Critical Review.

METAPSYCHOLOGY AND BIOLOGY.

Some criticisms of Freud's "Beyond the Pleasure Principle."

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THE Freudian psychology offers plausible interpretations of such a varied and wide assortment of phenomena, and has been so suggestive in research and so potent in therapy, that its relations to all the sciences it touches upon are of the greatest interest. In particular, it assigns such importance in mental development and functioning to the fundamental biological 'urges' that it forms the point of closest contact between the mental and the biological sciences. It is true that 'instinct psychologies' of the faculty type are *essentially* biological; but they are *à priori*, they make no more than a formal pretence of being psychological, and beyond a sterile, because artificial, classification of mental activities do not advance our understanding of mind. Psychoanalysis, on the other hand, is a genuine empirical psychology, and its inductions in its own field seem promising for a correlation with biological views of the activities of the organism, and with physiological accounts of their mechanism. These facts are recognized and highly valued by Freudians. Their attempts to link their theory of mind explicitly with a physcobiological foundation, therefore, deserve close attention.

Freud's *Beyond the Pleasure Principle* seems to aim at a more general view of mental process, in its relation to life as a whole, than that given by purely empirical psychology. Freud acknowledges the extent to which this departure involves frankly speculative reasoning. He exhibits a growing conviction that the hedonistic interpretation of human behaviour is not comprehensive and sufficient. Psychological analysis cannot get behind the fact that certain stimuli are pleasurable, others painful, that certain activities and tendencies are inherent in the organism, and that the latter craves certain specific satisfactions for which no psychological reason can be assigned. That is to say, the canon of psychic determinism cannot get behind the data of values; it cannot carry us *beyond the pleasure principle*. Whether or not the pleasure principle is really the only or the best instrument for inter-

preting mental process, there is no doubt, as Freud says, that psychoanalysis has been built upon it. Wherever a mental phenomenon is traced to a previous mental fact (psychic determinism), this process is interpreted by the dynamic formulæ of the pleasure principle. When, therefore, we have searched back to fundamental states of mind, *i.e.*, those which do not appear to be derived from antecedent ones, we leave the region of psychology proper. Here we must find substitutes for the *descriptions of experience* that apply in the subjective sphere, and, naturally, we will employ physical conceptions. Objectively considered, the pleasure-displeasure mechanism is economic, since its effect is always to reduce psychic tension in the most direct available way, or at the least to keep it constant. Having indicated this translation of the subjective pleasure principle into an objective economic principle (essentially identical), Freud sets out to supplement the latter with a "dynamic and topographical" presentation. This he calls 'metapsychology,' and it certainly is a topic on the border-line between psychology and biology. The latter science, therefore, has claims to consideration within this sphere. The purpose of this paper is to discuss how far Freud has done justice to these claims.

In the first chapter of *Beyond the Pleasure Principle* Freud briefly indicates the change of topic, of method, and of point of view just mentioned. He formulates a tentative objective conception of pleasure-displeasure as a *rate of alteration* in amount of excitation present in the mind—"probably the amount of diminution or increase in a given time is the decisive factor for feeling." He quotes with approval Fechner's hypothesis that "every psychophysical movement rising above the threshold of consciousness is charged with pleasure in proportion as it approximates—beyond a certain limit—to complete equilibrium; and with displeasure in proportion as it departs from it beyond a certain limit." To me it appears, however, as if Fechner's view would allow us to conceive of an augmentation of excitation that is yet pleasurable, *i.e.*, so long as discharge is not too much hindered any heightening of tension will be actually pleasant. Pleasure is, however, undoubtedly a function of detension, and the general purpose of the psychic apparatus is to bring this about. On the other hand, tension is raised by the operation of the instincts, appetites and other tendencies, *i.e.*, by factors metapsychological in all but their final presentation to the mind. These 'urges' are, in fact, felt to be painful even where there is no thwarted conation; even where satisfaction is being freely attained we speak of a 'keen' pleasure in which introspection can detect an element of pain. Such a view in some form commands a very wide acceptance.

Freud goes on to speak of the limitation imposed upon the pleasure principle by that of reality, motivated by the instinct of self-preservation, so that we find one instinct thwarting the immediate gratification

of others. The task of the psychic apparatus is thus no longer direct detension but compromise (page 5). In the next paragraph reference is made to other unavoidable conflicts within the developing mind. The psychic apparatus must achieve the co-adaptation of somewhat incompatible desires and from these conflicting tendencies organise a harmonious personality. Obviously the psychologist must reckon with many factors beyond the pleasure principle.

The next two chapters develop, from an empirical standpoint, the view that there is a *repetition-compulsion* which is in no way dependent upon the pleasure principle, and which, in fact, can and does reinstate memories which have not, and never had, any pleasure value for the subject. Later (pages 44–45) he finds that the compulsion to repetition is a general “characteristic of instinct, perhaps of all organic life.” He says: “According to this *an instinct would be a tendency innate in living organic matter impelling it towards the reinstatement of an earlier condition*, one which it had to abandon under the influence of external disturbing forces—a kind of organic elasticity, or, to put it another way, the manifestation of inertia in organic life.” (Italics in original.) Having adduced some facts of migration and spawning, in support of this view, he proceeds: “But the search for further examples becomes superfluous when we remember that in the phenomena of heredity and in the facts of embryology we have the most imposing proofs of the organic compulsion to repetition.” He then refers to recapitulation in unequivocal terms as supporting his position, and states that *a mechanical explanation of these facts is impossible*.

I have criticised the recapitulation hypothesis elsewhere (see this *Journal*, May, 1924, p. 1). Here we need merely note how metapsychology tends to become biology, in which science Freud makes a rather impressive *début*. A formal declaration of a vitalistic metaphysic, a new definition and usage of the term ‘instinct’ (which is identified with the formative forces of organic development), an assumption of the truth of the ‘biogenetic law’ in its most extreme form, and as we shall see, a total disregard for the principle of evolution by the selection of the fit or of the fittest (though the analogous principle of economy is made fundamental for psychology)—all these “far-fetched conjectures” form, perhaps, an adequate reason for calling the discussion metapsychological rather than biological.

“If, then, all organic instincts” (does this imply a division of instincts into organic and psychic?) “are conservative, historically acquired, and are directed towards regression, towards reinstatement of something earlier, we are obliged to place all the results of organic development to the credit of external, disturbing and distracting interests. The rudimentary creature would from its very beginning not have wanted to change, would, if circumstances had remained the same, have

always merely repeated the same course of existence. But, in the last resort, it must have been the evolution of our earth, and its relation to the sun, that has left its imprint on the development of organisms. The conservative organic instincts have absorbed every one of these enforced alterations in the course of life and have stored them for repetition ; they thus present the delusive appearance of forces striving after change and progress, while they are merely endeavouring to reach an old goal by ways both old and new. This final goal of all organic striving can be stated too. It would be counter to the conservative nature of instinct if the goal of life were a state never hitherto reached. It must rather be an ancient starting point, which the living being left long ago, and to which it harks back again by all the circuitous paths of development. If we may assume as an experience admitting of no exception that everything living dies from causes within itself, and returns to the inorganic, we can only say '*The goal of all life is death,*' and, casting back, '*The inanimate was there before the animate.*' "

Freud himself has commented severely, though justly, upon metaphysical system-mongering as phantasy projections, but what shall we say of this ? We have no evidence of an evolution of physical conditions on the earth's surface and of a change in the earth's relation to the sun which parallels the evolution of life. Freud himself admits that it is inconceivable how physical changes could have brought evolution about. Everywhere life is adapting, specializing ; indeed, its chief failures are due to overspecialized adaptation. Even the *regressions* of parasitism, when viewed in correct perspective, are seen to be *concentrations of effort upon the vital ends of existence*, and accordingly to be counterbalanced by tremendous expenditure of energy upon reproduction and by elaborate specialization where this is of advantage, *i.e.*, in other life cycles and phases which enable the species to disseminate itself and perhaps maintain itself independently of its host. No biologist would interpret such an involution as evidence of a tendency to return to a previous evolutionary phase, to a more elementary organization. A species that can exist in two or more alternative forms and that can maintain itself in as many distinct environments, cannot be regarded as under the influence of a definite regressive tendency. Death itself has been interpreted as an adaptation to promote the increase and evolution of the species. It is more than doubtful whether, as Freud says, "everything living dies from causes within itself." It may be an imperfection or inadequacy of the life principle incidental to the attaining of other, evolutionary, ends. It may even be normally due to the effects of parasitism, and hence *to the vital strivings of other organisms. Disorganisation, return to the inorganic, is certainly due to such activities.* Nowhere in the world of life do we find Freud's *regressive tendency* unequivocally displayed ; everywhere we find 'upward' strivings, adapta-

tions, elaborate specializations, regenerations, evolution, as characteristic of life. Involution, disintegration, return to the inorganic, is to all appearance due to the accident of environment. Surely it is absurd to attribute all the indefinitely varied and elaborate vital activities in the world to the crude and uniform physical agencies of environment, and, at the same time, to regard death and dissolution as the sole aim, end, and activity of the vital principle. Freud is clear-sighted enough to draw, and bold enough to state, the absurd conclusion that the ego instincts, 'the principle of self-preservation,' are really death-seeking tendencies, *i.e.*, a desire for the manner of death peculiar to the organism concerned.

We here see metapsychology becoming metaphysics, and that without the resulting gain in simplicity and systematization of knowledge which alone justifies philosophical reflection as an aid to science. We can follow with approval speculative attempts to reduce the organic to terms of the inorganic; such fulfil the above condition. Even a pansychism might be defended. But Freud is a convinced dualist, *i.e.*, he considers that animistic explanations must be used to supplement mechanistic formulæ. He differs, however, from most animists in this, that he uses the vital principle to explain death and disintegration—a physical process—and assigns the explanation of life processes to the formulæ of physical science. Thus he accepts the onus of introducing non-scientific, because teleological, explanations without using them to explain anything which cannot be explained on mechanistic lines.

Besides this complete reversal of the biological conception of life, Freud throughout assumes without comment or apology that acquired characters are inherited. Underlying his idea that life harks back to the inorganic, there is a conception of the directive force of life as a memory. Such a conception is not unknown, but adds, I submit, another load to his already top-heavy speculations. He talks of a purposive striving after death (return to the inorganic), meaning, I take it, that this goal, consciously or unconsciously, must in some sense be represented in the organism. Since it cannot be an idea based upon sense presentations (in the case of the lower organisms) it must be of the general nature of a memory of the organism's own primordial state. But how, it may be asked, can living matter remember its own condition *before it became living matter*? And of which of its many inorganic states (prior to vitalization) does it retain the memory trace? The history of each constituent atom of the organism is different, yet we are asked to picture the totality as striving for a joint reversion. Memory in any conceivable form is organic, and cannot antedate or refer back to preorganic phases. The atoms of my body need not have been part of any ancestral body, and consequently can have no yearning to recon-

stitute such a primitive form, or, indeed, any memory of such. They have not necessarily taken part in evolution ; they have been organised by assimilation during my own life-time, and, in the ordinary course of nature, by katabolism would be returned to the inorganic state without necessitating the dissolution of my body as a whole. We find, therefore, that the matter of organisms cannot retain the memory and cannot possess the desires with which Freud appears to credit it. Even pan-zooism, therefore, the postulate of memory and desire residing in matter itself, would not help Freud here, since the matter itself has taken no part in evolution and so cannot possess any tendency to retrace and undo that process. We could go so far with Freud as to compare the activity of the pleasure principle to the running-down tendency of a clock, instinct and appetite representing the winding up ; when, therefore, instinct and appetite fail, the clock will run down finally, but it did not design and evolve itself with a view to re-attaining the condition of inactivity.

Another difficulty Freud attempts to meet is : how, if the life 'urge' is directed towards death, has life not achieved its goal—extinction ? Why do we find life wherever it can be supported ? Why is extinction apparently due to failure of adaptation ? Freud suggests that primitive strains of life may in fact frequently have achieved their own extinction, and here he is in agreement with some of the theories of the origin of life, which represent this as having arisen at more than one point, perhaps in more than one form. Now we can hardly imagine how life could arise ; indeed, under present conditions—outside the laboratory—biogenesis is incredible. If we seek the reason for this we will at the same time discover why life could not have originated at any very widely separated points of time. It is not really necessary to postulate any vastly different conditions of heat, moisture, etc., from those prevailing at present. The impossibility of biogenesis hinges upon the fact of the *presence of parasitic and saprophytic organisms*. Prior to their evolution, the whole world was a sterile crucible in which synthetic processes were not perpetually terminated by digestion, in which nitrates and carbohydrates, etc., could accumulate and interact unchecked for centuries. After life was once disseminated over the globe, *a new genesis from inorganic matter would no longer be possible*. Quite probably, therefore, life originated from several stems, but these stems were coeval unless stellar dissemination was also a factor.

Freud's conception of repeated origins and extinctions of life can, therefore, be true only up to a point, and of course the "decisive external influences" which compelled the living substance "to ever more complicated and circuitous routes to the attainment of the goal of death" are inconceivable, nor does he attempt to suggest their nature. He is then forced to interpret the self-preservative instincts as "part instincts

designed to secure the path to death peculiar to the organism"; "the organism is resolved to die only in its own way."

In opposition to the death instincts (which we have been in the fallacious habit of regarding as egoistic and self-preservative) are the sex instincts, "although perhaps it only means a lengthening of the path to death." Nevertheless he regards the contradiction as full of significance for psychopathology, though he does not indicate the relative importance of the coincident conflict between the individual and his culture. Freud seems indeed to contradict himself (page 49) where he says "the reproductive cells probably retain the original structure of the living substance and . . . detach themselves . . . charged . . . with . . . the newly acquired instinctive dispositions." In what form are we to conceive these dispositions if not as structural modifications, and how can the original structure be a modified structure? Is this where mechanistic explanations fail us?

These animadversions are not intended as deprecating the use of speculation, still less as condemning this particularly stimulating and original train of thought. It must be acknowledged, also, that Freud again and again characterizes this speculation as "far-fetched," as "the exploitation of an idea out of curiosity to see whither it will lead" (page 26). He refers to "this extreme view" and later criticises it; never does he leave us in any doubt as to what he regards as hypothesis and what as fact. But surely even free speculation should take some account of the canon of parsimony. We should not string together a chain of hypotheses of the greatest gravity and highly controversial, each false if another holds, in order to support some trivial or doubtful conjecture. The chain will break with its own weight. Surely also we should not use hypotheses in place of ascertained and accepted fact and of established principles. Yet Freud does both these things; airily he sweeps away the whole fabric of biology, taking the greatest liberties with the very principles of science, to make room for a metapsychology constructed of the phantasies of neurotic patients and the *dejecta membra* of exploded and outgrown biological theories selected because

- they seem to suit his purpose.

I accept most of the Freudian doctrines with conviction. Freud himself I regard as one of the three great men in the history of mental science. Both as therapy and as mode of investigation of mind psychoanalysis stands supreme. But it is the bane of the movement that it has attracted so many incompetent and uninformed writers, and that so much nonsense has been published in its name. There is no doubt, I am afraid, that Freud's cautions will be overlooked, his findings accepted and developed, that he will in fact be teaching the wicked ones their ways. It is a deplorable thing that all but some few of the school adopt his teachings with such enthusiasm that they are thereby impelled to

reject his method, which is essentially critical and empirical. His whole success was conditioned by his refusal to accept the ponderous but empty psychiatry of his day. 'Take away your *à priori* theory' seems to have been his working principle, 'and let us develop a theory from nothing but the facts and the most intensive possible study of the facts.' Yet here we find him applying *à priori* inferences from psychology to biology, though the latter science is on far the sounder and more objective footing. Freud's objection was to the vicious method of interpreting one natural group of phenomena by formulæ which were really derived from the study of another group and to the supporting of this *à priori* theorising by adducing selected facts. This objection is perfectly valid, but the pity is that Freud seems to think the canon of method should be applied only in favour of psychology. He does not seem to realize how easily metapsychology becomes *à priori* biology and physiology. It is perfectly true that if science is ever to offer a coherent explanation of nature, the partial theories developed in each department of experience must constantly endeavour to extend their application to facts not taken account of in their own first formulation. In a sense all inference is *à priori*, but in extending a theory from one department of knowledge to another, regard should be paid to *theory* already existing in that other, since it probably represents the facts on which it is based more impartially and systematically than any outside theory would do. This justice Freud denies to biology; in fact, he leads an incursion into the latter science as a naïve Lamarckian and holding some very unbiological views on the relation of survival value to evolution.

On page 27 (*et seq.*) we find this argument. Perceptual consciousness embraces exteroceptive stimuli on the one hand and feeling reactions on the other. It is in this sense the mediator between organism and environment. Originally this mediating function was performed by the whole surface of the simple organism; later, part of the surface was withdrawn, centralized, and specialized to deal with the samples of stimuli still transmitted from the other parts of the ectoderm (remaining on the surface). "The grey cortex of the brain remains a derivative of the primitive superficial layer, and it may have inherited essential properties from this" (page 29). Freud suggests that the mediating function of consciousness, the fact that it "must face towards the outer world and must envelop the other psychic systems," points to the localization of this function *ab origine* in the outer layers of the organism, or, in the case of higher organisms, their morphological equivalent. So far he is reasonable and ingenious, though the assumption is perhaps greater than its heuristic value justifies. He says (page 27), "We . . . are in agreement with the localizing tendencies of cerebral anatomy, which places the 'seat' of consciousness in the cortical layer, the *outermost enveloping* layer of the central organ. Cerebral anatomy does

not need to wonder why—anatomically speaking—consciousness should be accommodated on the *surface* of the brain instead of being safely lodged somewhere in the *deepest recesses* of it.” (Italics mine.) Freud plainly founds upon the assumption that the cortex of the brain (outer surface) is the homologue or direct descendant and representative of the outermost layers of the ectoderm, whereas, of course, the contrary is the case. In its withdrawal from the surface the ectoderm is turned outside in and the ‘heirs’ of the function of the original body surface should therefore be ependymal cells, or at least cells “in the deepest recesses” of the brain. Both functionally and developmentally, therefore—regarded as the apex of the arc—the cortex is the part of the brain farthest removed from the periphery of the body. If Freud’s argument is valid, therefore, cerebral anatomy will have to reconsider the very theory to which Freud’s argument looks for support.

Freud proceeds to the startling suggestion that conscious processes are not remembered and that this is because the continued registration of new experience would exhaust the capacity of the physical basis of conscious thinking; that “*consciousness arises in the place of the memory trace*” is a statement for which he claims at least the merit of definiteness. To academic psychology it appears to be definitely false, and the whole of the inferences based upon it therefore invalid. Freud himself (page 32) seems to contradict it, without, however, appreciating the fact. He points out that appreciation of time depends entirely upon the conscious system of mind. But the function involves the ideal arrangement of a series of events all but one of which are past, *i.e.*, remembered. We see then that judgments of time, of before and after, are more dependent than any others upon the registration of experiences, and that in the order of their occurrence. Nevertheless I discern an element of empirical truth in Freud’s suggestion. Conscious experiences are certainly registered, but generally in a systematic way *without a ‘charge’ of emotion being fastened to any one experience*. Recall depends, therefore, on intellectual associative processes and not upon the autonomous activities of the stored experience. Conscious experiences tend to be stored as passive ‘traces,’ not as dynamic ‘complexes.’

It is noteworthy that Freud assigns no function to consciousness. Though he appears to appreciate that consciousness is an invariable concomitant of adaptive processes, and although it is a commonplace that perfected behaviour adaptations (habits) become non-conscious, he still regards this unique phenomenon as being without biological significance. As a thorough-going and convinced Lamarckian, how can Freud understand the acquisition and wide distribution of this function? It may be admitted that, having allotted such complete functional capacity to unconscious mental processes, psychoanalysis leaves itself at a disadvantage in regard to finding a specific function for conscious-

ness. Nevertheless, as a pure speculation, I would suggest that the coincidence of consciousness with the process of adaptation of wish to opportunity is sufficiently close to merit attention.

Freud ignores the fact that the central nervous system exists only in higher animals and is not an evolution from, but superposed upon and additional to, the primitive nervous system that characterises the lower. His suggestion as to the evolution from a superficial to a central sensorium ignores this primitive nervous system, or confuses it with the central system. It ignores the process of evolution from coelenterate to protochordate levels, and asks us to imagine the evolution of a central nervous system in a type of organism that one is forced to classify as protozoal. His whole conception of a "vesicle" first evolving a hyper-sensitive cortex, then acquiring a protective, "in a measure inorganic," cuticle, and withdrawing and centralising its sensorium, seems to take little account either of the known facts of evolution or of the necessary conditions of survival. It confuses sensibility to stimulus with susceptibility to injury. The first as the basis of all adaptation is wholly valuable, and excessive development is inconceivable. The specialization of sense organs represents an increase, not a decrease, of sensibility. As a matter of fact the elaboration of insensitive integuments is most unusual where there is a central nervous system, but quite common where there is not. The idea that a race could first evolve a sensitivity incompatible with existence and then compensate for this by an overcoat of insensitivity, does not appear valid from the standpoint of survival value.

We may fairly charge Freud with an entire lack of interest in evolutionary problems. At least he never takes the biological point of view. This also would explain his utterly uncritical acceptance of the Lamarckian principle and of the recapitulation theory, neither of which does he ever appear to think needs a word of defence or the acknowledgment of a possible alternative view. Though *Beyond the Pleasure Principle* is really a biological essay, Freud shows throughout a conspicuous disregard for biological fact, biological theory, and biological problems.