

Sigmund Freud and ways of talking about the unobservable. Romantic, positivist, Kantian, and vitalist aspects of the mental unconscious.

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For psychoanalysts, for researchers outside the psychoanalytic realm, as well as for laymen, the most lasting part of Freud's work has been his view concerning the role of the unconscious in human life. However, there is deep confusion about its actual status. A significant reductionist emphasis pervades the scientific atmosphere of post-Freudian times. Consequently, present-day researchers outside of the psychoanalytic community claim that if the Freudian unconscious is anything, it is only the brain, and phenomena psychoanalysts study could also be explained by referring to the 'cognitive', 'the new' or 'adaptive' unconscious¹. This trend contradicts the classical psychoanalytic view. Benjamin B. Rubinstein and Arnold H. Modell are among the rare psychoanalysts who have treated the reductionist challenge in a detailed manner².

Freud gave his followers reason to think that the unconscious was something more than just the brain by insisting that it was mental. It may seem that Freud believed that somewhere between consciousness and the brain there was mental 'substance' of which the unconscious mental contents were made. This, however, is very unlikely: Freud

was aware of the problems linked to dualism, and there is no doubt that he did not want to be a dualist. He embraced the ideals of the natural sciences as they stood at the end of the 19th and during the first decades of the 20th century. In any case, it is more the rule than the exception that researchers who are held to be dualists do not agree with this assessment – it is possible that psychoanalysis really implies a dualist view of man. It is argued below, however, that mind-matter is not the best dichotomy within which to conceptualize Freud's view.

The idea of the mental essence of the unconscious should be connected to the larger question concerning *entities that cannot be observed* (or 'unobservables'). This question has two aspects. The first is the temporal aspect: there is a considerable difference between Freud's times and the present in how, why and when it is legitimate to talk about the unobservable.

Secondly, there are at least four domains in the scope of which such talk takes place: theology (or religion), physics, philosophy, and biology. The first domain is of minor importance in the present context: Freud was "a militant atheist", and did not try to hide religious ideas in his writings³. As far as physics is concerned, there are fundamental differences between Newton's mechanics (of Freud's times) and present-day quantum mechanics. However, studying that domain does not give any notable insights into Freud's thinking. It is therefore the domains of philosophy and biology that enjoy the key role here.

At the core of Freud's clinical findings is the notion that although conscious planning and intentions do not take place behind phenomena such as dreams and slips of the tongue, these phenomena are not arbitrary. Freud conceptualized his notions in terms of unconscious mentality -- he talked about

unconscious desires, fears, and meanings. We will argue that the reason why his view is difficult for present-day scientists to grasp does not lie in the progress of the philosophy of mind, or of neurophysiology: it is biology and the status of Kant's metaphysical ideas that have most dramatically changed since Freud's days.

From the perspective of biology, the correct dichotomy behind the idea of the mental essence of the unconscious is not that of mind and body, but rather that of inert matter and living organisms. It is on this basis that we will argue that Freud's solution to the tension between his clinical data and scientific ideals is -- at least implicitly -- vitalist.

1. The Freudian mental unconscious

From his early to his last writings Freud emphasized that the unconscious was mental, and that pertained to unconscious contents (repressed ideas) and unconscious (defensive) acts, as well as to the principles and mechanisms behind our phenomenal life (the psychic apparatus). In 'The Unconscious' he suggests that the unconscious acts and 'latent mental states' are not just physiological, but mental in particular⁴. He does not present straightforward arguments for that, but he claims that their existence is self-evident.

In *The Interpretation of Dreams* he stated,

(...) we will picture the mental apparatus as a compound instrument, to the components of which we will give the name of 'agencies,' or (for the sake of clarity) 'systems'. It is to be anticipated, in the next place, that these systems may perhaps stand in a regular spatial relation to one another, in the same

kind of way in which the various systems of lenses in a telescope are arranged behind one another. Strictly speaking, there is no need for the hypothesis that the psychical systems are actually arranged in a *spatial* order⁵.

The reader remains rather confused about how the psychic apparatus exists: if it cannot be determined in terms of neurophysiology, how can it exist?

In *An Outline of Psycho-Analysis*, one of his last writings, Freud's tone is more cautious:

We know two kinds of things about what we call our psyche (or mental life) [*Psyche, Seelenleben*]: firstly, its bodily organ and scene of action, the brain (or nervous system) and, on the other hand, our acts of consciousness (...). Everything that lies between is unknown to us, and the data do not include any direct relation between these two terminal points of our knowledge. If it existed, it would at the most afford an exact localization of the processes of consciousness and would give us no help towards understanding them⁶.

Thus, Freud emphasized that the unconscious was mental, and present-day psychoanalytic researchers share that idea⁷. In terms of the mainstream views, Freud's conception is difficult to accept: the psychoanalytic idea seems to mean that the unconscious exists in a distinct sphere between the brain and consciousness, and it is difficult to state convincing arguments for that in-between location⁸.

We must say 'seems to mean', because the above idea is overtly dualist and mystifying, and that does not fit into Freud's identity as a scientist: his aim was to explain matters in terms of the natural sciences in particular⁹. From this perspective, the following claim made by Rubinstein is

reasonable:

Even though Freud's formulations of the distinction between neurophysiological and unconscious mental events are not always unambiguous, it seems fair to say that, according to psychoanalytic theory, unconscious mental events are neurophysiological events that are classified as mental (...)¹⁰.

Taking these matters together, the only thing we can be sure of is that around the idea of the mental unconscious there are lots of confusions. What actually was Freud's view? Why were his formulations "not always unambiguous"? These confusions and open questions give us good reason to study what Freud actually meant when he stressed the mental essence of the unconscious.

2. What was it like to be Freud? I: the unobservable, Romanticism and Positivism

Our temporal distance from Freud's death is almost seven decades. In spite of repeated claims about his death and burial, many clinical psychologists and laymen maintain that many Freudian ideas are plausible and even self-evident. When he was sketching the foundations of psychoanalysis at the end of the 19th century, his temporal distance from the great figures of German romanticism, idealism and natural philosophy such as Kant, Hegel, and Goethe was not significantly longer.

Goethe's works inspired Darwin, and led Freud in his career in the domain of the natural sciences, too. For example, the "discovery of the unconscious" owes as much to the "recognition of a Goethean order" as to that of a "Freudian

disorder, in the depths of the mind”¹¹. Freud had several courses in philosophy, one of them given by Franz Brentano. Thus he had more than just a fragmentary knowledge of the ideas of Kant and Hegel, the greatest philosophers of that time. Both of them believed that we cannot reach truth and the nature of things solely through the senses and experiments. Kant stressed that the appearance of things was not the same as the things were in themselves. He also considered all science dependent on speculative principles and concepts that were established *a priori*. Hegel held that the *Geist* constituted the objects of natural science, and that only through the *Geist* would its results become reasonable.

Freud did not invent the use of theoretical or speculative concepts as auxiliary constructions for guiding scientific research, but he did apply them in the philosophical and scientific setting of his time. He had predecessors, such as Fechner, Helmholtz, Brücke and Brentano, who already supported empirical research along the lines given by heuristic fictions¹². Even Helmholtz, the father of the famous neurophysiological school, cannot be classified as a perfect reductionist materialist in that he did not shun the unobservable¹³. For his part, Brentano attacked German metaphysics, and at the same time considered it ‘empirical’ that we could grasp necessary relations (‘immanent universals’) as given in our experience¹⁴.

Freud was well versed not only in the romantic tradition, but also in early positivism and the idea of the ‘unity of science’ proposed by Ernst Mach. He had contacts with Machian positivist circles in Berlin. Together with Mach, Einstein, Hilbert and many others, he signed the call for the foundation of a *Gesellschaft für positivistische Philosophie* in 1912, a call that

was published in *Archiv für Geschichte der Philosophie*, *Physikalische Zeitschrift*, and *Zentralblatt für Psychoanalyse*¹⁵. Brentano differed from the positivists and experimental researchers in maintaining that it was possible to gain scientific knowledge about general laws by inferring from single experiential facts.

Thus it might be appropriate to see Freud's metapsychological speculations in the light of Mach's ideas on the heuristic value of fictional entities or fantasy-representations (*Phantasie-Vorstellungen*)¹⁶. Mach, who was usually strict in rejecting unobservable entities, refers to theoretical concepts of physics, such as 'atoms', 'forces' and 'mass'. In his view, these were mere conventions (even "monstrous figments of fantasy") that could help us to grasp connections between phenomena¹⁷. He saw their necessity as provisional: they may become superfluous later on.

One can find traces of these ideas in Freud's writings: for example, in his suggestion that drives (*Triebe*) could be seen as conventions, and that the psychoanalytic theory of drives (*Trieblehre*) is a kind of mythology¹⁸. Mach's ideas seemed to suit Freud's purposes perfectly: this kind of view would allow him to postulate unobservable theoretical entities without disturbing his positivist conscience too much. The closeness between Freud and Mach was thus not restricted to epistemological questions, but included a more personal level with 'uncanny' tones¹⁹.

Let us study Freud's agnostic idea of the mental unconscious, cited above, from this perspective:

Everything that lies between [the psyche, *Seelenleben* and the brain] is unknown to us, and the data do not include any direct relation between these two terminal points of our knowledge. If

it existed, it would at the most afford an exact localization of the processes of consciousness and would give us no help towards understanding them²⁰.

To us, Freud's ambivalence concerning the cornerstone of his works appears astonishing. When considered in the intellectual context of his times, however, it becomes more accessible. Freud was educated to think that the true nature of things was not necessarily revealed by empirical means, although the *Seelenleben* should also be naturalized, taken as a natural object. Thus, it was logical for him to leave open the question concerning the essence of the unconscious.

The fact that Freud described some of his central theoretical concepts as myths may also seem really strange to us now, but in the context of early-20th-century positivism it is rather understandable. Considering that even in the Machian scheme the theoretical concepts of physics were also 'figments of fantasy', Freud's myths were in good company. One must keep in mind that although the postulation of theoretical entities in the context of the hypothetico-deductive model of science is no longer considered at all problematic, things were not so simple in the early days of modern positivism, when one thought of the observable as the immediately given 'sense-data', and when one believed in the possibility of pure empirical observation without any theory.

The above citation was from one of Freud's last works, which implies that even later he was under no great pressure to abandon his romantic intuitions. At first, analytic philosophy did not reach hegemony in the field of the philosophy of science. The analytic and continental branches of philosophy became gradually schools that did not communicate much with each other. It was possible for Husserl, Sartre and Bergson, for

instance, to create respectable careers outside the scope of analytic philosophy. Even Freudian ideas had a significant role in the domain of continental philosophy (in the works of Foucault and Derrida, for example).

Thus, Freud had been interested in philosophy (albeit understating his philosophical background, and denying the impact of Schopenhauer and Nietzsche), but did not find any compelling reasons to give up the idea of the mental essence of the unconscious. Non-psychoanalytic criticism was and has been directed mainly at his (empirical) claims and methods of research, not at his philosophical presuppositions.

3. What was it like to be Freud? II: Freud the neuroscientist

As a young undergraduate student in 1876 at the Zoological Station in Trieste Freud first dissected 400 eels, resulting in a study on their sexual development²¹. He was admitted to the University of Vienna in 1876 to work at the Institute of Physiology, directed by Ernst Brücke. He admired Brücke, stating later that he was “the greatest authority who has had an influence on me”²².

Vitalist lines of thought were rather popular in the 19th century. The vitalists argued that purposeful processes among living organisms could not be explained in mechanical terms, and invoked a life-giving, not-yet-found or provisionally unknown principle in order to explain the observable differences between living organisms and inert matter. Like in the 18th century vitalism, the vital thing was conceived of as “an idea distinct from our ideas of the attributes of body and soul”²³ and as “...force, principle, or power whose origin and

ontological status were unknowable"²⁴.

Brücke belonged to the anti-vitalist school, claiming that all physiology could be explained in terms of chemistry and physics, and was determined to give the death blow to vitalism. He claimed that all natural phenomena were movement phenomena. Freud worked in Brücke's laboratory in 1876-82 studying several subjects in the field of neurohistology (such as nerve fibres and cells) and neurophysiology²⁵.

In the middle of the 19th century the so-called 'school of Helmholtz' -- first founded in 1845 as the *Berliner Physikalische Gesellschaft* by Emil du Bois-Reymond, Hermann Helmholtz and Ernst Brücke²⁶ -- sketched the basics of neurophysiological thinking, which was later characterized by the terms '(naive or physiological) reductionism', 'sterile scientism', 'metaphysical realism', 'mechanistic', and 'positivist'. Most of the members of the Helmholtz camp had studied in the neurophysiologist Johannes Müller's laboratory at the University of Berlin. Müller still showed some preference for the vitalist hypothesis in his theoretical writings, but "in key aspects he was firmly and unshakeably a scientist"²⁷. When Freud studied medicine at the end of the century, the impact of the school of Helmholtz had already somewhat weakened, but it was still upheld in the Vienna medical school²⁸.

It is often proposed that it was through his teachers Brücke, Theodor Meynert, and Sigmund Exner that Freud adopted such a reductionist view. Needless to say, reductionism was very far from German idealism²⁹.

However, Freud's career in academic neurophysiology was relatively short. He had married and his economic situation was not secure. As a young researcher among older colleagues

he was unlikely to find a position as an academic researcher, and Brücke advised him to leave the academic world of neuroscience and to become a clinician³⁰. It was in 1886 that Freud began his own practice.

4. What was it like to be Freud? III: Freud the clinician

Freud gradually loosened the grip of organ medicine and neuropathology in his practice. Gay paints a controversial picture of Freud's feelings about being a clinician, but in any case Freud became a practicing neurologist³¹. He was probably disappointed that his career in science seemed to have come to an end.

Clinical practice, however, opened up a new world for him. Smith has drawn out from Freud's writings the so-called 'continuity argument', which presents the (main) reason why Freud held the unconscious to be mental³². In brief, the argument goes as follows. Human consciousness contains 'gaps' – sometimes we 'sleep on' a problem and wake up with an answer, or a solution suddenly pops up in our mind. This means that we have unconsciously processed an answer or a solution. According to Freud/Smith, plain neurophysiological matters cannot produce such a competence, and thus unconscious processing must possess the property of the 'mental'.

Generally speaking, clinical notions support the idea of the mind/brain as a flexible, creative, re-structuring, and self-organizing system. By this we mean that every psychoanalyst is aware that mental contents are interdependent: studying an analysand's relation to her/his parents affects transference and

vice versa; revealing hidden memories affects what one consciously fears and desires; becoming conscious of one's desires affects the superego and the ego-ideal, and so on. The mind/brain may become fixed on certain psychic problems, but in any case the unconscious reacts 'creatively' to different things by producing symbols and rational (but repressive) explanations, for example. Freud became convinced that these kinds of interrelations were anything but accidental. In fact, he came to believe that psychic disorders are somehow motivated or intentional, have a purpose, or are in the service of a *telos* of some kind. It was a real scientific challenge to create a theory that would explain these observations in a plausible and consistent manner.

Romantic poets and philosophers of idealism such as Hegel held that in nature and in the history of mankind were purposes, teleology, goals and aims. They also suggested that these were grounded on different kinds of non-material entities. It would have been easy to conceptualize such clinical notions through German idealism, Schopenhauer or Nietzsche that Freud had studied, but he did not wish to choose that way.

Spurning metaphysical concepts, pantheism, nature mysticism and vitalism, positivist natural scientists opposed German *Naturphilosophie* or 'Romantic science'. As Ellenberger stated,

After 1850, the philosophy of nature and Romanticism seemed to have completely disappeared. It was the period of positivism and the triumph of the mechanistic *Weltanschauung*³³.

Galdston describes the tension as follows:

Intentions and purposes smacked of vitalism, and reeked of

teleology. Life, according to prevailing scientific belief, was to be accounted for in terms of matter and energy, in terms of molecules in motion. Purpose and intention had neither place nor meaning in the realm of science³⁴.

Thus, Freud's scientific sympathies were clearly on the side of the 'exact' school of Helmholtz, and he wanted to keep a distance from speculative idealism. However, it turned out (at least after the unfinished *Project*) that it was not possible to treat such clinical notions in the scope of the scientific ideals of the 'school of Helmholtz' either, i.e. in terms of neurophysiology.

In his developing theory, psychoanalysis, Freud treated intentionality/teleology of the unconscious mind/brain, and non-conscious goal-directness in terms of repressed mental contents. Behind that were neurophysiological terms and terms that sound neurophysiological: psychic energy, the hydraulics/dynamics of the mind (metapsychology), and the constancy principle, among others.

Freud's theory is an extraordinary mixture. For one thing, his, say, 'Helmholtzian ego-ideals' are clearly visible. Secondly, he was fascinated by the machine as a metaphor for the mind/brain, which became popular about hundred years before his birth. Furthermore, there is a streak of romanticism in his writings. As will be seen, his background in romanticism was like the id, having veiled effects upon his thinking.

5. Romantic, vitalist, and Kantian undertones in Freud's works

Freud's thinking contained romantic undertones in many

respects. The main 'Freudian' topics of hypnosis, the interpretation of dreams, sexuality and fantasies, his interdisciplinary approach (combining psychology, anthropology and neurophysiology), his studies on the arts, myths and religion, as well as his personal enthusiasm about archaeology clearly reflect that spirit. His favorite poets (Goethe and Schiller) and the philosophers he knew (Nietzsche and Schopenhauer) also showed a streak of romanticism³⁵.

Even Freud's most technically sounding terms have their romantic aspects. When he was drafting his early explanations for his clinical findings, his only co-thinker was his friend Wilhelm Fliess, whose interests were very far from those of Freud's teachers: numerology, nose theories and biorhythms, among others. Freud also had serious discussions on mystical matters with C.G. Jung, whose thinking later became both overtly vitalist and overtly mystical³⁶. Galdston suggested that it was through Fliess that the ideas of romanticism found their way into Freud's works³⁷.

Gustav Fechner is seen as a great figure in the history of psychology, known from his 'psychophysical law.' Freud also respected him a lot. According to Ellenberger³⁸, the concept of mental energy, the principles of pleasure -- unpleasure, constancy and repetition, and the topographic model of the mind derive from Fechner. Fechner's roots, too, were deep in romanticism: under the pseudonym Dr. Mises he published in 1825 the parodical pamphlet *The Comparative Anatomy of Angels*³⁹, and he studied the relation between the spiritual and the physical worlds (between the mind and the body), thus founding the discipline of psychophysics. In his time the romantic philosophy of nature was already old-fashioned, and he presented his ideas within the conceptual framework of

experimental psychology, the development of which he stimulated⁴⁰.

'Mesmerism', later called hypnosis, was the "basic approach to the unconscious mind" in the late 18th and the 19th centuries⁴¹. The question of hypnosis gave rise to debates on hidden fluids and forces. Mesmer explained the effectiveness of his treatment in terms of a universal and invisible magnetic fluid. 'Animal magnetism' was used as an alternative term for Mesmerism. Freud was very well informed about the ideas behind animal magnetism because it was a line of explanation that had persisted alongside psychological explanations during the entire 19th century.⁴² Before developing his method of free association he not only used hypnosis but also 'electric' treatment.

While we may be horrified that Freud did not bother to clarify what the term 'mental' meant in front of the 'unconscious', and desperately seeking the logic behind the idea of the mental essence of the unconscious, we must take into account his *Zeitgeist*. A present-day neuroscientist aiming at explaining human behavior through a not-yet-found substance, entity, or force would be held in suspicion. However, at the end of the 19th and the beginning of the 20th century the situation was different. Even Newton had speculated on not-found entities, and it was not long since new spheres of reality, such as electricity and magnetism, had been revealed. Thus, for Freud and his contemporaries speculating on not-yet found entities was far from always being a sign of mysticism or a non-scientific attitude.

Just like some of the vitalists who thought that the use of vital properties in describing empirically observable phenomena did not need to involve the postulation of new

non-physico-chemical agencies or entities, so Freud thought that the mental unconscious could be postulated to make sense of observable phenomena without the need for hypotheses concerning the underlying agencies or entities. This resembles the strategy of physiologists who postulated physiological properties or dispositions (such as Albrecht von Haller's 'irritability'), which were considered properties of certain tissues but for which one need not be able to assign a cause – just as Newton refused to formulate hypotheses concerning the cause of attraction⁴³.

Freud was probably not acquainted with the writings of the French vitalists, and -- formally speaking -- he was not an advocate of vitalism. Robert Holt, a distinguished Freudian scholar, has not found any reference to vitalism or well-known vitalists in his writings. He states,

Doubtless he [Freud] would have rejected any attempt to identify cathectic energy with *élan vital* or entelechy. It is therefore not my intention to maintain that he knowingly turned from mechanism to vitalism. I do submit, however, that psychic energy is a vitalist concept in the sense of being similar to and influenced by vital force, and being to a large extent functionally equivalent to it. They are at least historically and methodologically homologous -- buds from the same branch⁴⁴.

The claim made here echoes that put forward by Holt: Freud surely did not think of himself as a vitalist (nor as a dualist). However, the logic behind the idea of the mental essence of the unconscious is vitalist rather than dualist.

In the context of Freud's writings as a whole, it is clear that the neurophysiological explanations (or his interest in them) tend to diminish and the historical/evolutionary --

phylogenetic and ontogenetic -- explanations tend to flourish. This shift in his way of explaining clinical phenomena was also a shift from the mechanical, reductionist view toward the organic, biological conception. The dynamic conception of the mind/brain also appears in his emphasis on the multidetermination (or the 'overdetermination') of disorders. Thus, his interest in biology was not restricted to his early studies in the domain of physiology; Ernst Jones called Freud "Darwin of the mind"⁴⁵, and Sulloway's book calls him the "biologist of the mind"⁴⁶.

Freud's relation with philosophy was confused, conflicted and ambiguous -- he was well educated in philosophy, was enthusiastic about it in his youth, used to present sarcastic comments about it in his works, and avoided philosophical considerations. In any case, behind Freudian theories there lies -- like behind all scientific theories -- philosophical presuppositions. If there were a single 'philosophical key' to Freud's view concerning the nature of the mental unconscious (since Freud was a non-systematic thinker as a philosopher, we believe that in reality such a key does not exist), it would be Kant's philosophy.

According to Kant, things that we perceive are only appearances, and their true nature (*Das ding an sich*) remains unavailable to us. Tauber and Solms have explicated Freud's reliance on Kant's metaphysical system: in a Kantian spirit, Freud held that the unconscious is *Das Ding an sich* that lies beyond both material (body, neurophysiological) and mental (consciousness)⁴⁷. Ludwig Binswanger, Freud's friend, tells how he discussed this topic with Freud in 1913:

Freud asked me if Kant's 'thing in itself' was not the same thing as he

(Freud) understood as the 'unconscious'. I said no to this with a laugh and pointed out that the two things were on entirely different levels⁴⁸.

Solms shows how Freud's view contradicts the foundational claim of present-day neuroscience that the brain causes conscious states⁴⁹.

6. Discussion

Freud was not a prophet whose ideas and conceptualizations would necessarily be reasonable a century later. Neither do the romantic and positivist origins of (some of) his insights make his work worthless. We must also remind ourselves that when his ideas are confusing in the case of such an important topic as the unconscious, it was not that he was just too busy to be exact. Like present-day researchers, he was sometimes ambivalent in terms of how to approach the scientific challenges he met, and he also had to base his studies on the prevailing views. Given the state of the art in science, we must say at least that his model was not bad at all. Kitcher holds that Freud's hypotheses "enjoyed a substantial amount of support by nineteenth-century standards"⁵⁰.

The perspectives presented above could be compressed so as to portray Freud's view of the unconscious and his metapsychological concepts as a 'compromise formation' of his (1) clinical notions; (2) ideals of scientific explanations, adopted from the school of Helmholtz; and (3) the influence of German Idealism and the works of Kant, Schopenhauer and Nietzsche. Figure 1 below represents an attempt to schematize the dynamics that gave rise to psychoanalytic theory.

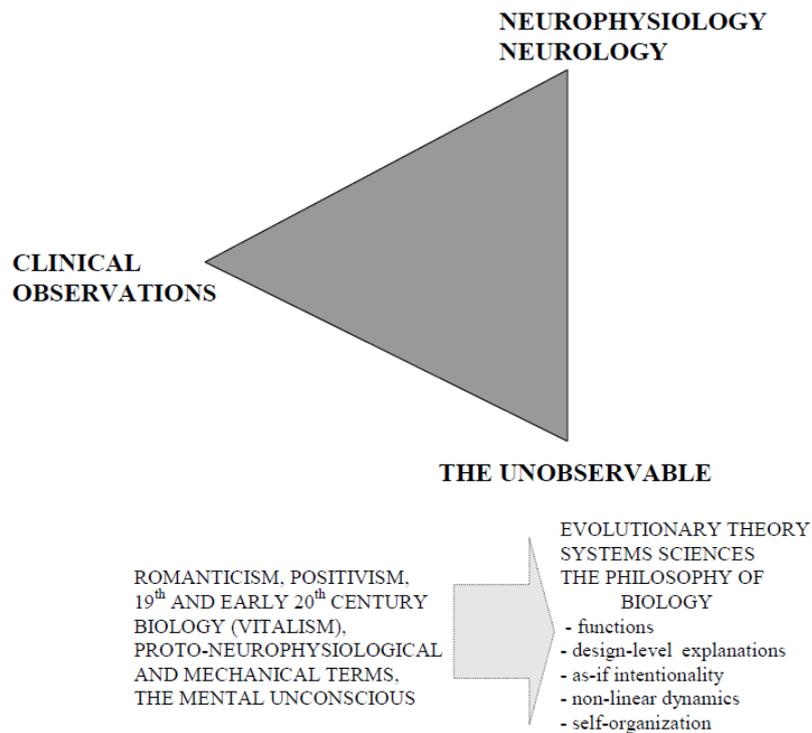


FIGURE 1. The dynamic triangle behind Freudian theory

The left and the upper-right corners of the figure concern matter that can, in principle or in fact, be observed. As far as clinical observations (the left corner) are concerned, Freud's data and that of his followers are basically the same: the clinical notions of post-Freudian times have not changed the picture concerning the unobservable. Neurophysiology has evolved a lot, but there has not been a revolution that would have changed the basic picture: we possess far more detailed

knowledge on the neural correlates of acts, dispositions of behavior, and conscious states than Freud did, but -- despite the new endeavor called neuro-psychoanalysis -- his *Project* has not been finished.

When referring to unobservable matters (the lower-right corner of the figure) Freud usually aimed at explaining the *meaning* of clinical observations. He often used proto-neurophysiological and mechanical terms that had a background in romanticism and smacked of vitalism: psychic energy, the psychic apparatus, the mental unconscious, and the constancy principle. The crucial thing here is that in explaining matters in the left corner Freud did not 'trust' the neurophysiology corner.

Clinical phenomena indicate that unconscious processing is dynamic, flexible, and, say, 'creative'. The (Freudian/Smithian) continuity argument shows that Freud believed that neurophysiological processes could not be described by those attributes -- the essence of unconscious processing could not be reduced to neurophysiological terms, nor explained in a mechanistic manner. In a word, Freud the neurologist seems to have believed that the plain neural unconscious (or the neural apparatus) was simply not able to account for matters that Freud the clinician found. This tension led Freud the psychoanalyst to create a theory that was a blend of the mechanistic, the neurophysiological, Kantian, and the vitalist undertones, and to stress the mental essence of the unconscious. Let us mention that currently Freud's challenge would be treated with conceptual tools developed decades after his times: von Bertalanffy's ideas of general systems theory, Wiener's cybernetics, design-level explanation, selfish gene, self-organizing system, attractor, neural algorithm,

procedural knowledge, implicit memory, and non-linear dynamics.

There are four logical alternative approaches to the essence of the unconscious:

- A. it is just the competencies, processes, functions and dispositions of the brain (the 'cognitive unconscious');
- B. it is a (useful) theoretical concept, but the unconscious actually exists only as A states;
- C. it contains an unknown aspect or a feature that may – at least in principle – be revealed by the methods of the neurosciences;
- D. it contains an unknown aspect or feature that cannot be revealed by the methods of the neurosciences.

The fact that Freud emphasized the significance of the term 'mental' in front of the unconscious suggests that he held that behind the clinical phenomena was an unobservable factor of some kind. That easily leads present-day people to think that he was an advocate of D, and thus also a dualist. Such a view could be defended by referring to his roots in romanticism, and we cannot categorically refute such a claim. However, given his sympathies with reductionism, positivism and atheism, we must not put too much weight on D in his thinking.

In the *Project* we can see Freud studying the limits of A. It led him to give it up, but only temporarily: in his later works he claimed that psychoanalysis was part of psychology, that psychology was a natural science, and that the progress of the natural sciences (especially of physics, chemistry and biology), with the emergence of more extensive and pervasive natural laws, would provide a new, firm (neurophysiological) basis for

psychoanalysis⁵¹.

Sometimes Freud appears as treating psychoanalytic terms in an instrumentalist manner, thus supporting B. When writing on the life drive and the death drive, for example, he states that we are

obliged to operate with the scientific terms, that is to say with figurative language, peculiar to psychology (or, more precisely, to depth psychology) (...). The deficiencies in our description would probably vanish if we were already in a position to replace the psychological terms by physiological or chemical ones⁵².

His interest in Mach's thinking also justifies such an interpretation. In the present-day context, there is no problem with the idea of the mental unconscious as a theoretical concept.

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