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PSYCHOANALYSIS, EVOLUTION AND THE END OF METAPHYSICS

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The end of metaphysics is the story which, in Freud's eyes, psychoanalysis brings to its conclusion. That story begins with the insights of Copernicus. But that beginning did not truly complete itself until the turn of our own century when, through psychoanalysis, science finally penetrated the sacrosanct domain of the self to provide a methodology of self-understanding for men living in a rationalized world.[1] In what follows, I explore the movement of mind that underlies Freud's theoretical self-understanding in order to see what was at stake at the moment when the metaphysical tradition lost all relevance to the understanding of life. For seen from the perspective of our contemporary situation, psychoanalysis appears as a last effort to articulate an integrative, determinate vision of man before the understanding of life dissolved into the existential morass we live in today.

The key to Freud's vision, and to the place of his thought within Western speculation about man, can be stated simply: psychoanalysis realizes the end of metaphysics by elaborating the meaning of Darwinism for human self-understanding. By this I do not mean that Freud had such a project in mind as a formal program of thought. Rather, evolution was for Freud an indubitable reality. And psychoanalytic theory arose out of the genuine perplexities that surrounded the question of man in the light of the reality Darwin had disclosed. Still, psychoanalysis is no evolutionary anthropology, at least not in any conventional sense, for Freud does not approach the phenomenon of man from the methodological perspective of evolutionary biology. That is, he does not interrogate human evidences with a view to discovering the relative survival advantages, and thus the *raison d'être*, of such distinctive features of *homo sapiens* as language, tool-fabrication and use, or the upright posture. Instead of the biological meaning of being human, psychoanalysis is concerned with the human meaning of being a biological entity, and with finding a way of making that meaning the basis of our self-understanding, both as individuals and as species-members. It is the question of meaning that sustains the speculative vitality of psychoanalytic theory, and forms its point of critical engagement with the metaphysical tradition.

A single, radical insight founds the psychoanalytic perspective and remains its pole of orientation throughout — remains unchanged, that is, even in the shift of the theoretical center of gravity from the unconscious to the eros instincts after 1919. That single insight may be characterized as a redefinition of the essence of man. For psychoanalysis, that essence is *desire*. And the decisive formulations for the determination of that essence are developed in the founding work of psychoanalysis, *The Interpretation of Dreams* (1900).

The Interpretation of Dreams shares with Heidegger's *Being and Time* (1927) the sensibility that the overwhelming reality of everyday life closes the individual off from the realization of an authentic self.[2] For the pursuit of that self, Freud bids us turn to our dreams with a mind to discovering its hidden meaning there. While thus elevating the dream and making it the manifestation of the mind's authentic originality, *The Interpretation of Dreams* conversely divests of substance the mind's emphatic expression in the lucid self-consciousness of reflecting reason and substantializes in its stead an unconscious domain of sheer impulse. For that domain, suppressed in waking life, is what gains expression (albeit a distorted one, requiring interpretation) in dreams. The onset of sleep marks the withdrawal of external reality. Dreams are what the mind produces wholly out of itself when freed from the need to attend to the distractions that intrude upon it from without.

"Man is explicitly man," Hegel informs us in the preface to *The Phenomenology of Spirit*, "only in the form of developed and cultivated reason, which has made itself to be what it is implicitly."[3] Against this identification of the human essence with reason's reflective self-explication must be placed Freud's assertion that "the core of our being" consists "of unconscious wishful impulses."[4] Between the two formulations stands Darwin's bringing of the Copernican-Galilean revolution — which had extruded man from nature — around full circle to embrace man himself. After Darwin, the nature which natural science has in view is necessarily, as J.H. Randall has put it, a "nature with man in it."[5] And the result is that the subordination of life to the discipline of reason, which informed reflective philosophy's continuation of the metaphysical tradition, is inverted by psychoanalysis into the subordination of reason to the vicissitudes of life. Hegel's metaphysics begins in the naive self-consciousness of the individual who realizes himself to be "the immediate certainty of self . . . unconditioned being."[6] Similarly, Freud's psychoanalysis takes "acts of consciousness" to be "immediate data" that are "without parallel" and which "defy all explanation or description."[7] The immediate self-certainty of consciousness with which both men begin, however, also marks the point of departure for two radically different ventures. For, in contrast to Hegel's *Phenomenology*, psychoanalytic reflection stands in the shadow of Darwin, of the knowledge ascertained by the science of external reality that human existence has an animal essence. While taking its stand in,

and never abandoning the field of phenomena first delimited by reflective philosophy, psychoanalytic theory makes recourse to natural history for the determination of that essence. And this, in the first instance, means recourse to dreams for the determination of the hidden turnings of desire in which the authentic self consists. Contrary to the contemporary reading of Freud, however, psychoanalytic theory does not thereby take its bearings from the work of interpretation.[8] Instead, the work of interpretation is itself governed from beginning to end by Freud's insight into what the essence of man must be in the light of what Darwin had taught. And as a pre-reflective urge that arises spontaneously within consciousness, the wish is the perfect choice of designation for that essence. *The Interpretation of Dreams* intends to teach men how, by turning away from the externally-imposed positivities of waking life, they can gain access to what lies hidden at the core of their being. Then, in *Three Essays on the Theory of Sexuality* (1905), Freud gives the dissimulations of desire an organic ground by further resolving "wishful impulses" into somatogenically-fixed sources of libidinal energy. Together, *The Interpretation of Dreams* and the *Three Essays* fill out the metapsychological program Freud had outlined for Fleiss in 1898.[9] For Freud, the mind is no longer the independent ontological substance it was for the founder of reflective philosophy, Descartes. Now the mind is understood to be an emanation of the body lived from within.

In neither *The Interpretation of Dreams* nor the *Three Essays* is Freud yet aware of just how radical the implications of his seminal insight are. Instead, he remains — albeit awkwardly — within the framework of the philosophical tradition. Thus, the assertion that, not reason, but unconscious wishful impulses form the core of our being does not prevent Freud from fixing the relations of "reason" and "impulse" in a hierarchy of higher and lower human faculties definitive for that tradition. In full accord with the traditional hierarchy, the aim of psychoanalysis, we are told in the dream book, is to bring heteronomous unconscious impulses "under the domination of" rational psychial processes, as he takes to be the case for normal psychial functioning.[10] And unconscious wishful impulses cannot be the "essence of man", as I have claimed to be the case in psychoanalysis, if some higher power controls them.

Freud's choice of the word "domination" is telling here, and reveals the significance of this apparent contradiction. Reason becomes an instrument of psychial domination rather than the realization of a rationally-ordered harmony of the soul in Freud because it has lost its metaphysical sanction. Or, to put the matter another way, lacking metaphysical justification, reason loses all substantive content, all norm-giving force, and becomes merely a necessity-imposed regulative function of the "mental apparatus" — a means among means in the technique of living, while itself unable to determine the sense of living. Organic need is what sustains that sense for Freud.

Only after completing his resolution of mind into body does Freud discover that a deepening of his generative insight is required if the recourse to natural history were itself to find completion. In this deepening of his original insight, unconscious wishful impulses are no longer subordinated within the decaying framework of philosophical rationalism. Now, what is "highest" in man is identified, not with rational processes that dominate impulse, but with conflicts internal to impulse itself. What I am refering to is that essential feature of "late" Freud, the super-ego, which he characterizes as the id's representative to the ego.[11] In the formulation of the super-ego, but not by that alone, psychoanalytic theory finally breaks through the framework that had contained it. Freed from the inhibitions of Freud's early rationalism, though not from inhibition itself, desire steps forth as the essence of man.

The psychoanalytic perspective as articulated by Freud entails a disavowal of metaphysics. But his disavowal is not that of a positivist oblivious to the concerns that animated metaphysical speculation. Nor is it merely an incidental consequence of the psychoanalytic outlook. Rather, psychoanalytic thought is fundamentally oriented by that disavowal, and bears within itself the mark of metaphysics by virtue of it. That mark is the essentialism which sustains the psychoanalytic vision of human reality. Essentialism, the notion that a single principle or substance underlies all the manifestations of a particular entity, thereby making it be what it is, has its provenance in the heritage of metaphysics — a heritage which, cast adrift from its moorings by the Copernican revolution, suffered shipwreck in the nineteenth century. That unconscious wishful impulses constitute the core of our being is the definitive insight around which Freud's theory of man crystallizes. In this, Freud's thought perpetuates essentialism in the aftermath of metaphysics by realizing the sense of essentialism in a radically altered setting. Evolutionism established that new setting by being the instrument through which natural science could finally make a serious claim upon the totality of the existent. Psychoanalysis allies itself with this claim and tries to make it good by reading man back into nature without prejudice to the innermost, intimate evidences of the human presence within the existent.

To articulate this matter in terms of a perpetuation of essentialism without the support of metaphysics would seem to involve a fundamental contradiction. For the fact of the matter is that the implicit ontology of natural science — perhaps best expressed in the notion of reality as process — is profoundly anti-essentialist. Darwin's completion of "the Copernican revolution in ontology", to use Hans Jonas' words,[12] consists precisely in the dissolution of essentialism's last stronghold — *viz.*, living nature whose organisms, both individually, and in their mutual interrelations, seem to manifest some kind of teleological order. Despite its elimination of purpose from the kingdom of life, however, Darwinism itself provided the setting for

Freud's reconstitution of human being in accordance with a perception of its essence. But before we can explain how this is so, we must first demonstrate what we have thus far only stated — namely, that Freud's turn to natural history draws its strength and its rudimentary orientation from his turn away from metaphysics.

"The intellectual period . . . has now been left behind", we are told in the early pages of *The Interpretation of Dreams*, "when the human mind was dominated by philosophy and not by the exact natural sciences."[13] Yet that realization did not deter him, in private correspondence, from admitting to an ulterior motive in the pursuit of his scientific studies. In letters to Fleiss just following the completion of the dream book, Freud writes, "I see that you are using the circuitous route of medicine to attain your first ideal, the physiological understanding of man, while I secretly nurse the hope of arriving by the same route at my own original objective, philosophy." And a month later, the same confession recurs in somewhat revised form. "When I was young, the only thing I longed for was philosophical knowledge, and now that I am going over from medicine to psychology, I am in the process of attaining it."[14] What prompted this circuitous route to the realization of philosophical impulses, and what in the writing of *The Interpretation of Dreams* made him feel that he was attaining philosophical knowledge, Freud leaves unclear. But the attitude towards metaphysics expressed in the dream book provides, I think, some essential clues.

In *The Interpretation of Dreams*, Freud felt called upon to make an unambiguous disclaimer of metaphysical intent. The context is a polemical one in which Freud attacks the "prevailing trend of thought in psychiatry today" according to which "anything that might indicate that mental life is in any way independent of demonstrable organic changes or that its manifestations are in any way spontaneous" provokes alarm. "Even when investigation has shown that the primary exciting cause of a phenomenon is psychical," we are assured, "deeper research will one day trace the path further and discover an organic basis (*Begründung*) for the mental event." In the meantime, to grant mental impulses "means of their own" does not commit one to "the metaphysical view of the nature of the mind (*dem metaphysichen Seelenwesen*)".[15]

Freud himself articulates the crucial connection between this disassociation of psychoanalytic understanding from metaphysics and his sense that *The Interpretation of Dreams* had carried him, *via* the circuitous route or natural science, to the realization of philosophical yearnings. In *The Psychopathology of Everyday Life* (1901), a book otherwise devoid of speculative content, we suddenly encounter a striking and incisive expression of the "spiritual" orientation of psychoanalytic thought in which Freud defines the meaning of his scientific work in terms of the inversion of metaphysics. Here metaphysics is associated, not with the philosophical tradition originating with the Greeks,

but with the religious "Platonism for the masses" that was absorbed into the conceptual framework of that tradition.

> A large part of the mythological view of the world, which extends a long way into the most modern religions, *is nothing but psychology projected into the external world.* The obscure recognition . . . of psychical factors and relations in the unconscious is mirrored . . . in the construction of a *supernatural reality*, which is destined to be changed back once more by science into the *psychology of the unconscious.* One could venture to explain in this way the myths of paradise and the fall of man, of God, of good and evil, of immortality, and so on, and to transform *metaphysics* into *metapsychology.*[16]

The transformation of metaphysics into metapsychology must not be confused with the dismissal of metaphysical concerns as meaningless, typical, for instance, of the logical positivism of the Vienna Circle.[17] In this transformation, Freud does not merely jettison metaphysics as some kind of colossal linguistic blunder. On the contrary, as the reflection of psychical factors in the unconscious, metaphysics becomes the mirror in which the mind might seek the image of its own innermost reality. The psychology of the unconscious fulfils the scientifically-ordained destiny of metaphysics by transforming it into metapsychology. In the letter to Fleiss where Freud lays out the program of psychoanalytic theory, we saw how Freud used the term metapsychology to signify the organic, which he locates at a level both behind and beneath the psychological. Now, in his first published use of the term (then dropped until the *Metapsychological Papers* of 1915), Freud situates metapsychology in polar opposition to metaphysics. Yet the original biological meaning of the term is still latent in this new formulation. For what ultimately sustains metaphysical illusions are the urgent somatic needs arising from the body which the wishful impulses populating the unconscious represent.

In actual fact, the transformation of metaphysics into metapsychology remains an unfulfilled programmatic statement, until *Totem and Taboo*, some eleven years later, realized its substance as an anthropology. Nonetheless, it remains an important signpost on the way of Freud's thought. *Flectere si nequeo superos, Acheronta movebo* ("If I cannot bend the Higher Powers, I will stir up the underworld") was the motto Freud chose for the dream book. And, without contradicting his later explanation that this motto simply represents the course taken by repressed wishes which, rejected by con-

sciousness, find their expression in dreams,[18] it can also be made to stand for the course taken by Freud's youthful philosophical passions in the recognition that the triumph natural science realized through Darwin had foreclosed access to the metaphysical realm — the realm where, traditionally, mind found in philosophical knowledge "its realization," as Hegel tells us, "and the kingdom it sets up for itself in its own native element."[19] As metaphysics reflected back into its origins, metapsychology — that is, "biology" — becomes for Freud the new source of transcendent meaning. Or, rather, as a response to Darwin's enfolding of the mind within nature, the transformation of metaphysics into metapsychology substitutes an immanent "within" for a transcendent "beyond" as the ground of self-understanding.

The forgoing considerations show that Freud's materialism arises out of his disavowal of metaphysics — a disavowal which gives definitive form to the new vision of human reality he tries to elaborate in the aftermath of metaphysics. We must now try to gain a closer understanding of what is involved in the psychoanalytic inversion of metaphysics by considering more fully how Darwinism simultaneously forecloses access to metaphysics and opens the possibility of reconstituting a comprehensive vision of man as *homo natura.*

If my concern were simply to show that Freud was deeply influenced by the advent of evolutionary biology, certainly I would have done better to cite Lamarck rather than Darwin as decisive for the development of psychoanalytic thought. For Freud was a life-long adherent of Lamarck's views concerning the nature of the evolutionary process. In particular, Freud found the Lamarckian mechanism of evolution through the inheritance of acquired characteristics hospitable to, and useful for the articulation of his theory of human psychogenesis. My fundamental thesis, however, — the thesis that psychoanalysis elaborates the meaning of Darwinism for human self-understanding — does not refer to the "influence" of evolutionism on Freud's thought. The elucidation of a great thinker's work in terms of a history of influences, however useful in familiarizing us with his intellectual environment can, in any case, never succeed in revealing the theoretical passion that consumes itself in the life of his thought. Whatever its appropriations and whatever its failings, Freud's thought is original. That is, it poses and answers for itself the essential questions rather than merely adopting a ready-made viewpoint, methodology or set of assumptions. The fundamental thesis is meant to indicate the originality of psychoanalysis as a solution to the engima evolutionism posed for self-understanding — as a convoluted, but consistent response to the question man had become for himself in the wake of Darwin. It was his concern with the "spiritual" impact of evolutionary science that led Freud to cite Darwin and not Lamarck in his famous discussion of the three blows dealt to human narcissism by the researches of science, even though he considered Lamarck's work, which preceded that of Darwin, to be scientifically

more valid. For it was with Darwin that the natural sciences came fully to dominate the human mind.[20] This meant, moreover, that the consequences of evolutionism for human self-understanding would have to be worked out in accordance with the ontological blueprint projected by the natural sciences, although Darwinism itself, as we shall see, introduced a new dimension into that blueprint. What I am suggesting with the fundamental thesis is that, when given a reading appropriate to its innermost problems, psychoanalytic theory illuminates the new situation of understanding and helps us gain our bearings with respect to it. More particularly, in the context of our current discussion, Freud's recourse from metaphysics to natural history attests to the closure of the metaphysical horizon in which evolutionism played a decisive role. It was into this situation that psychoanalysis stepped in order to provide what Freud claimed to be "a decisive new orientation in the world and in science."[21] In disavowing metaphysics and turning to natural history for the determination of the human essence, Freud's philosophical *daimon* showed a rudimentary grasp of, and turned to its advantage, the dissolutive impact which evolution had on the traditional interpretation of man.

Darwin's *Origin of Species* (1859), which established the evolution of life as a scientific fact, fundamentally altered the epistemic situation upon which the traditional interpretation of man had rested. By bringing into view a self-generating nature out of whose contingent, yet casually-determinate interactional processes man appears as but one more product, evolution was the instrument by which natural science finally forced the issue with metaphysics. Consciousness, which Heidegger once called "the land of modern metaphysics", was denied both meta-physical paternity and its exclusive relationship with human life. If we take evolution seriously as embracing the phenomenon of man, which in some sense we must, then mind ceases to represent an independent ontological substance that realizes itself in the act of reflection, but instead must be understood to have emerged from matter as the actualization of some potentiality inherent therein.[22] Reason can no longer be assigned the task of realizing the human essence by subordinating the passions of life to standards determined by the philosopher's perception of being. For evolution makes reason an attribute of life rather than its master. Finally, absoute being, insofar as it is still identified with what timelessly is, dissolves into nothingness in the face of the temporality that evolution implants at the very heart of everything that exists. "If there is nothing eternal," Aristotle notes in his *Metaphysics*, "then there can be no becoming; for there must be something which undergoes the process of becoming."[23] Now, coming-to-be does not arise from what eternally is. Rather, all discrete entities derive their being from becoming. Becoming is now the superior principle — or, rather, in the face of the primacy and universality of process and change, the whole distinction between being and becoming loses efficacy and significance. For in

becoming, entities proceed from an origin, but towards no final state, and realize no purposes. Their ontological meaning is fully exhausted in the determination of the causes that have produced them.

Correlative with the dissolutive impact of Darwinism upon metaphysics is the ontological regime evolution institutes in its stead. Here, the reflections of Hans Jonas, which have been instrumental to this point, will again form our starting point, but this time in the context of an interpretative disagreement. Jonas teaches us that Darwin's success in establishing a mechanical explanation for the origins and development of living beings "completed the Copernican revolution in ontology" by extending "to the realm of *life* that combination of natural necessity with radical contingency which the Newtonian-Laplacean cosmology resulting from that revolution had universally proclaimed."[24] By calling Darwinism the *completion* of the Copernican revolution in ontology, Jonas means to signify the claim science could make upon the totality of the existent — a totality conceived monistically as matter. For evolution treats the vital difference between the organic and the inorganic in mechanical terms as the emergence of the simplest self-replicating structures from chance encounters and transmutations within non-vital matter. Random variations in the off-spring and the natural selection of those best suited for survival then account for the further course of development. The element of radical contingency essential to the ontological blueprint of nature science projects is secured in Darwin's theory by the fact that variation is a function of the organism and natural selection a function of the environment. The two functions originate independently, or at least no conspiracy of nature co-ordinates organic and environmental changes so as to realize some pre-ordained pattern of development. On the other hand, the natural necessity Jonas cites as the second element of the Newtonian-Laplacean cosmology is operative in the non-purposive "selection" of the fittest through the elimination of those organisms relatively deficient in the equipment for survival within an externally-given environment. Necessity is at work here in the stark alternatives of life or death, being or non-being.

If this were the sum total of the matter, it would be difficult to understand how Freud could manage to bring human evidences into conformity with the ground-plan of nature projected by evolutionary science. But it is here that psychoanalysis directs us to an aspect of evolution's meaning for science's understanding of nature that Jonas overlooks. By Jonas' account, Darwin's achievement consisted in the explanation of the evolution of living entities within the Newtonian causal scheme signified by the combination of natural necessity with radical contingency — a causal scheme whose cosmological implications were developed by Laplace. Darwinism, however, did more than just conquer the realm of life for the Newtonian world-view. By that very act, evolution transformed the role which natural science assigned to time in the

scheme of things. The conquest of vital existence for a mechanistic natural science was thus exacted at an unexpected price. The organic beings which were now subjected to the rigors of efficient causality bore within themselves something that radicalized that scheme. Evolutionary science thereby inserted into the ground-plan of nature something that Freud could turn to his avantage in reconstituting a coherent vision of man after his fall from metaphysical grace.

In his identification of Darwinism causality with the causal scheme of classical physics, Jonas turns to Laplace's "hypothetical 'divine Calculator' "[25] — and properly so. For it is this hypothesis which illustrates most vividly the significance of time for classical, Newtonian physics. And evolution is about nothing, if not the meaning of time. Laplace's famous hypothesis runs as follows:

> An intellect which at a given instant knows all the forces acting in nature and the position of all things of which the world consists — supposing said intellect were vast enough to subject these data to analysis — would embrace in the same formula the motions of the greatest bodies in the universe and those of the slightest atoms; nothing would be uncertain for it, and the future like the past would be present to its eyes.[26]

The vision of natural processes given here is such that, in the words of Milič Čapek, "any instantaneous configuration of an isolated system logically implies all future configurations of the system. Its future history is thus virtually contained in its present state, which, in turn is logically contained in its past states."[27] For Jonas, Laplace's hypothesis complements Newton's mechanical explanation of "existing structures" by extending those mechanics to the question of origins and development,[28] thereby filling out and elevating to the level of cosmology the vision of the new natural science — a vision whose "metaphysical secret", Jonas tells us, lies "in the radically temporal conception of being, or in its identification with action and process."[29] It is into this scheme that, for Jonas, Darwin fits the realm of life. But what he does not see is that, by capturing living beings within the explanatory net of efficient causality, Darwinism transformed the meaning time bears for natural science's "radically temporal conception of being." Let us see how.

In its abstention from teleology, the interaction of variation and natural selection is in complete agreement with the Newtonian-Laplacean cosmology. Indeed, Darwin's explanation of organic development without recourse to

teleology is perhaps the most succint expression of the victory natural science won through him over metaphysics. For in living things, philosophy had one class of entities whose teleological nature appeared indisputable.[30] But the eradication of teleology was accomplished by the radicalization of its opposite, contingency, and with peculiar consequences. In Newtonian science, time, like space, is an infinite, uniform and continuous dimension of reality that remains independent of the events that transpire in it. Contingency refers only to the arbitrariness of the initial set of conditions — the first configuration of the system which, once in motion, unfolds within the grid of absolute time and space with ineluctable necessity. And since all relations are isometric, this world-system can be read backwards or forwards with equal sense.

None of this holds true in Darwin's theory of evolution, where the role of contingency is expanded dramatically. In the evolution of life, contingency is at work at every significant turning point in development, without thereby abrogating the law of necessity. Indeed, the unpredictable irruption of new organic forms is exactly what constitutes those important turning points. For evolution signifies the emergence of novel and unexpected adaptations out of the interplay of random organic mutations and changed organic and inorganic conditions of life. In the theory of evolution, no future "state of the system" is given with certainty in the present configuration of the natural economy. The present generation of each species is the cumulative product of the movement of life through time, and is thereby its effect. But while the variations which the present generation throws out through its off-spring for natural selection condition future possibilities, just what those variations will be, and with what result given changed environmental conditions, cannot be determined beforehand. Or to put it another way, the life or death selection lottery held every generation for the members of each species allows us in principle to infer a rigorous causal sequence which has produced the current state of the natural economy. But the cumulative causally-determined emergence of new biological forms describes a developmental sequence that is by nature irreversible. "Time's arrow" is not reversible as it is in Newton's rational mechanics, but points in one direction only — forwards towards a future which, once realized, will be seen to have been determined by the past, but whose definitive outcome remains hidden to the eye of the present.

For the idea of time implicit in the evolutionary development of life disclosed by Darwin's causal mechanism I would reserve the term temporality. Temporality is found, not in the mathematically determinate interval which makes up the uniform, continuous and infinite time used in Newtonian science to measure bodies in motion, but is found instead in the event which forms part of the unique sequence of happenings that make up a life-history. Thus, Darwin informs us in the *Origin of Species* that the evolutionary biologist regards "every production of nature as one which has had a history" and that

"every complex structure and instinct" is to be understood as the "summing up" of the species-history of the organism possessing it.[31] Or, as Francois Jacob has recently put it, "Living bodies are indissolubly bound up with time. In the living world, no structure can be detached from its history."[32] Thus we can say that with evolutionary science, the vision of time projected by the natural sciences ceases to be monopolized by Newtonian mechanics. Evolutionary time does not derive its fundamental characteristics from the mathematics of masses in motion. For biological reality, time is not merely a measure applied to organic entities from without. It is of their essence.

This element of temporality, which Darwinism inserted into the ground-plan of nature, is what Freudian theory exploits in order to restore the sense of essentialism in the context of natural history. But in order to see how this is so, we must explore more deeply the nature and implications of temporality in evolutionary theory. For thus far, the temporality we have spoken of pertains basically to species. The story of life on this earth is the story of a single, continuous development characterized by the increasing complexity and diversity of life-forms all of which can ultimately trace their origin to some original protoplasm. What evolve are species. But they evolve through the individual organisms in which species have their empirical reality. And as the most recent product of the immense journey of life through time, individual organisms are thus the concrete manifestations of the temporality of life. Every complex structure or instinct is the summing up of the organism's species-history because, in the theory of evolution, the individual organism is subordinate to the history of its species. And this relationship of organism to species helps explain the seductive logic of Haeckel's famous "biogenetic law" which, in *Totem and Taboo*, Freud adopts as the logic linking the psychical development of the individual to the development of human civilization.

Haeckel's biogenetic law — which, put briefly, asserts that ontogeny recapitulates phylogeny — is no longer taken seriously by most biologists, even though recapitulation theory was the explanation of individual organic development favored by Darwin.[33] The facts of ontogenesis (ontogeny being understood variously to signify embryological and/or anatomical development) simply do not conform to its logic. Nonetheless, recapitulation theory dominated the thinking of the first generation of post-Darwinism biologists since, as we shall see, it idealizes the ontological implications which the theory of evolution bears for the individual organism. And since our concern is with how psychoanalysis elaborates the meaning of Darwinism for human self-understanding, Haeckel's idealization helps us see what possibilities for reconstituting a coherent vision of human nature evolution offered when viewed from the rudimentary perspective Darwin established.

PSYCHOANALYSIS

We begin with Haeckel's own formulation of the law of recapitulation:

> Ontogeny . . . being the series of form-changes which each individual organism traverses during the whole time of its individual existence, is immediately conditioned by phylogeny, or the development of the organic stock (phylon) to which it belongs.
> Ontogeny is the short and rapid recapitulation of phylogeny . . . The organic individual . . . repeats during the rapid and short course of its individual development the most important form-changes which its ancestors traversed during the long and slow course of their paleontological evolution . . ..[34]

Now the biogenetic law pertains to a developmental process with which the *Origin of Species* is largely unconcerned — namely, the development of the individual organism. But why, then, was the biogenetic law so appealing to Darwinists as a way of explaining the development of the individual organism? The answer is that if the law were true, it would provide an invaluable guide to the generation of phylogenetic sequences which the incompleteness of the fossil record makes so difficult, in many cases, to reconstruct. But prior to the question of usefulness and appeal lies the question of what made the recapitulation of phylogeny by ontogeny so *plausible* as the proper interpretation or explanation of individual development. The answer to that question lies in evolutionary science's elimination of teleology from the kingdom of life. We noted earlier that organic phenomena offer a powerful experiential basis for the notion that the series of changes through which something passes is directed towards the realization of a final goal or purpose. For both Aristotle, the original articulator of the category of teleology, and for contemporary men in their everyday understanding of things, the purposefulness entailed in the movement from acorn to oak is obvious. Consider, then, the implications of Darwinism for the teleological understanding of what is at hand in the series of form-changes through which an organism passes. To Greek eyes, each organism's coming-to-be represented the step-by-step unfolding of an essential nature. The process of "becoming" was intelligible by virtue of its subordination to a final state of "being". Let us remember that the original use of the term species signified just this unchanging, eternally-fixed form which each organism, in its growth, strives to realize. With evolution, however, the individual organism ceases to be the manifestation-through-a-process-of-becoming of a fixed species nature. For each species itself represents

a developmental sequence of generations through eons of the past whose future course is unknown. With relation to its species, the individual living organism represents this past history for the present, and the bearer of what the species thus is "for the present" on its path towards a contingency-filled future. Thus, even though a species exists only through the succession of organisms that make it up, the species, by the logic of evolution, nonetheless subordinates the individual living organism to its own history, and imparts to the living thing the character of a concretion of historical time. By conceiving of the sequence of form-changes through which the individual organism passes to be the step-by-step repetition of its species-history, Haeckel's law makes evolutionary time the fated way for the organism to live out the time of its life. Instead of representing the teleological striving to embody an eternal form of being, the organism follows Goethe's advice and realizes the historical past as its own destiny. The ontological meaning of the organism is contained, not in the form it realizes, but in the sequence of form-changes through which it passes. The temporal vicissitudes of the species constitute the "essence" of the organism.

In the absence of teleology, then, Haeckel's law was a plausible guess at the nature of ontogeny which proved wrong. But this in itself does not speak against its significance as the idealization of the temporality which still inheres in the ground-plan of nature projected by evolutionary science. Contemporary biology, after all, still links our "fate" to the "inheritance" of genetic material drawn, so to speak, from the historically-generated gene-pool specific to our species, and thus opens us, incidently, to the perverse belief that, through genetic engineering, we can "determine" the "fate" of our progeny. In its explication of the historicality which, after Darwin, informs the life-story of every discrete organism, Haeckel's law gives us insight into Freud's attempt to discover the sense of being what we are — creatures who by origin and destiny belong to nature. And this insight is not to be found by attending to Freud's explicit adoption of the biogenetic law in *Totem and Taboo*, but rather by comprehending his reconstitution of the human essence in accordance with that aspect of evolutionary understanding that the biogenetic law explicates — by seeing, that is, how psychoanalytic reflection realizes the temporality that evolutionary science makes part of living nature's substance. "Impressive analogies from biology," Freud writes in his Leonardo study of 1910, "have prepared us to find that the individual's mental development repeats the course of human development in abbreviated form."[35] But it is only because the temporality projected by evolutionary science had been incorporated from the outset into Freud's theory of individual psychogenesis that these analogies could open the way to the generation of a cultural anthropology out of his individual psychology.

"(T)he basic text of *homo natura* must again be recognized," Nietzsche urges in *Beyond Good and Evil*. "To translate man back into nature" — that is

the task of the contemporary thinker who "hardened by the discipline of science" is at last "deaf to the siren songs of the old metaphysical bird catchers who have been piping at him too long, you are more, you are higher, you are of a different origin."[36] By tracing the evidence of consciousness back to a ground in the body lived from within, the founding works of psychoanalytic theory carry out that task. *The Interpretation of Dreams* inaugurates the era of psychoanalytic man, of man left with nothing but life itself and whatever sense he can make out of it. But psychoanalytic man is not yet existential man. The discovery that there is nothing beyond life is not for Freud the occasion for existential despair and the resolve to be in the face of life's absurdity. Thrown back upon life by science, psychoanalytic man is, by the same token, delivered to science for the interpretation of life. And for science, life is not an absurdity, but is instead the most remarkable achievement of matter. This achievement has no meaning in the immediate experience of life. But, whatever his doubts and anxieties, psychoanalytic man knows that the life he lives does not hang suspended in the void. For beneath life stands the rich multiplicity of nature from which life arises and to which it returns. By translating man back into nature, Freud attempts to make the nature to which science gives determinate meaning the basis for human self-understanding.

The transcendence of time is the ancient dream of metaphysics and lies at the heart of the essentialist vision of reality. In Aristotle's *Metaphysics* we are told that, "the principles of eternal things are necessarily most true; for they are true always and not merely sometimes; and there is nothing which explains their being what they are, for it is they that explain the being of others."[37] In eternal things lie the essence of entities — that which persists in and through all changes which any particular entity undergoes, insofar as it remains what it is and does not become something else. In the name of science, psychoanalysis undertakes to reconstitute a vision of human reality in accordance with a perception of its essence, and to do so despite natural science's dissolution of being, of teleology, of the realm of final ends, and its subjection of everything that is to the rigors of efficient causality and the relentless motion of sheer, purposeless becoming. Let us see how.

Temporality is time that is lived forwards, but comprehended backwards. But this does not make temporality merely a subjective, psychological phenomenon. For, as evolutionary biology is fully cognizant, living things are themselves temporal — that is, conditioned by time. Having discovered the temporal nature of species and disclosed the mechanism of their progressive development and differentiation, evolutionary biology imparts a determinate meaning to discrete living entities by seeing each as the summation of a species-history, thereby freeing organic time from its metaphysical subordination to the teleological realization of a timeless species-form. As we saw, Haeckel's biogenetic law tries to render the life-time of individual organisms intelligible

by interpreting each as the concrete embodiment of species-time. In this, he only idealizes the meaning which evolution bears for the individual organism. And that meaning is that the nature of the organism is contained in the history of its species. That is to say, the past itself takes the place of a super-ordinate transcendent form which the organism strives to be-come. In its concern with the psychosexual roots of the personality, it is exactly this orientation towards the past through which psychoanalysis elaborates the essence of man. How this is so we can learn by turning to the Freudian work that teaches us the most about meaning which the psychoanalytic theory of man bears for the understanding of life, *Leonardo da Vinci and a Memory of His Childhood.* That life transpires in time, and that making sense of a life requires the exercise of memory (in the case of autobiography), or the sympathetic re-enactment of a life through strict adherence to chronology (in the case of biography) is hardly a revelation. But that what a person shows in his life is to be understood in "the connection along the path of instinctual activity between a person's external experiences and his reactions"[38] is a claim distinctive to psychoanalysis — a claim whose possibilities and limitations Freud explores in the Leonardo study. In the process, we learn much about the view of life that issues from the reconstruction of life-experience into a natural history.

Leonardo da Vinci is clearly conceived as the application of the logic of psychosexual development worked out in the *Three Essays on the Theory of Sexuality* to a concrete case. What Freud wants to account for is Leonardo's overwhelming passion for research and knowledge, and the particular forms which this passion took in the course of his career, both as an artist and as an investigator of nature. But psychobiography does not just take the events of a person's life and develop them into a coherent story such that, through the sympathetic (though not necessarily uncritical) re-experiencing of those events, the meaning of that life is somehow allowed to speak for itself. Psychobiography, instead, subjects those events to critical analysis of a special kind.

> Supported by its knowledge of psychical mechanisms [psychoanalytic enquiry] endeavours to establish a dynamic basis for his nature on the strength of his reactions [to external events] and to disclose the original motive forces of his mind, as well as their later transformations and developments. If this is successful, the behaviour of a personality in the course of his life is explained in terms of the combined operation of constitution and fate, of internal forces and external powers.[39]

The essence of a particular personality must be sought along the path of instinctual activity which leads back to the original motive forces of the mind. Just as in biology, where genotypical characters manifest themselves phenotypically according to the conditions under which the organism's life transpires, so these "original motive forces" are manifest as a particular psychical configuration according to the interaction of an innate disposition with external circumstances. As he puts it in the 1915 edition of the *Three Essays*, the relation between constitutional and accidental factors is co-operative and not mutually exclusive. "The constitutional factor must await experiences before it can make itself felt; the accidental factor must have a constitutional basis in order to come into operation."[40] Yet once established, this original configuration of infantile sexual impulses — impulses which are polymorphic and auto-erotic — forms the basis of all later developments. What gives a dynamic character to these developments is the wave of repression which covers over the efflorescence of sexual activity with an infantile amnesia, and the subsequent vicissitudes which the repressed instincts undergo during the period of latency. The human organism is transformed into a civilized human being during this latency period through the diversion of polymorphous sexual energies to other purposes, according to a variety of possibilities about which Freud is never quite clear or settled, but which includes sublimation and neurotic compulsiveness. Both the wave of repression that ends the period of infantile sexual activity and the subsequent forms of instinctual canalization are themselves constitutionally-determined, and comprise for Freud the virtual mark of human speciation. Thus, already in the first edition of the *Three Essays*, we read:

> The fact that the onset of sexual development in human beings occurs in two phases, i.e., that the development is interrupted by the period of latency, seem[s] to call for particular notice. This appears to be one of the necessary conditions of the aptitude of men for developing a higher civilization, but also of their tendency to neurosis. So far as we know, nothing analogous is to be found in man's animal relatives. It would seem that the origin of this peculiarity of men must be looked for in the prehistory of the human species.[41]

Just as in evolutionary science, where the constitutional species-character which the individual inherits is itself a product of time, so in psychoanalytic science,

Freud bids us to look to events in human prehistory to account for the capacity for acculturation with which each human being is born. "(C)onstitution," he wrote Else Voigtländer in 1911, ". . . is nothing but the sediment of experiences from a long line of ancestors."[42]

In psychoanalysis, then, the dynamic basis of the mind of any particular person is to be found in the disclosure of its original motive forces, as well as in their later transformations and developments. And both origins and the later transformations are seen as manifestations of innate constitutional factors stirred into action by the particular circumstances of his life. This basis, however, is not determined immediately, but rather is inferred from a consideration of the leading characteristics of the adult personality. Thus, to return to the Leonardo study, we find Freud beginning, not with Leonardo's childhood memory, but, just as he would with a patient, with the manifestations of his character in later life. For according to the logic of psychosexual development, the key to an individual's character is always contained in the original fixations of infantile sexual life. That key comes into view, however, only retrospectively in the light of a given outcome. The essence of an individual character is identified, not with the *telos* or end against which the unfolding of the self is measured, but with origins, of which all subsequent manifestations of the self are an echo. Origins become the basis for rendering the course of a life intelligible as *the persistence of desire through time.* The constitutive role assigned origins enables Freud to reproduce as a vision of personal destiny the peculiar combination of necessity and contingency which generates the temporality informing evolutionary understanding. Thus in the closing passages of the Leonardo study we read:

> (E)verything to do with our life is chance, from our origin out of the meeting of spermatozoon and ovum onwards . . . chance which nonetheless has a share in the law and necessity of nature, and which merely lacks any connection with our wishes and illusions. The apportioning of the determining factors of our life between the 'necessities' of our constitution and the 'chances' of our childhood may still be uncertain in detail; but in general it is no longer possible to doubt the importance of precisely the first years of our childhood.[43]

What makes sense of the experience we have each been fated to live is the reflective grasp of the psychoanalytically-disciplined memory. Oriented towards the fixations of the past in his confrontation with the contingencies of

the present, psychoanalytic man finds himself permeated with time through and through. In the critical reconstruction of one's life-story along the path of instinctual activity, the sense of essentialism is restored in the context of a natural history of the mind. Psychoanalysis thus finds a way of lending a meaning to being a biological entity, and of making that meaning the basis of self-understanding.

Now the path of instinctual activity also describes the history of those wishful impulses which, having succumbed to the great wave of repression that terminates infantile sexuality, comprise the nucleus of the unconscious. And, since the recourse to natural history takes place as the transformation of metaphysics into metapsychology, it is not surprising that, in the *Metapsychological Papers* of 1915, Freud finally assigns to the unconscious the leading characteristic of metaphysical reality. "The processes of the system *Ucs.* are *timeless*, i.e., they are not ordered temporally, are not altered by the passage of time; they have no reference to time at all."[44] The persistence of desire through time expresses for Freud a will-to-be that transcends all discrete, time-bound manifestations of it. Significantly, the basis for this "timelessness" of the unconscious is already laid out in *The Interpretation of Dreams* by virtue of the constitutive role assigned the "experience of satisfaction" for psychogenesis.

> An essential component of this experience of satisfaction is a particular perception . . . the mnemic image of which remains associated thenceforward with the memory trace of the excitation produced by the need. As a result of the link that has thus been established, the next time this need arises a psychical impulse will at once emerge which will seek to *re-cathect* the mnemic image of the perception and to *re-evoke* the perception itself, that is to say, to *re-establish* the situation of the original satisfaction. An impulse of this kind is what we call a *wish*; the *reappearance* of the perception is the fulfillment of the wish. (my italics)[45]

The timelessness of unconscious wishes, as opposed to the timelessness of Aristotle's "eternal things", does not denote a realm of being beyond the transience of life. Metapsychological timelessness inheres in the experience of being organic realized by the psychoanalytic memory which, in tracing the continuity of desire through time, redeems a self from the transience of life.

"Whether we are to attribute *reality* to unconscious wishes," Freud writes in the closing pages of the dream book, "I cannot say. It must be denied, of course, to any transitional or intermediate thoughts." Of the concern expressed in this curious passage, Freud offers a further elaboration in the 1914 edition by adding the following reflections: "If we look at unconscious wishes reduced to their most fundamental and truest shape, we shall have to conclude, no doubt, that *psychical* reality is a particular form of existence (*Existensform*) not to be confused with *material* reality."[46] In these formulations, Freud clarifies the ontological meaning of his resolution of the self into embodied desire. In finding, not "intermediate or transitional thoughts", but unconscious wishes "reduced to their most fundamental and truest shape" a form of existence with separate status from material reality, Freud translates Descartes' antithesis of the knowing mind and the nature it knows into an opposition within nature. As the lived side of corporeal being, unconscious wishes represent the form of existence in which nature stands conflicted within itself. "Let us imagine ourselves," Freud suggests in "Instincts and Their Vicissitudes"

> in the situation of an almost entirely helpless living organism, as yet unoriented in the world, which is receiving stimuli in its nervous substance. This organism will very soon be in a position to make a first distinction and a first orientation. On the one hand, it will be aware of stimuli which can be avoided by muscular action (flight); these it ascribes to an external world. On the other, it will also be aware of stimuli against which such action is of no avail and whose character of constant pressure persists in spite of it; these stimuli are signs of an internal world, the evidence of instinctual needs. The perceptual substance of a living organism will thus have found in the efficacy of its muscular activity a basis for distinguishing between an 'outside' and an 'inside'.[47]

And a bit later in the same essay, in an examination of the "polarities" by which "our mental life as a whole is governed", Freud draws upon this biological parable in order to ground the epistemological distinction first articulated by Descartes in the rudimentary existential polarity that informs organic existence. For "the antithesis ego [8] non-ego (external), i.e., subject-object, is . . . thrust upon the individual at an early stage" sheerly by the vicissitudes of its being organic. "This antithesis remains, above all, sovereign in our intellectual activity and creates for research the basic situation which no

Notes

SE = *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, James Strachey, General Editor (Hogarth Press, London: 1953-64).

1. The clearest expression of this outlook is found in "A Difficulty in the Path of Psychoanalysis" (1917), *SE* XVII, pp. 140-1, where Freud places psychoanalysis as the last of the "three blows to human narcissism" wrought by the researches of science, the first two being dealt by Copernicus and Darwin.

2. Trans. by J. MacQuarrie and E. Robinson (Harper & Row, New York, N.Y.: 1962), section I.5.B., pp. 210-24.

3. Trans. by J.B. Baillie (Harper Torchbook, New York, N.Y.: 1967), p. 83.

4. *SE* V, p. 603.

5. "The Changing Impact of Darwinism on Philosophy", *Journal of the History of Ideas*, v. 22, 1961, p. 454.

6. *Op. cit.*, Hegel, p. 87.

7. "An Outline of Psychoanalysis (1940 [1938]), *SE*XXIII, pp. 144 & 157 respectively. While these statements are drawn from Freud's last work, the same understanding is patent in his very earliest writings. *cf. Project for a Scientific Psychology* (1895), *SE* I, p. 307.

8. Here I have in mind particularly Jürgen Habermas' *Knowledge and Human Interests*, (Beacon Press, Boston: 1971), chs. 10, 11 & 12, as well as Paul Ricoeur's *Freud and Philosophy: An Essay on Interpretation* (Yale University Press, New Haven: 1970). Characteristically, Jean Piaget discusses psychoanalysis under the heading of "Linguistic Structuralism" in his *Structuralism* (Harper Torchbooks, New York, N.Y.: 1971).

9. "It seems to be," Freud wrote on March 10, 1898, "as though the theory of wish-fulfilment has only brought the psychological solution and not the biological, or, rather, metapsychical one. (I am going to ask you seriously, by the way, whether I may use the name of metapsychology for my psychology that leads beind consciousness.) Biologically, dream life seems to me to derive entirely from the residues of the prehistoric period of life (between the ages of one and four) [8] the same period which is the source of the unconscious and also contains the aetiology of all the psychoneuroses, the period normally characterized by an amnesia analogous to hysterical amnesia." *SE* I, Letter 84, p. 274.

10. *SE* V, p. 378.

11. *Cf. The Ego and the Id* (1923), ch. 3, *SE* XIX, pp. 28-39 *passim*.

12. "Philosophical Aspects of Darwinism", an essay in *The Phenomenon of Life: Towards a Philosophical Biology*, (Delta Books, New York, N.Y.: 1966), p. 47. This brilliant essay was the source of inspiration for the interpretation of psychoanalysis offered here, although Jonas does not deal with Freud in any respect.

13. *SE* IV, p. 63.

14. *The Origins of Psychoanalysis*, eds. M. Bonaparte, A. Freud and E. Kris, (Basic Books, New York, N.Y.: 1954). The first quote is from Letter 39 dated Jan. 1, 1896, p. 141; the second from Letter 44, April 2, 1896, p. 162.

15. *SE* IV, pp. 41-2. While I have rearranged the sequence of points Freud makes in this passage in order to highlight those relevant to my argument, I have not, I think, violated thereby either the spirit or letter of Freud's views as conveyed in the passage.

16. *SE* VI, pp. 258-9.

17. *cf. Logical Positivism*, ed. A.J. Ayer (Free Press, New York, N.Y.: 1959), particularly Rudolf Carnap's "The Elimination of Metaphysics Through the Logical Analysis of Language", pp. 60-81.

18. In *Letters of Sigmund Freud (1873-1939)*, ed. Ernst L. Freud, (Hogarth Press, London: 1970), Letter 228 dated Jan. 30, 1927, p. 376.

19. *Op. cit.*, Hegel, p. 86.

20. *SE* XVII, "A Difficulty . . .", pp. 140-1. The public controversy surrounding the *Origin of Species* attests to the authority science carried by that time in addressing issues of general human concern.

21. *Introductory Lectures* (1915), *SE* XV, p. 22.

22. It should be noted, however, that natural science itself has had no little difficulty in knowing what to do with the spoils of its victory. These difficulties are patent in the various "scientific" speculations on how "consciousness" evolved by a process of natural selection. What all such efforts forget is that the efficacy of a mechanistic causal scheme such as Darwin's is underwritten by an ontological imperative that eliminates from the outset consciousness (awareness, purpose, intention, volition) as irrelevant to the phenomenon to be explained.

23. Book Beta, *Metaphysics*, trans. R. Hope, (Ann Arbor Paperbacks, University of Michigan Press, Ann Arbor: 1960), p. 51, (999b:5-7).

24. *Op. cit.*, Jonas, pp. 47-8 *passim.*

25. *Ibid.* p. 40, n.

26. *The Philosophical Impact of Contemporary Physics*, (Van Nostrand, New York, N.Y.: 1961), p. 122.

27. *Ibid.*, p. 121. Ĉapek understates his case by adding the proviso that the "system" be "isolated". It is clear from Laplace's formulation, however, that the universe is itself just such an isolated system.

28. *Op. cit.*, Jonas, p. 38.

29. *Ibid.*, p. 40.

30. Indeed, Kant, no enemy of Newtonianism, thought "organized beings" to be unthinkable without the principle of teleology. *cf.* the *Critique of Judgement*, trans., J.H. Bernard, (Hafner Publishing Co., New York, N.Y.: 1968), sec. 75, p. 248. For a perceptive consideration of the significance of Darwin's elimination of teleology, *cf.*, John Dewey, "The Influence of Darwin on Philosophy" in *The Influence of Darwin on Philosophy and Other Essays in Contemporary Thought*, (Indiana University Press, Bloomington: 1910), esp. pp. 1 & 5.

31. *The Origin of Species by Means of Natural Selection*, first edition, (Penguin, Middlesex: 1968), p. 456.

32. *The Logic of Life: A History of Heredity*, (Vintage Books, New York, N.Y.: 1973), p. 296. Jacob is an eminent mechanist molecular biologist.

33. *Op. cit.*, *Origin*, pp. 27-8. Also the Introduction to *The Interpretation of Animal Form* by W. Coleman, (Johnson Reprint Corp., New York, N.Y.: 1967). The book is a collection of classical essays on morphology, in reprint.

34. Quoted in E.S. Russell, *Form and Function: A Contribution to the History of Animal Morphology*, (John Murray, London: 1916), p. 253.

35. *Leonardo da Vinci and a Memory of His Childhood*, *SE* XI, p. 97.

36. Trans. W. Kaufmann, (Vintage Books, New York, N.Y.: 1966), p. 161.

37. *Op. cit.*, Aristotle, Book Alpha The Less, p. 36, (993b:28-32).

38. *SE* XI, p. 136.

39. *SE* XI, p. 135.

40. *Three Essays on the Theory of Sexuality*, *SE* VII, p. 239.

41. *Ibid.*, p. 234.

42. *Op. cit.*, *Letters of Freud*, Letter 149, p. 293.

43. *SE* XI, p. 137.

44. *SE* XVII, "The Unconscious", p. 187.

45. *SE* V, pp. 565-566.

46. *SE* V, p. 620.

47. *SE* XVII, "Instincts and Their Vicissitudes", p. 119

48. *Ibid.*, pp. 133-4.