

## **Psychoanalysis, Philosophical Issues.**

Psychoanalytic theory has great explanatory scope. Hypotheses about psychological mechanisms such as *identification* and *projection*, and about the *unconscious* working of motives, provide explanations for many aspects of development from infancy through adulthood; for symptoms and structures of motivational conflict in mental disorders including schizophrenia, depression and mania; and for the role of unconscious motivation and mental conflict in war and other forms of group conflict. (For italicized terms see Laplanche and Pontalis in the recommended reading below).

These hypotheses, in turn, are based upon clinical evidence, that is, the actions, utterances, thoughts, feelings, etc. that emerge during psychoanalysis, in the particular clinical settings devised by Freud and his successors. Accordingly, philosophical discussions of psychoanalysis have frequently focused on two topics: (i) how well psychoanalytic theories can be regarded as *evidentially supported* by the clinical data they are initially framed to explain, and (ii) how far particularly psychoanalytic conceptions of *unconscious mental states and processes* should be regarded as viable. The first of these will be the main topic of this entry, and the second will be briefly considered at the close.

### **Free association and Freud's claim about evidence.**

The relevant clinical data arise in the practice of *free association*, as pursued by patients in analysis over the course of months and years. To free associate is to describe the contents of what is sometimes called the stream of consciousness – passing experiences, thoughts, feelings, and so forth – as fully as possible as they occur, and without omitting or censoring anything. This leads rapidly to thoughts and feelings which are unexpected even to those thinking them: so, for example, a patient in free association might report, with surprise or shock, that he is now imagining having sexual intercourse with the therapist's daughter with a penis made from his own faeces, or again that he has just imagined the therapist's mother dead with swords stuck through her breast and the therapist and his children eating away at her genitals (these are instances from Freud's notes of his treatment of the patient known as the Rat Man).

Such full and informative disclosure was without precedent in previous psychological investigation, and remains without parallel even now. It gives rise to data that are unexpected and forceful, and – since nobody conducts free association for long on their own – with which few people are acquainted. The data thus generated enabled Freud and his successors to learn as much about what went on in the minds of their patients as the patients were able to put into words, and in addition to base further conclusions on patterns which could be observed while they were doing so. Thus there were the patterns relating associations to elements of the manifest contents of dreams, described by Freud in his own case in *The Interpretation of Dreams* (see the Specimen in the readings below). Again there was the pattern Freud described as *transference*, in which emotions and conflicts felt early in life towards parents and siblings were revived in patients' current experience of the therapist. Since free association and the experiences that emerged in analysis were Freud's main sources of data, he maintained that persons who did not have first-hand experience of them were not in a position to criticize his theoretical conclusions.

### **Dispute about Freud's claim: advocates and a comparison with Darwin.**

This claim has naturally been at the core of disputes about evidence in psychoanalysis. Advocates characteristically maintain that the claim reflects the fact that psychoanalysis has a unique and remarkably rich source of data that are otherwise unfamiliar and unexpected (see again the Rat Man's associations above). Such data cannot be ignored, but they also cannot readily be communicated, except in small and isolated vignettes. Freud's description of the publishable parts of his associations to elements of his dream of Irma's Injection, for example, takes up many pages; and even such a detailed written description of mental processes leaves out much information available to the subject experiencing them at first hand. When we reflect that such an accumulation of data is relevant to the partial understanding of a single dream, we can see that there is no prospect of adequately summarizing or surveying

the full range of data relevant to the main conclusions to be drawn from even a relatively short period of interpretive thinking of this kind.

In this perspective we might compare psychoanalysis with Darwin's theory of natural selection. Darwin's theory also relates to a great range of data, drawn both from the observation of current forms of life and from that of countless traces of extinct and very different forms left in the incomplete and largely uncharted fossil record. Here again we have a vast field of potential data, much of which remains unknown. These data, however, are relatively enduring and publicly available for classification, discussion, and survey. So investigators working with them have been able to use them to show a larger and often skeptical scientific public how they confirm the kind of theories Darwin and his successors devised. In the case of psychoanalysis, by contrast, the data are private and perishing, and emerge in each analysis in ways unique to the individuals concerned. So for psychoanalysis, despite a comparable wealth of data drawn from countless hours of individual analyses, there can be no such disciplined public demonstration of confirmation, nor any such assuaging of skepticism, as obtains for Darwin's theory.

### **Critics and the questioning of evidential support.**

But where advocates of psychoanalysis see a problem about the *communication* of confirmatory data, critics see a problem about the *status as confirmatory* of the data themselves. If these data cannot be communicated to critics, why should they defer to the claims of others about how they are to be interpreted? Rather than simply taking others' word, it seems that critics should form opinions of their own, based on such accounts of the data as are available. Such opinions are inevitably – given the minute sample of data and the distance from it, say advocates; given the nature and circumstances of the data, say critics -- that the data should be regarded as far less confirmatory than advocates maintain. So while both advocates and critics agree that data such as Freud stressed require to be explained, they differ radically as to how they should be understood.

### **Explanation, evidence, and Bayes' Theorem.**

We can review these disputes in terms of standard notions from the philosophy of science. Roughly, insofar as we make observations, or establish other data, we accept them as they are (this is why we regard them as *data*). Nonetheless we may want to know *why we might expect these data* to be as we find them. We cannot answer this merely by considering the data on their own; but we can link them with other things by framing *hypotheses* or *theories* that *explain* them, characteristically by representing them as effects of some more encompassing causal mechanisms. In this we cease to regard the data as isolated phenomena, but instead see them as having a particular place in a larger causal pattern, which includes mechanisms that explain why we should expect them to be as we find them.

This means that such explanatory hypotheses or theories are always also *predictive*, in the sense that they represent the data they cover *as to be expected in accord with the working of the mechanisms that explain them*. But for this to be so, the hypothesis (or hypothesized mechanisms) must perforce confer a *probability of the data given the hypothesis* than is higher than the *probability of the data given the negation of the hypothesis* (supposing that there is no such mechanism). This is simply what is for the hypothesis to explain the data in the sense of showing why they should be expected to be as they are. From this, however, it follows that where we advance such an hypotheses in explanation of an open field data, we should also be able to *confirm* or *disconfirm* that hypothesis, that is, to increase or decrease whatever credibility we initially assign to it. For we can do this simply by updating our assignment of credibility to the hypothesis in accord with Bayes' theorem, as it seems rational to do.

This is because the condition required for the hypothesis to explain the data – that *the probability of the data given the hypothesis* be greater than *the probability of the data given the negation of the hypothesis* -- entails that for further data which are as the hypothesis predicts *the probability of the hypothesis given the data* (the credibility to be assigned the hypothesis after further data have been collected) will be greater than *the prior probability*

assigned to the hypothesis, whatever that was. So even a weakly predictive hypothesis gains credibility – is confirmed – as we observe that things turn out as it predicts. (And the relation is reversed, and the credibility of the hypothesis diminished, where data turn out not to be as even weakly predicted.) The increase or decrease in probability engendered by further observations, moreover, should be proportional to the probability the hypothesis confers upon them – as is reflected in the value we intuitively place on the precise and evidentially powerful predictions yielded by explanations in the ‘hard’ physical sciences.

On such an account Freud’s hypotheses should be regarded as confirmed insofar as they provide the best available explanation of the data they cover and render expectable; and this is apparently what Freud was attempting to illustrate by repeated example in publications such as *The Interpretation of Dreams*. His overall claim there was that if an individual seeks to interpret his or her dreams by pursuing free association in relation to the elements of the dreams, then data will emerge from free association that allow the dream to be interpreted in the kinds of ways he describes. He argued this by producing examples – by showing again and again how data from free association and dreams could be used for interpreting dreams in a way that was sufficiently systematic and non-arbitrary that others could arrive at broadly similar results. The instances he produced apparently encompass data explained by his overall account. If so, then as he claimed, critics ignorant of such data, or the way his hypotheses served to explain them, would not be in a position to evaluate them properly. Criticism of explanatory theories that does not take full account of observational data upon which they are based is not empirically well founded.

### **Critiques by Popper and Grünbaum**

Understanding confirmation and disconfirmation in this way also bears on the celebrated critiques of Freud by Karl Popper and Adolph Grünbaum. According to Popper’s criterion of *falsifiability* the only general hypotheses that can be regarded as truly scientific are those that predict data so precisely that they would be conclusively falsified if particular instances of data were not forthcoming. Again, only such precise general hypotheses can be said to explain data, and to be confirmed by them, in a fully scientific way. Such falsifiability should not be confused with the kind of Bayesian confirmation and disconfirmation indicated above. Rather, Popper’s account in effect requires that truly scientific hypotheses confer a probability very near to certainty on the data they explain, so that any predictive failure renders the probability of the hypothesis itself negligible. As Popper stressed, the hypotheses of Freud and Darwin mostly do not satisfy this criterion; and for this reason he regarded them as metaphysical as opposed to scientific.

This categorization by Popper has very often been used to discredit Darwin or Freud. This, however, misrepresents both Popper’s argument and his intentions. Popper not only allowed but emphasized that the general theories he characterized as metaphysical might have true and confirmed instances. His account turned on the difference between singular instances and the unrestricted theoretical generalizations thought of as inductively supported by them. The establishing of singular instances of a general claim (e.g. finding that this or that dream was well understood as a Freudian *wishfulfilment*) could not conclusively verify the unrestricted generalization (that all dreams were wishfulfilments) involved. By contrast, establishing a single negative instance (finding a dream – e.g. an anxiety dream or nightmare – that was not best understood as a Freudian wishfulfilment) could conclusively falsify the generalization.

In light of this Popper held that genuinely confirmed instances, even in the context of a general theory as scientifically fertile and invaluable as Darwin’s, did not suffice to render the generalizations themselves truly scientific. Likewise, and despite criticisms, he stressed that Freud’s explanations of instances in *The Interpretation of Dreams* were fundamentally correct, and that Freud’s description of the unconscious therefore constituted a great discovery. Popper regarded the generalizations of Darwin and Freud as unscientific, not because they lacked confirmed positive instances, but rather because the terms in which they were cast were not so precise as to render them conclusively falsified by ostensibly negative ones. This is particular was his criticism of Freud.

Advocates of psychoanalysis agree with Popper that psychoanalytic hypotheses do not generally yield strict and readily falsifiable predictions such as are attainable in the 'hard' sciences. This holds, indeed, for the whole of the natural human psychology of desire, belief, perception, emotion, and experience in which understand one another in everyday life. But in this psychology – and contrary to Popper's claims – our ability to understand one another with precision far outruns our ability to predict one another's actions. This is particularly clear in the case of language, in which we may be able to understand what a person says with as great an exactness as we understand anything in science, without thereby being able to predict what he will say next.

Advocates also stress that in this field examples that admit a degree of generalization may have great importance even if they are subject to restriction. The interpretations of dreams that Popper regards as basically correct already provide grounds for revisions in commonsense psychology that are deep, and potentially cumulative and radical. It is highly important -- as Popper conceded in speaking of a great discovery -- if very many dreams can be understood in this way, even if not all can be. So advocates maintain that if, as Popper agrees, Freud's hypotheses are sufficiently predictive to impose genuine relations of confirmation and disconfirmation on instances of explanation, and if they provide the best explanations we can frame for very many instances that would be unexpected on other accounts, they should be regarded as constituting a significant and empirically cogent extension of our everyday psychology of motive, by means internal to it.

Comparing Darwin and Freud brings out another methodological point. Where a theory explains data by representing them as produced by an underlying causal mechanism, its predictions entail claims about the mechanism as well. Where the mechanism itself is as yet unexplored, finding out about it becomes part of the project of confirming or disconfirming the theory. Darwin's theory made claims about the mechanisms of heredity – that they produce resemblances between parents and offspring that also allow for modification by natural selection – as did Freud's about the neural mechanisms of motivation, dreaming, and mental disorder. The predictive scope of Darwinian theory, and with this the degree of confirmation it enjoyed, steadily increased as the mechanisms of heredity were anticipated and described. Once Darwin's theory could be exhibited as predicting the great fact that the vital and reproductive process of all living things are regulated by the same basic family of molecular mechanisms, Darwinism attained a degree of confirmation comparable with other paradigms of science. In this it also illustrated the failure of Popper's criterion, for of course we remain unable precisely to predict the alterations which natural selection will produce (e.g. in the flu virus), even though we may attain detailed understanding of them afterwards.

Advocates of psychoanalysis hold that progress in developmental psychology and neuroscience will likewise generate further and significant confirming or disconfirming data. But this will also depend on actively searching for evidence about the working of the mechanisms, as in the Darwinian case of combining physiological research with digging for fossilized instances of forms of life altered or eliminated by natural selection. In psychoanalysis such digging is shown in looking for the deepest and most significant connections in free associations, memories, motives, and conflicts, as well as relating these to findings in psychology and neuroscience. In both cases the digging is mandated by the hypotheses under consideration, which predict the kind of thing (but not in detail) that digging should disclose. And in both cases digging for evidence is liable to be mistakenly characterised by critics as a search for confirmation in violation of falsificationist strictures.

By contrast with Popper's falsificationism, Adolph Grünbaum provided a critique of Freud on inductivist grounds. Psychoanalytic claims about motives, he argued, were causal claims. Therefore they required non-interpretive and extra-clinical experimental or correlational support, such as the double-blind control-group procedures used to test the causal powers of drugs. Again advocates of psychoanalysis contest these criticisms as failing to take full account of the nature of Freud's hypotheses and data. Certainly psychoanalytic claims about the role of motives are causal, just as are claims about the roles of perceptions, desires, beliefs, and emotions in everyday life. But then in the indispensable and fundamental psychology of meaning and motive that we naturally use in understanding one another, we already constantly establish such causal connections by intuitive interpretive means. In

maintaining that Freud was extending this psychology by means internal to it, advocates of psychoanalysis were also perforce maintaining that other forms of correlational testing, although they might be desirable where possible, were not required.

### **Suggestion as an alternative explanatory hypothesis.**

In addition, and like many before him, Grünbaum argued that the kind of confirmatory clinical observations to which Freud refers may well be contaminated by the influence of the analyst – e.g. by unconscious suggestions with which the patient unwittingly complies. In this his critique recycled the oldest but also the most influential grounds for rejecting psychoanalytic claims; and similar arguments have also been cited to explain the apparently confirmatory data that sustain competing psychoanalytic schools.

To this familiar charge advocates reply, yet again, that it does not take full account of the methodological situation. This is simply that all hypotheses purporting to explain the data in question, including hypotheses that postulate processes such as suggestion, require to be evaluated by how well they actually explain and predict the data involved. In fact psychoanalytic hypotheses seem the only ones that do so with any degree of adequacy. For critics who stress the role of suggestion have provided no account as to how it is supposed to explain psychoanalytic data; and these data, as recorded, show patterns inconsistent with the claim.

Thus data recorded as explained by early Freudian hypotheses are very often better explained by quite different psychoanalytic hypotheses framed later in order to explain different data. For example the associations to Freud's dream of Irma's injection, and to others in *The Interpretation of Dreams*, are clearly better explained by the mechanism of *projection* that Freud was to emphasize in later work than by that of *wishfulfilment* he used in his initial book. (The hypothesis of wishfulfilment does not explain why the derelictions with which Freud is concerned should be assigned to Otto in the dream; that of projection has this as a direct consequence. In addition projection is the mechanism most explicative of paranoia, and so serves to explain the anxiety dreams and nightmares with which critics still tax Freud's first formulation.) Such retrospective but more cogent explanations can be given for very many recorded instances of psychoanalytic data, and this pattern is inconsistent with the claim that the data are explained by psychoanalytic hypotheses because they emerge from suggestion in terms of them.

Again, critics often cite that fact that patients of therapists of different schools come to free associate, and so produce clinical data, using the concepts of those schools. Advocates regard this as showing, as would be expected, that these patients are using the theoretical framework in terms of which they are attaining deeper understanding of themselves for the purpose for which that framework was devised, that is, to enable them to understand themselves better than they would without such a framework. Likewise advocates regard the persistence of differing schools of depth psychology as a natural and inevitable consequence of the richness of the data forthcoming in free association (and unconstrained play in the case of the analysis of children) and the motivational complexity of the human mind. As with the long intricate development of life itself, we may never attain a single best perspective on these things; but that is no reason not to seek such better and deeper explanation as we can frame.

Freud's associations to his dream of Irma's Injection, for example, clearly relate the events of the dream to a range of deeper motives. These include guilt for the inadequacies in his treatment of Irma, anger at Otto's drawing them to his attention, shame and fear of censure from his medical colleagues, deeper forms of guilt related to more serious medical failures in the past (the death of another patient and a mentor and friend), and so on and on. We can see that each element of the dream relates to a complex of such motives, among which Freud's discussion and explanation in terms of wishfulfilment leave many alternatives unexplored. It should be no surprise, and no indication that these are not genuine data admitting the kinds of explanation Freud and his successors have given them, that they can be explicated as derived from these underlying motives in more than one way. Here again the situation is analogous to that in other fields of enquiry, including evolutionary biology.

Just as different groups or schools of depth psychology favour differing patterns of derivation from deeper unconscious motives, so different groups or schools in evolutionary explanation favour patterns of derivation of species along differing branches of the tree of life, our own species included. This is the standard working of explanatory thought.

### **Recent work in developmental psychology and neuroscience.**

Advocates and critics of psychoanalysis thus remain in epistemic deadlock about the significance of clinical data. In this situation it has seemed relevant to both to consider related fields such as developmental psychology and neuroscience, especially since Freud began work as a neuroscientist, and framed many of his psychoanalytic concepts so as to be consistent with his own neuroscientific understanding.

Work in both fields has burgeoned in recent decades, and advocates urge that, as was to be expected, the results systematically favour psychoanalytic hypotheses. Thus attachment theory, developed by the psychoanalyst John Bowlby as an empirical and evolutionary approach to the formation of emotional bonds and the effects of parental care, has become a well-established field of developmental psychology. It has produced powerful empirical evidence of the influence of parenting on psychological development from as early as four months, and its main modes of testing, such as the 'strange situation' procedure, are in effect ways of determining the role of emotional conflicts such as Freud took to be central to mental disorder. So it has arguably produced systematic evidence of the pervasive and long-lasting conflict-engendering role of what Freud described as the earliest parental imagoes, and with this evidence for a range of psychoanalytic claims about the developmental importance of such conflict.

The observations of attachment theorists also coincide with current hypotheses in developmental neuroscience, which stress how representations of self and other in the infant's relatively unformed cortex are structured under the impact of emotion by interaction with parents and carers over the first year of life. Again, recent work has provided accounts of emotion and dreaming consistent with Freud's, and confirmed clinical phenomena that seem to require explanation in psychoanalytic terms. Neuroscientific work seeking to determine the construct validity of psychoanalysis has shown a range of consistencies between key Freudian ideas and recent perspectives on global brain function that have emerged in neuroimaging and Bayesian neuroscience (see the collection of recent essays below).

The neuroscientific framework of the Bayesian brain, moreover, seems also to provide a simple and direct account of repression and other Freudian concepts, thereby contradicting a range of traditional philosophical arguments against them. As regards the therapeutic effect of psychoanalysis, neuroimaging studies now seek to specify changes effected by successful psychoanalytic theory in neural systems related to emotion and attachment. So while such empirical work is not directed to the particular clinical observations stressed by Freud, it seems to offer indirect but wide-ranging empirical support for them, now in terms of the working of the causal mechanisms that underlie them. No doubt philosophical critics of psychoanalysis will respond to these new claims and data; at present, however, they have yet to do so.

### **Further readings:**

Boag, S., (2012) *Freudian Repression, The Unconscious, and the Dynamics of Inhibition*. London: Karnac. Clear recent discussion of repression and the Freudian unconscious.

Buchheim, A., Viviani, R., Kessler, H., Kachele, H., Cierpka, M., Roths, G., George, C., Kernberg, O., Burns, B., Taubner, S., (2012) Changes in Prefrontal-Limbic Function in Major Depression after 15 Months of Long-Term Psychotherapy PLoS ONE [www.plosone.org](http://www.plosone.org) March 2012 Volume 7 Issue 3 e33745. A recent neuroimaging study of the effect of successful psychoanalytic therapy on neural circuits involved in emotional response and control.

Chung, M. C., and Feltham, C., (Eds) (2003) *Psychoanalytic Knowledge*. New York: Palgrave Macmillan. The essay by Macmillan presents much of the position assigned to critics above.

Douven, Igor, "Abduction", *The Stanford Encyclopedia of Philosophy (Spring 2011 Edition)*, Edward N. Zalta (ed.), URL = <<http://plato.stanford.edu/archives/spr2011/entries/abduction/>>. Philosophical discussion of explanation, inference, and Bayes' theorem.

Clark, P., and Wright, C. (1988) *Mind, Psychoanalysis, and Science*. Oxford: Blackwell. Has Grünbaum's summary of his main arguments about clinical evidence, and a critique of them based on the view that psychoanalysis is a partly cogent extension of commonsense psychology.

Fotopolu, A., Pfaff, D., and Conway, M., (Eds) (2012) *From the Couch to the Lab: Psychoanalysis, Neuroscience and Cognitive Psychology in Dialogue*. Oxford: Oxford University Press 2012. Collection of recent essays on the relationship of neuroscience and psychoanalysis. That by Carhart-Harris and Friston outlines a contemporary Helmholtz/Bayes approach to neuroscience, stressing its continuity and compatibility with Freud's own Helmholtzian approach. In other readings the Bayesian approach is linked with repression, attachment, and other topics discussed above.

Freud, S. (1900/1957). 'Analysis of a specimen dream' In J. Strachey (ed.) *The Interpretation of Dreams*, in Strachey, J., ed., *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, Volume V pp. 96 – 121. London: Hogarth Press. Freud's first and paradigmatic example of the use of free association in interpreting a dream.

*Frontiers in Psychoanalysis and Neuroscience*: online free access journal for work linking psychoanalysis and neuroscience at [http://www.frontiersin.org/psychoanalysis\\_and\\_neuropsychanalysis](http://www.frontiersin.org/psychoanalysis_and_neuropsychanalysis)

Grünbaum, A. (1984) *The Foundations of Psychoanalysis*, Berkeley: University of California Press.

Laplanche, J, Pointalis, J. B., (1973) *The Language of Psychoanalysis*. London: Karnac. Useful and scholarly explications of psychoanalytic terms and concepts.

Lear, J., (2005) *Freud*. New York: Routledge. Good contemporary introductory book.

Levine, M. (Ed.) (2000) *The Analytic Freud* London: Routledge. Essays relating Freud to topics in the philosophy of mind.

Neu, J. (1991) *The Cambridge Companion to Freud*. Cambridge: Cambridge University Press. The essay by Sachs criticizes the arguments of Grünbaum sketched above.

*Neuropsychanalysis* <http://www.karnacbooks.com/JournalNeuroPsycho.asp>. Journal with an editorial board including distinguished neuroscientists and dedicated to recent research in the intersection of psychoanalysis and neuroscience.

Popper, K. R., (Author) and Bartley W. W., (Ed.) (1983) *Realism and the Aim of Science: From the Postscript to The Logic of Scientific Discovery*. New York: Routledge. Section 18 of Chapter 2, 'A Case of Verificationism', contains Popper's most detailed discussion of Freud.

Solms, M., and Turnbull, O., (2002) *The Brain and the Inner World: the Neuroscience of Subjective Experience*. London: Karnac. Introduction to work in the neuroscience of emotion relevant to contemporary understanding of Freud.

Wollheim, R., and Hopkins, J., (Eds) *Philosophical Essays on Freud*, Cambridge: Cambridge University Press, 1982; since 2010 in reprint on demand. The Introduction to this collection and the essay by Davidson exemplify the conception of psychoanalysis as a cogent extension of commonsense psychology as discussed above.

Wollheim, R. (1993) *The Mind and its Depths* Cambridge, Mass.: Harvard University Press. Outstanding philosophical essays on Freud, including a detailed critique of Grünbaum in the terms discussed above.