, S = 2, D = 2.		
<i>Criterion 2</i>		
Father chose/mother	1-	2+
/son	1+	1+
/daughter	1+ -	1-
Mother chose/father	2+	2+ -
/son	1-	1+ -
/daughter	1+	2+ -
Son chose/father	1-	1-
/mother	2-	2
/daughter	1+	1
Daughter chose/father	1-	1-
/mother	1+	2+
/son	1+ -	1+
Mutualities: F = M = 1, S = 1, D = 1.		
Incongruencies: F = M = 1, S = 1, D = 2.		



Appendix B
Individual and Family Perceptual and Emission Scores,
Shown in Percentages

	F	M	S	D
<i>Criterion 1</i>				
PS (%) ^a	33	33	33	100
ES (%) ^b	100	33	33	33
TS (%) ^c	67	33	33	67
FTS ^d = 50%.				
<i>Criterion 2</i>				
PS (%) ^a	67	0	33	67
ES (%) ^b	0	100	33	33
TS (%) ^c	33	50	33	50
FTS ^d = 41.5%.				

^aThis percentage (perceptual score) is calculated by the coincidences between the individual's perceptual choice with the other person's sociometric choice for him or her. ^bThis percentage (emission score) is calculated by the coincidences between the individual's sociometric choice and the other person's perceptual choice for him/her. ^cThis percentage (telic score) is the average of each individual's perceptual score (PS) and the emission score (ES). ^dFTS is the average of all family members' telic scores.

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