THE IRRATIONAL AND ILLOGICAL NATURE OF SCIENCE AND PSYCHOANALYSIS: THE DEMARCATION OF SCIENCE AND NON-SCIENCE IS A PSEUDO PROBLEM

FREUD INVALIDATES AND TRANSCENDS THE EPISTEMOLOGY AND ENLIGHTENMENTS NOTIONS OF SCIENCE: SCIENCE LOOSES ITS POSITION AS A PRIVILEGED AND SPECIAL METHOD OF TRUTH

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IS PSYCHOANALYSIS FALSIFIABLE? DOES IT MATTER?

CRITICAL DISCUSSION

THE IRRATIONAL AND ILLOGICAL NATURE OF SCIENCE AND PSYCHOANALYSIS: THE DEMARCATION OF SCIENCE AND NON-SCIENCE IS A PSEUDO PROBLEM

This essay will argue that the demarcation between science and non-science and the debates over what makes science a science and its epistemic or privileged criteria or method of finding truth are pseudo problems

This essay will argue that to answer the question, "is psychoanalysis falsifiable?" requires a prior notion of what constitutes 'truth'. This essay will show that the two main paradigms of 'truth', that psychoanalysis is assessed on, are the correspondence theory of 'truth' and the coherence theory of 'truth' This essay will show that based on the correspondence theory of 'truth' some scholars argue that psychoanalysis is not falsifiable while others argue that it is. I will show that those who adopt a coherence theory of 'truth argue that psychoanalysis can only be falsified upon its criteria and not those of the correspondence theory. So in effect I will argue that psychoanalysis can be falsified if the criteria advocated by each theory of 'truth' is adhered to. Now even though psychoanalysis can be falsified I will argue that this does not matter in the least for psychoanalysis as a theory. I will show that the coherence and correspondence theories of 'truth' are philosophically flawed. I will argue because they are flawed their criteria of 'truth' lacks epistemological support; thus making any

falsification done under their criteria suspect. I will also show, using examples from science and mathematics, that there are examples in each discipline where falsification of a theory has not led to its abandonment and the theory still plays an important function in all future theory construction. What these examples will be used to argue is that it does not matter if psychoanalysis is falsifiable or not it can still be a valid theory any way.

There is an on going debate in psychoanalysis as to whether psychoanalysis is a scientific or hermeneutic discipline. The positivist critique of psychoanalysis argue that psychoanalysis is "…an ideological closed belief system lacking falsifiable postulates or a sound empirical basis."[1] Zaretsky notes "… some came to believe that psychoanalysis was not a science." The reason for this was because psychoanalysis excluded "… critique and speculation, [refused] to ask when empirical verification was necessary and when it was impossible to obtain … "[2] These attacks were not new for during the inter war period psychoanalysis was critiqued by "… liberal defenders of scientific orthodoxy."[3] Nevertheless there was disagreement on the scientific status of psychoanalysis such that some Logical positivists, such as Richard Von Mises argued that psychoanalysis was grounded on " incontestable observations".[4] Here we see that a major criticism of psychoanalysis was its lack of empirical support. In other words a major criticism of psychoanalysis was that it did not verify its ideas by experience or reality. Now no less a figure than Freud himself claimed that psychoanalysis was in fact empirically non-falsifiable. Freud when confronted with

[1] A, Bateman, & J, Holmes, *Introduction to Psychoanalysis*, Routledge, 2002, p.20.
[2]E, Zaretsky, *Secrets of the Soul*, Alfred Knorf, 2004,. p.291.
[3] ibid.,. p.183.
[4] ibid., p.185.

the unscientific status of psychoanalysis, "responded that analysis did not lend itself to experimental testing .."[5]

Grunbaum, in 1984, published a book which took issue with the positivist attack upon the un-falsifiablity of psychoanalysis Grunbaum " argues that, although perhaps more difficult to study than in the physical sciences, cause-effect principles apply just as strongly in psychology as in physics. He also shows that many psychoanalytical postulates *are* falsifiable …"[6] A, Bateman, & J, Holmes claim that repression, unconscious awareness, identification and internalization are scientifically proven. [7] Now despite Grunbaum's apparent demonstration of the falsifablity of psychoanalysis some theorists claim that the external validation of psychoanalysis is doomed to fail. These theorists follow Ricoeur in claiming a hermeneutic understanding of psychoanalysis. They claim that instead of a correspondence with reality, as being the criteria upon which to assess psychoanalysis, they claim that "… internal coherence and narrative plausibility as the basis for settling disputes."[8]

Thus we see there are those, like Grunbaum, who argue that psychoanalysis can be tested against the facts of reality and potentially its postulates can be falsified by reality. On the other hand there are those, like Ricoeur, who advocate a hermenutical approach where it is not a correspondence with reality that matters but whether the psychoanalytic theory is internally consistent and its interpretations or narratives satisfying or not. A theory is falsifiable, in the correspondence theory of 'truth' if it does not agree with reality. In the coherence theory of 'truth' a theory is falsifiable if

[5] ibid,. p.185.
[6] A, Bateman, & J, Holmes, op.cit, p.21.
[7] ibid., p.22.
[8] ibid., p.244.

it is inconsistent in terms of the system. I will argue that both criteria are flawed and lack epistemological support.

In this regard we see that the debate on the falsifiablity of psychoanalysis is a debate between correspondence and coherence theorists. Now the correspondence and coherence theories of 'truth' are philosophically flawed. I will show how they are flawed and lack epistemological support. What I will draw from this is my claim that it does not matter whether psychoanalysis is falsifiable or not either in terms of the correspondence or coherence theories of 'truth' because both lack epistemological support.

A way of looking at a theory is to see at as a set of statements which say something about a state of affair about reality. Under this viewpoint the issue is what is the relation between the statement and reality that makes it 'true' or 'false'. O'Hear notes 'true' statements correspond or picture reality[9]. But the problem with this is that " how can a statement- something linguistic – correspond to a fact or state of affairs. Certainly it cannot be a replica of a state of affairs , nor does it fit with it in the way a nut might be said to correspond with a nut. Further, even if we could make some sense of a simple affirmative factual statement …. There are considerable problems with knowing just what it is other statements are supposed to correspond to."[10] What about negative statements that say something is not or does not exist? What about

[9] A, O'Hear, *What Philosophy Is*, Penguin, 1991, pp.88-89.
[10] Ibid., p.89.

counterfactural statements? Do mathematical and moral statements correspond to something in reality? Are there universal statements that correspond to reality?

The correspondence theory of 'truth' that sees statements as corresponding to reality is thus problematic. The problems are such that, as O'Hear notes " … the correspondence relation are simply shadowy reflections of statements we regard as true for other reasons rather than as generally mind-independent realities."[11] When we realize that there is no non-conceptual view about reality we realize that even 'reality' is a value-laden conceptual laden term. As some argue all theory is value laden there are no facts uncontaminated by epistemological, metaphysical, other theories, and ontological views. The result of all this is to undermine the claims of the correspondence theory such that "… there is something futile in thinking that what we know is achieved by direct access to a mind-independent reality, which would suggest that a naïve correspondence view of truth, at least, is likely to be able to give us little guidance in our actual inquiries and researches."[12] We shall see that the coherence theory of 'truth' fares no better in guiding our research or acessing our actual statements about 'truth' or falsidity.

In the coherence theory of 'truth' the criterai of 'truth' is that a statement does not contradict other statements O'Hear notes that "systems here are regarded as being governed by nothing more mysterious than normal relations of implication and

[11] ibid., . p90.
[12] Ibid., p.96.

contradiction."[13] But as has been pointed out it is quite easy to avoid contradiction by dropping inconsistent statements[14]. If a statement is inconsistent with theory or observation we can just drop either the theory or observational statement. Also many scientific theory suffer from empirical counter-evidence which we nevertheless still accept.[15] What happens when two or more theories i.e. Kleinian, Lacanian, Freudian, ego-psychology etc, are lets say coherent but contain mutually contradictory statements in regard to each other. In other words what about the situation when theories are coherent but contradict each other. O'Hear points out " that many would regard this as a conclusive objection to the coherence theory of truth, for surely whether a statement is true or not depends on the facts and not on the systems we are using to interpret the facts."[16] But here is the big problem. We showed above that facts are themselves value conceptual laden. The correspondence theory of 'truth' in fact is not epistemologically or metaphysically etc neutral- we see the facts through other theories. But we have just seen that in seeing the facts through other theories assumes that the theories are coherence, but coherence theories of 'truth' as we have seen are epistemologically flawed.

Thus we see that epistemologically both the correspondence and coherence theories of 'truth' are flawed. This to my mind say that it does not matter whether psychoanalysis is falsifiable. Whether it is, or is not is based upon a particular theory of 'truth' that has no epistemological support. Now regardless of these philosophical investigations I will show that in terms of each theory there is evidence that even though their criteria are not met for some theories these theories are still used with ongoing validity. This

[13] ibid., p.92.
[14] ibid., p.93.
[15] ibid., p.93.
[16] ibid., p.84.

evidence wil also lend weight to my claim that it dose not matter whether psychoanalysis is falsifiable or not, it can still have validity.

There are examples from physics where correspondence with reality has not resulted in the abandonment of the theory. A theory has been falsified yet nevertheless it is still used. A classic example is that of Newtonian physics Newtonian prediction of black-body radiation failed –this was left to quantum physics to do. Also Newtonian physic failled to predict the motion of three bodies in combined gravitational motion i.e. planets[17]. Kuhn points out that no one denied that Newtonian physic was not as science because it could not predict the speed of sound, or Newton's laws of gravitation failed to predict and account for the perigee of the moon or the motion of the moon; as he states " no one seriously questioned Newtonian theory because of the long recognized discrepancies between predictions from the theory and both the speed the speed of sound and the motion of Mercury."[18] Thus we see that even if psychoanalysis is falsified in terms of the correspondence theory of 'truth ,the case of Newtonian physics shows us that it need not matter in the least. In this regard there is truth in Freud's provocative idea, when he states, " even if psychoanalysis showed itself as unsuccessful in every other form of nervous and psychical disease as it does in delusions, it would still remain completely justified as an irreplacable instrument of scientific research. It is true that in that case we should not be in a position to practice it."[19] Now even in science and mathematics there are un-falsifiable entities but this does not stop them being used in those disciplines.

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[17] V. Illingworth, "Three-body problem", *Dictionary of Physics*, Penguin, 1991, p.487.
[18] T. Kuhn, *Structure of the scientific revolution* t, p.81.
[19] S. Freud, "Psychoanalysis and Psychiatry", in *Introductory Lectures on Psychoanalysis*, Penguin, 1982, p.295.

At the very core of science and mathematics there are un-falsifiable entities Such things as matter, the mathematical point, anti-matter force etc. are unfalsifiable. Freud notes the presence of un-falsiable objects in psychoanalysis when he states " too it will be entirely in accord with our expectations if the basic concepts and principles of the new science (instincts, nervous energy, etc) remain for a considerable time no less indeterminate than those of the older sciences (force, mass, attraction, etc)."[20] Thus we see that even if psychoanalysis is not falsifiable, in terms of the correspondence theory of 'truth'. just like in mathematics and science, it does not matter for a theories validity. The coherence theory of 'truth's says that if a theory or statement is inconsistent then it is false. But there are examples where this is the state of affairs but nevertheless the theories are still used.

Freud acknowledges the inconsistency of psychoanalysis, thus in terms of the coherence theory falsifiable, but nevertheless says it does not matter. As he states " [a] person of an epistemological bent might find it tempting to follow the paths –the sophists – by which the anarchists succeed in enticing such conclusions from science [i.e. its self-abrogation]. All I can say is the anarchist theory sounds wonderfully superior so long as it relates to opinions about abstract things: but it breaks down with its first step into practical life"[21] Nevertheless Freud states "Indeed it seems to us so much a matter of course to equate them in this way that any contradiction of the idea

[20] S. Freud, "An Outline of Psychoanalysis", in *Historical and Expository works on Psychoanalysis,* Penguin, 1986, p.390.
[21] S. Freud, "A question of a Weltanshauung", in *New Introductory Lectures on Psychoanalysis*, Penguin, 1991, pp..212-213.

[the unconscious] strikes us as obvious non-sense. Yet psychoanalysis cannot avoid raising this contradiction; it cannot accept the identity of the conscious and the mental."[22]

In mathematics inconsistency goes right to the heart of it, but this does not stop it from still being valid. As Bunch states:

> "None of them [paradoxes] has been resolved by thinking the way mathematicians thought until the end of the nineteenth century. To get around them requires some reformulation of mathematics. Most reformulations except for axiomatic set theory, results in the loss of mathematical ideas and results that have proven to be extremely useful. Axiomatic set theory explicitly eliminates the known paradoxes, but cannot be shown to be consistent. Therefore, other paradoxes can occur at any time."[23]

With all these paradoxes and inconsistencies Bunch notes that it is "… amazing that mathematics works so well."[24] Since the mathematical way of looking at the world generates contradictory results from that of science,[25] such as the mathematical notion of the continuum, and quantum mechanical concept of quanta. As Bunch notes "… the discoveries of quantum theory or the special theory of relativity were all made through extensive use of mathematics that was built on the concept of the

[22] S. Freud, "Introduction", in *Introductory Lectures on Psychoanalysis*, Penguin, 1982, p.46.
[23] ibid., p.139.
[24] ibid., p.209.
[25] ibid., p.210.

continuum…that mathematical way of looking at the world and the scientific way of looking at the world produced contradictory results."[26] Here we see the very foundation of science and mathematics is falsifiable but this dose not bring about the abandonment of those things that are falsifiable. The same is true in quantum mechanics inconsistencies or falsifiablty does not bring about the abandonment of the statements or theory.

In regard to quantum mechanics Heisenberg notes that " the strangest experience of those years was that the paradoxes of quantum theory did not disappear during this process of clarification; on the contrary they have become even more marked and exciting." [27] Now even though no experiment has contradicted quantum theory predictions and quantum theory is the most successful that has ever existed nevertheless one paradox namely the Einstien-Prodolsky-Rosen paradox may require for its resolution declaring the existing quantum theory, with all its successes wrong.[28] Eberhard notes the solving of some quantum paradoxes is not decided by a method or epistemology but " [the] ideas [relating] to one's philosophical view of the world." [29]

Thus we see that it does not matter if psychoanalysis is falsifiable or not. There are statements and theories in mathematics and science which are falsifiable both by a correspondence theory of 'truth' criteria or coherence theory of 'truth' criteria. Nevertheless even though they are falsifiable the statements are still used and the theories still regarded as valid. We saw that there are un-falsiable statements

[26] ibid., pp.209-10.
[27] F. Selleri, *Quantum Paradoxes and Physical Reality*, Kluer Academic Publishers, 1990, p.v111.
[28] ibid, p.v111.
[29] P. Eberhard, "The EPR Paradox, Roots and Ramifications", in W. Schommers (ed) *Quantum Theory and Pictures of Reality*, Spinger-Verlag, 1989, p.85.

mathematics and science but nevertheless these statements are not abandoned. We saw that philosophically the correspondence and coherence theories of 'truth' are epistemologically flawed. These flaws thus take away the epistemological support for their truth criteria . All these examples thus to my mind leads to the conclusion that psychoanalysis while it in theory can be falsified, and in practice if we accept Grunbaunm's arguments, it does not matter. As Freud said so long ago " even if psychoanalysis showed itself as unsuccessful in every other form of nervous and psychical disease as it does in delusion it would still remain completely justified as an instrument of scientific research it is true that in that case we should not be in a position to practice it."[30]

[30] S, Freud, 'Psychoanalysis and Psychiatry', in *New introductory Lectures on Psychoanalysis*, Penguin, 1982, p.295.

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IN WHAT WAY WAS FREUD A CHILD OF HIS TIMES? HOW DID HE TRANSCEND IT?

FREUD INVALIDATES AND TRANSCENDS THE EPISTEMOLOGY AND ENLIGHTENMENTS NOTIONS OF SCIENCE: SCIENCE LOSES ITS POSITION AS A PRIVILEGED AND SPECIAL METHOD OF TRUTH

This essay will ague that Freud was a child of his times. I will show that why Freud was a child of his times was because his thinking was influenced by the enlightenment/positivist zeitgeist that characterized his period.. This zeitgeist shaped Freud's psychoanalytic thinking. This enlightenment thinking it will be shown was a positivist scientific ideology. I will show that what Freud considered himself doing was in fact positivist science. The methods and somewhat ontology of this science was derived from the enlightenment zeitgeist that Freud was born into brought up on and influenced his thinking. By going back to Freud's text I will show the positivist ideas contained in his views. It will be seen that from the beginning of Freud's psychoanalytic works to the end the major influence on his think was that of positivist scientific ideas as derived in the main from the enlightenment. Now even though Freud was influenced by this zeitgeist he nevertheless did transcend it. This transcending of the zeitgeist that he was embedded in comes about in a

major epistemological way. In effect this transcendence was right at the beginning of a shift in the way science was to view reality. Little appreciated or noted Freud's transcendence it will be show was to argue for an irrationalism in regard to nature and the mind. I will show that Freud felt that rationality was no criteria to understand psychoanalysis and the mind. In effect irrationality or the living with contradictions in regard to theoretical ideas was part of the nature of exploring the mind. In this regard Freud it will be shown was leading the way for the same ideas about reality that quantum mechanics and mathematics were in the process of putting forward themselves. This trend in Freud was in effect to invalidate the rationalistic ideas of the enlightenment positivist science that he was in but which he was to go beyond or transcend.

Zaretsky notes that " … psychoanalysis served as the 'Galvanism' of the second industrial revolution."[31] But it was the enlightenment positivism that served as the Galvanism of psychoanalysis. Freud being a child of his times absorbed this enlightenment Zeitgeist. Zaretsky notes that there are two distinct currents in Freud's work: a scientific and a humanistic.[32] Bettelheim likewise points out that the German idea of science i.e. *Wissnschaften* comprises two distinct forms of science namely natural science (*Naturwissenschaften*) and the sciences of the spirit

[31] E, Zaretsky, *Secrets of the Soul,* A, Knopf, 2004, p.8.
[32] ibid,. p.332.

(*Geisteswissenschaften*).[33] The ideas in regard to natural science Freud picked up from the enlightenment Zeitgiest.

Freud was heir to and immersed in the zeitgiest of the enlightenment. The intellectual influences which drove Freud were those contained in enlightenment thinking. From the 1680s to the 1780s enlightenment ideas permeated Europe. The enlightenment believed in the power of reason to understand the world. It believed in human and scientific progress. Philosophy was dominated my materialism and determinism. Ideas which science adopted as it's own.[34] Schorske noted that the 'Copernican revolution' of the enlightenment had for eighteenth-century modernity ".. put a new principle of subjective freedom at the center of all modern pursuits such as art, morality, politics, and even science (which liberated the human subject at the same time as it objectified nature)."[35] Zaretsky notes that this principle unfolded into the 'second modernity' of which Freud belonged.[36] Freud even uses the idea of a Copernican revolution to characterize his work. As Freud states, "the universal narcissism of men" is threatened by psychoanalysis in a way that parallels that of

[33] B, Bettelheim, *Freud and Mans Soul*, Vintage Book, 1982, p.41.
[34] T, Maustner, *The Penguin Dictionary of Philosophy*, Penguin, 2000, pp.167-168.
[35] E, Zaretsky, op.cit, , p.7.
[36] ibid,. p.7.

Copernicus.[37] Hamlyn points out that the enlightenment was a "..movement characterized by a tendency to apply the methods of the new sciences of the age of Newton to other intellectual and philosophical problems."[38] Thomas documents how the scientific and philosophical revolution of the Seventeenth century brought about the decline of religion and magic. Thomas notes how scientific thinking permeated down from the intellectual elite to be absorbed by lower strata's of society.[39] It is with the enlightenment Zeitgeist in mind that Freud was a child of his times when, according to Zaretsky, Freud insisted that psychoanalysis "… was subject to the general protocols of science."[40] Freud in fact tried to give psychoanalysis legitimacy by insisting on that it was a science.[41] This insistence of Freud was due to him being the child of an age which could only accept something as valid if it was a science.

The beginning of the second industrial revolution saw the beginning and eventual flourishing of the psychological sciences.[42] Darwin had altered

[37] S, Freud, 'A Difficulty in the way of Psychoanalysis', SE, Vol. 17, 1917, pp.137-144.
[38] D, W, Hamlyn, *The Penguin History of Western Philosophy*, Penguin, 1990, p.206.
[39] K, Thomas, Religion and the Decline of Magic, Penguin, 1978, p.769.
[40] E, Zartesky, op.cit, p.176.
[41] ibid,. p.184.
[42] E, Zaretsk, op.cit, . p.21.

the belief in associationism by affecting the meaning of such terms as reflex, instinct and emotion.[43] Somatic models were being applied to neuroses.[44] Zaretsky notes how Darwinism viewed the organism as driven by internal needs and was influenced by its environment. These ideas Zaretsky claims expressed themselves in Freud's view that the instincts were on the border between the soma and the psyche. Freud's sexual stages of development Zaretsky claims had links to Darwinism idea of evolutionary change. As Zaretsky notes Darwinism ".. led to the view that such characteristics of the psyche as the development stages of sexuality, or the formation of the ego, were the product of a long evolutionary history, the continual adaptation of inner and outer realities."[45]

It is into this scientific zeitgeist that Freud was born. The university to which Freud went was world-renowned for its faculty of science and medicine.[46] Ernst Brucke, one of Freud's professors was and outstanding German scientist of the Helmholtz school of medicine.[47] The members of this school applied the methods of physics to the study of living organisms.[48] They fought against vitalism and the mystification and

[43] ibid,. p.22.
[44] ibid,. p.22.
[45] E, Zaretsky, op.cit, p.332.
[46] L, Breger, *Freud: Darkness in the Midst of Vision*, John Wiley and Sons, 2000, p.51,
[47] ibid,. p.51.
[48] ibid,. p.51.

superstitions of biology and nature worship romanticism.[49] The Helmholtz program was positivistic and applied the methods of mathematics and physics to the study of human life.[50] What this meant was that they looked for the chemical-physical forces in nature and discarded emotion and sentiment.[51] It was this scientific positivism of enlightenment thinking that was to influence Freud's psychoanalytic thinking through out his life.

Jones, in his book about Freud's life, notes how much of an influence Bruche and Helmholtz positivism were on Freud. As he states Freud subscribed to the idea that

> No other forces than the common physical and chemical ones are active in the organism. In those cases at the time which cannot be explained by these forces one has either to find the specific way or form of their action by means of the physical-mathematical method or assume new forces equal in dignity to the chemical-physical forces inherent in matter, reducible to the forces of attraction and repulsion.[52]

[49] ibid,. p.51.
[50] ibid,. p.51.
[51] ibid,. p.51.
[52] E, Jones, Sigmund Freud Life and Work, Vol. 1, Basic books, 1953, p.45.

One of Freud's early works called *the Project for a Scientific Psychology*, was couched in materialistic positivist thought. This work has been viewed as central to the emerging psychoanalysis. As Strachey states " the project in spite of it being ostensibly a neurological document, contains within it the nucleus of a great part of Freud's later psychological theories … *The Project*, or rather the invisible ghost haunts the whole series of Freud's theoretical writings to the very end."[53] Freud's concept of libido or mental energy is derived from the materialistic positivist *Project*.[54] Libido could almost be seen as itself derived from a thermodynamic concept of energy as contained in the science of the day. This makes sense as Freud's psychoanalytic theory of the pleasure principle i.e. discharge to reach the lowest level of tension can be seen a form of the third law of thermodynamics. Interestingly Freud's model has been called an economic model of energy transfer.[55] Freud being a child of his age believed in the scientific protocols methods and epistemologies of how his age viewed science. These ideas of Freud were positivistic

[53] J, Strachey, SE 1, p.290.
[54] C, Rycrofft, *A Critical Dictionary of Psychoanalysis*, Penguin, 1995, p.48.
[55] ibid,. p.43.

Freud regarded what he was doing in psychology as science. As Zaretsky notes Freud consistently sought to articulate the scientific dimensions of the analytic enterprise."[56] Now Zaretsky claims that after Freud completed his *The Interpretations of Dreams*, in 1899/1900, Freud rejected his earlier positivism.[57] We will see that this claim of Zaretsky is not quite correct. It will be seen that Freud adopts a positivist view of scientific methodology as well as a Bruche and Helmholtz positivism in regard to the brain and the mental apparatus.

Science, according to Freud, " … endeavors is to arrive at a correspondence with reality – that is to say, with what exists outside us and independently of us … correspondence with the real external world we call 'truth'.[58] Thus we see here that Freud regarded science as discovering real existent entities, entities that are external and independent of us. Now these entities were regarded as being provisional hypotheses. Freud states of this Metapsychology that any part of it can be altered or changed without lose or regret once it proves inadequate. As he states " such ideas as these are part of the speculative superstructure of psychoanalysis any portion of which can be abandoned or changed

[56] E, Zaretsky, op.cit p.68.
[57] ibid,. p.38.
[58] S, Freud, 'A Question of a Weltanshauung', in *New Introductory lectures on Psychoanalysis*, Penguin, 1991, p.206-207.

without loss or regret the moment its inadequacy has been proved."[59] Similarly Freud notes that the mental apparatus "… is an hypotheses like many others in the sciences … open to revision … The value of an 'fiction' of this kind … depends on how much one can achieve with its help."[60] Here Freud is associating 'fiction' with hypotheses. Now Freud regarded an hypothesis as something science constructs to understand the observational facts which can be modified or altered as the observations entail in order to get a better understanding of the facts in question. As Freud notes in science " [b]y observation … we come upon something new … we put forward conjectures, we construct hypothesis, which we withdraw if they are not confirmed … we renounce early convictions so as not to be led by them into overlooking unexpected factors and in the end …we get an insight into the whole of mental events …"[61]

Now Freud regarded such things as matter, force and gravitation in physic as being hypotheses or working concepts as he states " [p]hysics itself, indeed, would never have made any advance if it had to wait until its

[59] S, Freud, 'An Autobiographical Study' in *Historical and Expository Works on Psychoanalysis*, Pelican books, 1986, p.216.
[60] S, Freud, 'The Question of Lay Analysis', in *Historical and Expository Works on Psychoanalysis*, Pelican books, 1986, p.294.
[61] S, Freud, 'A Question of a Weltanshauung' in *New Introductory lectures on Psychoanalysis*, Penguin, 1991, p.210.

concepts of matter, force, gravitation and so on had reached the desirable degree of clarity and precision."[62]

In talking about sexuality, in 1914, Freud notes that psychical forces can be used to replace, or stand for what are really chemical substances, or existents he states " … we are taking this probability into account in replacing the special chemical substances by special psychical forces."[63]In other words Freud is saying the psychical forces exist ontologically because the chemicals they represent exist ontologically. Freud in 1915 noted that the mental apparatus of the topographical model did refer to physical parts of the brain. In regard to the topography of the mental apparatus Freud states " It is a difficult one as it goes beyond pure psychology and touches on the relations of the mental apparatus to anatomy. We know that in the very roughest sense such relations exist."[64] In 1933 Freud again notes that the psychic phenomena existed because they had biological i.e. physical accompaniments As he states "[a]ctually what we are talking now is biological psychology, we are studying the psychical accompaniments of biological processes. It was as representing this aspect of the subject that the 'ego-instincts' and the 'sexual instincts'

[62] S, Freud, 'An Autobiographical Study' in *Historical and Expository Works on Psychoanalysis*, Pelican books, 1986, p.242.
[63] S, Freud, 'On Narcissism an Introduction', in *On Metapsychology*, Penguin, 1991. P. 71.
[64] S, Freud, 'The Unconscious' in *On Metapsychology*, Penguin, 1991, p.176

were introduced into psychoanalysis."[65] Again Freud claims that psychoanalysis is rooted in biology" … after we have completed our psychoanalytic work we will have to find some point of contact with biology…"[66] Similarly psychoanalysis " … explains the supposedly somatic concomitants phenomena as being what is truly psychical …"[67] These claims of Freud clearly show that the mental apparatus of the ego, id and super-ego did exist because they have biological, or physical accompaniments in the brain Freud says this clearly when he states " … we must recollect that all our provisional ideas in psychology will presumably some day be based on an organic substructure …"[68] Thus we see all through Freud's thinking life he adopts the Zeitgeist of the Bruche and Helmholtz positivism. As a child of his times Freud was unable to extricate himself from the Zeitgeist of his time. Just as we saw how Darwinism fed into his development drive theory of sexual development so the Bruche and Helmholtz positivism feeds into his account of the mind.

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[65] S, Freud, 'Anxiety and Instinctual life', in *New Introductory lectures on Psychoanalysis*, Penguin, 1991, p.128.
[66] S, Freud, 'The Claims of Psychoanalysis to Scientific Interest' in *Historical and Expository Works on Psychoanalysis*, Pelican books, 1986, 42.
[67] S, Freud, 'An Outline of Psychoanalysis', in *Historical and Expository Works on Psychoanalysis*, Pelican books, 1986, p.389.
[68] S, Freud, 'On Narcissism an Introduction', in *On Metapsychology*, Penguin, 1991.

Now it is true that Freud in fact agrees with Breuer in calling his theories a mythology. But this agreement is deceptive. Freud in fact claims that the theories of physics are mythology as well. As Freud notes "[i]t may perhaps seem to you as though our theories are a kind of mythology … But does not every science come in the end to a kind of mythology like this? Cannot the same be said to-day of your physics."[69] Now as we argued above Freud would have regarded the mythical entities of physics such as force etc as existing. What Freud regarded mythical entities as being was not their non-existence but their indefiniteness. As Freud notes in regard to the instincts "[t]he theory of the instincts is to say our mythology. Instincts are mythical entities, magnificent in their indefiniteness."[70] In this regard instincts were regarded as being mythical entities not because they don't exist but because their complete elaboration, like the entities of physics, remains indefinite.

After Freud's Clark lectures in America psychoanalysis started to blossom in America. The American version of Freud Zaretsky notes portrayed psychoanalysis as hard boiled scientific positivism.[71] In this regard "Freud's insistence on the scientific character of psychoanalysis

[69] S, Freud, 'Why War', in *Civilization Society and Religion, Group Psychology Civilization and it Discontents and other works*, Penguin, 1985, p. 158
[70] S, Freud, 'Anxiety and Instinctual life', in *New Introductory lectures on Psychoanalysis*, Penguin, 1991, p.127
[71] E, Zaretsky, op.cit, p.83.

had been widely accepted."[72] Nevertheless Logical positivists such as Richard Von Mises argued that psychoanalysis was grounded " incontestable observations".[73] As the century was to advance Freud's psychoanalysis was to be attached on the same grounds upon which it sort to achieve legitimacy namely its scientific pretensions, or positivism. Now as we shall see Freud side steps these attacks by transcending the positivist criteria of science i.e. rationality itself.

Now Freud's adopting of a positivist scientific paradigm, in regard to psychoanalysis, eventually worked against psychoanalysis. As the twentieth century advanced Freud's positivism came under attack. Zaretsky points out how with the advent of the forties, and psychoanalysis being embedded in the welfare state, it became wedded to a positivist notion of science.[74] This started to cause psychoanalysis problems because it could not live up to the positivist stricture demanded of a science. As Zaretsky notes "… some came to believe that psychoanalysis was not a science." The reason for this was because psychoanalysis excluded "… critique and speculation, [refused] to ask when empirical verification was necessary and when it was impossible to obtain … "[75] These attacks were not new for during the inter war period psychoanalysis was critiqued by "… liberal defenders of scientific orthodoxy."[76]

[72] ibid., p.18.
[73] ibid., p.185.
[74] ibid., p.290.
[75] ibid.,. p.291.
[76] ibid.,. p.183.

Now positivist science is to some degree empirical in nature i.e. theories are tested against reality for verification and validity. As we saw above a major criticism of psychoanalysis was that it did not verify its ideas by experience or reality. On this point we see Freud transcending the stricture of the science he maintain he was doing by belittling the experimental testing. Freud when confronted with the unscientific status of psychoanalysis, "responded that analysis did not lend itself to experimental testing .."[77] In this regard Freud is altering the methodology of science Psychoanalysis in effect becomes a critique upon taken for granted enlightenment positivist ideas about science. In this regard Freud's idea become quite revolutionary in their transcendence of the very Zeitgeist that he is a child of. In a contemporary sense positivism, as a philosophy of science, has been debunked and discredited as the metaphysical entities that it claims a science eschews have been seen to be at the very core of science and mathematics i.e. matter, the mathematical point, anti-matter force etc. The presence of metaphysical objects brings a measure of the unknown into both science and psychoanalysis but as Freud noted even though "the processes with which it [psychoanalysis] is concerned are themselves just as unknowable as those dealt with in other sciences, by chemistry or physics for example." [78] In this way metaphysical objects does not preclude psychoanalysis, just like science, "… to establish the laws which they obey and to follow their mutual relations and interdependencies unbroken over long stretches – in short, to arrive at what is described as an 'understanding' of the field of natural phenomena in question." [79] Freud notes this when he states " too it will be entirely in accord with our expectations if the basic concepts and principles of the new science (instincts, nervous energy, etc)

[77] ibid,. p.185.
[78] S.. Freud, "An Outline of Psychoanalysis", in *Historical and Expository works on Psychoanalysis*, Penguin, 1986, pp.389-390.
[79]Ibid., pp.389-390.

remain for a considerable time no less indeterminate than those of the older sciences (force, mass, attraction, etc)."[80]

In this regard Freud's transcendence of positivism has been validated by time. Now where Freud really transcends his Zeitgeist is in his rejection of the very notion of rationality which is at the heart of positivist science. Zaretsky notes that enlightenment thinkers believed that that reason could discover universally valid rational conclusions. As he states "[f]or the enlightenment, autonomy meant the ability to rise above "merely" private, sensory, and passive or receptive propensities of the mind in order to reach universally valid rational conclusions."[81] Now what was meant by rational is consistent non contradictory conclusions in agreement with Aristotelian logic. Freud in fact argues, in places that Aristotelian logic, is not the right tool to be used to investigate the mind. In this regard Freud transcends his time by underming the whole enlightenment faith in logic and reason.

As we saw above the enlightenment enshrined reason as a tool to understand as well as science as a discipline to discover 'truth'. Science became, with the enlightenment, materialistic and, based upon Newtonian physics, and deterministic. Science was conceived as being built upon empirical evidence and being rational. Now being rational meant that it gave a consistent contradictory account of reality. The method for this rationality was Aristotelian logic. Dean has pointed out that, since at least Aristotle and right up until modern times, Aristotelian logic has been regarded as

[80] S. Freud, "An Outline of Psychoanalysis", in *Historical and Expository works on Psychoanalysis*, Penguin, 1986, p.390.
[81] E, Zaretsky, op.cit, p.17.

being an epistemic condition of truth.[82] In philosophy as well as science consistency has been regarded as a criteria of 'truth'. The world Freud was born into held these notions about science. Now though Freud was a child of his times he in effect transcend his Zeitgeist by radically bringing the irrational into science. Freud in facts over throws Aristotelian logic as a valid tool to understand the mind. In Freud's view of science illogicality does not preclude something from being true It is with this idea that Freud transcends his times and is a precursor to eventual findings in modern physics and mathematics. This transcendence will be seen in regard to how his contemporaries and modern scholars critiqued Freud's because psychoanalysis led to paradox and self-contradictions claims Freud acknowledge but in fact claims do not invalidate psychoanalysis.

Some psychoanalysts , like Rycroft,[83] Szasz[84], Schafer[85] etc claim, contra Freud, that psychoanalysis is not a science because it is not a casual-deterministic theory but instead a theory of meaning. Rycroft claims that those psychoanalysts that claim psychoanalysis is a casual-deterministic theory "…open themselves to attack from critics like Professor Eysenck who see clearly that psychoanalysis cannot satisfy the cannons of those sciences which are based on the experimental method but believe that if they can demonstrate its inadequacy as a casual theory, they have proved that it is nonsense."[86]

[82] C, Dean *Aristotelian logic as an epistemic condition of truth the grand narrative of Western philosophy*, Gamahucher Press 2003.
[83] C. Rycroft, "Introduction", *Psychoanalysis Observed*, Constable, 1968.
[84] T. Szasz, The Myth of Mental illness, Paladin book, 1981.
[85] R. Schafer, *A New Language for Psychoanalysis*, Yale University Press, 1976.
[86] C. Rycroft, op.cit, pp.14-15.

Epistemologically some argue, that a casual-deterministic approach to psychoanalysis places it either in a paradox or contradiction. The presence of these paradoxes, or contradictions thus make it untenable and thus not a science. In regard to Freud's notion of psychic-determinism Rycroft notes that it "… [places] psychoanalysis in a contradiction, viz. that of maintaining both that conscious processes are determined by unconscious ones and that making unconscious processes conscious increased the individual's freedom of choice and action."[87] This contradiction Rycroft claims make the notion of an agent, or ego initiating defenses, or introjection impossible.[88] This can be put another way. Psychic determinism places psychoanalysis in a contradiction namely that psychoanalytic therapy and analysis, by bringing to consciousness the etiology of behavior, is meant mitigate and alleviate this behavior but by psychoanalytic theory consciousness and behavior are themselves strictly determined by unconscious forces i.e. psychic determinism. Thus psychic determinism would make psychoanalytic therapy or analysis pointless and useless as consciousness can have no function to play in behavior formation at all. Thus psychic determinism would make all belief in conscious deciding and acting an illusion.

Freud had trouble getting the scientific status of psychoanalysis recognized. The universities and mainstream science did not recognize psychoanalysis as a science because it did not meet with their positivist criteria of what constituted a science. According to them psychoanalysis was too speculative not empirical enough too interpretative and not producing observable quantifiable results[89]. Zaretsky points out that "[e]ven the most rigorous enlightenment philosophers had a more open concept

[87] C. Rycroft, *A critical Dictionary of Psychoanalysis* 2 ed. , Penguin, 1995, p.101.
[88] ibid., pp.4-5.
[89] E, Zaretsky,, op.cit, p.66.

of reason …"[90] In this regard Freud's empirically based but interpretive and sometimes speculative psychology was largely excluded from the university, and main stream science at the time."[91]

In Freud's time philosophers critiqued psychoanalysis for its self-contradiction. Freud was aware of these critiques and epistemological problems; as he states philosophers " could not conceive of such an absurdity as the "unconscious mental" this idiosyncrasy of the philosophers could only be discarded with a shrug."[92] In this regard, though Freud was brought up in an enlightenment positivist view of science, he is here transcending this Zeitgeist and arguing that though psychoanalysis is irrational it can still be true and valid.

Freud is clear on the point that though psychoanalysis is at heart irrational it is still valid as a truth generator. As he states " [a] person of an epistemological bent might find it tempting to follow the paths –the sophists – by which the anarchists succeed in enticing such conclusions from science [i.e. its self-abrogation]. All I can say is the anarchist theory sounds wonderfully superior so long as it relates to opinions about abstract things: but it breaks down with its first step into practical life"[93] Nevertheless Freud states "Indeed it seems to us so much a matter of course to equate them in this way that any contradiction of the idea [the unconscious] strikes us as obvious non-

[90] ibid,. p.66.
[91] ibid., p. 66.
[92] S. Freud, *An Autobiographical Study*, SE, Vol. 20, 1925, p.31
[93] S. Freud, "A question of a Weltanshauung", in *New Introductory Lectures on Psychoanalysis*, Penguin, 1991, pp..212-213.

sense. Yet psychoanalysis cannot avoid raising this contradiction; it cannot accept the identity of the conscious and the mental."[94]

Now Freud shrugging of philosophers' claims that psychoanalysis cannot be a science because it is absurd was correct. Some philosophers and scientist still call those scientific paradigms which are riddled with contradiction and paradox a science. A classic case in philosophy in regard to a philosopher being wrong even though his arguments were logical is Kant's[95] insistence that space is Euclidean, when in fact it is not but Euclidean but instead Riemann.

In mathematics paradox goes right to the heart of it. In 1930 the mathematician Hilbert began a program to prove that mathematics was consistent. With the discovery of such mathematical paradoxes as the Burli-Forti paradox, Russell's paradox, Cantor's paradox and Skolem's paradox by early 1930's as Bunch notes, Hilbert's program did not succeed such that "disagreement about how to eliminate contradictions were replaced by discussions of how to live with contradictions in mathematics."[96] Attempts to avoid the paradoxes led to other paradoxical notions but most mathematicians rejected these notions.[97] Thus the present situation is that mathematics cannot be formulated, except in axiomatic theory, without contradictions without the loss of useful results. With regard to axiomatic theory, this cannot be

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[94] S. Freud, "Introduction", in *Introductory Lectures on Psychoanalysis*, Penguin, 1982, p.46.
[95] E. Kant, Immanual Kant's Critique of Pure Reason, trans N, Kemp-Smith. Macmillan, 1993, pp. 67-74.
See also N. Kemp-Smith, *A Commentary to Kant's Critique of Pure Reason*, Macmillian, 1979, pp.117-120.
[96] B. Bunch, *Mathematical Fallacies and Paradoxes, Dover*, 1982, p.140.
[97] ibid., p.136.

proven to be consistent with the result that paradoxes can occur at any time. As Bunch states:

> "None of them [paradoxes] has been resolved by thinking the way mathematicians thought until the end of the nineteenth century. To get around them requires some reformulation of mathematics. Most reformulations except for axiomatic set theory, results in the loss of mathematical ideas and results that have proven to be extremely useful. Axiomatic set theory explicitly eliminates the known paradoxes, but cannot be shown to be consistent. Therefore, other paradoxes can occur at any time."[98]

With all these paradoxes and inconsistencies Bunch notes that it is "… amazing that mathematics works so well."[99] Since the mathematical way of looking at the world generates contradictory results from that of science,[100] such as the mathematical notion of the continuum, and quantum mechanical concept of quanta. As Bunch notes "… the discoveries of quantum theory or the special theory of relativity were all made through extensive use of mathematics that was built on the concept of the continuum…that mathematical way of looking at the world and the scientific way of looking at the world produced contradictory results."[101]

In regard to quantum mechanics Heisenberg notes that " the strangest experience of those years was that the paradoxes of quantum theory did not disappear during this

[98] ibid., p.139.
[99] ibid., p.209.
[100] ibid., p.210.
[101] ibid., pp.209-10.

process of clarification; on the contrary they have become even more marked and exciting." [102] Now even though no experiment has contradicted quantum theory predictions and quantum theory is the most successful that has ever existed nevertheless one paradox namely the Einstien-Prodolsky-Rosen paradox may require for its resolution declaring the existing quantum theory, with all its successes wrong.[103] Eberhard notes the solving of some quantum paradoxes is not decided by a method or epistemology but " [the] ideas [relating] to one's philosophical view of the world." [104]

Eberhard's claim that the presence of paradoxes is not decided by epistemology or method but by one's philosophy captures Freud's ideas about contradiction at the heart of psychoanalysis. Freud transcended the positivist criteria of his time by making the irrational as a means to truth. By claiming that psychoanalysis was still valid even though it was paradoxical and self-contradictory he anticipated future findings in physics and mathematics and transcended the narrow limitations of the very positivism he was a child of. Freud's transcendence of his times positivism could be stated as even though psychoanalysis was not empirically verified or rationally justified it nevertheless justified as being an instrument of science. This is captured nicely in Freud's provocative statement about it possible non successful cure of psychic disease. As he states " even if psychoanalysis showed itself as unsuccessful in every other form of nervous and psychical disease as it does in delusion it would still

[102] F. Selleri, *Quantum Paradoxes and Physical Reality*, Kluer Academic Publishers, 1990, p.v111.
[103] ibid, p.v111.
[104] P. Eberhard, "The EPR Paradox, Roots and Ramifications", in W. Schommers (ed) *Quantum Theory and Pictures of Reality*, Spinger-Verlag, 1989, p.85.

remain completely justified as an instrument of scientific research it is true that in that case we should not be in a position to practice it."[105]

[105] S, Freud, 'Psychoanalysis and Psychiatry', in *New introductory Lectures on Psychoanalysis*, Penguin, 1982, p.295.

Thus we see that Freud was a child of his times. Freud was born into brought up on and absorbed the enlightenment positivist Zeitgeist of his time. This positivism was that of a materialistic deterministic idea in regard to nature and the mind. Freud adopted his times attitudes towards science. An attitude that considered science as a means to truth. It was shown how Darwin's ideas about the organism being driven by needs and in tune with its environment fed into Freud's idea about instincts and the effect of the environment on humans. Freud through his life adopted a Bruche and Helmholtz positivism in regard to the mind. This positivism had the mind being the result of chemical-physical mechanisms. All through Freud's life he maintained that psychoanalysis was a science. Science for Freud was based upon the enlightenment positivist Zeitgeist of his times. This meant that science was empirical, and sort to find objectively real phenomena; and was based upon a revision of hypotheses if theory did not meet fact. Now even though Freud was a child of his positivist times he in fact transcended them. Freud's discarded the criteria of his positivist time in that he said psychoanalysis was not amendable to empirical verification. The main criteria Freud dismissed was that of rationality. It was shown how Freud admitted the irrationality/illogicality of psychoanalysis right at its heart. But Fred dismissed this by arguing that psychoanalysis was still a science regardless of its irrationality. In this regard it was shown that Freud anticipated future findings in physics and mathematics. All this dismissal of positivist scientific criteria made Freud transcend the time that he was in fact a child of.

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