Moreno's Scientific Methodology

The Unsuspected Revolution.

Actively magic-poetic… methodically scientific.

DRAFT — Friday, 8 November, 2013

> *The chief methodological task of sociometry has been the revision of the experimental method so that it can be applied effectively to social phenomena.*
>
> (Moreno, 2012:39)

Abstract

This article aims to concisely describe J.L. Moreno's philosophy of experimental design and scientific method. Sociometry is central to Moreno's social science and six principles that guide sociometric research are described. Moreno's social research methods have a solid place in Moreno's work and are a major contribution to social science. Greater consciousness of Moreno's scientific approach will strengthen and extend the psychodramatic methods, social experiments and foster ethical social change.

Key Words

social science, scientific methodology, principles of sociometry, research, psychodrama, experimental design.

Introduction

It did not strike me just how important Moreno's scientific methodology was when I discovered *Who Shall Survive?* Moreno's seminal work at the start of my psychodrama

training. The book, first published in the early thirties emphasised a research method. My personal therapy overwhelmed any attention to scientific methodology. I was not alone in this, many people are hungry for therapy and thus psychodrama as personal development is the best known of Moreno's methods. I dismissed Moreno's science talk as his need to be seen as a credible person in the world. I no longer believe that was his motivation. Science is at the core of his work. Moreno pioneered a paradigm of science that has not made a shift into scientific consciousness.

In this article I will describe how Moreno's philosophy of science and experimental design is infused in his work and related to his concepts of warm up, action, spontaneity, encounter, the power of the moment, and how to make a better world. Moreno is driven by a quest to investigate human beings in a way is congruent with his understanding that humans are not robots, that as agents with spontaneity they can't be known in the way we know things. Moreno acknowledged his work was incomplete, and a "world-wide project – a scheme well-nigh Utopian in concept" (Moreno, 1978:121). Now, many decades later there is a growing mistrust of research that in the psychosocial sphere (Greenberg, 2013) because we are aware of the influence of financial interests. Understanding, implementing and extending Moreno's approach would lead to dramatic change in how social research is evaluated and practiced.

Moreno, scientist

Moreno was not a scientist above all else. Some say Moreno was primarily a theatre person (Scheiffele, 1995), a mystic (Schreiber, 2013:8) or a psychiatrist. Jonathan D. Moreno introduces his father as "a religious prophet or a wizard or a guru ... he was all of these and a scientist." (Moreno, 2011)

The prophet, wizard and guru can overshadow the scientist. Moreno was influenced by a visionary experience, an *idea fixe*; a moment of insight:

> *I suffered from an idee fixe, from what might have been called then an affectation, but of which might be said today, as the*

> *harvest is coming in, that it was by "the grace of God." The idee fixe became my constant source of productivity; it proclaimed that there is a sort of primordial nature, which is immortal, and returns afresh with every generation, a first universe which contains all beings and in which all events are sacred. I liked that enchanting realm and did not plan to leave it, ever.*
>
> Moreno, 2012:14

The mystical aspect is one half of the story. Further in the same book, *The Future of Man*, Moreno describes exactly how he is motivated to investigate his own visionary experience as a scientist.

> *I had a double task, to create, to produce the element within myself first, to bring so to speak, the subjective-creative subject matter to realization, then to isolate and investigate it. ... I began to "warm up" to prophetic moods and heroic feelings, putting them into my thoughts, my emotions, gestures and actions; it was a sort of spontaneity research on the reality level.*
>
> Moreno, 2012:16

And the stage becomes and instrument for the research:

> *The theatre was a safe retreat for unsuspected revolution and offered unlimited possibilities for spontaneity research on the experimental level. Spontaneity could be tested and measured ...*
>
> *Being brought up in a scientific environment I began to develop hypotheses, procedures by which to test them and tests by which to measure spontaneity. All this, not as a science for its own sake, but as a preliminary and supplementary step for a theatre of spontaneity which opened its gates to the worshipper of*

immediate and creative genius.

Moreno 2012:17

The unsuspected revolution was that the stage offered a means for research. While there is much of Moreno's work that has been kidnapped, borrowed or duplicated this central idea remains firmly in the psychodramatic community.

In the Preludes to Who Shall Survive?

> *I was fortunate to experience and act out firsthand during my own life the transformation of a sacred into a secular cultural order-a process which ordinarily lasts centuries of development. The sociometric system gained in depth and clarity and was able to combine the two extremes which have pervaded human cultures, the concretely, actively magic-poetic, with the objectively, methodically scientific.. Because I had lived through two opposite cultural systems, first a sacred religious existence, then a secular worldly existence, I could pass without difficulty from religious into scientific thinking, in fact, they appeared like two sides of the same coin. It is because the sociometric system had first a religious character that all sociometric and psychodramatic techniques were in their first format religious and axiometric. As I tried the sociometric system first on the universe and on the concept of God, its first manifesto was a revolutionary religion, a change of the idea of the universe and the idea of God. The God of Spinoza was not real and dynamic enough; his God was metric but void of spontaneity and creativity. The God of Jesus was further extended, the son "withered away" until nothing was left except the universal creativity of the Godhead and only one commandment: To each according to what he is.**

> ** The postulates "each according to his needs or according to his work capacity" still indicate a bias against all the potentialities of the individual. The postulate above indicates an all-inclusive acceptance of the individual "as he is."*
>
> Moreno 1978:xxi

Moreno is explicit about the relation between his theology and science, he writes in a preface to *Das Stegreiftheater (Theatre of Spontaneity*, first published in 1923) how that book "marked in my work the beginning of a new period: the transition from religious to scientific writing." (Moreno 2010:17)

That he turned to scientific writing is no exaggeration. The title of the Journal he founded is: *Sociometry: A Journal of Inter-Personal Relations and Experimental Design*.[1] He wrote many articles with a focus on science. *Who Shall Survive?* (Moreno, 1978) is devoted to describing the experimental method. *Sociometry, Experimental Method and the Science of Society. An Approach to a New Political Orientation.* (Moreno, 1951), is a treatise on method, in that book he says:

> *The experimental method in physics was furthered in the first half of the seventeenth century, under the leadership of Galileo, Bacon and Newton. The experimental method in the social sciences was handicapped as long as it tried to follow the physical model; it really got under way in the first half of the twentieth century under the leadership of sociometry…*
>
> (Moreno, 1951:13)

Moreno proposed a new methodology. He was convinced the scientific methods devised for the physical sciences were not applicable to humans. His concepts: tele, warm up, creativity, spontaneity, the here and now, encounter and action are interrelated concepts that enable the exploration of human relationships.

Adam Blatner has reflected in some depth on Moreno's *idea fixe* and methodologies and concludes, as I do, that the imaginative qualities (Moreno refers to them as speculations, Moreno, 1978:Foreword to the third Edition) are integrated with the scientific methodological formulations, and relevant today:

> *Beyond this, I think he was on to something important: Moreno's vision was of a kind of archetypal realm which synthesized the Dionysian and the Apollonian, the egocentric, soul-amplifying power of personal imagery and the social, organized, focusing power of methodology. That these themes can be synthesized through the vehicles of drama and the concretizing action techniques of sociometry is still generally unrecognized in the larger world. These ideas have tremendous relevance for the way people deal with the known world, not just the social sciences, but the arts and indeed all human endeavors. They have practical implications, but deserve to be considered afresh (in the spirit of spontaneity), and to be renewed in theory as well as in action.*
>
> Blatner 1996:Last paragraph

In *Sociometry and Experimental Sociology* (Moreno, 1954) Moreno sees the place of his new science in the bigger picture:

> *Let us briefly survey the development of scientific method. There have been two phases in the development of scientific method. First there were the observational sciences of astronomy, geology and systematic biology. Then came the experimental sciences of chemistry, physics and experimental biology. It has been necessary for a true science of man to use, in addition to those approaches, a third. An action science…*
>
> (Moreno:1954:358-359)

It is a big claim to make; sociometry is the third form of science, a science of humankind. Should we take this seriously?

The relationship between theory and practice

It is important to realise that he was not a theoretician but a practitioner. He deliberately did not pursue the academic life. He created institutions, founded Journals but above all practiced his theatrical, spiritual, psychological and scientific work. Actions speak louder than words.

Moreno quotes a review of Kurt Lewin's work by H.J. Eyseneck in the British Journal of Sociology Dec. 1952 Vol. III, N0. 4. "…Lewin's followers … insist that theory preceded experiment, and that the latter would have been impossible without the former." This is clearly in contrast to Moreno's own theory of how knowledge is created, which is a circular process described in the Canon of creativity. There is warm up leading to spontaneity leading creativity which leads to conserves which in turn lead to more spontaneity. This is a more dialectical epistemology not unlike that of marx and Engles one that is known as "praxis" and associated wit the work of Paulo Freire.

> *⋯ process of human critical reflection on the world and taking conscious, transformative action on that world is how Freire conceives of "praxis" (Davis & Freire, 1981; P. Freire, 1974, 1982a, 1982b), which is the core of his epistemology. Freire (1982b) explains that,*

> *[H]uman beings ... are being of 'praxis': of action and of reflection. Humans find themselves marked by the results of their own actions in their relations with the world, and through the action on it. By acting they transform; by transforming they*

create a reality which conditions their manner of acting.(p. 102)

Praxis, however, requires that humans, both individually and collectively, act as Subjects in the world as opposed to being objects to be acted upon (P. Freire, 1974, 1982a, 1982b). As Subjects, then, humans, who are in a constant state of development, can act to transform their reality and "go on to a state of being, in search of becoming more fully human" (P. Freire, 1982b, p. 145). By implication, to treat humans as objects, thereby lessening their abilities to act to transform their world, is to dehumanize them (P. Freire, 1982a, p. 5), a state of being which engenders a state of oppression (P. Freire, 1974, p. 28).

Au, 2007

See also the quote mentioned above in the section on Principle 5 Adequate motivation.

If all sociometric techniques known today are used by the population to transform its present social structure into a new social order in accord with the set of values which they, the people have decided to pursue.

Moreno, 1978:121

Sociometry

The third science, the action science is different from observational and physical science. Calling it is science is difficult because the matter studied is in inverted commas:

Psychodrama can be defined therefore as the science which explores the "truth" by dramatic methods.

Moreno, 1978:81

So what is this "truth" that it is in quote marks? This sentence follows:

It deals with inter-personal relations and private worlds.

There may be aspects of people and society that can be investigated by the other forms of science, however when it comes to the inter-personal and the private world, the realm of the psyche, with its roots in the Greek word for breath; the realm of soul, myth, the in-between in relationships, dreams, poetry, drama, sociometry is indicated, physical science does not apply; the subject matter is not physical. Talking about psyche was once known as psychology; logos of psyche. Language is created to speak of the psyche; mind, the unconscious, shadow, self, ego, id, ego-states, gestalts. Plato used the word "metaxy", an in-between space where there are no objects, yet there is something to describe. Moreno's quote marks around the word 'truth' do the job. They create a holding space in the same way as the psychotherapeutic hour or the stage creates a place for the sacred.

Moreno brings a rich language to "inter-personal relations and private worlds". Sociometry is central at those times when people come together to explore the human condition, modes of communication, forms of therapeutic intervention, patterns of behaviour, classification of role systems, modes of organisations, motivation and so on.

In 1924 he wrote "The theatre was a safe retreat for unsuspected revolution and offered unlimited possibilities for spontaneity research on the experimental level. Spontaneity could be tested and measured…" (Moreno 2012:17).

The stage is the instrument that opens a reality that is 'surplus' to our every-day world. All that ephemeral and subjective in the psyche is concretised and can be seen and touched. The invisible can be measured.

Moreno's language reflects the integrated nature of his work. Moreno sometimes used 'sociometry' as the name of his whole social science endeavour. Sometimes it is a technique for therapeutic change in groups. As I wish to focus on the scientific method, I will mostly use the word 'sociometry' to cover his work in experimental design, experimental sociology and his philosophy of science.

The word 'psychodrama' is used to cover sociometry, role training, sociodrama and classical psychodrama, in this context the group process aspect of sociometry and not the research aspect is to the fore. The psyche and the socius are linked and Moreno often uses the word psychosocial.

John Stuart Mill was right, Moreno points out, to be sceptical that social phenomena are too inaccessible, inconsistent and fleeting to be a fitting subject matter for science "but he did not realise that it was the experimental method which was at fault". (Moreno, 1954:31) On the stage we make the psychosocil physical. Therefore the more accomplished the group work, the fuller the theatrical production the more it will reveal "truth", the better the therapy and the better the science.

Moreno describes the complexity of sociometry in some depth:

> *What, precisely, is sociometry? The cornerstone of sociometry is its "Doctrine of Spontaneity and Creativity." It has created an experimental methodology which is applicable to all social sciences. It is the sociometric revision of the scientific method of the social sciences that will gradually make such a thing as a science of society possible. It gives its subjects research status by changing them from subjects into participating and evaluating actors; a social science becomes sociometric to the degree in which it gives the members of the group research status and the degree in which it is able to measure their activities; it goes to work with actual or prospective groups and develops procedures which can be used in actual situations. It puts an equally strong*

> *emphasis upon group dynamics and group action as upon measurement and evaluation. In the early phases of sociometry measurement was mere counting, for instance, counting of words, of acts, of roles, of choices and rejections, of steps in walking or of mouthfuls and pauses in eating; these naive, rough forms of measurement were an indispensable first step before standardized units of universal validity could be established.*
>
> Moreno 1978:18

In that one paragraph Moreno sums up a process he worked with and wrote about all his life.

People are not objects

Sociometry indicated when working with people as people, not things.

> *"The social sciences need—at least in their crucial dimension—different methods of approach. The crux of the ontology of science is the status of the "research objects." Their status is not uniform in all sciences. There is a group of sciences like astronomy, physics, chemistry and biology in which the research Objects are always mere "objects." Their actions speak for themselves and the generalizations concluded from them are not threatened by any metaphysical protest or social revolution of their kind. "*
>
> (Moreno, 1953:63)

Moreno had an idea of the god like sacredness of human beings. This was an observation of the way people are, and how they are different from machines. All his writing and his life's work is related to the basic understanding that we are not automatons. We have consciousness. This is a profound fact, I am I, I can act, I can relate.

> *When God created the world He started off by making every being a machine. He made one machine push the other and the whole universe ran like a machine. That seemed to be comfortable, safe and smooth. But then He thought it over. He smiled and put just an ounce of spontaneity into each of the machines and this has made for endless trouble ever since — and for endless enjoyment.*
>
> Moreno 1978:xvii

Moreno and Buber were contemporaries and have a lot in common.[2] Sandra Turner in her thesis (1990) shows how both men value encounter. Both understand the I-You relationship and both see it as sacred in a way I-it not. Science belongs to the I-It world according to Buber. Buber writes of the I-You relationship:

> *The human being who but now was unique and devoid of qualities, not at handfl but only present, not experienceable, only touchable, has again become a He or She, an aggregate of qualities, a quantum with a shape. Now I can again abstract from him the color of his hair, of his speech, of his graciousness; but as long as I can do that he is my You no longer and not yet again.*
>
> Buber, 68

> *The world that appears to you in this way is unreliable, for it appears always new to you, and you cannot take it by its word. It lacks density, for everything in it permeates everything else. It lacks duration, for it comes even when not called and vanishes even when you cling to it. It cannot be surveyed: if you try to*

make it surveyable, you lose it.

Buber, 83

Moreno while having a similar understanding of the sacredness of the I-You, believes investigation is possible without destroying the You-ness. I imagine a conversation between Moreno and Buber might have looked something like this:

Buber: As soon as you can measure it, you have not really seen it in its fullness. This is particularly true of people. Connect with them and you are in a sacred space which disappears if you then step out to observe it.

Moreno: I'm totally with you when you say to really connect with a person (or even a thing) you need to meet, to encounter it. That is very different from the world of things. But I think we can measure the relationship with people AND stay in what you call the I-You world.

Buber: You can't convince me that it can be done. Observe it and you are no longer in the relationship, you are a third party, the You becomes an It, an object.

Moreno: It can be done, but with great difficulty. The world may not even be ready for it. It would mean creating a deep warm up to this venture. Observation would not be at a distance but right there in the relationship. Rules would need to be created… a method developed, a method for investigating the I-Thou, a sociometry. Using the methods of the observational, physical and biological sciences with people, we agree, would not be in the sacred realm of authentic encounter. There is another possibility.

Buber: True encounter is hard enough and rare enough now. I don't think your sociometry will ever get off the ground. People are new in every moment.

Moreno: I agree. It will be a science of the here and now. And more than that, humans participate is creation, they partake of the divine in that they can become spontaneous, creators with god, they can consciously create something new. It will be a science that

embraces the uniquely new moments of spontaneity. It will measure and train people in spontaneity; it will investigate and transform people at the same time. The relationship is transformed from within at the same time as transforming the participants.

I'm going to make this happen, it is the only way we shall survive.

Buber: But is it ethical to have an agenda like this for other people?

Moreno: If true spontaneity is achieved then the people's aspirations will lead the way. (1978:xci)

Six Principles of Sociometry

Moreno calls them rules or principles and also says, "sociometric procedure is not a rigid set of rules, it has to be modified and adapted to any group situation as it arises." (Moreno 2012:27)

The principles are interrelated. The list is followed by more details about each principle.

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1. Principle of warm up.

The researcher and the participants become informed, ready, willing and able to participate in an investigation or a research project.

2. Principle of action

Participation is done in action. Learning is experiential, it is learning by doing.

3. Principle of co-action

Participants in the group are researchers, and the leader is also a participant.

4. Principle of dynamic difference

Group process attends to the discrepancy between the overt and the underlying motivations.

5. Principle of adequate motivation to create change

Participants should feel about the experiment that it is in their own cause.

6. Principle of collaborative recording and publishing

Recording and publishing is designed and integrated into the project.

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1. Principle of Warm up.

The researcher and the participants become informed, ready, willing and able to participate in an investigation or a research project.

What differentiates an experimental research project from a therapy group, organisational development, or a training group? The main difference is in this first principle, warm up.

Everything in the group is influenced by a well established a warm up. The purpose and planning influence the group. The researcher can create the warm up or the warm up can be group led.

Moreno refers to the "Rule of the warming up process or active productivity."[3]

> *The human actor may lose his spontaneity in an instant, and a few moments later he may have a hard time to recall the experience during the act. In order to be adequate in a particular act he should begin to warm up as near to the act as possible and you ought to know when he begins to warm up. (Rule of the warming up process or active productivity.)*

> *In the warming up process of the group it is best to view all the co-actors in situ and to view them in the direction of their productivity. ln order to view them you have to move with them, but how can you move with them unless you, the experimenter, are a part of the movement, a co-actor? The safest way to be in the warming up process yourself is to become a member of the group.*
>
> Moreno 1978:62

Moreno has requirement for sociometry: "that the participants in the situation are drawn to one another by one or more criteria."[4] (Moreno 1978:91) If the warm up includes investigation, experimentation or research then participants will embrace that purpose.

Contrasting his methods with those of Freud, Moreno states:

> *We reversed the psychoanalytic technique and turned the subject loose as a totality, turned him into spontaneous action, into a spontaneous actor. Instead of searching after past experiences, the subject turned his mind to the present, to immediate production.*
>
> Moreno 1978:9

Warm up is always to action and production.

2. Principle of Action in the 'here and now'

Participation is done in action. Learning is experiential, it is learning by doing.

The term 'active productivity', connected here with warm up means that warm up is not only a state, but an active, collaborative and interactive process. Moreno in *Theatre of Spontaneity*, originally published in 1923, has this to say, clarifying his use of the term 'productive':

> *The aim of inter-personal creativity is a double one, to be productive and socially present, receptive to the productivity of the others and to one's own productivity at the same time. The correspondence and communication between a number of spontaneous actors needs therefore, elaborate support.*
>
> Moreno 2010:70

Zerka Moreno said in her session at the Oxford international conference in 1994, "Dr Moreno created psychodrama because language is not the high road to the psyche but movement is. From the earliest moments our actions communicate throughout a non-verbal period of life. Action is prior to language." (Holmes, 1994:78).

Moreno has a "Rule of universal participation in action" (1978:63) This may seem simple and obvious yet research can easily fail to meet the spirit of this principle, for example when people are asked to introspect and report that information in surveys.

3. Principle of co-action

Participants in the group are researchers, and the leader is also a participant.

Gene Eliasoph, one of first psychodrama practitioners and a protégé the founder tells how in 1954 he heard J.L. Moreno tell a group he was leading: "We are all patients in this group, and we are therapists as well for one another. I will learn from you and you will learn from me, and who knows, we may be the first group to fly to the moon!" (Nicholas & Eliasoph, 2002)

> *The actor must become an observer of himself and an actor towards the observer. And the observer must become an actor towards the observed and an observer of himself; one must co-act with the other, a meeting is taking place. … The methodological problem … is to bring the act into the observer and the observer into the act.*
>
> (Moreno:1954:358-359)

The meeting is an encounter. Note the connection of the methodological principle and the well-known poem in the opening of Psychodrama Vol 1

> *A meeting of two: eye to eye, face to face.*
> *And when you are near I will tear your eyes out*
> *and place them instead of mine,*
> *and you will tear my eyes out*
> *and will place them instead of yours,*
> *then I will look at you with your eyes*
> *and you will look at me with mine.*
>
> Moreno 1977:1

That the researcher becomes a participant and the participants become researchers is an encounter and role-reversal. If the researcher and the participants are able to stand in each other's shoes they become the other. Moreno means something literal, all participants are fully in both roles.

> *The safest way to be in the warming up process yourself is to become a member of the group. (Rule of "co-action" of the researcher with the group.) But by becoming a member of the group you are robbed of your role of the investigator who is to be outside of it, projecting, creating, and manipulating the experiment. You cannot be a genuine member and simultaneously a "secret agent" of the experimental method. The way out is to give every member of the group "research status", to make them all experimenters and as each is carrying on his "own experiment"....*
>
> (Moreno, 1978:61-62)

> *As time goes on he may become better adjusted to his double*

role, since he shares it with every member of his group. But when he plans an experiment he may watch his step and not impose it too hastily on the group. Indeed, he should not assume the allures of an experimenter more than any other member.

(Moreno, 1978: 62)

4. Principle of dynamic difference

Group process attends to the discrepancy between the overt and the underlying motivations.

The internal, material structure of the group is only in rare instances visible on the surface of social interaction; and if it is so, no one knows for certain that the surface structure is the duplicate of the depth structure. ... As even our most minute observations of the interaction may be incomplete, meaningless or useless to the actors, we must get our actors to act as they would when engaged in real living, The organism in the field becomes "the actor in situ." Whole cultures can be "acted out" piecemeal in the experimental settings of axiodrama and sociodrama, with protagonists as creators and interpreters.

Moreno 1978:60-61

Living in the group he will soon discover that there is a deep discrepancy between the official and secret needs, official and secret value svstems. (Rule of dynamic difference in group structure, peripheral versus central.) ... Before any experimental design or any social program is proposed he has to take into account the actual constitution of the group.

Moreno, 1978:62

For example Diana Jones describes a phenomena that drew her to sociometry:

> *As I worked in organisations I began to observe that while the outer group structure of an organisation is apparent, be it senior executive teams, teams of managers and staf, project teams and service delivery units, the inner structure of relationships at any particular time, of who is close to whom, who is distant from whom, and on what basis, generally remains invisible and unspoken.*
>
> Jones, 1996:4

Focus on depth is also expressed by the "Rule of "gradual" inclusion of all extraneous criteria." Moreno speaks of "the slow dialectic process of the sociometric experiment." (1978:63)

The words 'dynamic difference' describe well what I saw unfold in a recent training group for therapists and counsellors. The overt aim of the members was to learn techniques and skills to attend to people who had experienced trauma in their lives. Later in the group members gradually revealed the trauma in their own lives. Each level of consciousness relates to the other, there is a useful dynamic between the different expression and motivations.

5. Principle of adequate motivation to create change

Participants should feel about the experiment that it is in their own cause.

> *In order to give every member adequate motivation to participate spontaneously, every participant should feel about the experiment that "it is his own cause, and not for the one who promotes the idea—the tester, the employer, or any other power agent." As his learning expands to knowing how to bore with research ideas from within he may get the idea of being a member of two or*

> *more groups, one serving as a control of the other. This should not be an experiment of nature without the conscious participation of the actors, but one consciously and systematically created and projected by the total group.*
>
> Moreno 1978:62-63

I can imagine this experience: "the idea of being a member of two groups or more groups one serving as a control of the other." It flows from the double life as participant researcher. It is like in psychodrama training group that is simultaneously, at another level a personal development group. The use of the word control group is deliberate on Moreno's part. A group can experiment with different interventions. Then there are indeed more "groups", not a double blind experiment but a double consciousness experiment.

I recall a training group for counsellors where we consciously experimented in pairs by listening to each other, in two ways, one, by responding with self disclosure of some similar moment in our own lives and secondly, using only doubling and mirroring. A sociogram revealed that the doubling and mirroring are essential as the first and major component of good listening.

> *... construct a test in such a manner that it is itself a motive, an incentive, a purpose, primarily for the subject instead of the tester. lf the test procedure is identical with a life-goal of the subject he can never feel himself to have been victimised or abused... From the point of view of the subject it is not a test at all and this is as it should be.*
>
> Moreno 1978:105

What makes a motivation adequate is that it is the 'cause' of the participants. Moreno was fully aware of the importance of Marx, and while he does not subscribe to class in a the way that Marx does, there is a reference here to a class being conscious and acting in its

own cause. Moreno can apply his methods to the micro and macro levels at the same time. Motivation is for some psychosocial change.

This passage from *Who Shall Survive?* contains references to many of the principles of sociometry so I will quote it here in full, then the sentence that relates to forming a new social order.

> *A sociometric study becomes an experiment a) if all its situations, its home, work, educational, recreational, cultural and administrative groupings are created by the total community of citizens-investigators, each citizen being an investigator and each investigator being a member of the community. The social actors are producing and analytic actors at one and the same time. The setting must obviously be life itself and not a laboratory. One may, of course, call an ongoing concern like a community, a laboratory, but this kind of a laboratory has a different meaning from that of the physicist or the animal psychologist. b) If all its formal and informal groups, in accord with its criteria, are involved in the social transformation. c) If, whenever necessary, with the full consent and cooperation of the entire community, certain social conditions are kept constant, whereas the hypothetical conditions are allowed to vary. d) If all sociometric techniques known today are used by the population to transform its present social structure into a new social order in accord with the set of values which they, the people have decided to pursue. This set of values may be a Christian system of values, a Hinduistic system of values, a cooperativistic system of values, a communistic or a democratic system of values. Whatever the system of values, the sociometric method is the surest guide towards their realisation.*

The sentence that relates to adequate motivation is this one:

> *If all sociometric techniques known today are used by the population to transform its present social structure into a new social order in accord with the set of values which they, the people have decided to pursue.*

Moreno is saying if this condition is not met it is not a sociometric experiment. It shows how revolutionary he thought sociometry could be, and it emphasises that knowledge and change are connected.

> *A truly therapeutic procedure cannot have less an objective than the whole of mankind. But no adequate therapy can be prescribed as long as mankind is not a unity in some fashion and as long as its organization remains unknown.*
>
> Moreno 1978:3

Moreno described a logical part (referring to the methods used to test validity) of research and a material part (referring to the nature of the subject of the experiment.) The neglect of knowing how to work with people rather than things means have been crippled in the ability to create social change:

> *Whereas the logical aspects of experimentation have been stressed abundantly, from Francis Bacon (1) to Mill and up to our own time, the material part has been so sadly neglected that the development of the social sciences has been seriously crippled and with it the possibility of providing the total of human society with more rigorous and adequate instruments of social*

> *change than are available. It has become, therefore, an important task of the sociological thought of our own century to correct the most flagrant error of methodical insight which has made social research trivial and confusing while deteriorating its outlook.*
>
> Moreno 2012:38-39

They are strong words, "the most flagrant error of methodical insight which has made social research trivial and confusing while deteriorating its outlook." Has this error in fact been corrected? I don't think so. That theatre can be a laboratory for all kinds of research for example is not a notion that survives to this day.

Often the term "modern research" when used in the social sphere it is vague, and refers to research whose underpinnings are taken for granted. This covers many methodologies and the research and the reference to it often motivated and funded outside of the participant groups. "Modern research" in psychotherapy can be motivated by a need to be "evidence based", and the motivation for that is funding and recognition by the state and insurance companies. The driver these external bodies is their financial and political agendas. Moreno understood this right from the start, and the principle of adequate motivation is central to the method.

6. Principle of collaborative recording and publishing.

Recording and publishing is designed and integrated into the project.

Science includes the integration of new knowledge with the web of the old. Moreno created Journals and books, those ventures put sociometry on the map. There are many more publishing options available today than in Moreno's lifetime. It is possible innovate recording and publishing that is highly inclusive of the participants. The principle is clear:

> *Recorders, observers, and analysts are made natural parts of the group process: they are given a function of immediate usefulness for every participant.*

I have one example, of something at the minor end but motivated by think of the psychodramatic method as including research component:

In a couple therapy training group we consciously experimented with ways of working in the warm up phase of a couple therapy session. The couple was created in depth using a sociodrama where the original social and cultural atom of each partner was enacted and all group members had taken the role at some stage over two days. All the group members worked for some time as therapists with the couple during the initial phase of a session (group members taking turns to be the couple).

After the therapist had worked with the couple for the first few minutes of a session we heard from the couple, the therapist and the audience and we recorded what we considered were useful ways of working in these initial moments.

The document was used to update a handout I use in the training. I can imagine extending this approach in its depth of investigation as well as in the writing and distribution of the results.

Psychodramatic work, (using that term in the broadest sense) is already an experiment. Much of our work is already being written up. Case studies, assignments for trainees, thesis. Just as the work itself the science is unconscious, in our writing too the fuller development of sociometry as science would show itself. The aspect that could be heightened is the recording of the results and thinking of who the work is for beyond the immediate members of the group.

Writing is fully integrated if the group leader does not need to ask that awkward question "may I have your permission to publish?" That question is already addressed either in the formation of the group or in the warm up. Who writes and where it goes is consciously addressed by the group.

I wish I had more experimental groups to report on here — in the meantime join me in some of my imaginary small steps.

Imagine a sociodrama session commencing with the question "what are the principles of being authentic in the work place?" Could the step be added to the findings and writing a collaborative document for specified wider distribution be added? This would be a small shift in the group process that is inline with honouring at least some principles of Moreno's experimental design approach. Such a document would not need to be submitted to a Journal, but could be referenced in a blog post or linked to on a website. The peer review aspect of the document is built in. The peers agreed in the group, on the findings of perhaps several days of sociodramatic experimentation, testing approaches in the microcosmic world on the stage. We make our sociometric methodology clear.

Both the method and the ability to present it, how and who to present the information to are needed. We use sociometry to explore social questions and devise ways to record them and to link them to other information networks.

The work of Jim Rough the originator of wisdom councils (2002) and Dynamic Facilitation (Zubizarreta, 2006) has methods of enhancing and using the isomorphic relationship between groups and society. Wisdom councils implement many sociometric principles though they are not explicitly related to Moreno's work. They have implicit in them a form of recording and distribution of the findings of the group. Wisdom Councils are a form of experimental design that could be studied and adapted and well be used with more psychodramatic methods.

We are grappling with a revolutionary approach. Note that this is in a world where publication is also undergoing a revolutionary change. It may conjure up a wide range of processes. There are peer-reviewed journals, whose prestige is based on the citations in other peer-reviewed journals. At the other end of the spectrum are newsletters and YouTube videos. Publication is changing. There is an open access movement using the Creative Commons copyright system to see that knowledge is available to all and this movement is growing.[5]

The integration of the principles into a seamless process.

The principles above are part of an integrated methodology, an abstraction from a living vital process.

The following passage is typical of Moreno's writing and shows how the principles flow together.

> *The subjects, because they are doing the scenes themselves, starting from the origin of their feelings for each other and assuming the social roles required by the situations on hand, creating the dialogue, the scenes, the sequences and the climaxes, bring the dynamics of group structure to life. The vehicle permits every type of interaction to take place between the participant actors, from the most casual and little structured to the most complex human venture.*
>
> Moreno, 1954:361-361

The researcher is not *per se* the person who creates a hypothesis. The researcher is a person who leads the group so that the group can form a hypothesis. Or the researcher brings together a group of people around a proposal, in this case too the group members choose the area of concern by virtue of joining the group.

> *The results of these efforts are: a) Sociological theory and theory of action have been brought into a single system, pointing the way towards an experimental sociology; b) it is found increasingly productive to start with deep material inquiry first and to let the production of hypotheses develop in the course of experimentation. The customary a priori formulation of hypotheses often operates as a cultural conserve on the investigator, blocking his spontaneity in the production of action theory.*
>
> Moreno, 1954:363

> *An action science… of man requires in its crucial parts and basic research, in addition to observational and manipulatory experimental techniques, the development of "autonomous" and "autometric" experimental designs, created of the subjects, for the subjects and by the subjects.*
>
> Moreno:1954:358-359

The phrase: "maximum spontaneous participation" (Moreno 2012:25) sums up these principles well. When these criteria are met they define a "sociometric experiment". The phrase "near sociometric" is used knowing that these criteria cannot all be met all the time.

Zerka T. Moreno in *The Function of "Tele" in Human Relations* sums up the principles of sociometry as a research mode:

> *The essential reason for doing sociometric investigations is not just to make relationships visible and available for interpretation,*

but to reconstruct groups so as to maximize sociostasis and find some resolution to the problem of the unchosen or rejected. These measures are guides towards change in action in life itself. Group members become co-researchers with the investigator of their own groups, not merely verbally but in interaction. It is meant to activate the tele existing in the group and stabilize the relationships. ...

True sociometry is done with a view to change the group, not merely as a form of academic exercise. (The Sociometry Reader, op. cit., Sociometry and the Science of Man, 1956).

Moreno, Z. T. 2000: 234-235

What is science? Where does sociometry fit in?

With these Six Principles of Sociometry we can evaluate research. The degree to which research is sociometric has ethical implications. It also has implications for the validity and truth of the findings. To see the importance of this third form of science it is useful to reflect on what science is and how it evolves.

Kevin Kelly: the evolution and future of science

Kevin Kelly, among other things, is a philosopher of the scientific method. Here is his definition of science:

"... science is a machine we have invented to connect information. It is built to integrate new knowledge with the web of the old. "

(Kelly, 2010 Loc 4988)

Kelly has made a study of the evolution of the scientific methods. Reading his story of the unfolding, and continuous development of science I realise that Moreno's claims to a place for sociometry as a third form are not so outragious.

> *Despite its own rhetoric, science is not built to increase either the "truthfulness" or the total volume of information. It is designed to increase the order and organization of knowledge we generate about the world. Science creates "tools"—techniques and methods —that manipulate information such that it can be tested, compared, recorded, recalled in an orderly fashion, and related to other knowledge. "Truth" is really only a measure of how well specific facts can be built upon, extended, and interconnected.*
>
> (Kelly, 2010 Location 4964)

Kevin Kelly sees science as more than the actual experiments. The results exist in a web of communication, in a mediated community. This is done through a variety of means:

> *Unified knowledge is constructed by the technical mechanics of duplication, printing, postal networks, libraries, indexing, catalogs, citations, tagging, cross-referencing, bibliographies, keyword search, annotation, peer review, and hyperlinking. Each epistemic invention expands the web of verifiable facts and links one bit of knowledge to another. Knowledge is thus a network phenomenon, with each fact a node. We say knowledge increases not only when the number of facts increases, but also, and more so, when the number and strength of relationships between facts increases. It is that relatedness that gives knowledge its power.*
>
> (Kevin Kelly, 2010 Location 4988)

Here is his summary of the evolution of science:

The scientific method is not one uniform "method." It is a collection of scores of techniques and processes that has evolved over centuries (and continues to evolve). Each method is one small step that incrementally increases the unity of knowledge in society. A few of the more seminal inventions in the scientific method include:

280 B.C.E. *Cataloged library with index (at Alexandria)*, a way to search recorded information

1403 *Collaborative encyclopedia*, a pooling of knowledge from more than one person

1590 *Controlled experiment*, used by Francis Bacon, wherein one changes a single variable in a test

1600 Laboratory

1609 Telescopes and microscopes

1650 Society of experts

1665 *Necessary repeatability*, Robert Boyle's idea that results of an experiment must be repeatable to be valid

1687 *Hypothesis/prediction* (Isaac Newton)

1752 *Peer-review-refereed journal*, adding a layer of confirmation and validation over shared knowledge

1885 *Blinded, randomized design*, a way to reduce human bias; randomness as a new kind of information

1934 *Falsifiable testability*, Karl Popper's notion that any valid experiment must have some testable way it can fail

1937 *Controlled placebo*, a refinement in experiments to remove the effect of biased knowledge of the participant

1946 *Computer simulations*, a new way of making a theory and generating data

1952 *Double-blind experiment*, a further refinement to remove the effect of knowledge of the experimenter

1962 Study of scientific method (Thomas Kuhn)

1974 *Meta-analysis*, a second-level analysis of all previous analysis in a given field

> *Together these landmark innovations create the modern practice of science. (I am ignoring various alternative claims of priority because for my purposes the exact dates don't matter.) A typical scientific discovery today will rely on facts and a falsifiable hypothesis; be tested in repeatable, controlled experiments, perhaps with placebos and double-blind controls; and be reported in a peer-reviewed journal and indexed in a library of related reports.*

> *The scientific method, like science itself, is accumulated structure. New scientific instruments and tools add new ways to organize information. Recent methods build upon earlier techniques.*
>
> (Kelly 2010, location 5059)

Notably absent, though we can imagine it finding its place in the timeline is:

> 1928 *The sociometric test*, Moreno's method of measuring the relationship between people based on various criteria, and including the subjects of the experiment as researchers, and the researcher as participant.

However Kelly speculating on the future of science on the influential website *The Edge* Writes:

> *Return of the Subjective – Science came into its own when it managed to refuse the subjective and embrace the objective. The repeatability of an experiment by another, perhaps less enthusiastic, observer was instrumental in keeping science rational. But as science plunges into the outer limits of scale – at the largest and smallest ends – and confronts the weirdness of the fundamental principles of matter/energy/information such as that inherent in quantum effects, it may not be able to ignore the role of observer. Existence seems to be a paradox of self-causality, and any science exploring the origins of existence will eventually have to embrace the subjective, without becoming irrational. The tools for managing paradox are still undeveloped.*
>
> Kelly, 2006

Moreno was conscious of this inclusion of the subjective in his methods. “Sociometric methods are a synthesis of subjective with objective methods of investigation.” (2012:44)

I have quoted Kelly at length to show that science evolves, and that it is not one thing. Surprisingly different approaches contribute to an evolving scientific method. Moranian methods could be a link to the science of the subjective that Kelly is looking forward to even in science at the limits of scale and certainly in the realm of the psychosocial.

That Moreno thought this would happen and he made efforts to make it happen the following quotes show.

> *By the third millennium or thereabout a new position will crystallize. It will be a reversal of the old. ... Indeed, the leadership in scientific method and discovery which has been for nearly two and a half thousand years in the hands of physicists will pass to social scientists, and just as the social sciences were dependent upon the physical sciences for hypothesis and methods, the social sciences will some day help the physical sciences to understand and run the physical universe.*

> *Because of the value which the experimental method has shown in these areas [physical and biological sciences] the conclusion has been drawn by many writers that it can be applied to the social sciences. But their optimism is unjustified. Mill's skepticism was correct in principle; but he did not realise that it was the experimental method which was at fault, and not the inaccessibility and fleeting inconsistency of the social phenomena.*

> *The chief methodological task of sociometry has been the revision of the experimental method so that it can be applied effectively to social phenomena.*
>
> (Moreno, 1954:31)

The Sociometry Paradigm

That science evolves in leaps is central to Thomas S. Khun's *The Structure of Scientific Revolutions* (1970). The language of one paradigm, such as Newton's does not hold up in another. The universe of discourse from one does not work in another. "Normal science, for example, often suppresses fundamental novelties because they are necessarily subversive of its basic commitments." (Kuhn 1970:5). 'normal science' means research firmly based upon one or more past scientific achievements, achievements that some particular scientific community acknowledges for a time as supplying the foundation for its further practice." (Kuhn 1970:10)

It may be that when the Sociometry journal was handed over *The American Sociological Society.* (Moreno, 1955) the specifics of sociometry were lost in the development of a more generalized social psychology. The journal still exists today and does address a field that is closer to sociometry than the other journals of *The American Sociological Society.*, but still may have lost something of the focus.

> *When Moreno decided to step down as editor in 1955, he gave Sociometry to the American Sociological Society. The journal's name changed to Sociometry: Journal of Research in Social Psychology in 1956, and the new editors broadened the scope of the journal to focus on "the systematic exploration of the processes and products of social interaction at the interpersonal, intrapersonal, intergroup and intragroup levels" (Editorial 1956). In 1978 Sociometry changed its name to Social Psychology and in 1979 to Social Psychology Quarterly. The purpose of the journal's name change was to reflect more accurately the broad field of theory and research in social psychology. Nevertheless, the journal continued (as stated on the inside cover) to publish "articles concerning the processes and products of social interaction," suggesting that studies of group structure would still find a home. The journal further broadened*

> *its scope in 1988 (as stated on the inside cover) to "publishing papers on the link between the individual and society," but it continued with the tradition of welcoming sociometric research (e.g., Hallinan and Kubitschek 1990).*
>
> Harrod, Welch, and Kushkowski 2009

Within the psychodrama field there is an upsurge of interest in research, however often Moreno's methods are not mentioned. The emphasis is on a 'normal research' to establish psychodrama as evidence based practice. An example is the handout *Research Process Overview* by Annika Okamoto and Michael Gross (2013) for their workshop at the April 2013 ASGPP conference on Evidence Based Practice, published in the newly formed ASGPP research blog. The handout is useful in that it is a guide to a research process however there is little to ensure that the principles of sociometry are taken into account.

There is also trend to change psychodrama to make it easier to research. From *Reformulating psychodrama as an experiential reintegration action therapy (ERAT), The corrective emotional approach,* by David A Kipper

> *... the original theory of psychodrama did not lend itself to an impressive body of scientific research regarding its validity and clinical effectiveness. Indeed, for a long time several reviewers pointed to the paucity of such research and recommended various approaches to remedy this situation (for example, D'Amato and Dean 1988; Rawlinson 2000; Kipper and Hundal 2003). In contrast, it is believed that the ERAT reformulation is easily amenable to empirical, qualitative and narrative research (Kipper and Ritchie 2003).*
>
> Kipper 2007

To what extent are the principles of sociometry integrated into the reformulation?

Varieties of Moreno's Science

Science is not one thing and Moreno's social science also has many facets. Consider the following passage from Moreno's article *Sociometry and Experimental Sociology.*

> *The neo-dramatic technique of spontaneous roleplaying has been, consciously or unconsciously, the model for numerous varieties of small group research. The subjects of a sociological experiment may be brought together in an attempt to create a society in miniature or some relevant fragment of it. These experimental productions of group activity in statu nascendi which are similar to spontaneous drama show significant features and lend themselves to quantitative measurement and to qualitative analysis. The subjects, because they are doing the scenes themselves, starting from the origin of their feelings for each other and assuming the social roles required by the situations on hand, creating the dialogue, the scenes, the sequences and the climaxes, bring the dynamics of group structure to life. The vehicle permits every type of interaction to take place between the participant actors, from the most casual and little structured to the most complex human venture.*
>
> (Moreno, 1954:361-361)

In this passage we can see he sketches various approaches and qualities of research:

- Research has been conscious or unconscious and there are many varieties.
- Subjects may be bought together for a sociological experiment

- The group is a society in miniature
- There can be experimental productions
- There is value in activity that is in *statu nacendi*, the moment of birth or emergence
- Drama lends itself to quantitative and qualitative analysis
- Scenes exploring the origins of the feelings for each other bring the group structure to life.
- The small group can explore the casual and little structured events and most complex human venture.

Moreno also speaks about I that validation:

> *In order to meet with the special character of psychotherapeutic processes, the difficulty of framing them into an experimental design, it may be useful to differentiate two kinds of validity, scientific validation as currently considered unexceptional in the scientific fraternity, and "existential" validation which looms in all psychotherapeutic practices and is the cause of many misunderstandings of what is scientific and what is not. The meaning of existential validation should be clearly spelled out as making claims of validity only in situ, in the here and now without any attempt to confirm the past or to predict the future. It should be classified as more than art, although when people talk about the art of psychotherapy it is implied that what takes place has existential validation. Scientific and existential validation do not exclude one another, they should be constructed as a continuum.*
>
> Moreno & Moreno 2011:94

I will discuss the variety experiments and research under the following headings

- Research inherent in the psychodramatic methods.
- Research projects
- Isomorphism — society in miniature
- Quantitative measurement and qualitative analysis

Research inherent in the psychodramatic methods.

Every psychodrama group is an experiment. The word protagonist has the Greek *agon* at its root, 'one who undergoes a test'. Research may be conscious or unconscious. Research methodology is so well integrated into the psychodrama methods that it is almost invisible. The groups have outcomes but not a formal experimental structure, or published results.

The three phases of a group: warm up, enactment and sharing can be viewed as:

- Investigation and hypothesis formation
- Experimentation
- Interpretation and outcome

Consider the investigation and hypothesis formation inherent in a typical psychodrama group. In the warm up phase there is an investigation of the connections around concerns in the group. Questions for exploration are identified and sometimes various solutions are proposed. Common understanding of terms may be reached. There is formal or informal mapping of the sub-groups in relation to the themes. The protagonist is identified as someone who embodies the themes (Logeman, 1999). The purpose of a drama is established; crystallising and forming a personal take on the groups concerns.

The protagonist with the aid of the group explores and experiments and finds some solution. In the sharing the findings are clarified, amplified and distributed among the group. This is existential validation.

A sociodrama where social and political issues are re-enacted can shed light on actual social situations. Social roles by definition are ones that people understand because they are part of the society. This what is meant when Moreno says: "assuming the social roles required by the situations on hand" (Moreno, 1954:361-361)

This is not pretence, role play it is not acting in the sense of pretending.

> *The productions emerge in statu nascendi, extemporaneously, Without prior preparation of the participants. It is of essence to the production that the scenes enacted are real and meaningful to the participants, and real and meaningful within their participant culture.*
>
> (Moreno, 1954:361)

It is a drama of the group.

Looking at these familiar groups with my eyes attuned to the scientific method I see its presence at work just below the surface. Are the understandings and outcomes universally meaningful?

> *It is of essence to the production that the scenes enacted are real and meaningful to the participants, and real and meaningful within their participant culture. However much we try to keep the research and experimental aspects of these productions apart, it becomes increasingly clear that in order to obtain significant material, significant for the group which cooperates in a particular production, the subjects have to be deeply involved privately, because personal problems are directly treated or indirectly touched, or socially, because certain cultural, ethical and political problems have become deeply anchored in the subjects. Without an existential warm up of the participant actors not only the cathartic benefit of the participants will fail to be*

> *accomplished but even more, the research benefit for a material inquiry into the dynamics of group structure will fade out. Here research techniques and action theory are integrated because of their natural relationship.*
>
> (Moreno, 1954:361)

Psychodramatists, sociodramatists and sociometrists working in organisational development have been doing research all along.

Moreno wrote a front piece for the Group Psychotherapy journal in 1968, *The Validity of Psychodrama*, that sheds light on how he envisages the method.

> *The question as to the validity of psychodrama has aroused considerable controversy in the course of the years. There have been two opinions. One emphasizes that the usual measures of reliability and validity do not seem to be particularly appropriate for psychodrama. If each person acts out his life honestly, the data are perfectly reliable and valid. The second opinion is that the current methods of measuring validity can be applied. The two opinions do not exclude one another. The two methods of validation can be combined.*

> *But it is accurate to say that the validity of psychodrama does not require proof beyond its face value. It is a statement of the persons themselves, what they experience at a certain moment in respect to a given activity. Psychodrama deals with primary acts and bits of behavior, and not with "factors" like intelligence,*

> *genes, or any other hidden factor. A choice is not more honorable because it is statistically valid. There is no need for further validation as long as the members of the group and their behavior are taken as they are expressed in the present tense and as long as no pretense is made that the future of the participants can be predicted from the events which have been produced or that generalizations can be drawn from whatever the events demonstrated. But one can state with certainty that what matters is that the actions and decisions are valid for the paricipants themselves at the time when they are experienced. In such a case, one may talk about an "existential" validation, and it should be definitely separated from "scientific" validation. But when one thinks of existential validation, one must guard against automatically thinking that this must be an impulsive and irrational kind of behavior. It may be behavior of the highest and most well-organized kind.*
>
> Moreno 1968:3

Adam Blatner in the introduction to the fourth edition of *Foundations of Psychodrama History, Theory and Practice* writes:

> *The analogy to a laboratory also suggests the activity of exploration and experimentation, trial and error in a controlled environment. In psychodrama, that control is provided by the special, "as-if" context of play. In this setting, mistakes don't have the same meaning as they do in the "real world," and so people can try out alternative behavioral responses. An eminent physicist noted, "Science advances only by making all possible mistakes.... the main thing is to make the mistakes as fast as possible and to recognize them" (Wheeler, 1981, p. 26). Discovering which attitudes and behaviors work best in complex*

> *social situations also can be approached scientifically using psychodramatic methods. Those risking this kind of experiential learning are protected by psychodrama's special setting committed to support rather than rejection.*
>
> Blatner, 2002:XVIII

If the question and outcome were recorded then the experimental work in many groups would t be explicit. Moments of experimental design could be noted, and insights recorded. Many sessions explore in action something of what is viable and useful to the advancement of human interaction and life.

The simple question, “how useful was this group for you” could be expanded to be a truly sociometric test of the efficacy of the group. Groupworkers expanding their work to include more coscious use of sociometry for many things, for example evaluation of effectiveness of the group.

Research projects

Moreno describes how “the subjects of a sociological experiment may be brought together”. People come together all the time to collaborate to discover the new. There are scientific organisations, grants, clubs and universities dedicate to furthering science. To bring people together is one way to initiate research.

At the time of writing the first draft of this article I offered to conduct a workshop at the 2014 AANZPA conference in Melbourne. The focus of this writing led me to include the possibility of experimentation into the design.

Here is the description to the workshop, you will see it aims to bring people together with a particular interest and there is the warm up to experiment and record the results:

> *Doubling and Spontaneity*
> *A three hour workshop*

The purpose of this workshop is to strengthen our use of doubling when there is a focus on relationship building and conflict resolution. The doubling will assist the protagonist to accept their feelings and thoughts and to express them without accusation or criticism.

Using sociodramatic enactment we will explore and evaluate this form of doubling. We will identify principles that apply in different contexts and use the concept of spontaneity to guide our observations. An email group will be available for those who wish to follow up the session by collating our findings.

Groups with a description that includes a specific question, that explicitly defines the group as part of the research team and that raises the matter of publishing outcomes from the outset would create the warm up for these things to happen. Group led research investigates matters of interest to the group. The difference between this and a therapy group is in the warm up and in that the results will be collated and added to the scientific endeavour. Therapy is not excluded. Parameters of confidentiality could be part of the initial brief. The process of reading, collating, writing, editing and presenting the material could be prescribed beforehand and/or developed by the group.

Isomorphism — society in miniature

Groups are a "society in miniature" (Moreno, 1954:361-361) this is why a group has implications and meaning beyond the group. This is especially true when there is enactment on the stage. Psychodramatically we may have killed and been killed in war, died in a famine, married, divorced, murdered and plundered, lived several lives that in a sociodrama that spanned the life of a tribe over several generations. Such enactments are immersions into the fabric of the archetypal social forces we know in our bones; learning by *being*. It can shake us to the core to be part of a "society in miniature". We experience universal humans roles.

The group may to some extent represent the demographics of a larger society, however this only partially yields the isomorphic resonance. The group will have a limited range of psychodramatic roles, ones that are unique to the members. However, between them they have a vast knowledge of the social roles, ones they understand from their own experience from being in a social world. A group can tap into this wealth and create a society in miniature with remarkable accuracy. It is through role reversal and participation that qualitative insights are gained that would be hard to gain in other ways.

The group is "isomorphic" with the world and dramatic production maximises that harmony. The personal structures in the small group resonate with social structures and we explore both at the same time.

Douglas Hofstadter provides an informal definition of isomorphism:

> *The word "isomorphism" applies when two complex structures can be mapped onto each other, in such a way that to each part of one structure there is a corresponding part in the other structure, where "corresponding" means that the two parts play similar roles in their respective structures.*
>
> (Hofstadter, 1980:57)

It is the isomorphism between the role system in one person's social and cultural atom and the role system in a group that means one protagonist can do the work for the whole group. Similarly it is the isomorphism between a group and the larger society that enables social research to occur in a small group, a "society in miniature".

The work of Jim Rough the originator of wisdom councils (2002) and Dynamic Facilitation (Zubizarreta, 2006) has methods of enhancing and making the isomorphic relationship between groups and society explicit. Wisdom councils are small groups that consciously work to report back to the larger society on their findings. Wisdom Councils are a form of experimental design that could be studied and adapted and well be used with more psychodramatic methods.

In Psychodrama, Second Volume experimentation is described in some detail how the theatre is a laboratory:

> *Another frequent application of role-playing techniques is the testing of non-directive counsellors in settings which are constructed as closely as possible like the actual situation itself. Experiments in our laboratories in Beacon and New York have shown the productivity of the role-playing method when applied to the more complicated situations of the group. A series of experiments have been set up in which a) a psychoanalyst assumes the "role" of a psychoanalyst and another individual assumes the role of a patient on the couch. The session is carried out as if it would be an actual therapeutic session, b) A non-directive counselling situation has been set up in which a trained non-directive counsellor takes the role of the counsellor and another individual the role of a client. Again, both try to come as close as possible to the real feeling and actual process taking place in an actual counselling situation, c) In a group therapy experiment a number of individuals and a therapist are placed around a table. The therapist plays the part of the therapist; the individuals around the table play the part of the patients, trying to act as closely as possible the way they would act in a real group therapeutic session. d) A psychodramatically trained individual assumes the role of a psychodramatic director; a group of individuals try to play the part of an audience. The session is to run according to the customary rules, a member of the audience is selected to be the protagonist and he plays the part of the protagonist, trying to be like a real one. The setting up of such experiments is no easy matter; it is not as simple as merely hiring a number of subjects. It would be like studying cancer on individuals who are not afflicted with the disease. The*

> *condition sine qua non is here the therapeutic talent of the experimental subjects, that they are sensitive for the mental syndrome studied and sufficiently alert to express their experiences; the other important factor is the therapeutic skill and resourcefulness of the overall conductor. The crux is the degree of involvement and warm-up of all participants; if they are too "cold", the factors which are under study will not emerge and the purpose of the experiments will be defeated. Role-playing of therapeutic situations may concentrate first on the study of the four factors which have been shown by the investigations reported above as being of crucial importance in all patient-therapist relationships, the "feeling for one another", the "perception of one another", the motoric events — the "interacting" between them, and the "role relations" emerging to and fro in an ongoing therapeutic situation.*
>
> (Moreno and Moreno, 2011:22-23)

Theatre has always been a way to explore the world. That theatre can be seen as a scientific instrument is not so strange if we think of simulation as a form of doing science. Theatre is a living laboratory. It is a world alongside the world — a meta world.

Quantitative measurement and qualitative analysis

The quantitative measurement and qualitative analysis Moreno speaks of takes place in various forms.

Firstly it is integrated in the work in an unconscious way as described above. There is a qualitative analysis inherent in the warm up and sharing phases of the group. Often spectrograms and sociometric tests are employed, and these can yield more quantifiable information. This is the unconscious social experiment.

Qualitative social information is hard to find in society. Just how does an immigrant feel as they come to a new society? How does this change over time? What are the chief influences that make a difference? A group of people with knowledge and interest in this area could explore the world of the immigrant sociodramatically and psychodramatically and experience through enactment not only facts but the experiential impact of their situation.

Historical writing, fact or fiction includes the entering into another world in the imagination. This paper *Configuring Historical Facts through Historical Fiction* explores trustworthiness of these explorations:

> *We suggest that historical fiction helps to encourage and broaden consideration of the inner life of historical fact that informs the search for similarities and differences that exist through time in human motivation, action, and cohabitation. Arguably, historical fiction proves as trustworthy a resource in this endeavor as history textbooks. In his study of historians and high school students reading historical texts, Sam Wineburg illustrates this point, observing that ''when asked to rank the relative trustworthiness of the eight documents, historians ranked this excerpt [from an American history textbook] last, even less trustworthy than an excerpt from a fiction work.''10 Our concern here has less to do with the factual validity of textbooks than with the veracity that historical fiction can provide students seeking to imagine what the past has to do with their present understandings of self and society. Historical fiction offers both students and teachers explorations of difficult choices and human contradictions, as well as insight into the complexities of social life, in order to counterbalance the superficial coverage of human challenges.*
>
> den Heyer and Fidyk 142:2007

Individual writers working exclusively with their imagination can produce trustworthy information. People gathered for the purpose of exploring social phenomena, interacting and role reversing can amplify this effect and produce significant insights.

Warm up to research

If the six principles of sociometry are adhered to, human dignity is maintained; people will not become things. The common practice of asking people to consent to research with a simple 'yes' is not 'co-action'. Becoming a guinea pig, being used, is something people have every reason to fear.

A negative warm up to research results from the non-sociometric research we are used to, research that is not as Moreno put it 'of the people, by the people and for the people' (Moreno, 1947). It is so often by vested interest, on an uninvolved population with the purpose to better able to manipulate them. Sociometric research has that barrier to overcome. Ironically if the research is of benefit to the participants and there is enthusiasm for the project it may be seen as not being 'objective'.

For example: Slawson (1965:531), commenting on the effectiveness of psychodrama in treating hospitalised patients, states:

> *The zeal and perseverance of many practitioners not only implies bias, but precludes even a pretence of objectivity.*

Can Moreno's social science find a new life in psychodramatic practice and in the world of social science? The development of "experimental designs, created of the subjects, for the subjects and by the subjects." (Moreno:1954:358) would be a first step. An understanding and commitment to the six principles is in itself a major warm up and shifts the nature of everyday practice and research proposals.

Who Shall Survive? lists over a hundred hypotheses for further investigation. Many of these proposals for further study are related to studying sociometry itself, for example:

> *36. Place the sociometric investigator into the midst of several populations, not to give a test, but a) to arouse his warm up towards a given population and the warm up of that population towards him; and b) to test his sensitivity for the criteria most significant for it.*

> *The investigator who establishes a rapport, enters into a maximum of involvement with a population and will choose the right criterion in the course of his warm up will provoke a wider and deeper participation of the population than the investigator who gives the test coldly by means of a mailed questionnaire, for instance, or similar methods which try to reduce his involvement to a minimum.*
>
> Moreno 1978:711-712

Moreno's principles were developed early in the evolution of social science and while they have not managed to dominate the field, some aspects of his work have continued to develop and many of the values are found in other research methodologies. If the sociometric values are adhered to, much can be learned from other methods even though they are not fully sociometric.

What follows are sections on methodologies that have something in common with Moreno's social science and some of them are directly related. Some may have kidnapped sociometry. All have an alternative that differentiates them from positivist physical science.

Pragmatism

Moreno acknowledges the influence of the pragmatists:

> *The soil for sociometry was prepared by the thinking of J. Baldwin, C. H. Cooley, G. H. Mead, W. I. Thomas and particularly John Dewey. Sociologists and educators were the first to accept it.*
>
> Moreno, 1978:lx

Pragmatism a philosophy that influenced Moreno continued to develop research methodology in its own right. Kevin Kelly's descriptions of science make it clear there is no one "scientific method'. Abraham Kaplan makes the same point in his book influenced by the pragmatism of Peirce, James and Dewey: *The Conduct of Inquiry: Methodology for Behavioral Science.*

> *I... forgo a definition because l believe there is no one thing to be defined. ... If we are to do justice to this complexity, l think it is hard to improve on P. W. Bridgman's remark that "the scientist has no other method than doing his damnedest."*
>
> Kaplan (1964:27)

Patricia A. Shields (1998) draws on a scientific approach with its roots in pragmatism. She defines five main styles of research and how each will have its associated type of question and conceptual framework. The five styles are:

1. Exploratory Research
2. Descriptive Research
3. Understanding Research
4. Explanatory Research
5. Predictive Research

Figure 1 on of her paper goes into detail for each style and is reproduced in full:

1. **Exploratory Research**
   - **Types of Questions:** Anything goes What, When, Where, Why, Who, How or any combination of the above.
   - **Types of Conceptual Frameworks:** Most of the time working hypotheses and/or loosely defined descriptive categories.
   - **Types of Methods/Techniques:** Field research/case studies, focus groups, structured interviews, document analysis (usually qualitative).
   - **Statistics Used:** Usually none—but anything goes.
2. **Descriptive Research**
   - **Types of Questions:** What (you are describing something—what are its characteristics—What are the attitudes of administrators about policy...)
   - **Types of Conceptual Frameworks:** Descriptive categories
   - **Types of Methods/Techniques:** Survey, content analysis
   - **Statistics Used:** Simple descriptive statistics mean, median, mode, percentages, t-statistic.
3. **Understanding Research**
   - **Types of Questions:** How close is situation x to the ideal/standard? How can x be improved?
   - **Types of Conceptual Frameworks:** Practical ideal type (usually organized by categories)
   - **Types of Methods/Techniques:** case study, survey, document analysis, structured interviews
   - **Statistics Used:** if any .. descriptive statistics mean, median, mode, percent distributions, simple t-statistic

4. **Explanatory Research**
   - **Types of Research Questions:** Why (loosely what is (are)the cause(s)) the basic format is "if A then B" or is there a relationship between A and B. It is also possible to have several causal factors
   - **Types of Conceptual Frameworks:** Formal Hypotheses (generally between at least two concepts) Hint: when the hypothesis is put in operational form one can speak of the relationship between the independent and dependent variable.
   - **Types of Methods/Techniques:** Experimental/Quasi-experimental design, archival records, aggregated (time series) data analysis, survey
   - **Statistics Used:** t-statistics (comparison of means), correlation, Chi-square, analysis of variance, simple regression, multiple regression

5. **Predictive Research**
   - **Types of Research Questions:** What can one expect in the future? If the answer to the "why" question is known then the answer to questions about the future are clear.
   - **Types of Conceptual Frameworks:** Models including cost benefit analysis, cost effectiveness analysis, economic base studies, shift and shares analysis and formal hypotheses.
   - **Types of Methods/Techniques:** Experimental/Quasi-experimental design, Cost Benefit Analysis, Cost Effectiveness analysis, survey
   - **Statistics Used:** Analysis of Variance, simple regression, multiple regression Usually the most sophisticated of techniques.

This typology would form an excellent basis for a group to warm up to their purpose and to create an experimental design.

Sociometry and Action Research

There was, what Moreno calls a secession in the development of sociometry by Kurt Lewin. He described this in a paper in 1953 and this was reprinted in the Preludes in *Who Shall Survive?* the following year.

Action Research, or Group Dynamics is often attributed to Lewin, however the true origin could more correctly attributed to Moreno (Gunz, 1996). There is a significant difference between sociometry as a research method and action research. Two main ones cited by Moreno are spontaneity and the basis in action.

Lewin was original as a theoretician but his experimental work in

> *group and action dynamics was not original. The techniques which made his work popular stem from me, they led him and his students to the study of autocratic and democratic group structure, group decision and roleplaying. He did not have firsthand inspirations in these areas but was quick in secondary elaboration and giving them a topological costume. He became belatedly aware of this incongruity and tried to develop, supplementary to topological theory, a theory of action of his own, using my action theories as a model. But he did not succeed in this, he did not see clearly the relationship between spontaneity, warming up, the stages leading up to and the operational circumstances emerging in the moment of action. He tried to set up a theory of change without a theory of spontaneity, a theory of action without a theory of the actor* in situ*, a theory of productivity without a theory of creativity. This theoretical deficiency led to deficiencies in the comprehension and the effect of action techniques. Lewin's chief handicap was that he tried to formulate a theory of action without being an action technician himself. He had to depend upon his students to be indoctrinated into them and they were themselves unimaginative and inadequately trained.*
>
> Moreno 1978: civ-cv

It is interesting that decades later in an article comparing the two methods Phil Carter, *Building purposeful action: action methods and action research*, mentions that is the warm up to spontaneity that he would like to see action research incorporate into their approach.

> *I hope action researchers are encouraged to creatively apply some of the components, techniques, and perspectives of AM [Moreno's action methods] that have been presented here.*

> *Following the theory of spontaneity an action researcher may wish to change their initial task from problem identification to health identification. They may also wish to utilise the dramatic stage and techniques in order to encourage the integrated presence of all human facilities in the living dynamics of individuals co-creating in the here-and-now moment.*

> *While AR [Action Research] and AM have distinctive backgrounds with their own unique theoretical basis and set of methods, they both have similar worldviews with similar objectives and principles. Hopefully this paper shows that AM can benefit AR. A future study could show how AR can benefit AM. It appears that connections between AR and AM could be strengthened for mutual benefit. Perhaps uniting the two under a common banner would be beneficial. One potentially profitable effort in this area would be the expansion of current descriptions of action science (Argyris et al. 1985; Friedman, 2001).*

I think that an investigation of action research could be investigated to see if there are – after the 60 year long split – some things that can be learned to strengthen sociometry as a research method.

Regardless of the origins the phrase attributed to Lewin sums up an idea that is central to the Moranian method. This the principle of adequate motivation:

> *"You cannot understand a system until you try to change it"*

The branch that broke away with Lewin has grown and many of the Morenian principles

are alive and well in the methods. See for example some websites about action research and action science. Here is the opening passage from "Participatory action research" a section on the Learning for Sustainability website, developed by Will Allan (n.d.) (Accessed 14 October, 2013)

> *Action research comprises a family of research methodologies which aim to pursue action and research outcomes at the same time (PAR, action learning, soft systems methodology, etc.). It therefore has some components which resemble consultancy or change agency, and some which resemble field research. The focus is action to improve a situation and the research is the conscious effort, as part of the process, to formulate public knowledge that adds to theories of action that promote or inhibit learning in behavioural systems. In this sense the participatory action researcher is a practitioner, an interventionist seeking to help improve client systems. However, lasting improvement requires that the participatory action researcher help clients to change themselves so that their interactions will create these conditions for inquiry and learning. Hence to the aims of contributing to the practical improvement of problem situations and to the goals of developing public knowledge we can add a third aim of participatory action research, to develop the self - help competencies of people facing problems.*
>
> *The principles of action research can be seen to underpin the development and improvement of practice in all the fields of inquiry within this site. The concept of learning by doing in which learning is perceived as experiential and reflexive is fundamental to this approach. It recognises that people learn through the active adaptation of their existing knowledge in response to their*

experiences with other people and their environment. Moreover, the process of building on experience is a natural one for most people and action research provides a framework for formalising and making this process more effective. By making explicit and documenting the processes by which individuals carry out their activities and problem solving processes allows for the fine tuning and improvement of these processes. And while action research is inherently a collaborative approach, it is also useful as an approach to one's individual work.

Will Allen's site lists many useful resources including a link to the Action Science Network.

The Action Science Network aims to accurately describe and efficiently demonstrate the theory and practice of action science and, secondarily, to connect individuals and groups interested in working with action science.

The "action science" strategy of organizational development was defined and vigorously advanced primarily by Dr. Chris Argyris (with important help from Donald Schon and others) over a period of more than 50 years.

In the field of Organizational Development, action science is also known as action inquiry, action research, or organizational learning.

Argyris' action science has roots in works by world thinkers such as John Dewey (1859-1952) and Kurt Lewin (1890-1947).

Action Science Network (n.d.)

Could it be that this spontaneity is lacking in action research is because it is so “it is most frequently discouraged and restrained by cultural devices.” See Moreno’s well-known passage defining spontaneity:

> *Spontaneity operates in the present, now and here; it propels the individual towards an adequate response to a new situation or a new response to an old situation. It is strategically linked in two opposite directions, to automatism and reflexivity, as well as to productivity and creativity. It is, in its evolution, older than libido, memory or intelligence. Although the most universal and evolutionarily the oldest, it is the least developed among the factors operating in Man's world; it is most frequently discouraged and restrained by cultural devices.*
>
> Moreno 1978:42

Bob Dick is an advocate of Action Research in Australia… From his website:

> *It's a natural way of acting and researching at the same time*
>
> *With the exception of well-practised tasks there is a natural rhythm to the way most of us behave. We do something. We check if it worked as expected. If it didn't, we analyse what happened and what we might do differently. If necessary we repeat the process.*
>
> *act -> review -> act -> review ...*
>
> *This is the natural cycle which action research uses to achieve its*

twin outcomes of action (for example, change) and research (for example, understanding). You might say that action research is true to label -- it is action and research.

action research = action and research

Some features of action research assist the action. Some assist the research. Some assist the "and" -- they help the action and the research fit together.

Dick, 2002

Indigenous Knowledge

To enhance the perspective that there is something misleading about the term 'science' as used in the dominant discourse, it is worth seeing knowledge and knowledge-making through the eyes of indigenous cultures. A paper by Charles Royal[6] is informative:

The second key theme within indigenous knowledge concerns the weaving of knowledge and experience across domains of knowledge and the boundaries articulated for disciplines. This theme arises from the notion that indigenous knowledge is 'holistic' in the sense that knowledge is interconnected and relational in the same way that all life is interconnected and relational. We dwell within the web or weave of life – in Māori we use tātai or genealogies for all creation as a metaphor for this aspect of existence – and so our knowledge reflects this reality.

Some see this theme as an attempt to undermine and compromise

> *disciplines. Some might even suggest that this idea is anti-methodological. (One will note how this theme is deeply relevant to notions of power and its expression through knowledge.) However, the idea of weaving across boundaries can not take place without the boundaries themselves existing. Just as the world contains natural borders – as between the sea and land, as between mountains and flatland, as between knowing and ignorance – so there are natural borders within knowledge and they exist for substantial reasons. A 'holistic' view of the world and of knowledge is not blind to parts, boundaries, borders and thresholds but rather sees these parts both as 'wholes' in themselves as well as parts of larger wholes (confer 'holon'.). Life is a complex and multidimensional whole and the quest to see the 'whole' is to render disciplines as part of a complex set of pathways leading to wholeness rather fragmentation. In this way of viewing the world, understanding relationship is the key to understanding the world.*
>
> Royal 2005:4

I quote this passage to give a sense of the spirit that infuses *knowing* in the Māori culture, and to lead to the remarkable last line: "In this way of viewing the world, understanding relationship is the key to understanding the world."

This is central in Moreno as well. We are students of the in-between. In a way there is nothing there. We can't bottle it, it is the space between that is so rich we can describe it in metaphor or in theory, but the actual phenomena we are looking at is between people and things. There is another passage in the same paper on the creation of new knowledge:

> *Wānanga is considered here as an activity, an active process of exploring and considering. Further, we can say that the general purpose of the activity called 'wānanga' is the creation of new*

knowledge and understanding. When some one or some people are conducting wānanga, they are going through a process whose outcome is a new idea, a new understanding, new knowledge. This idea is reinforced in everyday parlance. For example, when we use a phrase like:

Kei te wānanga tātou i te pātai nei.

we are saying that:

We are considering/debating/analysing/exploring the question (before us).

The intention, of course, is to find out something new, to come to a new understanding or realisation. Whilst the sense of 'finding' or 'seeking' is not made explicit in the term wānanga, it is nevertheless implied and well understood throughout the community of Māori language users. Hence, we can say that at a very simple and everyday level, wānanga is used to stand for a process by which we can come to some kind of new idea or understanding. Wānanga is also used to refer to a particular person skilled in the work of the whare wānanga:

Kihai i tae ki nga pukenga, ki nga wananga, ki nga tauira.

He was not taught by the teachers, the learned ones, the exemplars.

Royal 2005:11

I want to draw attention to an article that discusses the co-production of knowledge by indigenous and non-indigenous people. There is an immediate sense that when it comes to the principles of sociometry the indigenous cultures have an approach built into their bones that is in harmony with sociometry:

> *A dialogue of science and traditional knowledge: co-production of knowledge*
>
> *There is another aspect of this knowledge building. Knowledge is a dynamic process, and knowledge is contingent upon being formed, validated and adapted to changing circumstances. This invites the development of relationships between researchers and indigenous people as co-producers of knowledge (Davidson-Hunt & O'Flaherty 2007). A diversity of indigenous groups in Canada has welcomed a dialogue with science to help co-produce locally relevant knowledge in a number of different areas. These have included the co-production of knowl- edge for resource management and planning (Davidson-Hunt & O'Flaherty 2007); dealing with environmental contaminants (Berkes et al. 2001); community health (Parlee et al. 2005); development impacts (Peloquin & Berkes 2009); environmental monitoring (Berkes et al. 2007); climate change (Berkes & Jolly 2001; Peloquin & Berkes 2009), and protected areas and biodiversity conservation (Davidson-Hunt & Berkes 2006; Berkes et al. 2007). Non-indigenous researchers have played a major role in knowledge co-production in these areas, always preceded by trust-building, development of working relationships, and respect for areas that should not be researched.*
>
> Berkes 2009:153

Feminist Standpoint

Feminist standpoint theorists make three principal claims: (1) Knowledge is socially situated. (2) Marginalized groups are socially situated in ways that make it more possible for them to be aware of things and ask questions than it is for the non-marginalized. (3) Research, particularly that focused on power relations, should begin with the lives of the marginalized. Feminist standpoint theory, then, makes a contribution to epistemology, to methodological debates in the social and natural sciences, to philosophy of science, and to political activism. It has been one of the most influential and debated theories to emerge from second-wave feminist thinking. Feminist standpoint theories place relations between political and social power and knowledge center-stage. These theories are both descriptive and normative, describing and analyzing the causal effects of power structures on knowledge while also advocating a specific route for enquiry, a route that begins from standpoints emerging from shared political struggle within marginalized lives. Feminist standpoint theories emerged in the 1970s, in the first instance from Marxist feminist and feminist critical theoretical approaches within a range of social scientific disciplines. They thereby offer epistemological and methodological approaches that are specific to a variety of disciplinary frameworks, but share a commitment to acknowledging, analyzing and drawing on power/knowledge relationships, and on bringing about change which results in more just societies. Feminist scholars working within a number of disciplines—such as Dorothy Smith, Nancy Hartsock, Hilary Rose, Sandra Harding, Patricia Hill Collins, Alison Jaggar and Donna Haraway—have advocated taking women's lived experiences, particularly experiences of (caring)

work, as the beginning of scientific enquiry. Central to all these standpoint theories are feminist analyses and critiques of relations between material experience, power, and epistemology, and of the effects of power relations on the production of knowledge.

Bowell, 2011

Practice based research

Greenberg S.L.

The research approach I recommend involves the intensive analysis of concrete-change performances using both intensive observation and measurement of in-session behavior, as well as the investigation of participants' subjective recall of their experience. The goal is to build models of client-change processes and the therapist interventions that set these in motion. Examples of research efforts to study the allowing of emotional pain, the process of interruption of emotion, and the process of resolution of hopelessness are given.

Greenberg 1999

Charmaine McVea in AANZPA Journal No. 14 in an article: *It's Not Enough Just To Say It Works: Research Into Psychodrama and Experiential Therapies,* creates an excellent warm up to a variety of possibilities for research that could meet all the sociometric principles:

Some of the ways we can develop case-study research in psychodrama include:

1. Focussing research questions on issues of relevance to practitioners and clients by studying significant events within sessions, how they come about, their impact on clients, and how the director might make use of these events (e.g. Mahrer and Boulet 1999).

2. Examining multiple cases, to test whether results are replicated across cases, and to identify whether results are general, typical or variant (e.g. Hill, Thompson and Williams 1997).

3. Developing plausible therapy and non-therapy explanations for post-psychodrama changes by such means as:

a. mapping outcomes against processes within psychodrama sessions (e.g. Greenberg 1986; Elliott 2002), and

b. comparing processes and outcomes of successful and non-successful sessions.

4. Using videotapes of psychodrama sessions to enable information to be collected from a variety of sources - including director and protagonist recall of significant events, and independent researchers participating in process analysis (e.g. Greenberg 1999; Mahrer 1999).

5. Using measures that are being used by other experiential psychotherapy researchers so that our work can be readily placed alongside a larger body of work (refer to the Network for

> *Research on Experiential Psychotherapies www.experiential-researchers.org/ index.html).*
>
> McVea, 2004

Advocates of practice based research, Scott D Miller, Barry Duncan and Jaqueline A. Spark say this in their book *The Heroic Client: a Revolutionary way to Improve Effectiveness Through Client-directed, Outcome-informed Therapy:*

> *We mean "revolutionary way" to reflect two themes central to this book. One is our revolutionary desire to overthrow mental health practices that do not promote a partnership with clients in all decisions that affect their well being. The second theme is the revolutionary improvements that recent research about outcome feedback has demonstrated—using client-based outcome feedback increases effectiveness by an incredible 65 percent in real clinical settings. Such results, when taken in combination with the field's obvious failure to discover and systematize therapeutic process in a manner that reliably improves success, have led us to conclude that the best hope for improving effectiveness will be found in outcome management.*
>
> Duncan, Miller and Sparks, 2004:location 258

The highlight of their research is that modalities of psychotherapy are not as relevant as listening to client's feedback on what is useful in the therapy.

Conclusion

Because of the potential for qualitative research to contribute to evidence-based practice, qualitative research methods represent a useful set of techniques for the scientist-practitioner. Although the terms and concepts associated with qualitative research may be unfamiliar to traditionally trained school psychologists, many of the processes that qualitative researchers use are actually quite similar to professional activities in which many school psychologists engage on a routine basis. As a result, many elements of qualitative research may readily be incorporated into the scientific practice of school psychology.

Meyers and Sylvester 2006

This paper can be seen as a response to the call "to discuss explicitly the criteria for judging qual- itative, case and interpretive research in informa- tion systems" (Lee et al. 1995, p. 367). Therefore, just as principles and guidelines for case studies were provided by analyzing them from the philo- sophical perspective of positivism (Lee 1989), so this paper will do the same for interpretive field research, but from the philosophical perspective of hermeneutics. Also, just as suggestions were made for researchers who wished to undertake research employing the case research strategy and offered "criteria for the evaluation of case study research" (Benbasat et al. 1987, p. 369), so this paper

does the same, except that we focus on interpretive field research.

These principles are relevant the Principles of Sociometry mentioned in this paper. For example, 'The Fundamental Principle of the Hermeneutic Circle':

> *This principle suggests that all human understanding is achieved by iterating between considering the interdependent meaning of parts and the whole that they form. This principle of human understanding is fundamental to all the other principles.*
>
> Klein & Myers 1999:72

While the wording is different, the sense is one that includes "Rule of "gradual" inclusion of all extraneous criteria." that I have included under principle 5: Principle of dynamic difference. Moreno speaks of "the slow dialectic process of the sociometric experiment." (1978:63)

Another of Klein & Myers principles : 3. The Principle of Interaction Between the Researchers and the Subjects

> *Requires critical reflection on how the research materials (or "data") were socially constructed through the interaction between the researchers and participants.*
>
> Klein & Myers 1999:72

This principle is not as strongly stated as the principle of co-action but the same value is inherent in it.

The other principles in this paper are not so clearly related however they are not in conflict with the sociometric method and would assist in a warm up to research, and the writing process.

Social Network Analysis

Another field that acknowledges sociometry at its roots is social network analysis. (Borgatti, 1996) This field has grown exponentially with the Internet, and with the popularity of social networking sites. Note this passage from the address to the Annual Sunbelt Social Network Conference by Charles Kadushin.

> *Let me now briefly run down what I saw as the methodological problems facing the field in 1979. I first dis- cussed the problems of data collection, noting that although Moreno invented sociometry, he left us with a lot of problems. I mentioned the informant accuracy problem first brought to our attention by Bernard and company (1981) and further discussed by Hammer (1984). While some may say that the greatest contribution to methods of the Irvine team led by Freeman is UCINET (and as a regular user I am much appreciative), my own feeling is that the theory and demonstration of sociometric "deep structure" is probably their most important work. Much more needs to be done here, however, as I will point out momentarily. Then there was the great invention by a Toronto team (Weflman himself assigns credit to Shulman, 1972) of the sample survey research ego-centered network system. I rank the invention of this method as close to the invention of sociometry itself as generative of both empirical studies and theoretical problems. We have now done much work with this approach (I would still like to find an acceptable one word tag for it - I will leave the problem to Barry)*

> *and I think we now know much more about its advantages and limitations. ' '*
>
> Kadushin 1988

Also:

> *Similarly, the greatest advances in our field have come as the result of new data collection techniques (e.g., sociometry). There is a serious crisis in our current ability to collect good sociometric data in unbounded systems and some major inventions must occur to lift us out of reanalysis of dated data sets.*
>
> Kadushin 1988

It is satisfying to see the link with Moreno acknowledged and the connection made explicit with the use of the word sociometry. More investigation is needed, but it seems likely that only a few of the six principles of sociometry apply to any of these studies. My exploration of the field shows that there is a wealth of knowledge about research, and much could be learned to strengthen the use of sociometry, especially in the area of quantification. See for example *Community structure in social and biological networks (*Girvan and Newman, 2002).

The Frankfurt School – Critical Theory

> *... Habermas wants to establish the "validity of reflection". For example, Descartes, in his Meditations on the First Philosophy , sought to find a source of knowledge that would ground the knowledge that he had doubted. Similarly, Habermas wants to establish such a foundation, although he does not turn to God for his basis. Instead, "Habermas's aim is to show that the power of reason is grounded in the process of reflection." Habermas believes that "bad science" has its root "in the 'cognitive attitude'*

> *of scientistic (positivist) science." The very culture of modern science, rooted as it is in positivism, cannot bring itself to be reflective, as Habermas demands, without abandoning the ideology of "objectivity".*
>
> *Furthermore, Habermas sees critical theory as a way to recognize the telos of society and to normatively evaluate society's current state as it relates to the fulfillment of that telos. "For Habermas, this telos is the end of coercion and the attainment of autonomy through reason, the end of alienation through a consensual harmony of interests, and the end of injustice and poverty through the rational administration of justice." [Braaten 111]*
>
> Stickle, n.d.

Critical Theory and Action Research have similar philosophy and for example are taught together in the Washington School of Social Work. (Sohng, 2005). The rejection of a positivist philosophy is central to these methods.

From Wikipedia on *The Authoritarian Personality* (1950):

> *The Authoritarian Personality is a 1950 sociology book by Theodor W. Adorno, Else Frenkel-Brunswik, Daniel Levinson, and Nevitt Sanford, researchers working at the University of California, Berkeley, during and shortly after World War II.*
>
> *...*
>
> *Though strongly criticized for bias and methodology,[4][5] the book was highly influential in American social sciences,*

> *particularly in the first decade after its publication: "No volume published since the war in the field of social psychology has had a greater impact on the direction of the actual empirical work being carried on in the universities today."[6]*
>
> Wikipedia accessed 14 October, 2013

One of the central tenets on critical theory is the revolutionary ideal of equality, and this relates to Moreno's principle of co-action. In *Jacques Rancière and the Contemporary Scene: The Evidence of Equality and the Practice of Writing*, Jean Philippe Deranty and Alison Ross, say this in relation to Jacques Ranciere a writer associated with critical theory.

> *This intrinsic performative dimension of Rancière's philosophical writing applies especially to the guiding axiom of his thinking, the axiom of equality. Equality for Rancière cannot be demonstrated through induction or deduction; it can only be verified locally and problematically in practice. Such practical verification of equality, which for Rancière constitutes the core definition of politics, involves a series of moves and displacements within existing discourses, since politics for him aims fundamentally at challenging a given 'sharing/dividing (partage) of the sensible'.' This core discursive dimension of the verification of equality, however, has ripple effects in the different universes of established thought, which prop up, through reasons and explanations, the existing discourses of society. In other words, the practical verification of equality aims to achieve 'real life' effects, but in all necessity is also waged in discourse and in thought, and thus necessarily enrols the theorist in its process.*
>
> Deranty and Ross (2012:Loc 134)

Connected Knowing

Helen La Kelly Hunt writes "*Relationship as a Living Laboratory*" (2005). Her writing is significant in two ways. One, the idea that a relationship can be a laboratory is strongly in the spirit of Moranian scientific methodology. In human relationships, laboratory and stage are closely related. The chapter is significant in another way. Hunt introduces the idea of connected knowing, distinguishing it from separate knowing. She values both ways of knowing and opens up two distinct epistemologies and scientific methods.

> *The Epistemological Distinction Between Separate and Connected Knowing Is Important for Relational Theory*
>
> *As indicated by theorist Sandra Harding, who referred to an "epistemological crisis of the West," the field of epistemology is in flux. As our culture grapples with postmodern concepts, we are struggling to understand how knowledge is gained. A Harvard study on men's development (Perry, 1970) led to the concern that women's perspectives were missing from theories of psychological and ethical development. The book Womenis Ways of Knowing (Belenky, Clinchy, Goldberger, & Tarule, 1986) was intended to describe not only the different ways that women know but also how women in the United States are socialized to know (Goldberger, 1996, p. 8). Belenky et al.'s conceptualization of the different ways that people know reflected what many theorists had already concluded: that the mind-body dualism of psychology, which artificially separates cognition, emotion, and behavior, has created a compartmentalized approach to understanding the human experience.*

Belenky et al. (1986) introduced the concept of procedural knowing, which has two designations. The first is separate knowing, a distanced and impartial stance toward that which is to be known. This is the skeptical stance of the devil's advocate. Dating back to the Socratic method, separate knowing is the backbone of Western academia; it is the sort of inquiry that occurs in the classrooms of higher education. We can better understand separate objective knowing by looking at the etymology of the word objective: ob, "off"; jest, "throw." Separate knowing employs a "throwing off or away," which allows us to look at a thing critically. The second designation is connected knowing, an attempt to enter into the space of the thing to be known and to identify with it. This kind of knowing is conceived as a. positive, effortful act that is more intuitive and less rational. Connected knowing requires not merely sympathetic understanding or the absence olf negative evaluation but also affirmation of the other. It follows Martin Buber's recommendations to "image the real," to "make the other present," which requires "a bold swinging . . . into the life of the other" (cited in Clinchy, 1996, p. 218). Women's Ways of Knowing emphasized that connected knowing is not superior to separate knowing, but neither is it inferior. Although both are important, connected (that is, feminine) ways of knowing historically have been devalued (Golberger, 1996, p. 9). Blythe Clinchy (1996) observed that separate knowing requires a removal of the self, whereas connected knowing requires an investment of the self, which does not automatically accept the other but instead engages in self-reflection. The investigator "listens to the self in order to listen to the respondent. [The investigator uses] the self to understand the other" (Clinchy, 1996, p. 219)

Hunt (2005:37-38)

Note: I have added Hunt's references to the Bibliography .

That the method used to develop Imago therapy, a relationship laboratory is not well understood or valued is indicated by the fact that there is a strong move within the Imago movement to develop the separate knowing aspect of the process of knowing. They are striving to be "evidence based", without claiming their roots in practice based evidence.

Citizen Science

> *Citizen science (also known as crowd science, crowd-sourced science, ornetworked science) is scientific research conducted, in whole or in part, by amateur or nonprofessional scientists, often by crowdsourcing and crowdfunding. Formally, citizen science has been defined as "the systematic collection and analysis of data; development of technology; testing of natural phenomena; and the dissemination of these activities by researchers on a primarily avocational basis".[1] Citizen science is sometimes called "public participation in scientific research."[2][3][4]*
>
> Wikipedia

Almost exclusively applies to the physical sciences, however there is some mention of it in social science projects. The methodologies might inspire future sociometrists to use the Internet more fully.

Open Research

> *Open research is research conducted in the spirit of free and open source software. Much like open source schemes that are built around a source code that is made public, the central theme of open research is to make clear accounts of the methodology freely available via the internet, along with any data or results*

extracted or derived from them. This permits a massively distributed collaboration, and one in which anyone may participate at any level of the project.

If the research is scientific in nature, it is frequently referred to as open science.[1][2] Open research can also include social sciences, the humanities,mathematics, engineering and medicine.

Wikipedia http://en.wikipedia.org/wiki/Open_research

Open Access

Open access (OA) is the practice of providing unrestricted access via the Internet to peer-reviewed scholarly research. It is most commonly applied toscholarly journal articles, but it is also increasingly being provided to theses, book chapters,[2] and scholarly monographs.[3]

Open access comes in two degrees: Gratis open access, which is no-cost online access, and Libre open access, which also includes some additional usage rights.[4]These usage rights are often granted by the use of Creative Commons licenses.[5]

Wikipedia http://en.wikipedia.org/wiki/Open_access_(publishing*)*

Evidence Based Practice

Figure 2 is from the notes by Annika Okamoto and Michael Gross for their workshop at the April 2013 ASGPP conference on Evidence Based Practice. The few pages create an excellent warm up to all matters a sociometric research project would need to attend to.

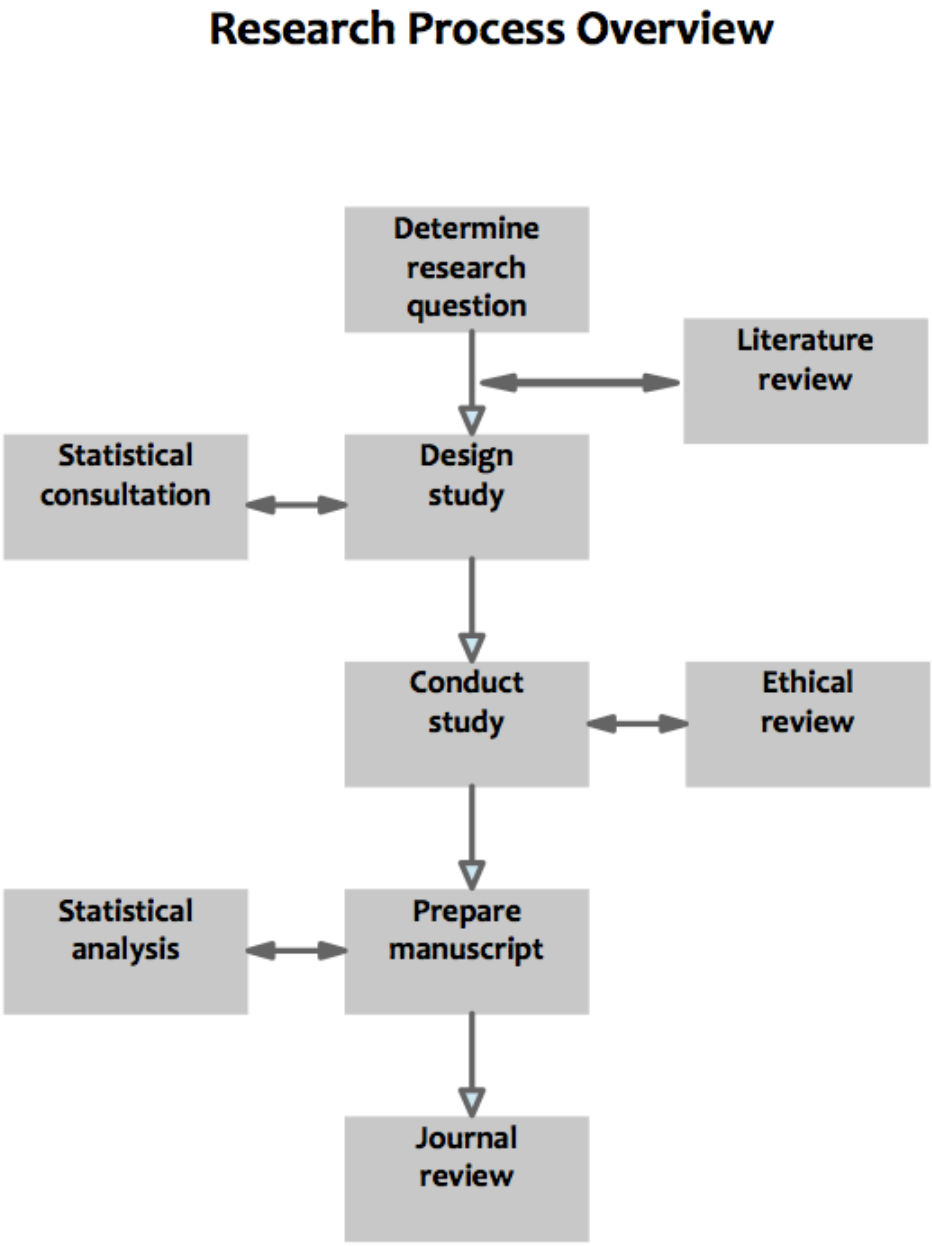

Figure 2. From a handout by Annika Okamoto and Michael Gross (2013)

Constructivist Research

As Peter Howie (2011) mentioned Moreno's work can be seen as clearly falling outside of the positivist approach to knowing and being closely related in this respect to constructivist theory. Just how closely related constructivist methodology is to sociometry can be seen in this paper about research in information systems (IS), *How we Invent What we Measure: A Constructionist Critique of the Empiricist Bias in IS Research.*

> *In this paper I have argued that there are two prototypical metaphysical positions that inform IS researchers, positivism and constructionism. While positivists believe in an objective world independent of human intervention, constructionist believe that the world is a social construction. The methodological position that results from positivism is empiricism understood as the attempt to gain understanding of the real world. I have tried to show that empiricism is flawed because it cannot live up to the expectation of producing objective knowledge. It can only produce knowledge on the basis of prior knowledge and thus produces self-fulfilling prophecies. My central question was why, if this is true, constructionist researchers still use this flawed epistemology.*

> *The answer lies in pragmatic considerations. Empirical research is publishable because it represents the current consensus regarding scientific rationality (cf. Lyytinen & Hirschheim 1988). Researchers must appear to be rational and therefore adhere to given standards. For the constructionist this is no principal problem because she understands rationality as just another social construct which plays a part in the collective meaning making. A constructionist who does empirical research, even*

hard core statistical positivist empirical research therefore does not have to be self-contradictory. She may just try to speak the language that renders her ideas understandable.

Stahl, 2003

George Kelly, who I believe went to the Sunday Beacon sessions (source) Uses the term personal constructs. His notion of people as scientists is clearly related to Moreno and pragmatism.

The body of Kelly's work, The Psychology of Personal Constructs, Volume I and II was written in 1955[1] when Kelly was a professor at Ohio State University. The first three chapters of the book were republished by W. W. Norton in paperback in 1963[2] and consist only of his theory of personality which is covered in most personality books. The re-publication omitted Kelly's assessment technique, the Rep Grid Test, and his method of psychotherapy (Fixed Role Therapy) which is rarely practiced in the form he proposed.

On the other hand, Kelly's fundamental view of people as naive scientists was incorporated into most later-developed forms of cognitive-behavioral therapy that blossomed in the late 70s and early 80s and even, surprisingly, into Intersubjective psychoanalysis which leaned heavily on Kelly's phenomenological perspective and his notion of schematic processing of social information [3]

Wikipedia

Turning the tables: Moranian methods in the physical sciences

Moreno predicted his third science, sociometric methods, would impact on the physical and biological sciences:

> *By the third millennium or thereabout a new position will crystallize. It will be a reversal of the old. ... Indeed, the leadership in scientific method and discovery which has been for nearly two and a half thousand years in the hands of physicists will pass to social scientists, and just as the social sciences were dependent upon the physical sciences for hypothesis and methods, the social sciences will some day help the physical sciences to understand and run the physical universe.*
>
> Moreno, 1954:31

People role reverse to discover and understand reality. Look at how Richard Feynman used role reversal in his scientific explorations:

> *Feynman's essential insight was to place himself once again in the electron, to see what the electron would see at light speed. He would see at light speed. He would see the protons flashing toward him—and they were therefore flattened relativistically into pancakes. Relativity also slowed their internal clocks, in effect, and, from the electron's point of view, froze the partons into immobility. His scheme reduced the messy interaction of an electron with a fog of different particles to a much simpler interaction…*
>
> Gleick, 2011: location 7016

Conclusion

I will sum up the possibilities this paper points to.

Our intuitive sense of the shortcoming of traditional non-paricipatory social science is not only valid but can lead to an alternative approach based on Moreno's social science; sociometry. In training and education Sociometry can provide more effective practice and evaluation. Sociometry, as a methodology for social science and experimental design will emerge as a recognised and significant method in psychology, sociology and all social scisnce. An impressive possibility is that Moreno's vision is validated and the methods used in this socio-psychological sphere spill over and enrich the work of scientists in other fields, strenghening our connection with people working in the biological and physical sciences especially quantum physics.

The opening lines of *Who Shall Survive?* reveals his asperations for major social change, with sociometry's objective being "the whole of mankind" (1978:3). Sociometry has the deep conviction that people can collaborate, that together they can go beyond the surface structures of the group and unleash creativity as they reach levels of ethical spontaneity. The possibility exists that sociometry is the key to the survival of humanity.

This article points to possibilities and also to much that can be done to fully embrace Moreno's work. There is historical and theoretical investigation needed that is only hinted at in this article.

How do the original research items done in the name of sociometry stack up? It may not be realistic to apply the six principles to review existing work. Moreno's use of the term "near sociometric" indicates that there is a continuum. Can they be repeated in some way? This might lead to the construction of similar groups today.

Within AANZPA, how many of the thesis (there are over 100) contribute to Moreno's social science in some way?

A thorough resource is the *Bibliography of Psychodrama © Inception to Now* (Wieser, n.d.). The site has over 6000 references to psychodrama, including Moreno's work. He explicitly does not include specifically sociometric research, and points to Adam Blatner's *Sociometry Bibliography*.(Blatner n.d.)

Such literature review would be a major contribution however main implication of this of this paper is in our practice. The purpose of theory is to test it in action

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Endnotes

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[1] The journal changed its name in 1951. The editorial of that journal reflects on the scientific method, I'll quote it in full:

EDITORIAL

The title of a scientific journal should be the shortest expression of its policy. When the title of this journal "*Sociometry*" was selected in the latter part of 1936 it was Gardner Murphy, its first Editor, who suggested that an under title be added: "A journal of Inter-Personal Relations," as this might indicate to the readers a larger area of research.

Today, after fifteen years, the original policy as expressed in its title has lost none of its vigor, except that meanwhile, due to the very influence which sociometry has exerted upon the various branches of social science, most journals in this field in the United States as well as in other English speaking countries have opened their pages to papers dealing with sociometric methods, including, among others, the sociometric test, role playing, sociodrama, psychodrama and group psychotherapy.

This fortunate development has stimulated us to pay increased attention to the area of research with which sociometry has identified itself from the very beginning—the area of experimental design in the social sciences. Because of the growing need for deepening our knowledge in this area and in order to emphasize our desire to be of service we have broadened the title of this journal, to be known henceforth as *Sociometry, A Journal of Inter-Personal Relations and Experimental Design.*

EDITORIAL COMMITTEE
(1951)

[2] Zerka Moreno (2007:6) published an item, *Moreno's Influence on Martin Buber* in the Psychodrama Network News. She highlighted the importance of Psychodrama as a means of creating encounter. The opening paragraph follows. "Dr. Robert Waldl from Vienna, who presented at both the New York and Miami conferences, has discovered that J.L.

Moreno influenced Martin Buber in his ideas of The Encounter. Moreno started his publications from 1914 onwards under the title series Einladung zu einer Begegnung, or Invitations to an Encounter, predating Buber's Ich und Du, or I and Thou by nine years. Dr. Waldl is planning to publish his PhD thesis in German and we hope for an English translation in the not too distant future. The significance of this discovery cannot be overestimated considering Buber's influence on philosophy, theology and psychology. While it is true that Buber broadened the idea of The Encounter, he did not create instruments for it to occur. Moreno literally invited such meetings and furthermore, produced the various instruments we now use to facilitate the human encounter, sociometry, group psychotherapy, psychodrama, sociodrama".

A transcript with illustrations is published on Adam Blatner's website (Wald 2010) and includes links to the thesis (in german).

[3] Most of the Six Principles of Sociometry are based on rules described in an essay, originally published 1948, in *Sociometry, Experimental Method and The Science Of Society: An Approach to a New Political Orientation,* called "Sociometry, and the Experimental Method" (2012:37), I discovered later that the section where these rules appear, "The Nature of the Warming Up Process and the Experimental Method", is almost word for word the same as a section entitled "Ontology of Sociometric Theory" in the 1953 edition of *Who Shall Survive? Foundations of Sociometry Group Psychotherapy and Sociodrama.* (1953:59). The 1953 version appears to be the latest version. The first edition, *Who Shall Survive? A New Approach to the Problem of Human Interrelations (1934)* is quite different and does not include the section at all.

As I describe the Six Principles of Sociometry I will quote from the section from the 1978 pdf edition of *Who Shall Survive?* Where this section is the same as in the 1953 edition.

[4] Diana Jones lists four requirements of sociometric explorations (1996:12);

a) that the participants in the situation are drawn to one another by one or more criteria

b) that a criterion is selected to which the participants respond, at the moment of the test, with a high degree of spontaneity

c) that the subjects are adequately motivated so that their responses may be sincere

d) that the criterion selected for testing is strong, enduring and definite, and not weak, transitory and indefinite"

These relate more directly to methodology for conducting the sociometric test. Moreno's words that introduce these requirements in the full edition of *Who Shall Survive?* (1978:91) are: "The theory of sociometric testing requires:" Note that though these criteria relate to the sociometric test (a part of, but not the whole of sociometry as a methodology of social science) they include warm up and item c reiterates the fifth of the six principles identified in this essay, the principle of adequate motivation.

[5] Open Access is well explained here: http://en.wikipedia.org/wiki/Open_access

[6] Video of Charles Royal speaking on this topic at a Royal Society Conference — session two, about 45 minutes into the session. Accessd 28 August, 2013 http://www.royalsociety.org.nz/events/2012-transit-of-venus-forum-lifting-our-horizon/forum-programme/