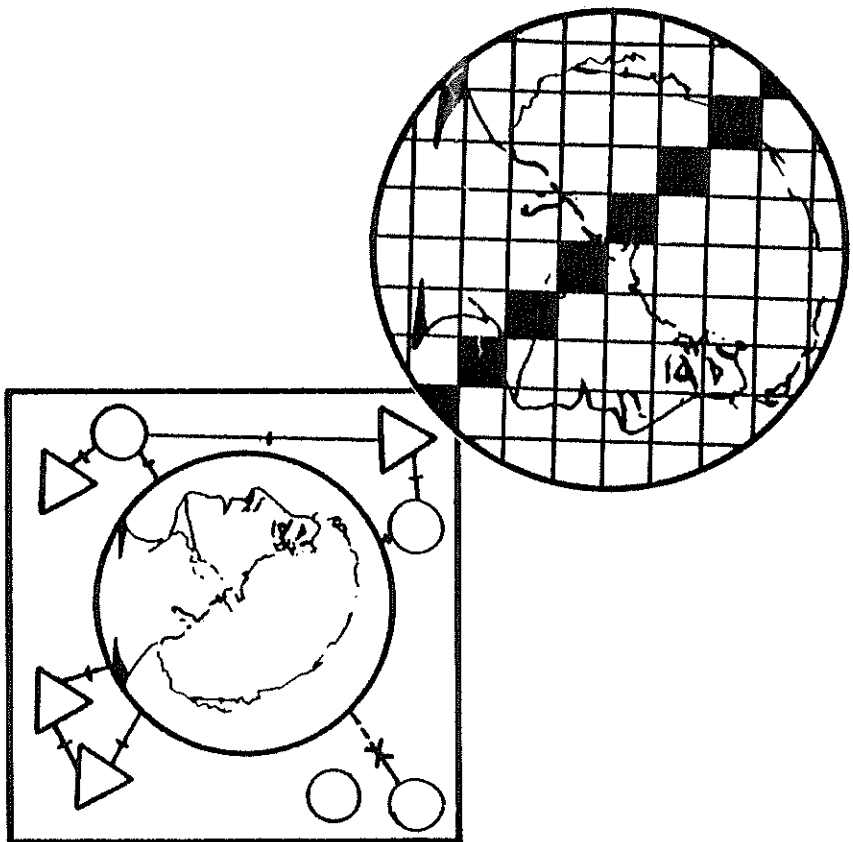


CHAPTER III

THE SOCIOMETRIC TEST

- Ann Hale



THE SOCIOMETRIC TEST

Introduction

The primary purpose of a sociometric exploration of a group is to reveal information to the group and its leaders about itself, specifically focusing on the connections which exist between group members and the reasons for those connections. Moreno developed a number of devices which accomplish this purpose to varying degrees. This chapter describes the sociometric test, an exploration of the choices group members make for each other as partners for specific activities.

The sociometric test has been in use since 1934¹ in many settings² and in combination with other research procedures. Consequently, the procedure has undergone expansion and refinement. The writer has chosen to present the classical sociometric test in detail, as a process, with a warming-up phase, an action phase, a sharing phase, an analysis phase and a future projection/intervention phase. Following this detailed process the reader is referred to Chapter VI which is devoted to action sociometry and quasi-sociometric methods.

The Warming-up Phase

The decision to use a sociometric test may result from pre-session planning, or it may arise as an answer to an immediate group need. Also, a group may decide to learn about the procedure by "doing one." The intent, those reasons for choosing this particular procedure, becomes a central element in the design of the sociometric test and consequently affects the warming-up phase. The decision to use the sociometric test assumes a thorough understanding of the procedure on the part of the person conducting the exploration (sociometrist) and his ability to describe the process to participants.³ The sociometrist needs to be clear about ways the sociometric test will meet an expressed need of the group here and now and the impact it may have on their interactions in the future.

The Warm-up of the Sociometrist

The person conducting the sociometric test in a group is involved in directing a number of persons in a collective exploration of a highly sensitive personal process: choice. Preparation of oneself to engage in this procedure means anticipating group concerns and reactions and being ready to confront these concerns directly and confidently. It also involves examining oneself for anxieties, fears, prejudices and covert issues which might inhibit the confidence and honesty with which he or she handles the exploration.

Some questions which focus the sociometrist on their own warm-up phase⁴

These questions are posed to evoke reflection and to generate an internal dialogue which can result in "spontaneous collaboration,"⁵ that of the sociometrist with the group, utilizing his or her perceptions and pointing the way to those areas where more information is required.

Can I identify when it was and what was happening in the group which prompted me to consider using the sociometric test?

What advantages do I foresee to its use? For me? For the group?

What disadvantages do I foresee to its use? For me? For the group?

What could happen which would affect my confidence? Who is likely to be involved if this happens? How do I imagine handling this situation if it occurs?

Is there any aspect of the procedure I am unsure of? What do I need to know, and where can I find an answer to my questions?

What alternatives to the sociometric test have I in mind which could assist the group in its present stage of development and readiness?

Will I take part in the exploration as a participant and share the role of co-researcher with the other members of the group? How will this decision be handled in the group?

The Warm-up of the Group

The first concern the sociometrist faces is the group's need to know what a sociometric test is, what is expected of them, what is going to happen.

"A full and lucid presentation, first perhaps to small and intimate groups, and then in a town meeting if necessary, is extremely helpful."⁶

The writer has prepared two appendices to this chapter which will be useful at this stage of the process. Appendix I, a-e, is a modified flow chart of the steps involved in the classical sociometric test. This chart can be used in outlining the procedure to a group; it can be used by group members as a guide which they can follow. Appendix II, Description of the Sociometric Test for the First-time Participant, is a short guide which can be handed out to participants beforehand and used for discussion in those "small and intimate groups" Moreno suggested.

The manner in which the introductory phase is handled will greatly influence the level of fear and resistance in group members' responses. It is important that the sociometrist remember that anxiety effects attention and retention. He or she may have to repeat instructions and to clarify a point more than once.

There are concerns which are expressed with some frequency by groups as they contemplate involving themselves in the sociometric test. The following is a listing of some frequently asked questions:

What is tele?

What is meant by neutrality?

Why not just ask us whom we like and dislike?

Since you say that the group's structure is constantly changing, depending on what we are doing, how important can it be to get a picture of the group's structure for only one activity and one point in time?

Can't this cause a lot of hard feelings in our group? How can it possibly help someone for them to find out that they have been rejected?

I don't see how doing this can really change anything. Don't most people know where they stand by now?

I don't see the usefulness of bringing negative feelings out into the open. Look at how we dealt with Judy and Carl's situation. It was never resolved. Why would we want to generate more conflict if we are not able to handle it.

Some frequently asked questions about the process of choosing:

What if I want to choose someone who is not here?

There is someone I could put under both choose to and choose not to. What do I do about the fact that to me they belong under both places?

Is there any way we could do this without showing the choices to anybody?

There are several people I would put as my third choice. I really can't distinguish between them. Is that allowed?

Won't people think I'm conceited if I guess that a lot of people are going to choose me?

Is it okay if I drop out? I really don't want to do this. I thought that I could go along with it, but as I do this I find it fits my worst fear of what could happen in a group like this.

These questions reflect the nature of the group member's readiness to proceed or the source of their anxiety if they are unable to continue. These concerns can be the topic of discussion in smaller sub-groups. The less anxiety that exists the greater the potential for spontaneous

choice-making.⁸ It is important to proceed more slowly if that allows the group to be respectful of other group member's concerns and their status of co-researcher.

Meeting in small groups provides for a release of tension which may have been built up during the discussion in the larger group. The smaller group gives persons more opportunity to speak informally and to reveal the sources of fears and anxieties. Persons eager to begin the sociometric test can use this opportunity to share the source of their positive feelings for the process.

What if the group decides not to proceed with the sociometric test?

Each person in the group should be willing to involve themselves. If a person or persons seriously object, the group needs to consider an alternative exploration which can be all-inclusive. Moreno's first sentence in Who Shall Survive? (1934) makes this quite clear:

"A truly therapeutic procedure cannot have less an objective than the whole of mankind."⁹

There are times when a group may wish to proceed, despite the refusal of a member, or members, to participate. There are times when the objections have to do with the choice, "I choose not to choose." This is the stance of the true isolate. It would be important for that group member, or those group members, to experience the impact of their position on the structure of the group. The isolate is not to be confused with a person who is making a statement of refusal to involve themselves based on lack of trust in the procedure of the sociometric test and the group's ability to use the information productively and humanely. In this instance the group should not proceed.

The group can refer to the Sharing Phase (See Appendix I. c) and share the feelings they have about what has taken place, what they expected to occur, what surprised them and what unfinished business has resulted from considering the sociometric test for use in the group.

The group may need to engage in less-threatening activities, even quasi-sociometric ones, in order to develop visible positive regard for each other, to create a more trusting group climate and to test out their skills for handling interpersonal conflict. Most group members are healthily reluctant to reveal negative choices in a group if they perceive the leadership and/or the group as incapable of facilitating conflict resolution.¹⁰

The Action Phase

The action phase of the sociometric test refers to the process of determining the criterion on which to base choices, declaring the choices, making perceptual guesses, and interacting with group members, sharing the objective and perceptual data with each person.

Selecting the Criterion on Which to Base the Sociometric Test

The criterion is designed to fit the situation in which the sociometric exploration is to be applied, specifically, what the group or the investigator wishes to know about the group. For example, a group which had become frustrated and unproductive when two of its "key members" were sick might want to explore the potential for leadership in the group. This might be done by asking the question, "Of the persons in the group who have not yet been in focus as leaders, whom would you choose to take charge of the group for one of its upcoming meetings?" In selecting this criterion the group would have important information available at such times when a choice for a leader needed to be made.

In selecting the criterion, the group should be informed that it may be possible to select more than one criterion. Time constraints may limit the options for additional criteria; however, it is a question which needs to be addressed at this time in the process. Having more than one criterion can demonstrate that group members make different choices depending on the activity implied in the criterion. It is important to keep referring back to what the group wishes to know about itself.

Some Classifications of Criteria are: 11

1. General versus Specific Criteria

There are times when a group wants the protection that a general criterion appears to give. It is more comfortable to select a non-specific criterion. An example of the difference in general versus specific criteria is, "Whom do you choose to take a walk with after dinner?" and, "With whom do you choose to take a walk after dinner in the unsafe section of the city?" The more specific the criterion the more clarity the group has of the meaning of the data. When general criteria are used it is important to analyse the reasons for choice and the additional criteria implied in those reasons.

2. Actual versus hypothetical criteria

Hypothetical criteria concern future-projected roles and may imply actions or situations which have little likelihood of occurring. Actual criteria are reality-based and deal with the here and now role repertoire. An example of actual versus hypothetical criteria is, "Whom in the group do you choose to share your bomb shelter with in the case of nuclear attack?" and, "Whom in the group do you choose to invite to your home for a weekend visit?"

3. Action versus diagnostic criteria

Action criteria are criteria which are selected with the view in mind of carrying out the implied activity, either through assignment or simultaneous participation of group members. Diagnostic criteria are selected as criteria for investigation purposes only and are not proposed as criteria to be acted upon. Diagnostic criteria may be used to study the group's structure and to plan for activities which may re-structure the group.

4. Personal versus social criteria¹²

Helen Hall Jennings (1947) distinguished between psychotelic and sociotelic roles, psychotelic roles being those which are personal and private and involve leisure activities, and sociotelic roles being those which are social and public, involving work-related roles. Her hypothesis is that a person's choice-making process varies depending upon the nature of the role and the sphere in which it is encountered. Examples of personal versus social criteria are, "Whom do you choose to have as your partner in marriage?" and, "Whom do you choose to have as your partner in business?"

5. One-way versus two-way criteria¹³

Criteria may imply an activity for which partners engage in the same role; or, conversely, the criteria may imply one person is the recipient of the interaction from another. An example of a one-way criterion is, "Whom do you choose to teach you for one hour on a topic of their choice?" This is a one-way criterion in that one person is chosen to teach, and the chooser is the receiver of the action. A different one-way criterion is required to determine reciprocity of choice, i.e., "Whom in the group do you choose to teach on a topic of your choice?" A two-way criterion would be, "With whom do you choose to teach a one hour class on a topic which you will jointly decide?"

A group which wants to be fully involved with the process of selecting the criteria may want to explore via discussion and consensus-taking, both the relevance of the criteria they are considering and the degree of threat experienced when contemplating choosing others on the criteria. The reader is referred to Appendix IV, Ranking Criteria of Choice by Relevance, Threat and Type. A listing of criteria (to which others may be added) may be examined by the group and determinations made about the degree of relevance and threat they wish to explore. Additional space is given to determine willingness to risk exploring the various criteria.

There are times when the very discussion and vote for criteria becomes an action quasi-sociometric exploration. Persons who have a lot of influence in a group may attempt to persuade the group to choose criteria which will meet the needs of one individual or one sub-group. Majority rules as a process of selection may not be in the service of the group

and certainly has a negative influence on the minority. The goal is to obtain unanimous consent to include others. Successful, unanimous participation of a group on a mildly threatening criterion for one exploration may encourage the more reluctant (threatened) group members to risk more in future sociometric tests.

The Wording of Criteria

In order that the activity implied in the criterion is clear, and that each participant can understand exactly where, when and what will be the basis of their choices, the group, or the investigator, gives particular attention to the wording of the criterion. The following guidelines have been extracted from the Handbook of Social Psychology (1954): 14

1. Questions are future-oriented.
2. Questions imply how the results are to be used. (If the criterion is to be acted upon, the group will need to know beforehand if small groups, pairs, etc., are to be formed as a result.
3. Word questions in such a way as to use projection when using diagnostic or hypothetical criteria. (Ex., "If you could choose...")
4. The question should specify the boundaries of the group. (Ex., "Of the people in the group whom you have met for the first time, ...")
5. Word the question to fit the level of understanding of the members of the group.
6. Questions should always state the number of choices allowed if choices are limited.

Sociometric consciousness in groups requires the ability to recognize the criterion on which group members are making choices, from role to role and from moment to moment. This involves identifying the words which make the difference, especially qualifying words, words which identify the sub-groups. The more groups struggle with the selection of criteria the more opportunity they are having for learning this valuable aspect of sociometric consciousness.

Revealing Sociometric Data: Reasons to Keep the Data Private and Reasons to Make the Data Public

Groups need to decide about how the data from the sociometric test is to be used and who has access to the data. It is common practice for group members to share the choices they have made for each other with the group, often sharing with each individual first, and then handing in their data sheets for quantifying, analysis and discussion. This practice is used in settings where the sociometric test is used as a tool for learning about group process and the individual's choice-making process. In instances where an outside investigator has been hired to study a group sociometrically, the group may negotiate for a sociometric test which is conducted confidentially. This would be the case when there is a mass

Negative Choice (-)

A negative choice means the person chooses to be at a distance from the other, not to share space or to spend time with the other person. There exists a repulsion for proximity to the other person. Negative choices evoke the image of interactions resulting in irritation, dislike and/or unpleasantness.

Neutral Choice (N)

The nearness and distance factor cannot be identified due to a number of factors:

- A. The person knows themselves to be positive, but prefers to remain neutral on the basis of the criterion; or, the person knows themselves to be negative, but prefers to remain neutral on the basis of the criterion. Electing this category of choice is identified by Zarka T. Moreno as "creative neutrality," choosing to set aside the positive or negative response in order to make alternative interactions possible; thereby creating a space and time for others to increase their experience of one another.¹⁶
- B. Indifference: Indifference responses are based on the lack of stimulation to choose. There is an absence of tele. If there is interest in the other person that interest is undifferentiated.
- C. Unexamined: The neutral choice is based on a lack of information and insufficient time to reflect and investigate the range of choice. This differs from the indifference category in that the person choosing has reflected and determined there is no response.
- D. Ambivalence: Positive and negative responses exist simultaneously thereby "neutralizing" the response. Ambivalent responses are more prevalent when criteria for selection are non-specific, allowing for varying interpretation and ambiguity. Ambivalence-motivated neutral choices may be due to the fact that a person is receiving two messages (positive and negative) or the person has two sets of responses when contemplating the consequences of acting on either the positive or negative choice.
- E. Choose Not To Choose: This category may be either due to a person refusing to partake in the sociometric test, or may be due to the person's desire to be isolated from the group.

Reasons for Choice

Participants are asked to give specific reasons for their choices, keeping in mind how these reasons relate to the question (criterion) and their underlying motivation to interact with the other person in the implied activity. The reasons are given as direct feedback to the person, rather than a more impersonal statement about the person.

It should be possible to determine from the statement whether the reason is based on tele, transference, or indifference and whether the reason is psychetelic or sociotelic. Some examples are:

tele - "I feel attracted to you, accepted by you for who I am;
I feel seen by you, and respected."

transference - "Your anxious questioning annoys me. I am reminded
of an old girlfriend and this puts me off."

indifference - "I don't have any sense of who you are, no strong
feeling either way."

psychotelic reason - "You are expressive and natural with your
body, therefore massage seems to be a wonderful means for
communicating."

sociotelic reason - "I know you have trained in Aston patterning
and therefore I'd learn a lot from a massage by you."

Reasons given for sociotelic criteria tend to be statements about skill,
ease in relating, intelligence, quickness or clarity of the person's
style and honesty. Reasons given for psychotelic criteria tend to be
statements about degree of comfortability, trust, sensitivity, enjoyment
of contact and style of communicating. 17

There are covert reasons for choice that often do not appear in objective
data, but are alluded to on the perceptual data sheets. Also, an
interviewer may also be able to identify covert reasons if persons are
encouraged to be candid. Covert reasons tend to result from a need to:

- 1) convey previously undisclosed material to the group, or
aimed at revealing information to a specific person.
Ex. "Ever since you told other people about me being gay
I haven't trusted you."
- 2) undermine another person's connection to the group or to a
specific person.
Ex. "I am strongly attracted to you." (Soliloquy: "I'm sick of
Bill getting all the girls. I couldn't care less if Sharon
chooses me, but I'd sure like to cramp Bill's style. He seems
to prefer her for some reason.)
- 3) hide one's real choice and prefer safer choices.
Ex. "My first choice is Bill. I really trust you." (Soliloquy:
I wish I had the nerve to choose Steve, but I know I could never
get over my embarrassment if he didn't choose me, or even worse,
if he put me down as negative. Oh, God!)
- 4) protect another person from exposure to choices received or
level of choice.
Ex. "My first choice is Sharon." (Soliloquy: I wish I could
choose Carol, but she is so shy. She would probably be frightened
to death if I put her on my list. Maybe I'll put her down as
neutral, or fifth choice. Damn shame. But, I don't want her to
be afraid of me.

Making Perceptual Choices

Every individual in a group is able to sense where he or she seems to fit in a group with some degree of accuracy. The perception may be vague and tentatively offered; however, experience in making perceptual guesses strengthens the likelihood of accuracy of perception and builds trust in one's own intuitive system. At first, a person may begin to make guesses whether or not a person has chosen him or her in the "choose to" "choose not to" or "choose to remain neutral toward" category. Later, it may be possible for the person to distinguish the intensity of the choice, and whether he or she is ranked high as a preference, or low.

Several devices may be helpful to group members having difficulty making perceptual guesses. Have the group members mentally role reverse with another group member, and focus on what may be going on with that person as he or she is making choices. Suggest that they remember clues about earlier choices and what is likely to be the current response. If the perceptual guessing is distressing to the group member, have him or her write down the feelings which were present and share their reaction with the group during the sharing phase.

Have group members make perceptual guesses about the choices other group members are making for each of the other group members. This is similar to taking the sociomatrix and making a perceptual guess for each choice that is entered on the sociomatrix. This may be too time consuming and wearying; however, it is possible to select one or two group members and practice making perceptual guess "others for others" in addition to "others for self".

When making perceptual guesses the group members are also asked to give the reasons they have for forming this impression. This aspect of the exploration allows for group members to identify what they believe to be the source of the responses that others have for him or her. For example, a person may guess that John will choose him "because John thinks it is wrong to publicly reject someone." This perception may be accurate, but included in the reason given is a message to John that "I know what you really feel about me, regardless of your principles about rejection." It is possible for group members to find the source of the projection which they may feel directed toward him or her as attempts are made to come into contact with a reason for a particular perception. "Joan will reject me because I remind her of her last boyfriend."

It is useful to remind group members that the more perceptual guesses they make, the more opportunities they will have to evaluate the areas in their perceptual system which require skill training. Often there are some aspects which will be more difficult than others. For example, it seems easier to perceive mutuality, than incongruity.

Revealing Choices in Face to Face Interaction

Once group members have made their choices they may be instructed to move to a previously designated area to begin sharing in dyads the following information:

Category of choice and the reason for the choice
Their perceptual guesses and reasons
How they feel about the other's choice for them
Where do they stand with each other in the here and now

Group members will need to be encouraged to limit their contact to the immediate task at hand. If additional time is required it should be arranged for after the sharing phase. People seem to have varying styles of relating on the verbal level. Some people will finish earlier than others. The sociometrist, or group, needs to allow for an adequate disclosure period, approximately five (5) minutes per person.

The group, and the person conducting the sociometric test, should be aware of the potential impact of disclosures on each individual, especially those persons likely to have the greatest discrepancy in their perceptual estimations, and/or the greatest discrepancy in choices desired and choices received. It helps to have each person identify a person in the group whom they could seek out if they feel in need of immediate support during the disclosure phase. Also, it is reassuring to persons to have a specific time to reassemble for sharing, support and assistance.

This interaction phase has enormous potential for connecting and re-connecting group members, even evoking a new set of responses. A rationale for this face to face stage in the sociometric test can be found in Leavitt and Mueller (1966) who have commented upon the effects of feedback on communication:

- ...there is an
- 1) increase in accuracy with which information is transmitted
 - 2) increase in confidence over accomplishment
 - 3) cost of feedback is time
 - 4) Zero feedback engenders doubt, low confidence and hostility.
- Free feedback is accompanied by high confidence, amity and permits the learning of a mutual language which, once learned, may obviate the necessity for further feedback.

The important task of the sociometrist/group leader is to monitor the process of disclosure sufficiently in order to assure that the effects are beneficial and contribute to increased awareness rather than harmful and impeding personal growth.¹⁹

The Sharing Phase

The sociometrist/group leader conducts a "reporting in" session following the exchange of feedback. The reader is referred to the flow chart for this aspect of the process (Appendix I.c., page 82) which provides a general guideline for this disclosure phase.

Group members will benefit from examining the impact of making and revealing choices on themselves and each other. There are occasions when the impact will still be felt and the group will need to facilitate the sharing of others. One of the major areas of the sharing phase is the comparison of the expected outcome with the actual outcome. This discussion can be the source of discomfort to some or can be the source of revelation and amazement. What is important is to have the group members identify aspects of their choice - making process which they find useful and wish to keep and aspects of their process which warrents change based on this experience.

When group members have identified the meaning of this experience for themselves personally, the next step in the exploration is to determine the meaning of the sociometric test collectively in terms of group structure. A break of an hour or so is often indicated before working with the quantifying of data, in order for persons to have informal sharing time and be more available for the exacting task of interpretation of the results.

The Analysis Phase

This phase in the sociometric test is largely determined by the original purpose for conducting the exploration. Whatever those intentions, the information generated via the choice-making questionnaires must be assembled in a way to be useful for study and interpretation.

Constructing the Sociomatrix

A sociomatrix is a graph on which the choices made in a sociometric test are recorded. By charting the choices a person has made across the sociomatrix, it becomes possible, once all the choices of all the group members are recorded, to read down the sociomatrix and have information about choices made for a person. (Choices of, read across; choices for, read down.) It works in a similar way to mileage charts in a road atlas except that instead of using city names, the names of group members are used. An example of a sociomatrix is as provided on the next pages.

Ordering the names on a sociomatrix can provide access to information about sub-groups which are already known to exist, perhaps due to external factors. Names are listed in the same order down the left-hand column as across the top of the sociomatrix. In the example, the group wanted to look at the phenomenon of new group members choices of the older, more experienced group members and wanted to look at the choices made for the opposite sex. By placing the names of all the older group members in the middle of the list, with the new males and new females on the periphery of the sociomatrix, it is possible to read the sociomatrix at a glance for the required information.

SOCIOMATRIX

CRITERION: Whom do you choose to have as your partner
in an hour-long trust exercise?
DATE: June 15, 1980

| NAMES | NAMES | | | | | | | | | | | | Positive Choices Made | Negative Choices Made | Neutral Choices Made | | | | | | | | |
|-----------------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|-----------------------|-----------------------|----------------------|----|----|----|----|----|----|----|----------|
| | 1 MALE, NEW | 2 MALE, NEW | 3 MALE, NEW | 4 MALE, OLD | 5 MALE, OLD | 6 FEMALE, OLD | 7 FEMALE, OLD | 8 FEMALE, OLD | 9 FEMALE, NEW | 10 FEMALE, NEW | 11 FEMALE, NEW | 12 FEMALE, NEW | | | | | | | | | | | |
| 1 MALE, NEW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 5 | 4 | 2 |
| 2 MALE, NEW | 2 | 1 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 4 | 2 | 5 |
| 3 MALE, NEW | 3 | 3 | 1 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 6 | 1 | 4 |
| 4 MALE, OLD | 4 | 4 | 4 | 1 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 4 | 3 | 4 |
| 5 MALE, OLD | 5 | 5 | 5 | 5 | 1 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 5 | 4 | 2 |
| 6 FEMALE, OLD | 6 | 6 | 6 | 6 | 6 | 1 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 6 | 3 | 2 |
| 7 FEMALE, OLD | 7 | 7 | 7 | 7 | 7 | 7 | 1 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 6 | 0 | 5 |
| 8 FEMALE, OLD | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 1 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 7 | 0 | 4 |
| 9 FEMALE, NEW | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 6 | 1 | 4 |
| 10 FEMALE, NEW | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 1 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 5 | 6 | 0 |
| 11 FEMALE, NEW | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 1 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 5 | 5 | 1 |
| 12 FEMALE, NEW | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 1 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 2 | 2 | 8 |
| 13 | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | |
| Positive Choices Recd | 1 | 6 | 5 | 3 | 5 | 2 | 0 | 0 | 2 | 3 | 0 | 4 | | | | | | | | | 64 | 30 | 41 = 132 |
| Negative Choices Recd | 3 | 3 | 4 | 3 | 5 | 0 | 0 | 0 | 3 | 4 | 0 | 3 | | | | | | | | | 30 | 1 | 1 |
| Neutral Choices Recd | 5 | 2 | 2 | 5 | 1 | 3 | 1 | 2 | 7 | 4 | 5 | 4 | | | | | | | | | 41 | 1 | 1 |
| Positive Mutuals | 1 | 4 | 3 | 1 | 3 | 4 | 5 | 6 | 1 | 2 | 4 | 0 | | | | | | | | | 34 | 1 | 1 |
| Negative Mutuals | 3 | 3 | 1 | 3 | 3 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | | | | | | | | | 18 | 1 | 1 |
| Neutral Mutuals | 1 | 2 | 1 | 1 | 0 | 0 | 1 | 3 | 0 | 0 | 3 | 0 | | | | | | | | | 12 | 1 | 1 |
| Pos/Neg Incongruity | 1 | 1 | 2 | 1 | 3 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | | | | | | | | | 14 | 1 | 1 |
| Pos/Neut Incongruity | 4 | 2 | 3 | 4 | 1 | 4 | 6 | 4 | 5 | 3 | 2 | 4 | | | | | | | | | 42 | 1 | 1 |
| Neg/Neut Incongruity | 1 | 0 | 1 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 2 | | | | | | | | | 14 | 1 | 1 |
| WEIGHTING | 5 | 36 | 153 | 13 | 105 | 125 | 92 | 52 | 125 | 125 | 24 | 19 | | | | | | | | | 25 | 1 | 1 |

The ordering of the names on the sociomatrix in the example on the preceding page results in five smaller matrices:

- A. Males' choices for males
- B. Males' choices for females.
- C. Females' choices for males.
- D. Females' choices for females.

Inner square: Old group members choices for old group members. By further compartmentalising the reader can identify other groupings such as old male group member choices for new male group members, etc. The greatest clarity of sub-structures can be seen once sociograms are drawn.

Once the names have been entered on the sociomatrix, follow this charting process:

1. Arrange the objective data sheets in the order in which the names appear on the sociomatrix.
 2. Chart the positive choices.
Scan the first objective data sheet and locate the first choice positive. Place a 1 under the name of the person who has been the first choice. Continue this process until the data sheet shows no further positive choices. When this has been completed there should be a listing horizontally across the page.
 3. Chart the negative choices.
Using a different colored pencil, or by circling the number, enter the "choose not to" preferences each person has made. Again, the choices of a person are entered under the name of the person chosen horizontally across the page.
 4. Neutral choices
Leave a blank space for all the neutral choices. If research procedures require a symbol use an N.
 5. Total the positive expansiveness
Enter the total number of positive choices made by a person under the column heading "Positive Choices Made." Since some persons may choose more than one person for a level of choice (say, three persons as 2nd choice) count the number of actual choices made.
 6. Total the negative expansiveness
Total the number of negative choices and enter the number in the column indicated.
 7. Total the neutral choices
Total the number of neutral choices made and enter the total in the column indicated.
- Note: When a person "chooses not to choose" and makes no indication of the level of choice (neither positive, negative or neutral) place a CNC in the space and differentiate it from neutral choice.
8. Total positive choices received
Reading down the column (vertically) the choices a person has received can be determined. Add the number of positive choices received and enter the total in the space provided.

9. Total negative choices received
Scanning down the column under each person's name, count the number of negative choices received and enter the total in the space provided.
10. Total neutral choices received
Scanning down the column under each person's name, count the number of blank spaces (or spaces with an N) and enter the total of neutral choices in the space provided.
11. Total all choices made and received by group members.
Total the positive choices made by the group, and total the positive choices received by the group. The totals should result in the same number. Total the negative choices made and the negative choices received, the neutral choices made and the neutral choices received. If the totals do not match it will be necessary to re-check the totals or refer back to the objective data sheets.
12. Weighting
There are times when it becomes necessary to distinguish between one or more persons who are in the same or a similar position. Weighting the choices and placing value on mutuality will help to differentiate actual positions of group members, especially stars.
 - a. Divide the total number of positive choices received by the number of persons in the group less one. (Ex: 61 positive choices received divided by 12 - 1 = 5.545.
Value positive choices received as follows:
 1st choice = 5
 2nd choice = 4
 3rd choice = 3
 4th choice = 2
 5th choice = 1
 6th, etc. = no value
 - b. Divide the total number of negative choices received by the number of persons who are in the group minus one. (Ex: 30 negative choices received divided by 12 - 1 = 2.72.
Value negative choices received as follows:
 1st choice = -3
 2nd choice = -2
 3rd choice = -1
 4th, etc. = no value
 - c. Value neutral choices as equal to 0.
 - d. Total the number of all mutuals (positive, negative and neutral) and divide that number by the total number of group members. Divide that total by 2 (since mutuals involve 2 persons). (Ex: 34+16+12 = 62 divided by 12 = 5.16, divided by 2 = 2.58.
Value each mutual at 2.5.

Example: Using the values given above, the results of the sociometric choices weighted for person no. 1 would be:

-12
+12.5 for 5 mutuals

+ 0.5

1 = -3
N = 0
1 = -3
2 = -2
N = 0
N = 0
5 = +1
N = 0
1 = -3
2 = -2
N = 0

TOTAL -12

A discussion of weighting sociometric choices can be found in an article by Donald T. Campbell (1960).²⁰ Campbell's opinion is that differential weighting makes little difference; however, he offers a solution to those who wish to distinguish between level of choice.

Procedure for Determining Mutuality and Incongruity of Choice

In order to determine the connections between two person, one must read the sociomatrix horizontally and vertically, matching choices of with choices for. This process is made simpler by using a computing device²¹ or the sociomatrix reader.²²

To use the Sociomatrix Reader, place the uppermost triangle over the second black square in the line of squares which runs diagonally across the sociomatrix. Immediately to the left of the uppermost triangle on the reader and just above it are squares representing the choice male #2 has made for male #1 and vice versa. The diagonal lines on the reader connect choices of with choices for, allowing the sociometrist to determine whether the choices are reciprocal (positive-positive, negative-negative, neutral-neutral) or incongruous (positive-negative, positive-neutral, negative-neutral). It helps, when computing, if a small dot is placed on the sociomatrix when the choices have been identified as mutual. On the example below, male #1 has 3 negative mutuals, 1 positive mutual and 1 neutral mutual.

After completing one vertical row, slide the sociomatrix reader down and across to the next black square. Continue this process until the sociomatrix is completed.

(See next page for an example.)

| NAMES | | NAMES | | | | | | | | | | | |
|----------------|----|-----------|-------------|-------------|-------------|-------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| 1 MALE, NEW | 1 | MALE, NEW | 2 MALE, NEW | 3 MALE, NEW | 4 MALE, OLD | 5 MALE, OLD | 6 FEMALE, OLD | 7 FEMALE, OLD | 8 FEMALE, OLD | 9 FEMALE, NEW | 10 FEMALE, NEW | 11 FEMALE, NEW | 12 FEMALE, NEW |
| 2 MALE, NEW | 1 | 3. | 3. | 3. | 1. | 4 | 2. | 4 | 1. | 2 | 4 | 6 | 5 |
| 3 MALE, NEW | 1 | 4 | 5 | 4 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 |
| 4 MALE, OLD | 1 | 4 | 5 | 4 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 |
| 5 MALE, OLD | 1 | 4 | 5 | 4 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 |
| 6 FEMALE, OLD | 1. | 4 | 5 | 4 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 |
| 7 FEMALE, OLD | 4. | 3 | 4 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 | 3 |
| 8 FEMALE, OLD | 5. | 1 | 4. | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 | 3 |
| 9 FEMALE, NEW | 3. | 3. | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 | 3 | 3 |
| 10 FEMALE, NEW | 3 | 3 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 | 3 | 3 |
| 11 FEMALE, NEW | 3 | 3 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 | 3 | 3 |
| 12 FEMALE, NEW | 3 | 3 | 2 | 1 | 1. | 2 | 4 | 1. | 6 | 5 | 3 | 3 | 3 |

Determining a total of mutuals involves simply counting the number of dots entered on the sociomatrix. Determining incongruity is more time consuming. The following instructions may prove useful:

- a. Subtract the number of mutuals the person has from the number of group members minus one. This number is the total number of incongruities that need to be identified.
 - b. Consult the example below. In this example the incongruities of male #4 are being identified. He has 4 mutuals, indicating that there need to be 7 incongruities identified. The sociomatrix reader is placed one column to the right of male #4's column looking vertically down the sociomatrix.
 - c. The incongruities from male #5 to female #12 can be identified by reading the sociomatrix and writing the kind of incongruity found on a piece of paper. To determine incongruities for Male #1-3, place the sociomatrix reader upside down with the triangle covering the third black triangle from the top.
 - d. In the example the incongruities are:
 - 5 - blank (positive-neutral)
 - blank - 1 (positive-neutral)
 - blank - 3 (positive-neutral)
 - a mutual (positive-neutral)
 - 2 - blank (positive-neutral)
 - a mutual (negative-neutral)
 - 5 - blank (negative-neutral)
 - blank - 2 (negative-neutral)
- reading the upper square:
- 4 - blank (positive-neutral)
 - a mutual
 - a mutual
 - a mutual

| | | | | | | | | | | |
|----------------|---|---|---|---|----------------|---|---|---|---|---|
| | | | | | 5 MALE, OLD | 3 | 1 | 4 | 2 | 5 |
| | | | | | 6 FEMALE, OLD | 2 | 1 | 2 | 4 | 3 |
| | | | | | 7 FEMALE, OLD | 1 | 2 | 1 | 3 | 5 |
| | | | | | 8 FEMALE, OLD | 1 | 1 | 1 | 1 | 1 |
| | | | | | 9 FEMALE, NEW | 4 | 2 | 4 | 1 | 3 |
| | | | | | 10 FEMALE, NEW | 5 | 4 | 5 | 5 | 3 |
| | | | | | 11 FEMALE, NEW | 1 | 2 | 1 | 2 | 3 |
| | | | | | 12 FEMALE, NEW | 2 | 1 | 2 | 1 | 3 |
| 5 MALE, OLD | 1 | 4 | 5 | | | | | | | |
| 6 FEMALE, OLD | 4 | 3 | | | | | | | | |
| 7 FEMALE, OLD | 5 | 1 | 4 | 7 | | | | | | |
| 8 FEMALE, OLD | 3 | 1 | 2 | | | | | | | |
| 9 FEMALE, NEW | 4 | 3 | 4 | | | | | | | |
| 10 FEMALE, NEW | 3 | 4 | 4 | | | | | | | |
| 11 FEMALE, NEW | 1 | 2 | 1 | 2 | | | | | | |
| 12 FEMALE, NEW | 2 | 1 | 2 | 1 | | | | | | |

e. Total mutuals and incongruities and place the total in the space provided on the sociomatrix.

Encourage group members to be involved in the charting of the data. When a person is actually involved in reading the identifying connections between persons on the sociomatrix, many subjective comments occur to a person. This is one way that sociometric consciousness can be raised. Questions and impressions arise which have pertinence for the whole group. Participation in this phase of the exploration is an important aspect of the role of co-researcher.

The Perceptual Sociomatrix

One of the primary purposes of obtaining perceptual data is to enable the group members to compare what they guessed would occur with what actually occurred in terms of choice-making. A separate sociomatrix can be used, or a computer program can be used to do this comparative phase; however, it is recommended that group members simply place a sheet of tracing paper over the objective sociomatrix, and quantify the perceptual data, placing the results onto the tracing paper in such a way as to see the other results.

The following process is employed for noting the perceptual data:

1. Enter the names on the sociomatrix in the same order as appears on the objective sociomatrix. (OR, place the tracing paper onto the sociomatrix in a way that leaves the names visible.)
2. Enter the perceptual guesses a person has made on the perceptual sociomatrix, by locating the person's name at the top of the sociomatrix and placing a + for positive choices and a - for negative choices in the spaces under the person's name, reading vertically down the sociomatrix. You are charting the perceptual guesses the person has about choices for him or her, and therefore the perceptual data must

SOCIOMATRIX

CRITERION: [How do you choose to have as your partner in an hour-long trust exercise?]
 DATE: June 15, 1980

| | NAMES | | | | | | | | | | | | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | Positive Choices Made | Negative Choices Made | Neutral Choices Made |
|----------------------|-------------|-------------|-------------|-------------|-------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----|----|----|----|----|----|----|----|-----------------------|-----------------------|----------------------|
| | 1 MALE, NEW | 2 MALE, NEW | 3 MALE, NEW | 4 MALE, OLD | 5 MALE, OLD | 6 FEMALE, OLD | 7 FEMALE, OLD | 8 FEMALE, OLD | 9 FEMALE, NEW | 10 FEMALE, NEW | 11 FEMALE, NEW | 12 FEMALE, NEW | | | | | | | | | | | |
| 1 MALE, NEW | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 2 MALE, NEW | 2 | 1 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 3 MALE, NEW | 3 | 3 | 1 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 4 MALE, OLD | 4 | 4 | 4 | 1 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 5 MALE, OLD | 5 | 5 | 5 | 5 | 1 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 6 FEMALE, OLD | 6 | 6 | 6 | 6 | 6 | 1 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 7 FEMALE, OLD | 7 | 7 | 7 | 7 | 7 | 7 | 1 | 8 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 8 FEMALE, OLD | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 1 | 9 | 10 | 11 | 12 | | | | | | | | | | | |
| 9 FEMALE, NEW | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 1 | 10 | 11 | 12 | | | | | | | | | | | |
| 10 FEMALE, NEW | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 1 | 11 | 12 | | | | | | | | | | | |
| 11 FEMALE, NEW | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 1 | 12 | | | | | | | | | | | |
| 12 FEMALE, NEW | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 1 | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | | | |
| POSITIVE Recd | 1 | 6 | 5 | 3 | 5 | 7 | 10 | 9 | 2 | 3 | 6 | 4 | | | | | | | | | | | |
| NEGATIVE Recd | 5 | 2 | 2 | 5 | 1 | 3 | 1 | 2 | 7 | 4 | 5 | 4 | | | | | | | | | | | |
| NEUTRAL Recd | 5 | 2 | 2 | 5 | 1 | 3 | 1 | 2 | 7 | 4 | 5 | 4 | | | | | | | | | | | |
| POSITIVE Mutuals | 1 | 4 | 3 | 1 | 3 | 4 | 5 | 6 | 1 | 2 | 4 | 0 | | | | | | | | | | | |
| NEGATIVE Mutuals | 3 | 2 | 1 | 3 | 2 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | | | | | | | | | | | |
| NEUTRAL Mutuals | 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 3 | | | | | | | | | | | |
| Pos/Neg Incongruity | 1 | 1 | 2 | 1 | 3 | 1 | 0 | 0 | 1 | 1 | 1 | 2 | | | | | | | | | | | |
| Pos/Neut Incongruity | 4 | 2 | 3 | 4 | 1 | 4 | 6 | 4 | 5 | 3 | 2 | 4 | | | | | | | | | | | |
| Neg/Neut Incongruity | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | | | | | | | | | | | |
| WEIGHING | 5 | 4 | 15 | 13 | 10 | 5 | 12 | 5 | 5 | 12 | 10 | 14 | | | | | | | | | | | |

- be compared with the data which is found in the vertical reading of the sociomatrix. For perceptual guesses about neutral choices, leave the space blank, or place an N in the space. Use NP for no perceptual guess.
3. Total the perceived positive, negative and neutral expansiveness of the group members. Once the perceptual guesses are recorded it is possible to identify a collective impression of how the group perceived each person would respond to the group members on the basis of criterion.
 4. Total the perceived positive, negative, and neutral choices received. Add together the number of pluses (+), minuses (-) and blanks each person received.
 5. Determine mutuality and incongruity of the perceived choices. Using the same method as presented for determining mutuality of objective data (actual choices) determine the mutuality by using the sociomatrix reader.
 6. Total the number of perceived mutuals.
 7. Total the number of perceived incongruities.
 8. Check any other perceptual guesses made against the actual choices and indicate on the perceptual data sheet whether those perceptions were accurate.
 9. List all those mutuals which were actual and perceived mutuals. As well, list all those incongruities which were actual and perceived incongruities.

Sociogram Construction

A sociogram is a graphic representation of the results of a sociometric test. The sociogram depicts sociometric structure, particularly nearness and distance of the interconnections, cleavages, isolation and status. Sociograms can be drawn utilizing both objective (actual choices) and perceptual data, making it possible to graphically display the comparison of the two sets of data. The sociogram was first introduced by Moreno in the 1934 edition of Who Shall Survive? The intent of the sociogram is to cluster closely related persons and to thereby identify sub-groups, pivotal persons, and stars of the various groupings. Mary L. Northway introduced the target sociogram in 1940 as a way of depicting on a map of concentric circles the nearness and distance factor of several sociometric tests. This method may be particularly useful in instances where the group membership remains the same. The use of sectors can be added to the target sociogram allowing for a clearer reading of variables affecting choice. (For example see below.)

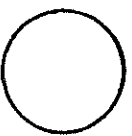
Sociometrists may choose to depict all choices in the sociogram; however, in instances of large group explorations, the ease of reading the sociogram at a glance is considerably lessened. Since the purpose of the sociogram is to provide a visible picture of a group dynamic relating to choice, it is recommended that topical sociograms be drawn, highlighting one or two specific phenomena.

How to Draw a Sociogram

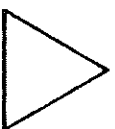
Assemble the necessary equipment: templates for circles and triangles, ruler, paper large enough to accommodate the size of the group (8½ x 11 is large enough for a group of 8-12; 11 x 14 for groups 12-20; 14 x 17 for groups of 12-36). Other additional equipment would be colored pens, using the inks to differentiate from the categories of choice. Moreno used red for positive choices and black for negative choices. Have sociomatrix at hand.

1. Refer to the sociomatrix and identify the most highly chosen person. Place a circle (female) or triangle (male) to represent that person near the center of the piece of paper.
2. Identify the next most highly chosen person(s) and place them in proximity to the star. Placement is helped by (a) placing the circle or triangle in such a way as to decrease the necessity of intersecting lines, and (b) placing persons nearer to those persons with whom they have reciprocal relations.
3. Complete the placing of persons using the same principles as outlined in item #2.
4. Using the notational system outlined on the next page, draw the lines between persons, minimizing the intersecting lines wherever possible.
Draw:
 - a. Sociogram of positive mutuality
 - b. Sociogram of negative mutuality
 - c. Sociogram of neutral mutuality (use a color for neutral).
 - d. Sociogram of positive-neutral incongruity.
 - e. Sociogram of negative-neutral incongruity.
 - f. Sociogram of positive-negative incongruity.
 - g. Individual sociogram of each person in the group.
5. Other useful sociograms might be:
 - a. Sociogram of first choice positive.
 - b. Sociogram of star succession: For each person who has made a first choice for the star, identify their second choice. Draw a sociogram of all first choices for the non-star and all second choices of the persons choosing the star as their first choice. This will give an indication of whom in the group is likely to be star on this criterion in the absence of the star.
 - c. Sociogram of choices for the same sex and for the opposite sex.
 - d. Sociograms of choices for new members of the group and for old members of the group.
6. Perceptual sociograms
Using the perceptual data as entered on the perceptual sociomatrix, identify the perceived star, and follow the same instructions for drawing sociograms as given for actual sociometric data. Compare these sociograms and draw lines on the page, or on a piece of tracing paper, which represent the perceptual data.

NOTATIONAL SYSTEM FOR SOCIOGRAM CONSTRUCTION



Indicates Female



Indicates Male

MUTUALS

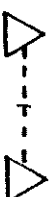
INCONGRUITY



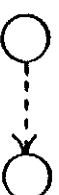
Positive Mutual



Positive Choice Met with Neutral Response



Negative Mutual



Negative Choice Met with Neutral Response



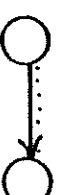
Neutral Mutual



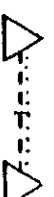
Positive Choice Met with Negative Response



Perceived Positive Mutual



Perceived Positive-Neutral Incongruity



Perceived Negative Mutual



Perceived Negative-Neutral Incongruity

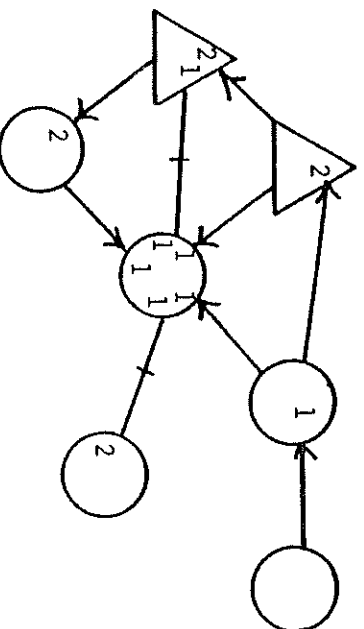


Perceived Neutral Mutual



Perceived Positive-Negative Incongruity

In-Instances when you want to indicate the preference shown (1st, 2nd choice, etc.) place a small number inside the circle or triangle showing the choice received:



These symbols are used to indicate a choice for a person outside the group:

Use a broken line to indicate a person who is absent or has died:



Males;



Females



The Target Sociogram

The target sociogram provides a method of graphic presentation which makes it possible to depict longitudinal studies for research purposes, as well as offering ease in identifying sociometric configurations. The following instructions have been adapted from The Primer of Sociometry, by Mary L. Northway. 23

1. Draw four concentric circles, the areas of each division being equal to one quarter of the whole target. These concentric circles have been used to represent significantly above chance, above chance, below chance and significantly below chance in studies where the choices were limited to a number smaller than the whole group. For an explanation of the formula required for computing chance expectancy and probability of choice see references.

2. In sociometric explorations where persons are asked to make choices (positive, negative and neutral) for each person in the group, total the number of choices received (in all sociometric tests for this group) for each person. Identify the number of possible choices a person could receive, usually the number of tests times the number of persons in the group minus one. (For three tests with twelve persons: $3 \times (N - 1)$ or 33. Next, divide the total space between the midpoint of the inner circle to the outer most edge of the concentric circles by the number (i.e. 33)



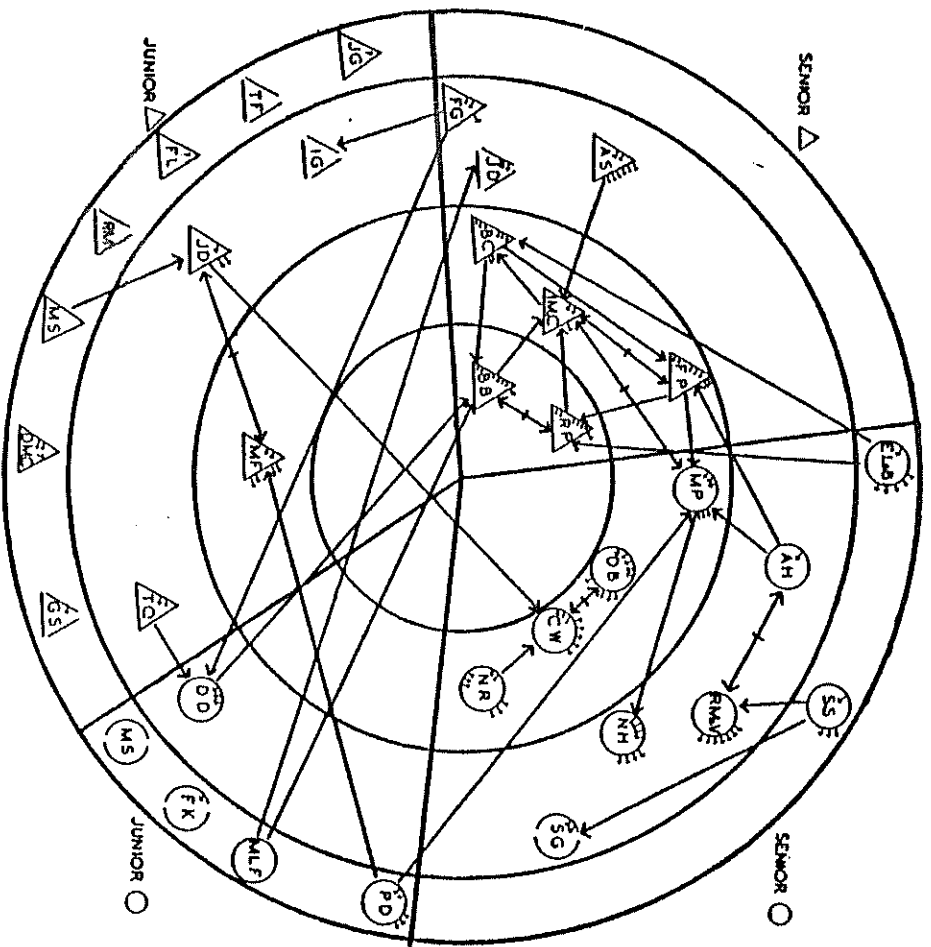
3. Next compute the average number of positive choices received for each of the sociometric tests. (For example, on one test the average positive choices received is 5.5, the next test 4.2 and the next test 6 is the average. Add these together and the figure 15.7 is the average number of positive choices received. Find that space on the target sociogram and draw another concentric circle on the target. This makes it possible to notice at a glance those persons who are chosen above or below average.

4. Next identify two significant aspects about the group you wish to compare: For example, male and female English and non-English speaking group members, or Caucasian and non-Caucasian male and females. (It is possible to use only one aspect.) Now split the target according to the percentage of group members who have the characteristic selected.

5. Now place each person on the target sociogram (a circle for females or triangle for males) according to:
a. the sub-group to which they belong, and
b. the total number of positive choices received.

6. Draw lines between persons having a reciprocal relationship of positive choices. (If there is a large number of positive mutuals, it may be more meaningful to draw lines between all mutuals in the 1st, 2nd and 3rd choice range.)

7. The following is a sample target sociogram: 25



Analysis of Choices

Regardless of the size or the kind of group being investigated, the distribution of choices among group members will be uneven: one, or a few, persons will be highly chosen, a larger number of persons will receive an average number of choices, and a few will be significantly underchosen (neglected).²⁶ This phenomenon is termed the sociodynamic law by Moreno (1948) and is further explained by Zerka T. Moreno (1966):

"In a given group, a percentage of individuals will be overchosen, obtaining more love than they can give or consummate (the sociometrically rich, sometimes referred to as the sociometric capitalists); another, larger percentage will represent the sociometric middle class, giving and receiving approximately an equal amount of choices, about as much as they can use productively; another percentage will represent the sociometric proletariat, the unwanted, unchosen or rejected individuals, who obtain and give far less love than they need for emotional growth and integration."²⁷

The sociometrist will need to identify stars of acceptance and stars of rejection, isolates and isolated dyads, cliques or sub-groups, and persons in pivotal positions in order to effect an analysis of the group's structure.

The Sociometric Star

The sociometric star is the person, or persons, in the group who receives the largest number of choices. This can be determined by reading the sociomatrix and the choices received columns. The star of acceptance is the person receiving the highest number of choices that are positive. The star of rejection is the person receiving the highest number of negative choices. Reciprocity is a factor in the determination of the roles that stars play in a group. A star who is highly chosen and reciprocates those choices has a solid basis for interaction and support in the group based on the criterion for which the group has been making its choices. A star who is highly chosen who does not reciprocate those choices, or only partially does so, has a less secure position in the here and now. It is possible that this phenomenon is an indication of where the potential for leadership lies in the group. There is also a need at times to acknowledge the star of incongruity. This person has the highest number of unreciprocated relationships, and can therefore claim some of the focus of the group due to stress which results from choosing persons who don't choose you, and not choosing persons who do choose you. The impact is felt as disruption. Next, if the group is investigating itself on the basis of work-related criteria and leisure-related criteria, it becomes possible to determine the sociotelic star (persons highly chosen for their skills and intelligence) and the psychotelic star (highly chosen for personal attributes and subjective feelings).

Isolate and Isolated Dyads

The true isolate does not choose and is not chosen. He or she may choose others who are not members of the group, preferring to invest choice in

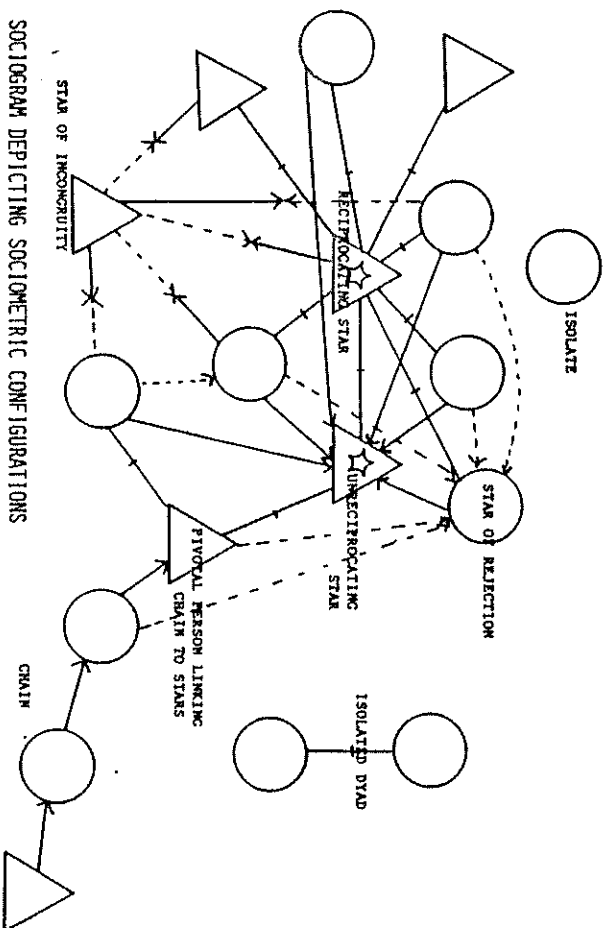
persons not present. "They reduce cohesion in the group to a minimum, possibly leading to dissolution and death of the group."²⁸ An isolated dyad is a pair, who choose only each other, and remain apart from the other members of the group. They are unwilling to join activities in the group and unwilling to share with others. This has an impact of stopping the growth of the identity of the group when it attempts to include the isolates. The isolates refusal to make choices stymies group members' attention to task.

Cliques and Sub-groups

Three or more individuals who mutually chose each other and/or include others in their group (which is less than the total number of the group) comprise a sub-group. The sub-group has the potential for exerting influence over the actions of the group, especially if they have a person in the sub-group who is identified as a star. Sub-group's have the capacity to split the group and divert group energies from task.

Pivotal Persons and Linkages

Persons who have a position in the group which links together key persons or sub-groups are termed pivotal persons. Identifying pivotal persons is usually accomplished by reviewing sociograms. They are visible by the fact that they are chosen by persons from both sub-groups, or chosen by both key persons. Pivotal persons often place value on both (or many) sides, and act as neutral ground for relating. Often there are several persons in the linkage, resulting in a sociometric configuration termed a chain. A chain is a line of persons each choosing in the same direction as indicated in the example below.



SOCIOGRAM DEPICTING SOCIOMETRIC CONFIGURATIONS

Analysis and Interpretation of Sociometric Data

Interpreting the results of the sociometric test must be a function which relates directly to the original purposes for conducting the exploration. These reasons tend to fall into the general categories of (1) Diagnosis, of group structure, individual status, and interpersonal and intergroup conflict; (2) Comparison of sociometric data with other psychometric and sociometric data; (3) Sociometric consciousness raising via the study of choice-making processes; and (4) Planned social action via remedial sociometry and re-structuring of groups.

The body of knowledge which exists having to do with interpretation and analysis of sociometric data is enormous and requires sifting through many inconclusive studies. The belief that in order to change something one must first understand it seems to have been a guiding principle for investigators. The major focus of the literature seems to be on establishing respectable quantitative methods for making and substantiating diagnostic efforts. However, sociometry as a therapeutic science has produced some hypotheses which assist group members in understanding and accounting for a number of the dynamics of the group and suggest ways for increasing sociometric wealth and flexibility.

Peter D. Mendelson (1976) directs attention to the change in orientation of sociometric investigations:

"In and of themselves sociometric methods could never change the world, even if they could contribute to understanding it better. Changing the world demanded action, but it was the fundamental actional orientation of sociometry from which the methods were divorced..Moreno himself recognized that the integrated character of his theory had begun to deteriorate within his own life; by the mid-1950's this was clear. And yet clear as it may have been, Moreno himself was unable to reverse this trend."²⁹

The following questions which assist sociometrists in understanding the results of their explorations need to be actively engaged with the group, and have an action oriented followup. It is not enough for group members to become aware of the interpretations about their behavior and their choice-making processes. They require opportunities to experience the consequences of both and to practice the expansion of their interactive role repertoire.

Emotional expansiveness

Question: "What seems to account for the positive expansiveness of a person?"

The average number of positive choices group members make for others can be used to deduce which group members are more expansive in their positive choices and which group members are less expansive in their positive choices. The average number can be an indication of the collective or general response the group has to making positive choices for others on that particular criterion. If the average number is more than 50% of the choices allowed,

in perhaps the 60-70% range, it can be assumed that the criterion poses little threat for group members, or that group members have sufficient knowledge of each other to make positive choices for large numbers of persons. Many factors enter into positive emotional expansiveness: (1) feelings of acceptance; (2) desire to positively identify oneself with specific persons or specific sub-groups by choosing them; (3) relevance of the criterion and the desire to connect with others on the basis of the implied activity; (4) risk-taking ability; (5) or, choosing others positively as a result of perceiving that they may choose oneself. Moreno states:

"The test of emotional expansiveness measures the emotional energy of an individual which enables him to "hold" the affection of other individuals for a given period of time, in difference from social expansiveness which is merely the number of individuals with whom he is in social contact regardless of whether he is able to hold them or not."³⁰

Persons who consistently over-choose others may be over-estimating the persons' actual positive position in the group. Over-choosers may be perceived as too eager to form a positive association with others and may be resented for declaring their acceptance on the basis of minimal contact. Persons who consistently under-choose others may be under-estimating the actual positive position of other group members and be resented for preventing opportunities for positive contact. Under-choosers may be perceived as arrogant or "too choosy." Under-choosers may have a very definite attitude toward making positive choices for others and prefer to limit the intensity of their interactions with the group.

Question: "What seems to account for the negative expansiveness of a person?"

Negative expansiveness in a group tends to increase in proportion to the degree of threat participants feel when contemplating having to act on the criterion of the exploration; or, the degree of unresolved interpersonal conflicts existant in the group. The average number of negative choices tends to be in the 15-25% range. The negative emotional expansiveness of a person can be the result of: (1) lack of the acceptance of the person in the implied role; (2) desire to be clear about the lack of readiness to engage in that role with the other person at this point in time; (3) desire to clearly disassociate oneself from a specific person or specific sub-group; (4) perceiving the non-acceptance of a person and desiring to "focus their animosities in the same direction"³¹ as others.

Groups tend to under-choose negatively and yet over-estimate in their perceptual guesses the amount of negative choices made. This is often due to the unwillingness of persons to admit to negative feelings when either they do not want to invest in resolving any conflict which might arise from making the information public; or they perceive him or herself, the other person, or the group unable to deal effectively with conflict.

Question: "What seems to account for the number of neutral choices made by a person?"

Accounting for neutral choices is important due to the lack of preciseness about the meaning of that category of choice. The group is encouraged to investigate the various "reasons for choice" supplied on the objective data sheets, identifying any tendency to define neutral choice in a specific way. The neutral choice allows the group member the possibility of being clear about the numbers of persons they feel positive or negative toward on the basis of the criterion. Over-choosing in the neutral range may be accounted for as: (1) the person being comfortable only when a small nucleus of interactors has been chosen; (2) the person's preference to declare choices only when he or she has a clear indication of positive or negative feelings; (3) an indication that the person has withdrawn from engaging with others, and particularly on this criterion; (4) the person having no clear indication of how others may be feeling about him or her.

Question: "What seems to account for a person receiving a high number of positive choices?"

Being highly chosen is an indication of wide acceptance by others in the implied role. The star of acceptance is perceived by others as having sufficient skill in the role and an ease in relating that others are comfortable with. The person behaves in a way others can identify with and support. Time should be given to determine how the person who is highly chosen feels about the role of star. There is quite a difference in feeling when the person is a star on the criterion of his/her choice, and when they are chosen on a criterion about which he/she has mixed feelings. For example, when a child is chosen as the person with whom they would most like to study for an exam when he/she would rather be visible and highly chosen as the person you would most like to have on the baseball team, being highly chosen can be a disappointing experience. Every person needs to have the experience of being highly chosen on the criterion of his/her own choice. Groups may need to explore further in those instances when a person is highly chosen and not comfortable with such a high degree of acceptance. The person's own perception of him/herself may not allow for such a positive position; and while the group members may be able to account for the person being so highly chosen, the star may reject the position.

Question: "What seems to account for a person receiving a high number of negative choices?"

There is a tendency in groups to spread positive choices over a wider number of persons and reserve negative choices for only a few. It appears to be safer (more acceptable) to reject persons whom the group has already tended to disapprove of, or persons perceived by several others as being inappropriate in their behavior, dress and appearance, or disliked for their hostility toward others. The rejected individual has a great deal

to teach the group about itself, the norms which have developed and the restrictions that these norms place on the behavior of the minority. Northway and Wigdor (1947) found that persons with a low sociometric status tend to be the most seriously disturbed. "They show less ability to control their emotions and seem to be more egocentric, moody and impulsive as a group."33

The highly rejected person(s) tend to require facilitation in having the expectations that they have of the group met and respected. The negative star's lack of skill in relating to the group is felt by others as an irritant. It is also possible to account for a high number of negative responses in instances where a person has withheld something that the group needs. For example, the group may need for a person to remain present to what is going on in the group, to invest in what is going on, even when what is happening does not immediately appear to be productive. When a person fails to attend to the group process and be direct about the feelings he or she may be having in response to what is going on, choosing to sit back and close their eyes, the group may reject the person for their lack of commitment.

The reasons persons give for their negative responses to others need to be explored and responded to by the person receiving the negative response.

Question: "What seems to account for a person receiving a high number of neutral choices?"

A high number of neutral choices could indicate that: (1) group members acknowledge that a person has a small social atom and can relate to only a small nucleus of persons; (2) group members have very little information about the person on which to base choices; (3) the group members may wish to allow a person who has had considerable focus (either positively or negatively) time to have a low-profile; (4) it is not known whether or not the person would reciprocate a positive or negative choice. On some criteria, such as "Whom in the group do you wish to encounter?" to receive a neutral choice is an active statement of lack of interest, a rejection by default. As discussed earlier in this chapter, neutrality can be a creative act of resisting a first response and giving a person time to change or grow into a role. For someone who is used to being the negative star, to be highly chosen in the neutral category can be interpreted as a statement of support and belief in the process.

Mutuality and Incongruity of Choice

There can be mutuality of choice category and incongruity within the choice category, and there can be mutuality in the reasons given for a choice and incongruity of category of choice. For example: Mary and Joan have been lifelong friends. On a sociometric test, with the criterion "Whom do you choose to have as your partner in a trust exercise?" Mary may reject Joan with the reason, "I trust you so completely. I want to do this with people I don't know as well." Joan may choose Mary as her first choice, "I trust

you so completely." Also, Moreno considered the valence of the choice in computing incongruity. For instance, a first choice positive is incongruous when compared with a fifth choice positive. Both are positive, but the intensity is not comparable. In determining mutuality and incongruity it may involve reconsideration of the reasons for choice as stated on the objective data sheets.

Question: "What seems to account for the degree of mutuality in the group?"

Mutuality implies that the choice one has made is reciprocated. A pair or dyad results. Each person in the pair has made a choice to relate to each other in the same or similar way. There is agreement at least in the way each has chosen the other. A high degree of mutuality in a group can be accounted for as: (1) a direct result of clear communication, (2) clear understanding of the criterion and choice-making process; (3) agreement about the goals and expectations of others; (4) willingness to involve oneself with others in a reciprocal way. The higher the degree of positive mutuality in a group the higher the cohesiveness of the group. However, the mutuality needs to be perceived mutuality to assure cohesiveness.

Question: "What seems to account for the degree of incongruity in a group?"

Incongruity of choice results when there is a lack of clear signals between persons about their responses to each other as potential interactors. Or, in the case of clear communication, incongruity can be a clear decision on the part of the persons to not reciprocate the choice (choices) or the other. Incongruity can result when: (1) one party rejects the advances or positive choice of another; (2) a person has changed in the response that he or she has had toward another person; (3) a person grows tired of a role or a particular position in group and refuses to reciprocate choices which result in having to remain in an old role; (4) influx of new members results in access to new roles and a change in the patterns of communication; (5) loss of group members results in access to new roles and a change in the patterns of communication; (6) group members develop new skills for relating which result in a change in their responses to other group members. Group members tend to rely upon a certain degree of mutuality to exist in order for them to feel the support necessary to deal with change and disturbances in sociostrastis. A high degree of incongruity (50% or higher) results in increased caution and increased dissatisfaction with persons with whom one has become accustomed to having a reciprocal relationship. A group will need to give time to interpersonal and socioemotional needs before returning to a focus on task when there is a high degree of incongruity present in the group.

Perceptual Data and Self and Other Ratings

Various studies (Schiff, Tagiuri, Ausubel, Criswell) have undertaken to test out the effect of accurate or inaccurate perception of self and/or other on interpersonal relationships and specific group phenomena, especially leadership.

"Awareness of own and others' status and of others' attitudes or traits may be influenced by tendencies in an individual:

(a) to make constant errors of prediction or estimation (i.e., consistent under- or overestimation of self or others), (b) to reciprocate his own expectations, and (c) to perceive himself as more or less accepting of others than other individuals in the group are. These influences in part will determine an individual's ability to accurately predict the relative degree of acceptance or rejection accorded the component members of the group (including himself) by the other group members.."³⁴

Schiff found that persons who underestimate their own status in a group also overestimate the status of others. One can infer that underestimators have a low self-regard. When the composite findings of the group's perceptions result in frequent under-estimation of choices others are making for oneself, it will be important for the group to focus on ways to improve self-esteem and to be clearer in the communication of positive feelings. Persons who overestimate the acceptance others may have for him or herself also perceive themselves as highly accepting to others. This overestimation could be an indication of the status a person wishes to achieve; and their behavior may be ambitious, independent and highly visible. If the findings of the investigation of the group's perceptions result in consistent overestimation, it is likely that a competitive atmosphere exists, with group members in need of clear, firm and honest communication. "Their perceptual or judgemental set is distorted by strong ego needs for success and for acceptance by other."³⁵

Persons in the mid-range, neither under- or overestimating the status of self or others have a clear picture of the group norms concerning acceptance and rejection and apply this norm to their perception sets. "The extreme groups are presumably more independent and less group-suggestible than the middle group is in their affective responses to associates."³⁶

Of greatest value to the group will be the combined effect of the feedback session following the making of choices and perceptual guesses. Each group member will, at that time, make an interpersonal accounting of accuracy and inaccuracy of perception, identifying misinterpreted cues, false assumptions and changes in feeling as the cause of actual misperception.

Cleavage

One of the reasons that groups investigate their sociometric structure is to find out if there are sub-groupings that appear with frequency regardless of the variation in the criterion for exploration. The adage, "Birds of a feather flock together." may hold some truth for the group. Often there is already a suspicion that a sub-group exists. What a sociometric exploration can confirm is the nature of those sub-groups, the existence of cleavages and point to those persons in the group who are in a position to assist with regrouping and integration of persons into a more cohesive unit.

A number of factors contribute to cleavage: sex, sexual preference, lifestyle, propinquity, kinship, job training, education, intelligence, ethnic background, religion, socioeconomic status, physical characteristics, language.

One way to identify cleavage is to ask the group to form two (or more) informal groups to accomplish a task which is one of those tasks for which the group formed. Have the groups account for the groupings which were made. Also, the sociometrist can have the group divide into some of the many external structures on the basis of the factors identified above. Have the group identify the sub-groups which are familiar and operative based on these characteristics.

Identifying Leaders

The sociometric test can be used to identify where the potential for leadership lies in a group. The major writer and investigator of leadership, in addition to J. L. Moreno, is Helen Hall Jennings. Beliefs about what produces leaders has undergone several changes over the centuries. Born leaders at one time commanded countries by divine right. This was followed by a belief that leaders had certain traits or innate characteristics that prompted others to follow. Others believed that a situation, being in the right place at the right time, produced leaders, or that it wasn't who a person was that mattered, but what the person did that is powerful. Jennings writings (see the bibliography) focuses the sociometrist on two kinds of leaders, leaders of sociogroups (groups that have a work-related focus) and leaders of psychogroups (groups formed for pleasure or leisure-related activities.)

Jennings writings support a functional view of leadership with leaders being chosen because they have attributes which will support the role of leader. "An analysis of their ways of behaving (depending upon toward whom) shows the leadership they exert to be definable as a manner of interacting with others It is as if these individuals recognize and think more of the needs of others than others think of their own needs. The leader-individuals often take actions in behalf of others, whom they do not choose and who do not know of the effort made for them."³⁷

There may be persons in the group who wish to have, or exert, influence over the person chosen to be in the role of leader. One way to trace leadership, especially in the instance of hidden leadership, or leadership channels, is to identify who has influence over whom.

"The aristo-tele position, so called by Moreno because the individual in it could exert influence all out of proportion to its sociometric prominence, may be thought of as "feeders-to-leaders" since he is an individual who receives a high degree of tele preference from individuals who do receive a great number of choices from the population as a whole. Such feeder leaders, however, are not and should not be thought of as in actual positions of leadership from a sociometric standpoint. They are given influence at the discretion of those in leadership positions..."³⁸

In studying the results of a sociometric test designed to identify the potential or actual leadership of a group, this occurrence of feeder-leader might occur in the cases of (1) a former leader who has asked for role relief but who still wishes to appoint, or encourage, the identification of his/her replacement; and (2) a person who has no desire for the role but has a strong interest in the identification of a leader who can be the leader in such a way as to meet his/her own approval.

Jennings found that, "In the sociogroup, it is noted, the newcomer often chooses the over-chosen leader-individuals. For psychogroup affiliation, he seldom does. It is as if the individual could find compatibility in his psychogroup best with individuals psychologically located more nearly like himself, but in the sociogroup selects individuals who can importantly create a milieu benefiting many members."39

In discussing what accounts for a person being identified as leader in a group it will be important for group members to be clear about what the role of leader is to be, what characteristics they want in their leaders and what style of leadership they prefer. Often leaders have the responsibility to censure and to praise others. Leaders protect the interests of the minority and assure that rejected individuals are responded to. A paragraph from Words of the Father gives the sociometrist a clue about the relationship of the leader to the minority:

THE TREE OF LIFE IS AILING.
TO HEAL IT,
START FROM THE TOP.
THE TOP IS NEARER THE ROOT
THAN THE MIDDLE.40

A Note on the Reliability of Sociometric Data41 and Test Re-test Results

Sociometrists will need to address the question of reliability of the information which is made available to them by sociometric testing. Group members should be encouraged to raise issues and make comments about any factors or events which result in questions about the validity of responses and test procedures. Some of these factors will be obvious. For example, the effect of change in membership in the group, changes in the test situation, lack of clarity about the meaning of the criterion for choice, or inadequate information about what would be done with the test results. The role of participant as co-researcher is important in this phase of the process. Group members will need to account for the degree of change or non-change in their sociometric choice-making or in their sociometric position on the basis of re-testing.

It is possible that the relevance or significance of change in sociometric position can be determined through quantitative analysis. A number of published studies have had reliability as a major focus. "Product-moment and rank-difference correlations are the methods which have been employed

most frequently to compute reliability coefficients. Since the distribution of choices is highly skewed it is doubtful that the conditions for applying these methods are sufficiently satisfied in sociometric type data."⁴²

The factors which affect the degree of change in choice are: "extent of acquaintance, the relevance of the choice criterion to the activity of the group, the age of the subjects, the technique of choosing and the time interval between test and retest."⁴³

Sociometric Intervention Phase

By the time a group has reached this stage many interactions between group members will have taken place, both a deus and within the group. The data will seem old; the group members will remark that the group has changed. A new awareness of choice-making (evident in some of the humor going around) and a heightened sensitivity to others will often occur, especially in groups where an active regard for others has been employed. There may be a reluctance to continue working with the data. The reluctance can be overcome if group members realize that this phase offers opportunities for them to be active: explore new possibilities for relating, experience the consequences of choice by following up the criterion in action, and identifying directions for change in one's sociometric set.

The following activities provide that active focus: the action sociogram, with improvisation; making of assignments to test choices in action; re-grouping; identifying criteria on which persons would like to be highly chosen; role training; conflict resolution; sculpting the group metaphor; and, identifying new criteria for future sociometric explorations.

Enacting the Group Sociogram

Discuss the sociograms which the group has drawn. Select a sociogram that seems to be important to explore in action, perhaps a sociogram which depicts an area of unfinished group business.

- 1) In a space identified as the group, have each person position themselves in the space according to their position in the sociogram.
- 2) Ask group members to soliloquise about the place they have in the group.
- 3) Offer group members an opportunity to reverse roles with other group members and report how it feels to have that position in the group. Have the group member identify what would have to happen in this group in order for him or her to be in this position. Check out with other group members.
- 4) Have group members generate ideas for what this sociogram feels like by having them pick a metaphor for the group. Examples could be: for chains, a daisy chain, or waiting in line at the airport; wheels for a cart, a metaphor given once when there were several stars; the ocean, some people being waves and others being sand carried away.
- 5) Have group members maintain the position they had in the sociogram, get in touch with the feelings that position evokes, and begin to take on a role which fits the metaphor. Interact with others from that role. The group leader may call "Stop Action!" and have persons say what was evoked by being in action.
- 6) Have group members choose a metaphor which represents how they want the group to be in the future. Examples have included: a porch swing, used car lot, auction at an antique store, and Cinderella.

Making Assignments to Test Sociometric Choices in Action

In the warm-up phase of the sociometric test, participants choose the ways in which the data will be utilised. Therefore, they know beforehand that they will be assigned a partner for those activities indicated in the criterion for which they made choices for another person; or, they will be assigned to a group

on the basis of a criterion selected to assist with the making of small groups. There are certain basic principles that are followed when making assignments using sociometric data.

- 1) Provide optimal satisfaction for the entire group. The assignments must have a therapeutic impact that is good for the whole of the group.
- 2) Persons in a weaker sociometric position tend to have fewer reciprocated choices. Find the strongest, positive link they have in the group and begin the assignments with these persons.
- 3) Share the sociometric wealth.

Assignments of pairs:

1. Identify the strongest mutually positive relationship each person has in the group. The descending order is as follows: 1:1, 1:2, 1:3, 2:1, 2:2, 1:4, 2:3, 3:1, 3:2, 3:3, etc.
2. If a person has no mutual, assign them to the highest choice they made that is met with a neutral response.
3. If none of a persons choices are met with a positive or a neutral response, assign them to a person who has chosen him or her, whom the person did not reject. Prefer the person who made him or her the highest choice.
4. In some instances there is no way to satisfy everyone without giving a person (usually a star) more than one assignment. Avoid this whenever possible. It may be helpful to point out that if the assignments were being made on the spot, it would be likely that fewer people would be with a partner that gave them utmost satisfaction.

Followup of Pairing:

1. Have the persons discuss, after their involvement in the activity, ways in which the experience confirmed or disaffirmed the initial reason for choice.
2. Have group members identify other group members (whom they chose to remain neutral toward or whom they rejected on this criterion) with whom they would be willing to try out relating on this activity.

Assignments into Small Groups

Usually the criterion is worded in such a way as to imply that a small group would be formed from the results. Persons would make several choices for fellow group members. Again, positive mutuality is the basis for membership whenever possible.

1. Weighting of choices may prove useful in making group assignments; therefore, have available the relative weighting of each persons position.
2. Depending upon the number of small groups desired (in some instances the number of small groups depends upon the interconnections of group members and not upon some external factor (number of seats in a car, beds in a room, etc.) identify persons in the group who have a low sociometric status figure. Perhaps there are three or four. Determine if any of these persons has a strong reciprocal connection to any of the other three. If so, it may warrant these persons being in the same group. Keep it in mind as a possibility.

3. Place the name of each person at the head of a column, and place the sociometric weighting in a column to the right of each person's name.
4. Locate the persons to whom each has a reciprocal relation. Place a second name in each column, the name of a person with whom the first is connected in some positive way. Keep track of the weighting of each group.
5. Continue adding persons, making attempts wherever possible to avoid placing negatively connected persons in the same group. Shift and change the groupings until there exists small groups having a similar number of members and a similar sociometric value.
6. Draw a sociogram of each group to check the interconnections. Identify what are likely to be issues with which the small group will have to deal.

Criteria Selection for Identifying Act Hunger

Now that each person has experienced being chosen on a criterion designed to focus the group on the collective structure of the group, it is possible for group members to use the same approach toward identifying (1) the criteria on which each person would most like to be highly chosen, and (2) identifying what has to happen to make that a possibility. The exercise "Group Exploration of Act Hunger for Roles of High Value" on page 169 helps to provide this future projected focus.

Role Training

During the feedback sessions and dialogue group members will be identifying skills, behaviors and attitudes they may wish to explore, change and practice. A role training session follows a specific format, as follows:

1. Have the person identify the role they wish to develop, or a situation in which the desired change in behavior may occur.
2. Have the person produce the scene where the failure occurs or is likely to occur.
3. Bring the person out of the scene and have them watch the action taking place while a double mirrors the actions of the protagonist.
4. Interview the protagonist about possible changes they could make in the action which would bring about a change in the outcome.
5. Test out any of these suggestions by instructing the protagonist to provide the new behavior which is designed to result in a change. See if it works. If so, conclude the role training session by having the protagonist make a few closure statements to oneself in the empty chair.
6. If the suggestions that the protagonist makes do not produce the desired results, have the protagonist reverse roles with the significant inter-actor in the scene. Then instruct group members to come from the audience and provide in action suggested changes in behavior.
7. The protagonist in the role of the other is in a position to gauge the impact of the changes on other people and evaluate the success of the suggestions that are provided by the audience. Have several persons offer suggestions in action. Each experience will give the protagonist opportunities to role reverse and to experience a wider role repertoire.
8. Have the protagonist select an example from the suggestions made, and practice the interaction. Replace the original auxiliary ego.
9. Have the protagonist continue the training in the role until there is adequate comfort with the role or change in behavior.

Identifying New Criteria for Sociometric Explorations

The sociometric test in which the group has recently involved itself may have clarified group concerns. Also, group members will have identified criteria on which they would like to be chosen. These criteria result from needs to be seen or involved in a way in the group which is satisfying. The majority of sociometric issues depend upon accessibility to roles. Discuss with the group other sociometric criteria and procedures which may benefit the group at this point in time.

CHAPTER III
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42. Ibid., p. 326.
43. Ibid., p. 343.

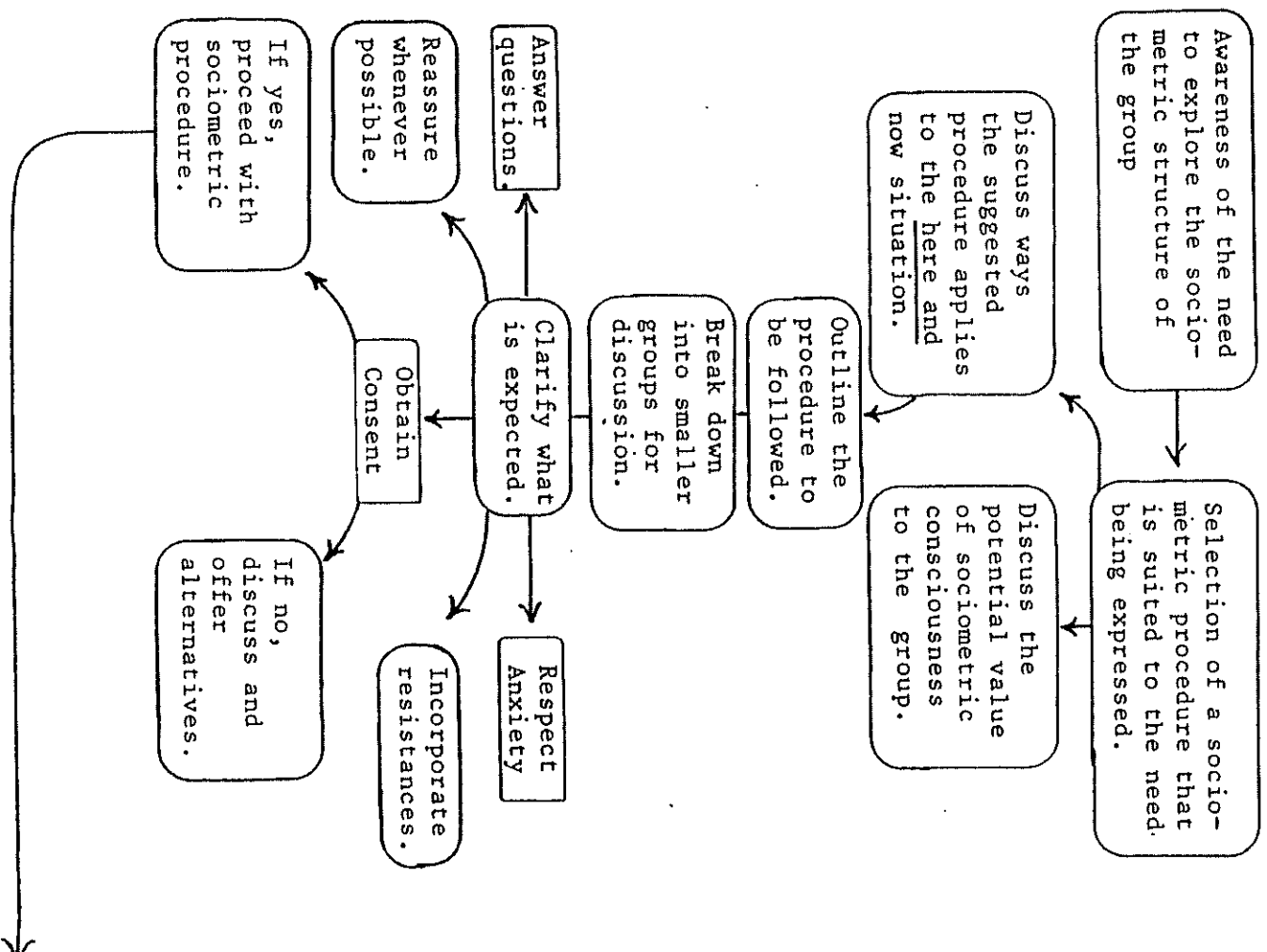
CHAPTER III

B I B L I O G R A P H Y

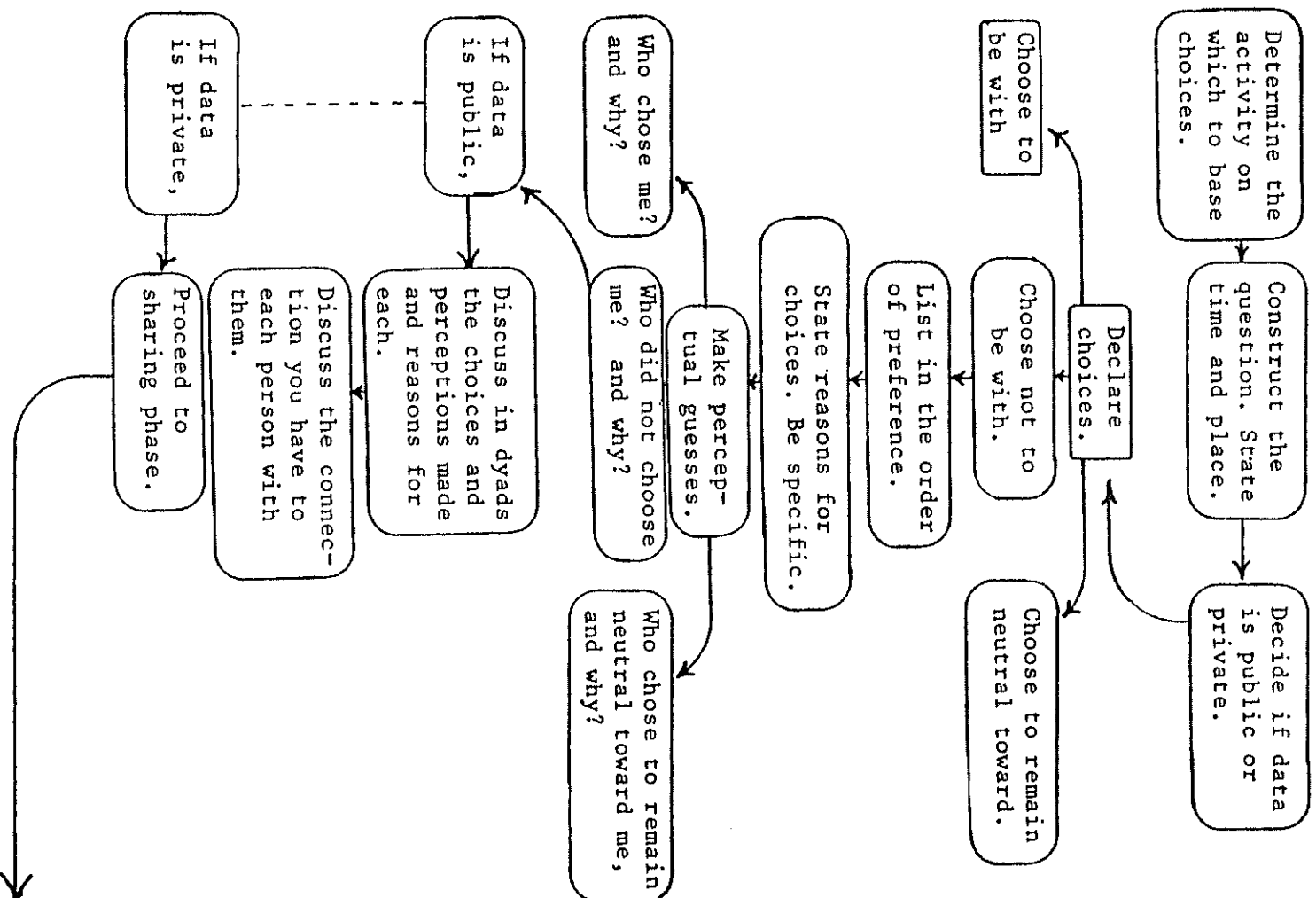
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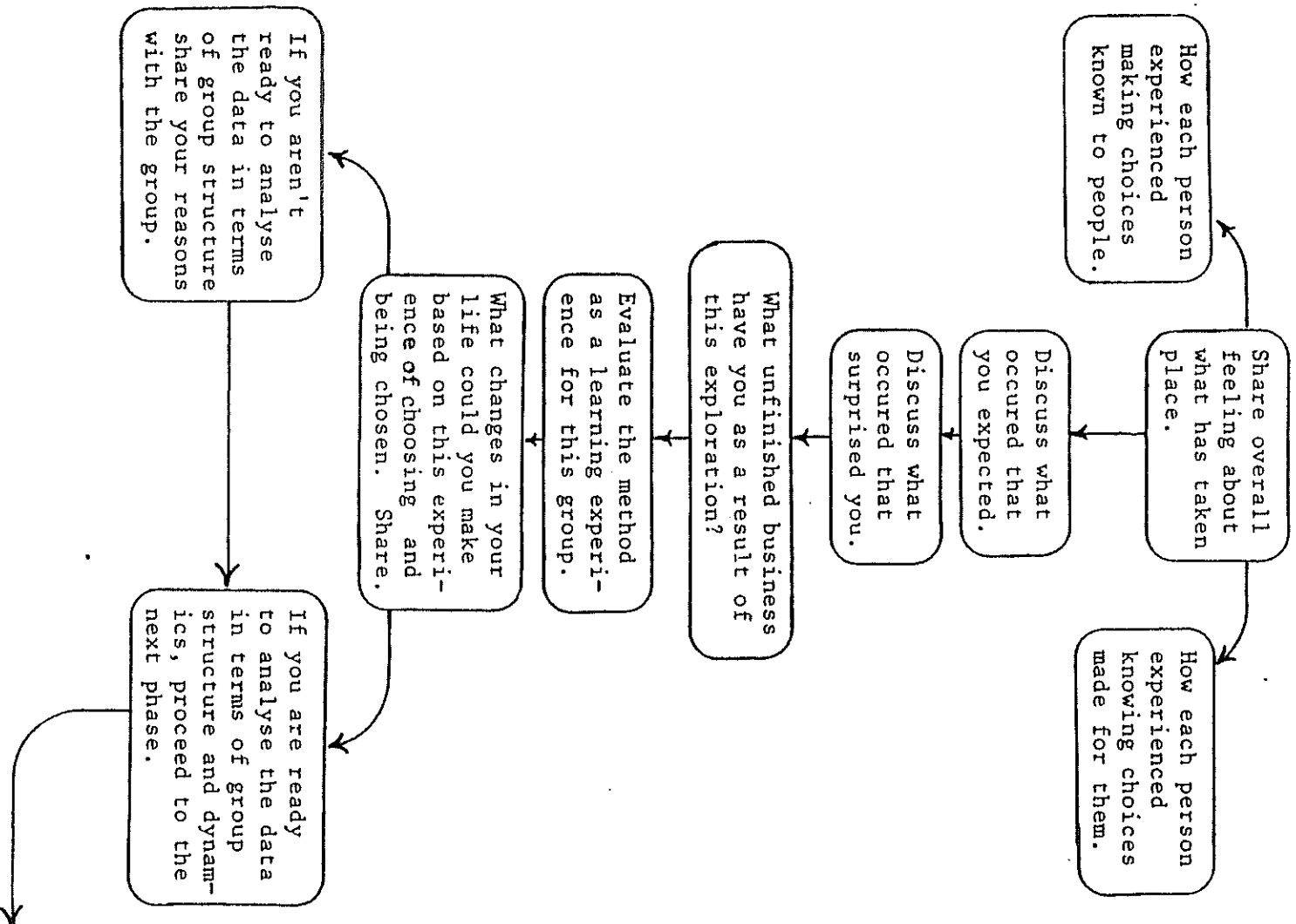
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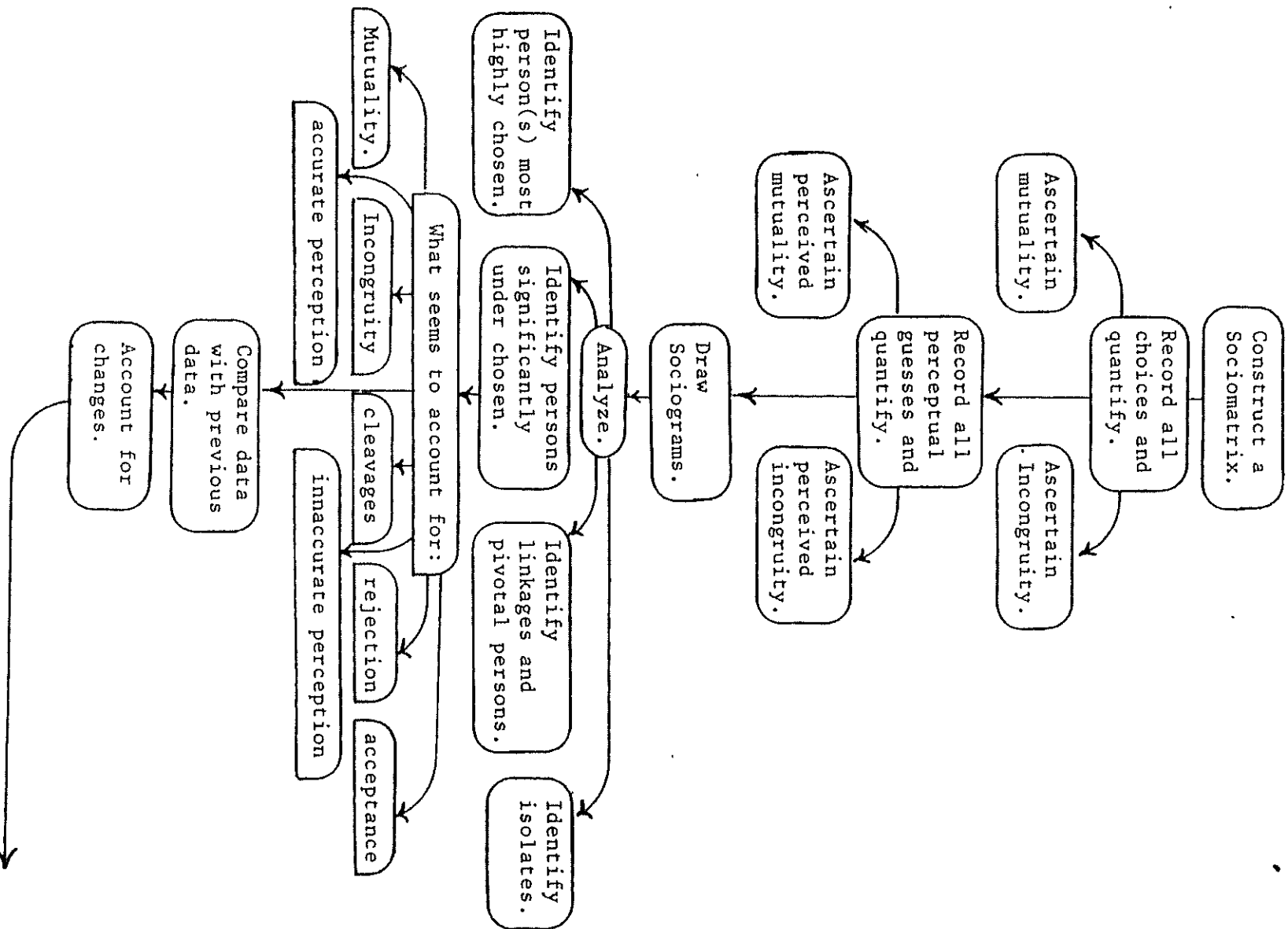
ACTION PHASE



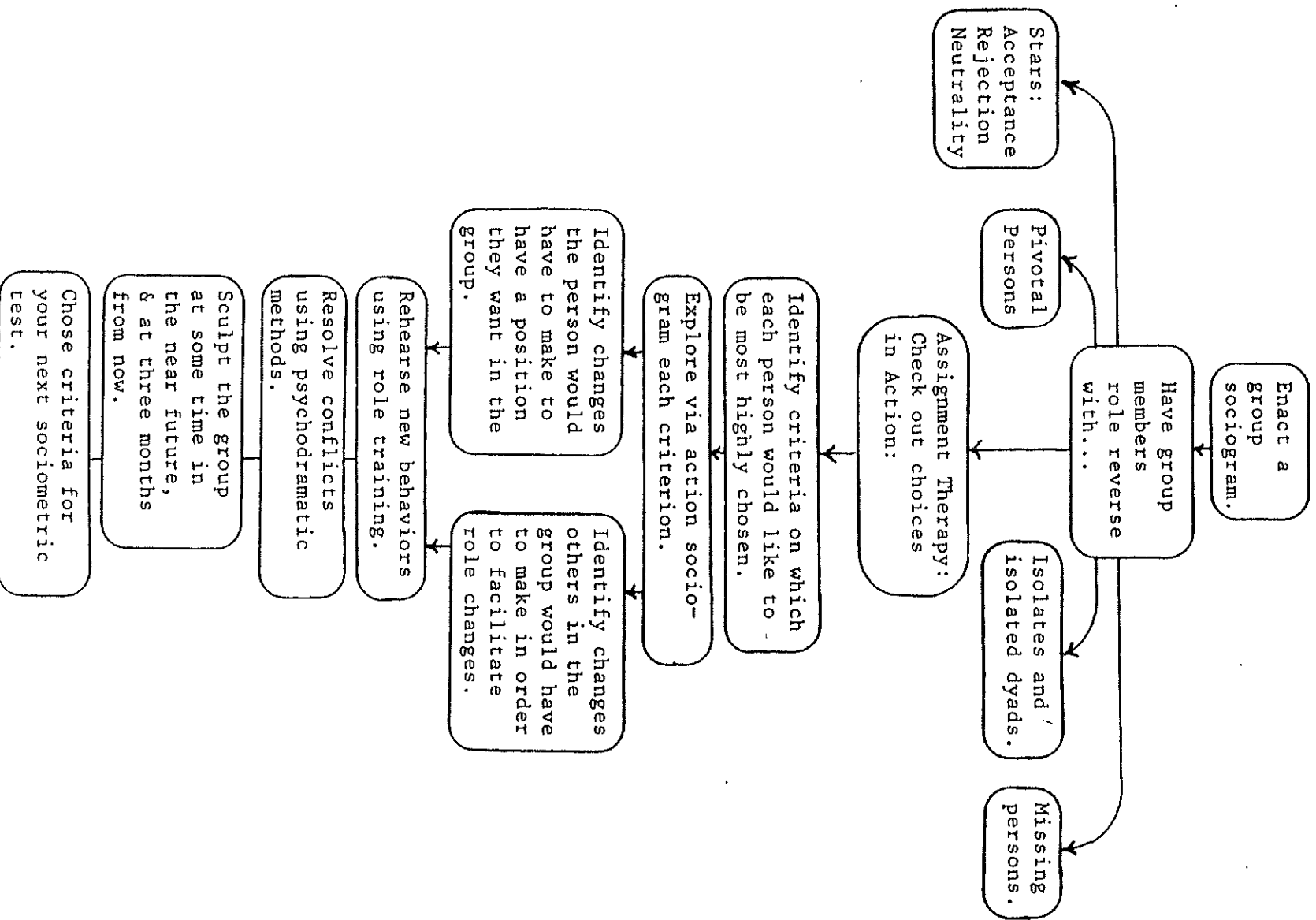
S H A R I N G P H A S E



A N A L Y S I S P H A S E



INTERVENTION AND
FUTURE PROJECTIONS



DESCRIPTION OF THE SOCIOMETRIC TEST
FOR THE FIRST-TIME PARTICIPANT

The sociometric test is a procedure designed by Jacob. L. Moreno, M.D., to determine the connections which exist between persons in a group, from time to time and from role to role. Moreno wrote in Words of the Father (1920):¹

"All Creators Are Alone
Until Their Love of Creating
Forms a World Around Them."

In this instance, the "world" is one's own group, which has a structure which can be identified, studied, and "formed" by the group to meet their expectations. A group's structure is complex and its dynamics involving. Therefore, group members need to develop skills for influencing and changing groups.

The sociometric test which is described below is not a test in the same way one takes an exam and derives a grade, but it is a test in the sense of a laboratory exploration. The following is a brief description of how the sociometric test is conducted.

First, the group picks a criterion for the evaluation. For example, the criterion might be "Who would I choose to take a half-hour walk with after lunch?" or, "Who would I choose to share with the three things I am most ashamed of in my life." Once the criterion is picked, each person in the group is asked to choose from among the other members: (1) those he or she would prefer to interact with, (2) those he or she is neutral toward, and (3) those he or she would prefer to not interact with, on the basis of the chosen criterion. Each person writes down his choices, and wherever possible, gives a reason for each choice. The results are shared, with each person spending a few minutes of time with each person, discussing their choices for each other. The data sheets are collected, quantified, and depicted in the form of charts, a sociomatrix and sociograms. Naturally a person's choices of others will vary depending on the criterion, thus the first criterion given in the example above might produce many more positive choices than the second one.

In addition to choosing others, each group member is asked to make guesses as to which other group members have chosen him or her, remained neutral toward him or her, or have chosen not to interact with him or her. In this way each person creates his or her own "perceptual sociogram". Later, these perceptions can be checked out against the data generated by the group and depicted on the sociomatrix. Thus a group member can discover how accurate he or she is in assessing how others in the group react to him or her.

The finished sociogram will illustrate who is chosen by whom, how often the choices are mutual, who is chosen infrequently or isolated from the group,

¹Moreno, J.L. Words of the Father. New York, Beacon House, 1941, p.138.

and who is rejected by other group members. From the sociometric data, assignments will be made so that each person will carry out the activity implied in the criterion with someone of his or her choice.

The process of sociometric exploration provides focus on a question which often goes un-asked in groups: "Where do I fit in this group?" This is a threatening question, but an important one. By confronting "the need to know" and the "fear of knowing" about oneself in relation to others, the group member can gain freedom from these needs and fears, and become more effective as a group member, group leader and self-therapist.

The criterion

The group's choice of criterion will reflect the unique features of that group. It is important that all group members give input into this choice. Be sure that the activity has relevance for you. Feel free to speak out and offer suggestions, and look for criteria which will provide a "stretch" in your risk-taking ability.

Choosing

Once the criterion has been selected each group member works independently. The following information may help you in making choices. Every group member is to be placed in one of the three categories: choose to, choose not to, choose to be neutral towards. There is no limit, however, to the number of persons within each category. For example, if the criterion is "choose to go nude bathing with" you might put everyone in the "choose not to" category (or conversely you might choose to put them all in the "choose to" category!). In any case, list both your positive and your negative choices in order of preference. (The neutral choices, of course, have no order of preference, otherwise they would not really be neutral.) It may be helpful to first make a list under each category and then place the number of your preference in the margin. If you cannot distinguish between two or more persons in the order of preference, they may be given the same number.

If you have difficulty making your choices, close your eyes and imagine yourself engaged in the activity specified with each person in the group. What feelings does this evoke? Make your choices on the basis of those feelings.

Report as accurately as possible the specific reasons for making each choice. Others will be struggling with putting their feelings into words. It is not an easy task. Verbalizing your feelings will help you better understand yourself as well as enable you to give constructive feedback to others. Write your reasons as if you are speaking to the person, not about them. This makes the reason more personal.

Be aware of the feelings you have about the process of choosing and rejecting others. Respect your anxiety. It is possible to learn from it. Remember that this choosing process goes on all the time (beneath the surface) during our daily contact with people. This group is a relatively safe, controlled "laboratory" situation where you can look carefully and honestly at this process, and come to understand yourself better. If you still find it difficult to be "completely honest" especially with people you chose not to interact with, you may find it helpful to fill out two data sheets: one you hand in, giving only the data you can share openly, and another which you keep, which reveals choices and reasons you would give if you were completely comfortable.

When you get to the part of the procedure that asks for perceptual guesses you may find it helpful to put yourself in each persons place (role reverse) in order to get in touch with the choices they might have made. Note what you are using as a cue to their choice. The more perceptual guesses you make, the greater the opportunity for learning about and sharpening your perceptual skills.

Summary

There are many different kinds of learning which come from the sociometric test. The most obvious question which it addresses is about group structure: "Where do I fit in this group?" "Where is the potential for leadership within the group and how may I make a contribution?" "What aspects of my personality cause people to choose me? to reject me?"

The procedure also helps each individual to look at his own choice process: "What are my needs, my fears, my anxieties surrounding the choice process?" "Am I able to make choices based on the fullest range of positive and negative feelings, and be responsible for acting on these choices?" After someone has participated in several explorations with different groups, he or she may begin to look at the factors involved in what kind of group (size, age, sex, culture, temperament, etc.) allows him or her the greatest degree of expansiveness, creativity and productivity.

All of the above questions look on the sociometric test as a measuring device (i.e. a method of assessing what is). But it is more than a means of measurement. It is also an agent of change. The process of carefully looking at relationships changes those relationships. This spin-off may occur in many ways, and happen immediately or over time. People who are mutual positive choices may get together quicker once they have acknowledged each other. Often in the process of writing down the reasons for a negative choice, a group member will realize that the person reminds him or her of someone else in the past who was a negative influence. That realization often releases the group member from some of the transference and allows him or her to establish a here and now relationship.

It is particularly useful to understanding social interactions if the group will re-do the sociometric test later in the history of the group. Choices at this point will be based less on first impressions and transference, and more on mutually shared experience. The test can indicate growth and change and the degree to which a person has been able to "form a world around them."

STAGES IN A GROUP'S DEVELOPMENT WHEN THE SOCIOMETRIC TEST WOULD BE A CHOICE

There are certain stages in a group's development when the group could benefit from a sociometric test. There are cues which indicate a need for such an exploration, and the sociometrist can develop this sensitivity in him or herself and pass this awareness on to the group. The following are guidelines which have been provided to help identify these stages (or moods).

A. The newly formed group

Reasons:

1. The sociometric test makes visible and concrete pre-existing connections and group structure.
2. Identifies telic connections as well as transference and empathic connections.
3. Diagnoses issues of inclusion and suggests intervention possibilities.
4. Clarifies level of risk-taking in the group.
5. Provides a task and focuses central concern.

B. A blocked group

Reasons:

1. Provides vehicle for expressing feelings in a collective, directed and focused manner.
2. Motivates group members to examine ways to involve themselves with group members less known to them.
3. Stimulates imagination and expands perceptions.
4. Identifies the stultifying group structure and focuses on existant act hunger.
5. Identifies persons carrying the heaviest loads of projection in the group and can provide role relief.

C. A hostile group

Reasons:

1. Reduces anger due to "nothing being done about a situation" by providing a focused alternative and a structured vehicle for expressing feelings and choices.
2. Provides relief of tension which may be due to the "invisibility" of dynamics producing hostility, by making group structure visible.
3. Identifies possibilities for alternative group structures.
4. Clarifies areas where group members have to take responsibility for their impact on others when motivations for choice are explored.
5. Focuses on fear which exists in the group and can suggest focus on supportive and confrontative role development.

D. A risking group

Reasons:

1. Makes visible changes in group members' positions in a group.

- D. 2. Provides practice in being open, firm, clear, and honest about one's responses and choices for others.
3. Provides an experience in facing the fear of rejection, and the fear of rejecting.
4. Provides information on group dynamics which are supportive of risk-taking which can be applied to groups less open and in need of skills.

E. A terminating group

Reasons:

1. Focuses on issues to be resolved in the group which are preventing adequate closure.
2. Highlights role development needs of group members (act hunger) not yet met by the group as it has currently structured itself.
3. Identifies areas of group and change for the group which can be the focus of evaluation.
4. Can clarify the end or continuance of relationships.

RANKING CRITERIA OF CHOICE BY RELEVANCE,
THREAT AND TYPE

In the columns indicated below rank the following criteria using the scale as itemized.

| | | | |
|---|--|-------------------------------|---|
| THREAT | RELEVANCE | TYPE | DECISION |
| 1=No threat. 2=Mildly threat- ening 3=Threatening. 4=Very threat- ening. 5=Overwhelmingly threatening. | 1=No relevance. 2=Some relevance. 3=Very relevant. | P=Psychotetic S=Sociotelic | 1=I would urge others to use it as well. 2=I would use it. 3=I'm neutral about using it. 4=I could be persuaded to use it. 5=I won't use it. |

| THREAT | RELEVANCE | TYPE | DECISION | CRITERIA |
|--------|-----------|------|----------|---|
| | | | | Whom do I choose to hold me when I need to cry? |
| | | | | Whom do I choose to be a confrontive double in my psychodrama? |
| | | | | Whom would I allow to practice psychodrama directing on me? |
| | | | | Whom would I choose to tell about a distressing sexual incident? |
| | | | | Whom do I choose to advise me about a current decision? |
| | | | | With whom do I choose to take a nap? |
| | | | | With whom do I choose to share a room? |
| | | | | Whom do I choose to wrestle? |
| | | | | Whom do I choose to spend leisure time with? |
| | | | | From whom do I choose to borrow notes? |
| | | | | Whom do I choose to have over to my house after class (after session)? |
| | | | | Of the people who are a risk for me to encounter about my angry feelings toward them, whom do I choose to encounter? |
| | | | | Of the people who area risk for me to let them know I am sexually attracted to them, whom do I choose to spend a hour with being open and direct? |
| | | | | Whom do I choose to have as my partner for analysing the data from this sociometric test? |
| | | | | With whom do I choose to share the impact this sociometric test has had on me? |
| | | | | Whom do I choose to tell about my first impressions of the other group members? |
| | | | | With whom do I choose to draw sociograms? |

- | | | | |
|------------------|-------------------|---------------|-----------------------|
| THREAT | RELEVANCE | TYPE | DECISION |
| 1=No threat. | 1=No relevance | P=Psychotetic | 1=I would urge others |
| 2=Mildly threat- | 2=Some relevance. | S=Sociotetic | to use it as well. |
| ening. | 3=Very relevant. | | 2=I would use it. |
| 3=Threatening | | | 3=I'm neutral about |
| 4=Very threat- | | | using it. |
| ening. | | | 4=Not in favor of |
| 5=Overwhelmingly | | | using it. |
| threatening. | | | 5=I won't use it. |

| THREAT | RELEVANCE | TYPE | DECISION | CRITERIA |
|--------|-----------|------|----------|---|
| | | | | Whom do I choose to advise me about my physical appearance? |
| | | | | Whom do I choose to have on my volleyball team? |
| | | | | Whom do I choose to lead the group in a guided fantasy? |
| | | | | Whom do I choose to lend my car to? |
| | | | | Whom in the group do I choose to ask for a loan of money (over \$20, less than \$50.)? |
| | | | | Whom do I choose to dance with, to slow music, when the lights are down? |
| | | | | With whom do I choose to share a weakness? |
| | | | | Of the people in the group whom it would be a risk for me to have them hold me, whom do I choose to hold me for five minutes in order for me to check my perceptions? |
| | | | | With whom do I choose to design a sociometric exploration for use in my work setting? |
| | | | | With whom do I choose to share a message? |
| | | | | To whom would I go for comfort if I find myself distressed in the middle of the night? |
| | | | | Whom do I choose to support me if I should be encountered in this group? |
| | | | | Whom do I choose to sit across from in group sessions? |
| | | | | Whom do I choose to spend an hour with exchanging feedback? |
| | | | | Of the people in the group whom I know least well, whom do I choose to spend time with on the break? |
| | | | | Whom do I choose to have as members of my support group? |
| | | | | OTHER: |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

OBJECTIVE DATA SHEET
FOR
THE SOCIOMETRIC TEST

Name: _____ Date: _____

1. Whom in the group do I choose to _____
List in the order of preference.

NAME REASON FOR THIS CHOICE

2. Whom in the group do I choose not to _____
List in the order of least preference.

NAME REASON FOR THIS CHOICE

3. Whom in the group do I choose to remain neutral toward on the basis of
this criterion. It is not necessary to list in any particular order.

PERCEPTUAL DATA SHEET
FOR
THE SOCIOMETRIC TEST

Name: _____ Date: _____

Criterion: _____

A. 1. Whom in the group do I perceive will choose me?

NAME

REASON FOR THIS PERCEPTION

2. Whom in the group do I perceive will place me in the "choose not to" category?

NAME

REASON FOR THIS PERCEPTION

3. Whom in the group do I perceive will choose to remain neutral toward me on the basis of this criterion?

NAME

REASON FOR THIS PERCEPTION

B. I have chosen to make perceptual guesses about the choices of _____.

HE/SHE CHOSE:

HE/SHE DID NOT CHOOSE:

HE/SHE WAS NEUTRAL TOWARD:

| NAMES | NAMES | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | Positive Choices Made | Negative Choices Made | Neutral Choices Made |
|-----------------------|-------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|-----------------------|-----------------------|----------------------|
| 1 | | ■ | | | | | | | | | | | | | | | | | | | | | | |
| 2 | | | ■ | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | ■ | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | ■ | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | ■ | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | ■ | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | ■ | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | ■ | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | ■ | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | ■ | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | ■ | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | ■ | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | ■ | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | ■ | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | ■ | | | | | | | | |
| 16 | | | | | | | | | | | | | | | | | ■ | | | | | | | |
| 17 | | | | | | | | | | | | | | | | | | ■ | | | | | | |
| 18 | | | | | | | | | | | | | | | | | | | ■ | | | | | |
| 19 | | | | | | | | | | | | | | | | | | | | ■ | | | | |
| 20 | | | | | | | | | | | | | | | | | | | | | ■ | | | |
| Positive Choices Recd | | | | | | | | | | | | | | | | | | | | | | | | |
| Negative Choices Recd | | | | | | | | | | | | | | | | | | | | | | | | |
| Neutral Choices Recd | | | | | | | | | | | | | | | | | | | | | | | | |
| Positive Mutuals | | | | | | | | | | | | | | | | | | | | | | | | |
| Negative Mutuals | | | | | | | | | | | | | | | | | | | | | | | | |
| Neutral Mutuals | | | | | | | | | | | | | | | | | | | | | | | | |
| Pos/Neg Incongruity | | | | | | | | | | | | | | | | | | | | | | | | |
| Pos/Neut Incongruity | | | | | | | | | | | | | | | | | | | | | | | | |
| Neg/Neut Incongruity | | | | | | | | | | | | | | | | | | | | | | | | |
| WEIGHTING | | | | | | | | | | | | | | | | | | | | | | | | |