

## Psychotherapy and Science

### *The Future of Knowing -- You Had to Be There.*

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### ***Abstract***

The scientific method used in the physical sciences does not easily lend itself to the study of the nature and quality interpersonal relationships and it can conflict with a psychological depth perspective. Dr. J.L. Moreno proposed sociometry a method of psychological work that is scientific but significantly different to the methods of the physical sciences.

This paper proposes that psychotherapy is sociometric and as such has a scientific validity. The nature of the validity of the work is explained and differentiated from the methods of external measurements of the physical sciences. The risks of adhering to the methods of the physical sciences in psychotherapy are explored.

The paper concludes with discussion of the implications for psychotherapy in three vital areas: training and assessment of psychotherapists, supervision and evaluation of psychotherapy for insurance purposes.

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## ***Introduction***

Psychotherapy is inherently within a private & confidential space. Clients may take years of trust building to bring forth the topic that they really want to talk about. Therapists are bound by confidentiality. We have a black box that is not easily penetrated. How can we trust research that is done?

Jacob L. Moreno developed sociometry, an approach to research in human affairs, in the 1930s. What he proposed needs a shift of perspective that is not easily made in the face of the success of traditional science in the last century. Psychotherapists understand intuitively that what they know and learn in the sessions has value, truth and validity, but it is very hard to put this knowing into words, and it is often treated as having no scientific basis. Understanding sociometry and that psychotherapy is a form of sociometric practice can make a difference to this situation.

Moreno is best known for his invention of the Psychodrama Method. The breadth of his vision becomes clear when we see that psychodrama is one of various "methods" for people to enter collaborative sociometric research. Psychodrama is the best known of these and has become a method of group psychotherapy in its own right however it is only one method of sociometric experimentation in Moreno's larger vision.

## ***Sociometry***

Sociometry is a way of seeing the social, human world experientially from the inside, as a member of a group. It involves a stance that is fundamentally different from empirical knowing of the physical world. Sociometry is not an analysis from the outside. Analysis, with its roots in Aristotle, like the whole scientific endeavour is of great value but it has not always worked well with human beings and certainly not with the psyche. It has worked fine in the physical and medical endeavour, but not so well in the human sphere. The scientific method promised by Moreno's sociometry aims to rectify this. His main treatise on sociometry from 1934 is called "Who Shall Survive?" indicating his grand aim of the survival of the human race. Sociometry is a prescription for scientific method for the social and psychological sphere. Moreno saw this way of knowing as a new scientific method that would become the paradigm even for the physical 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.

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.***"<sup>1</sup> [my emphasis]

Moreno, in the same article, enumerated "rules", guidelines or principles, central to the sociometric method. He does not present a crisp list of bullet points however for the purpose of this discussion I have condensed them, to give an insight into the method. These are the principles that apply to a sociometric endeavour:

1. Participants are informed, ready willing and able to participate.
2. Participants in the group are "researchers", and the leader is also a participant.
3. Participation is done in action. Learning is experiential, it is learning by doing.
4. There is acknowledgment of the difference between process dynamics and the manifest content. To quote Moreno: "there is a deep discrepancy between the official and the secret behaviour of members". (p.39) Moreno advocates that before any "social program" can be proposed, the director has to "take into account the actual constitution of the group." (p.39)
5. Rule of adequate motivation "Every participant should feel about the experiment that it is in his {or her} own cause . . . that it is an opportunity for him {or her} to become an active agent in matters concerning his {or her} life situation." (p.39)
6. Rule of "gradual" inclusion of all extraneous criteria. Moreno speaks here of "the slow dialectic process of the sociometric experiment."

The phrase: "maximum, conscious, voluntary spontaneous, participation" sums up these principles well. While I cannot find a place where Moreno puts all these words together, he has used them all to sum up the qualities of sociometry.

To the degree that these criteria are met they make a relationship or a group a "sociometric experiment". Members consciously enter a new learning collective, members define the "research". Moreno is encouraging a situation where there is both a cohesive group and where each individual is fully in tune with his or her own concerns. The distinction between leader and participant is not lost but both are fully members of the group.

### ***Sociometry and Psychotherapy***

A psychotherapist and a client form a sociometric dyad. While the language typically used for the psychotherapy relationship is different from that in the six principles above, psychotherapy is clearly an instance of a sociometric experiment. The actual nature of the “experiment” is formed inside the relationship, and is unique to the relationship.

Sociometric experiments, like scientific experiments in the physical realm are looking for knowledge and truth – there is a way of knowing what is true, method of verification.

Moreno referred to the psychodrama method as the “theatre of truth”. This is a different sort of truth than the one that can be explored by external methods usual in science or even in the social science. The psychodrama method, like psychotherapy, may for a while reveal information that is readily corroborated socially, information about the family such as ages and gender, data if you will. This data is not the same as the psychological truth, the sociometric truths that are central to the work. The substance of psychotherapy lies in a subtler realm, let me illustrate by a highly condensed case study.

#### **The example of Alice:**

Alice was born in 1950, the eldest of two girls. She lived with her parents until age 9 when she was removed by Social Welfare and placed in Nazareth House.

This information could be externally verified. Then some other sort of information is presented, which is of a whole different order.

**Alice:** We lived under a cloud of fear.

Working with this is part of the psychotherapeutic endeavour. Would we call it establishing the veracity of this information? Not really, but the continuing therapy reveals more meaning and, for all the philosophical doubts the word engenders, truth. The truth comes through the unfolding of the story and in the shared space of the relationship. If there is some doubt about the clarity or precision of the information it can be refined, a point is reached in the session where the therapist summarises:

**Therapist:** You lived under a cloud of fear that no one other than you and your sister could see.

**Alice:** Yes, and we were punished for “telling lies” that made it worse. I think we saw things because we were so terrified.

The story unfolds and links in with other stories that have been told in the room. This dynamic repeats in the context of the whole endeavour, the therapist recalls another moment from the shared knowledge of the psychotherapy:

**Therapist:** Your ex-husband is accusing you of lying.

**Alice:** Yes, we don't know what he will rave about next, yet for the rest of the world he is so honest and trusted. Yes, and then I feel just like I did with the nuns. What I say does not count.

**Therapist:** ...a cloud of fear that no one other than you and your *daughter* can see.

As the parallel dynamics, of the sisters and the nuns and the mother and the daughter, crystallise. Tears and then laughter of knowing affirm the new meaning and there is no doubt we have been in the theater of truth. In one shared moment we experience an hypothesis, an experiment, a conclusion and healing, all verified by the laughter and tears.

There is a here-and-now re-living of the old dynamics in the work with Alice that is illustrated with this moment from a subsequent session:

**Alice:** The reason I did not tell you about the abuse earlier is that I was scared you would not believe me.

Finding repeating patterns in what might at first glance appear to be unrelated material is very like the scientific endeavour in the physical world. Once a pattern is clearly seen then we have established a law of nature. To think of the work with Alice – which is typical of our psychotherapeutic work – as a form of research requires a shift of perspective, but it is clearly in a similar realm.

The dynamics that repeat independently of the content are understood through a visceral experience, tears and laughter. When yet another instance of the pattern is spotted it corroborates and often extends the understanding. When the dynamic is evident, though in a minor way in the psychotherapy itself it is a full experiential knowing that is shared in the psychotherapy space. Both the psychotherapist and the client can easily use such words as knowing, understanding which are the very things that scientific research aims for.

### ***Is this science; is it objective, can it be measured?***

These questions are relevant. To answer them we need to continue in a spirit of seeing psychologically, sociometrically. Some reflections on this question follow.

## The Objective Psyche

The interrelationship of the material, the repeating themes and dynamics that happens in psychotherapy points to an underlying web of connections. The dynamics and processes that arise usually reveal an underlying thread which is itself part of a larger fabric. Do we create meaning or discover it? It takes an imaginative effort to become conscious of the elusive patterns, yet once seen they are clearly not just imagined, but have some basis in reality. Once named they become obvious and clear but initially they are hidden in what is usefully called the unconscious. Was Moreno really right that somewhere here in these relationships we form we are creating a new scientific method? Is there a collective unconscious that will reveal itself. My answer to these questions in favour of some form of implicate order comes more from experience such as the one with by Alice than from theory. Moreno talks about a sociometric matrix that is similar to the collective unconscious of Carl Jung. Many traditions posit a definite layer of underlying social and psychological reality. Jung went as far as calling this the objective psyche, pointing to the same idea that this is not a purely subjective phenomenon. Here is the summary from the Wikipedia:

In his earlier writings, Jung called this aspect of the psyche the collective unconscious; later, he changed the term to the "objective psyche". The objective psyche may be considered objective for two reasons: it is common to everyone; and it has a better sense of the self ideal than the ego or conscious self does, and thus directs the self, via archetypes, dreams, intuition, and making mistakes on purpose, to self-actualization.<sup>2</sup>

## The Long Tail

Another idea that has a current popularity on the Internet and that seems relevant to there being an objectivity to our more subtle knowing is the concept of the Long Tail of distributions.

This curve applies to many phenomena. One is that if people apply nametags to objects (like web pages or photos) most names come from a common cluster, yet many people will add names that are rarely applied, creating the significant long tail.



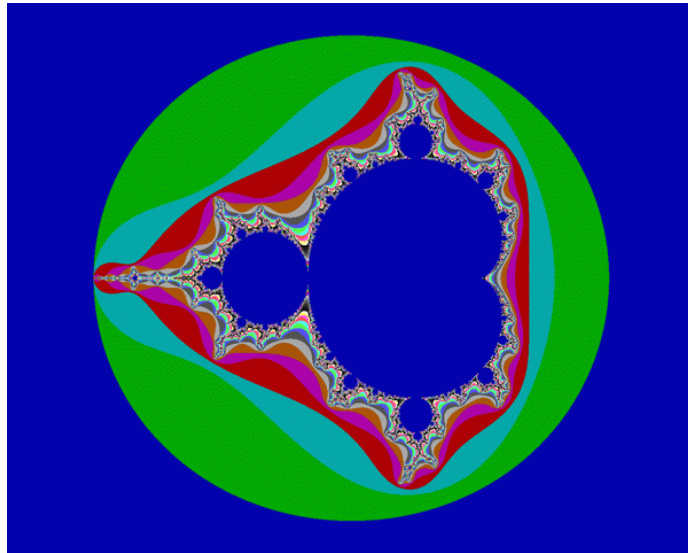
I have always had the sense that there is something objective in the way we name a complex, or a role. The objectivity or commonality of the collective lies in probabilities not the realm of the “either, or”. The shared knowing that emerges in psychotherapy is not of a binary, yes – no, nature, yet the solidity of the clusters of knowing is not in doubt.

**Fractals**

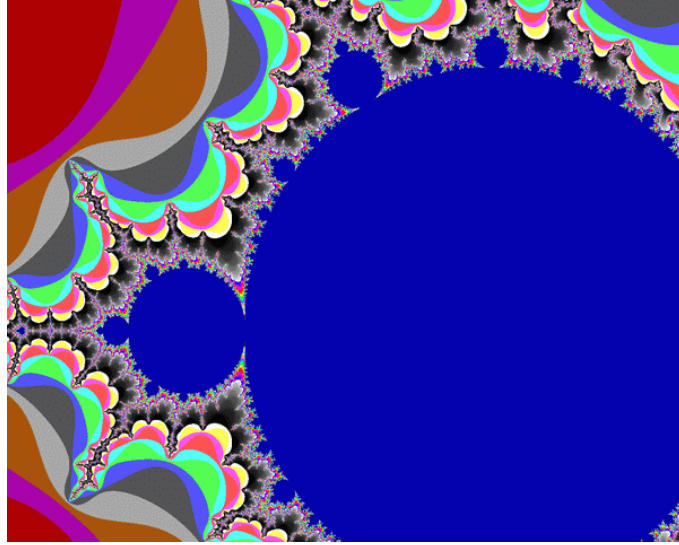
The psyche has a lot in common with a fractal, the mathematical formations that have irregularities repeat at different scales. When we examine any one aspect of the image – we see that the pattern repeats.

Neal Stephenson in the novel *Cryptonomicon*, p61:

This was just the executive summary of a weird life that Randy only learned about in bits and pieces as the years went on. Later he was to decide that Andrew's life had been fractally weird. That is you could take any small piece of it and examine it in detail and it, in and of itself, would turn out to be just as complicated and weird as the whole thing in its entirety.



These fractal images illustrate the point. The second is a small part of the first image.



The psyche is explored and reached through the study of patterns. The words psychotherapists use: theme, pattern, role, character, syndrome, complex (as in oedipal complex), and archetype. These are all words about patterns of the psyche.

To be good at exploring the psyche one has to have a measure of apophenia<sup>3</sup>.

### ***Parallel Process***

Given then that there is a form of often unrecognised and undervalued research happening inside psychotherapy itself is this knowing ever accessible outside of the confidential crucible of the work? Is the understanding then to remain for ever without external scrutiny?

Though we might not call it a research project, we also have a way of looking into this work from the outside it is familiar and right there in front of us, ***supervision***. Supervision is a process that has the same form as the psychotherapy and within it is one of the participants of the psychotherapy. It is “isomorphic” with the psychotherapy.

Douglas Hofstadter provides an informal definition:

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. (Gödel, Escher, Bach, p. 49) <sup>4</sup>

This is what we would call parallel process in psychotherapy. We see it occur between the structure of the client's world and the psychotherapy (as in the Alice example where she is afraid of being seen by the therapist as lying, as she was by the nuns and her ex.)

It also happens when the therapist takes that work to supervision. How might the dynamic recur? Here is one possibility:



**Therapist:** Alice is doing ok. She has made a break through with her ex husband.

**Supervisor:** Is she going back to him?

**Therapist:** Oh no, she is much clearer now how it all ties in.

**Supervisor:** How does it tie in?

**Therapist:** They made a link with her childhood and her relationship with her husband.

**Supervisor:** OK, you sound reluctant to say more...

**Therapist:** Yes, it is because last time we spoke it seemed so hopeless and I have not followed your suggestion we do grief work. I am not sure that the transformation she has made will be credible as I talk about it.

The therapist is now in the position that is similar to the clients – “will I be believed?” An unconscious thread has woven its way into the relationship with the supervisor.

If in the supervision they can resolve this trust issue then they will have looked into the sessions with Alice in a profound way. One resolution can be mapped to another and the supervisor, though external to the psychotherapy has an experiential verification of the work.

This has always been the essence of psychological work. Freud, I believe, said that the work does not begin until the patient's problem manifests in the room with him. We set up the conditions for the dynamics to recur. In psychodrama this happens in a more subtle way than might at first appear. In a psychodrama session there is a warm up phase where a difficult situation emerges in the group, not simply one of the problems of the individual. The subsequent psychodrama then works at two isomorphic levels – the protagonist's story and the group dynamics. Psychotherapy is very similar where we call that process transference.

### ***Valuing the Sociometric Nature of Psychotherapy.***

The main point of this essay has been made; that there is internal research and verification inherent in psychotherapy and that this has a form of reliability because it is a sociometric process. Sociometric research does not add specifically to what psychotherapists and clients already do in their work. Examining the six criteria of a sociometric process, (the principles of maximum conscious voluntary participation outlined above) will show that they are part of effective psychotherapy in their own right. Consciousness of this process occurring inherently in psychotherapy can lead to psychotherapists and clients better able to articulate the fullness and validity of their knowing. The value of this form of internal measurement of the living process is that it is ethical, non-intrusive, effective and safe.

### ***Risks of Non-Sociometric Measurement of Psychotherapy.***

The greatest value of becoming conscious that psychotherapy is itself a form of research is that it makes it feasible to exclude non-sociometric research from the profession. There are risks to applying measurement to psychotherapy that does not aspire to the principles of maximum voluntary conscious participation. Scientific methodology which relies on its own terms of reference are likely not to be aligned with the actual criteria used by the participants. Types of investigations that even when done well and with good will that are non-sociometric are those that originate from the requirements from an external source, such familiar processes as:

- Requirements to state and report on goals to a third party
- Requirements to submit diagnosis according to a specified model
- Psychotherapist training and assessment that requires audio or video reports to be shown outside the psychotherapy
- Requirements for the client to report on the psychotherapy to a third party
- Questionnaires

Four types of risk of processes of this nature are briefly examined here: the destruction of the psychotherapy, the distortion of the psychotherapy, the invitation to unconsciousness and lastly, the uncertainty of results.

### **The Destruction of the Psychotherapy**

The creation of a confidential space for psychotherapy is connected with the need for laboratory conditions for the subtleties of the psyche to emerge. Note the lengths psychotherapists go to protect the privacy and non-contamination of the work. Psychotherapists avoid work with friends or with relatives of their other clients. They will not disclose whom they work with if at all possible, and often avoid using the names of their clients even in supervision. Therapists are ethically bound not to form relationships with the client outside of the work.

Psychological unfolding has often been likened to material in an alchemical crucible, which is allowed to boil and splutter but which must not break the vessel and thus destroying the transformation process.

One risk of introducing research tools and methods, “instruments” that do not adhere to the principles of maximum, voluntary, conscious participation is that the research destroys the psychotherapy (often without the full knowledge of the participants or the external researchers). There are many such methods that form a leak in the otherwise hermetically sealed psychotherapy. Most psychotherapists will have heard of people leaving psychotherapy because they were not fully engaged perhaps in part because they had to comply with external demands on the work. Often these demands in the form of non-sociometric investigation are, paradoxically, to assure quality. But psychotherapy can be destroyed in ways other than the failure of engagement. If the boundaries of the vessel are allowed to break in the middle of deep work there can be profound psychological wounding.

The introduction of various phenomena into the process which are **not** sociometric are intrusions or leaks into the psychotherapeutic container and the risk is that the client rather than being healed is further damaged.

### **The Distortion of Psychotherapy.**

In some cases no actual harm may be done by the introduction of an external research agenda. However there may be distortion.

One way this can happen is that the measuring or assessment procedures begin to play their own role in the work. For example in the case of Alice, imagine that a video was used to record sessions for use in supervision. How would the instrument have related to the story? Was there the dynamic equivalent of a video in the original story in the boarding school? (There may well have been – while not in the form of a video, other structures may have performed this role) How did it play out in the divorce proceedings? How is it present in the supervision session? Unless the camera is included fully as an element in the repeating dynamics then it is a detractor and possibly a destroyer of the dynamics. The therapy with Alice was healing precisely because of the essential similarity *and* difference between the earlier relationships and the relationship with the therapist. There was the fear of being seen as a liar and now also the trust that enabled her to overcome and disclose the fear. How might the unconscious presence of the possibility of an unnamed audience at an unnamed time influence the pattern?

The psychotherapy for Alice could have led to other areas, perhaps the intrusiveness of the examinations of one sort or another.

Note that in the work with Alice her difficulty in trusting the psychotherapist was an element in the dynamics. Mistrust was at the heart of her work. So it is not that we can avoid the impact of the therapist in the therapeutic situation, but we can keep it to a minimum. When it comes to human relationships, change is measurement and measurement is change. We are the measured and the measuring instrument. The "measuring" of sociometry can be mapped and quantified, but it is within the space created by awareness of the flow of feelings between people in dialogue. The measuring and the psychological work are one.

Another distortion can happen because of demands of external evaluation. External assessors, though they may be neutral in their own stance, are not neutral in the impact on the work. For example if the clients rely on funding which is paid according to certain criteria being met then it is understandable that the client and the psychotherapist will look at how the work meets those criteria, they are obliged to do so. The criteria are there well before the sociometric criteria will have emerged in a slow dialectical process. The assessment of suitability for psychotherapy within a context is a different process of the psychotherapy itself and if the first is blurred with the second that is a non-sociometric intrusion.

With demands of external evaluation the risk of distortion is high: The psychotherapy can unconsciously conform to the criteria, or the client and/or psychotherapist consciously distort descriptions of the work to ensure they meet external measures. Even if these two forms of distortion do not occur the existence of the external demands will have some influence on the work. For example some psychotherapy work will insist on a medical diagnosis for its validity, making such an investigation may not be sociometrically determined and in some cases would not have happened without the external demand.

## **The Invitation to Unconsciousness**

The therapist may well ask the client to ignore or minimise the intrusion of an external observation. For example they may say “You will soon forget the tape recorder is on.” There is danger here, firstly the “tape recorder” is not really just an object and that should not be promoted. The recorder is a opening a window to the psychotherapy to other unknown people. It is a contradiction to ask the client to forget the imaginary audience and to ask them to remain in touch with feelings – especially about intrusions in the past that they were also asked to forget or ignore.

## **Uncertainty of Results**

The sociometric work of psychotherapy will lead to mutual understandings between the client and the psychotherapy. This can be extended as a network of knowing involving a supervisor. Forms of investigation based on non-sociometric methods, often methods borrowed from the physical sciences will yield certain results, however these may well be at variance with the inside story known only to the sociometric collective. The external researcher will never be sure if this has or has not happened.

## ***The Nature of the Psyche***

The discussion about non-sociometric investigation may reveal something more about the nature of the psyche and psychological work. The very illusiveness of the process to external measurement places psychotherapy in a similar place to quantum mechanics, where measurement both distorts the phenomena and also leaves the researcher with uncertainty. This link means that Moreno's prediction that sociometry could form the basis for the physical sciences in this millennium is not completely implausible. A reflection on the parallel with quantum physics follows:

## **The Story of Schrodinger's Cats**

This situation may mean that psychotherapy has an element that conforms to Heisenberg's Uncertainty Principle<sup>5</sup> and reminds me of the story of Schrodinger's cats. I recently read a popularised version in the Christchurch Press by science writer Hayden Welles.

Quantum theory assumes a completely alien view of reality. Although quantum effects are only obvious on the scale of individual atoms, we can scale them up to a more familiar size with a thought experiment proposed in 1935 by Erwin Schrodinger, a pioneer of the quantum revolution.

Imagine we have a steel box, some radioactive uranium, a vial of poison and a cat.

We happen to know that during an hour there is a 50/50 chance that, one of the uranium atoms will decay and release a burst of radiation. If this happens, a machine inside the box will break the vial, releasing the poison and killing the cat. - Now the experiment. We seal the cat inside the box for an hour, then take a look.

Uranium decay is a random and unpredictable quantum process, so we cannot predict the cat's state of health at all. Obviously we will find the cat either dead or alive, but here is the weird bit: before we open the box, according to quantum mechanics, the cat is both alive and dead at the same time.

How can that be? It turns out that at the quantum level nature is very indecisive, waiting until the last possible moment to make up its mind.

In the cat experiment the last possible moment is just as we open the box to see if Tibbles is still alive - until then there are somehow two cats inside the box with an equal right to exist.

Schrodinger called this bizarre state of affairs entanglement. Entangled cats are one thing, but these days scientists and engineers have found many practical uses for entangled quantum particles.

I was struck by the word “entanglement”. It seems to fit with the relationship in the midst of psychological work. If we opened the psychotherapy box the relationship and the work might die. Literal death is not to be excluded, times of ending and referral to other therapists are particularly prone to mishap. But the external observers create an even worse situation, when they open the crucible of containment they destroy the entanglement and they may well think that the resulting mess is actually what was happening before they opened the door, they will not see what we have in there, and they will not know that.

### ***Supervision as a Model of Sociometric Exploration outside of the Psychotherapy.***

The implications of this paper also include sociometric ways of seeing into psychotherapy work. The method of parallel investigation in supervision can be extended to assessment of psychotherapists. While it would not be easy or even possible for an insurance company to enter into a sociometric relationship with an individual therapist the parallel process of institutional approval of certain members of a therapeutic organisation might well be possible and effective.

The assessment of professional competence can be entrusted to the organisation of peers who can enter into sociometric dialogue.

### ***Conclusion***

I hope that this paper has pointed to possibilities, and of course that these possibilities can be realised. One possibility is that our intuitive sense of the shortcoming of traditional evaluations of psychotherapy is not only valid but can lead to an alternative approach. Another possibility is that we claim what we already know and do as a valid scientific approach. The possibility also exists that the methodology described here is strengthened and developed to form effective forms of psychotherapist evaluation. And the most impressive possibility is that Moreno's vision is validated and the methods used in this psychological work spill over and enrich the work of scientists in other fields.

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<sup>1</sup> Moreno, J. L., 1951, *Sociometry, Experimental Method and the Science of Society. An Approach to a New Political Orientation*. Beacon House, Beacon, New York. Page 31

<sup>2</sup> [http://en.wikipedia.org/wiki/Collective\\_unconscious](http://en.wikipedia.org/wiki/Collective_unconscious)

<sup>3</sup> From Wikipedia, the free encyclopedia:

<http://en.wikipedia.org/wiki/Apophenia>

Apophenia is the experience of seeing patterns or connections in random or meaningless data. The term was coined in 1958 by Klaus Conrad, who defined it as the "unmotivated seeing of connections" accompanied by a "specific experience of an abnormal meaningfulness".

Conrad originally described this phenomenon in relation to the distortion of reality present in psychosis, but it has become more widely used to describe this tendency in healthy individuals without necessarily implying the presence of neurological or mental illness.

In statistics, apophenia would be classed as a Type I error. Apophenia is often used as an explanation of paranormal and religious claims. It has been suggested that apophenia is a link between psychosis and creativity.

William Gibson uses this term in his novel *Pattern Recognition* and in his blog [http://www.williamgibsonbooks.com/archive/2003\\_02\\_17\\_archive.asp](http://www.williamgibsonbooks.com/archive/2003_02_17_archive.asp)

<sup>4</sup> Gödel, Escher, Bach: an Eternal Golden Braid is a Pulitzer Prize-winning book by Douglas Hofstadter, first published in 1979 by Basic Books. A new preface by Hofstadter accompanied an otherwise unchanged 20th anniversary edition (ISBN 0465026567) released in 1999.

<sup>5</sup> A good explanation can be found here: <http://www.grandunifiedtheory.org.il/schrod/schrodP.htm>