

“What Makes Psychiatry and Psychology Unique? An Argument for the Retention of the Narrative in Our Work.”

Welcome to the 21st century where the report of the mental status examination will now begin: “The patient is a 34 year old, divorced, childless, female Caucasian amygdala who enters the session accompanied by her prefrontal cortex.” No longer is the primary concern when confronted by a patient the search for the narrative, the story the patient is telling in the unfolding of his or her behavior, symptoms, dreams, character and life, the story of where he or she comes from, is now, and is hoping to go. Instead, we find ourselves entering a post-Freudian era where a tsunami of radical neurobiological reductionism and “systems-speak” is engulfing the field. There, they will have profound effects on the training of psychiatrists and other mental health care professionals, deeply altering the work they are doing, and, most important, the way they regard the human beings they are working with. History taking now serves the purpose of accumulating symptoms and signs to indicate those underlying neurobiological and systems difficulties. Stasis rather than flux is the order of the day. The search for meanings and purposes is being abandoned and the search for causes rooted primarily in the underlying neurobiology and neurophysiology substituted in its place.

The newly developing guidelines for “evidence-based”, “outcome-studied”, “best-practices”, “pay-for- performance” and such initiatives are evermore intruding into the therapist-patient relationship and decision-making. We see increasing mechanization, centralization and control of the direction of psychiatry and psychology, moving them further in a radically reductionistic direction. This movement has been aided and abetted by the economic forces dictated by the continuing rise in health care costs and the managed care companies’ attempts to restrict treatment to its least expensive, least time consuming, and most mechanical processes. Psychodynamic psychiatry and psychology are seriously endangered, with a decline in interest in the patient’s narrative of his or her life, the way he or she has lived it, is living it, and wants to be living it in the future.

I thought of these powerful trends in our field while reading *What Makes Biology Unique? Considerations on the Autonomy of a Scientific Discipline*, a book written by the distinguished evolutionary biologist Ernst Mayr and published in 2004 just before he died in 2005 at the age of 100. His discussion of and his opposition to a similar reductionism in

biological science seemed to me to apply strongly to our work as well, and his response to the radical biological reductionism engulfing his field clarified for me how we must regard and respond to the neurobiological reductionism pressing down on our psychiatry and psychology today, a reductionism that can be seen in papers presented at meetings, in journals, in case history reports, on e-mail listservs, even filtering down to discussions by candidates examining for the psychiatry boards. In psychoanalysis, the heartland of the narrative, we find some psychoanalysts have felt driven to search for legitimacy for psychoanalysis itself by explaining its major concepts primarily in terms of underlying neurobiology.

Ernst Mayr derives his world-view from Charles Darwin, whom he sees as not merely an evolutionary biologist but as one of the greatest of philosophers of science, a man who radically changed the way we look at the world. Darwin established a secular science, rejecting a supernatural explanation of the world. He saw the biological world as dynamic, evolving, rather than remaining constant. He saw plants and animals as living organisms derived from common ancestors in adaptation to the environment in a manner continually regulated by natural selection. He rejected the essentialism of a static Newtonian typological thinking applied to biology, and, instead, developed the concept of population thinking, emphasizing the critical role of variation among the uniquely different individuals of a large population. It is this individualism, Mayr points out, that differentiates the animate from the inanimate world, and the evolutionary sciences from the exact sciences such as physics and chemistry. He notes the universal similarity of the phenomena described and the static eternity of the material of the exact sciences, such as in Newtonian mechanics and the physics of Laplace. He states that these reductionistic and physicalistic ideas are really not fully applicable to biology for there are no inanimate systems in the world, from the atoms to the galaxies, that are anywhere near as complex as the biological systems of the macromolecules and cells. And here one must add that our psychology is even more complex, for the most part existing in and a manifestation of only the highest and most complicated living organisms, well above the macromolecules and cells.

Sigmund Freud too was deeply influenced by Darwin, both directly and indirectly: directly insofar as he had read Darwin himself; indirectly insofar as he was deeply influenced by the neurologist John Hughlings Jackson who had derived his own Darwinism through Herbert Spencer. Jackson had applied evolutionary concepts to his neurology and his

psycholinguistic understanding of aphasia in a 1878 journal article in *Brain* (“On Affections of Speech in Disease of the Brain”). Freud in 1890 adopted that approach in his book *On Aphasia*, and subsequently applied the Jacksonian model of neurological “evolution” and “dissolution” (Spencer’s terms) to his, Freud’s, dynamic psychological model of maturation and regression in *The Interpretation of Dreams*. This was the fundamental concept that gave rise to the development of psychoanalytic and psychodynamic psychology with its dynamic, evolutionary concepts, as opposed to the more static psychological and psychiatric concepts prevailing in middle Europe at that time under Helmholtz, Exner, Kahlbaum, Meynart, etc.

Mayr’s book has deep implications for our work. Psychodynamic psychiatry and evolutionary biology are similar in that they are both autonomous sciences in the Darwin-influenced, historical, social, evolutionary category of science. As such they are more like *Geisteswissenschaften*, individualistic, historically oriented and time influenced dynamic sciences existing in social contexts, akin to the arts and humanities in many ways, differing greatly from the static, physicalist exact sciences of physics and chemistry. These latter are *Naturwissenschaften* and are not fundamentally individual or biopopulation-oriented. Where psychodynamic psychiatry and psychology are concerned the language is metaphor, purposes, intentions and symbols, while the exact sciences speak in the language of mathematics and mechanism. Mayr describes evolutionary biology as separate in this way from functional biology, and it could be said that psychodynamic psychiatry and psychology are similarly separate from the academic, experimental and behavioral psychologies. All psychologies include neurobiology but psychodynamic psychologies are more than that. The reason for this lies in their non-linear, non-additive, not exactly predictable elements, emergence, contingency and chance, factors that play a major role in the evolutionary sciences, and particularly in psychodynamic psychologies. As noted, the latter exist in social contexts and in time, with narrative, hermeneutic, interpretive elements that tell of the story the patient has to live and tell. The language is metaphor and symbolism, and it exists in a universe of meanings, purposes, motivational directions and intentionality rather than blind causes and inanimate forces. Although the patients’ illnesses arise from neurobiological factors expressing themselves in the patients’ thoughts and behavior, there is more than that here, and the triumphalism of the exact sciences must be responded to. The necessary is being confused with the sufficient. One must have neurobiology but that does not explain “Hamlet.”

Another major difference between the two categories of sciences lies in the method of validation of their hypotheses. The exact sciences validate by experiment, but where time is a factor in the science and events move forward, ever in a state of Heraclitus-like flux, “one cannot,” Mayr states, “experiment with biological happenings in the past.” The historical sciences, existing in time, use a different method, Darwin’s. In evolutionary sciences this is the historical narrative. One “develops an imaginary scenario of past happenings on the basis of their consequences . . . [and] . . . then makes all sorts of predictions from this scenario and determines whether they have come true.” For example, in one of Darwin’s “biogeographic reconstructions” Darwin discusses “which postulated former land bridges . . . are supported by current [species] distributions and which are not.” Is this not similar to what we do in our psychodynamic psychotherapy?

These words in quotes are taken from Ernst Mayr’s book. Where he sees in the cosmos “no inanimate systems . . . anywhere near as complex as the biological systems of the macromolecules and cells,” he sees these evolutionary derived living systems as “rich in emergent properties because forever new groups of properties emerge at every level of integration.” These “biological systems are open systems; the principles of entropy therefore are not applicable.” The complexity is related to the capacities for reproduction, replication, adaptedness, growth and hierarchical organization, capacities not truly existing in the inanimate world. Mayr goes on to say that philosophically the “inanimate world consists of Plato’s classes, essences and types, with the members of each class being identical and with the seeming variation being ‘accidental’.” However, “in a biopopulation, by contrast, every individual is unique, while the statistical mean value of a population is an abstraction.”

If this is true for historical (evolutionary) biology, is it not even more true for an historically oriented psychology? How can that be reduced to or explained by the constant kind of activity of the neuronal pathways, neurotransmitters, neuroreceptors, neuromodulators and neuroregulators, interacting on each other but never moving dynamically forward in the ever-changing flux of things that Heraclitus spoke of? For no matter how much they rush around and act on each other, back and forth, they are always the same and doing the same things and preserving the same status, just as Democritus saw it. The historical evolutionary and the unchanging exact sciences both exist; each is a different way of knowing.

Mayr therefore, following Darwin, contrasts the static inanimate world with the animate world inhabited by what Darwin terms a biopopulation where every individual, by contrast, is unique. In the inanimate world an electron is an electron, everywhere and all the time, and a neurotransmitter similarly. Even the substance and structure of the biological parts, such as the amygdala, are similar and we can identify the tissue in every amygdala and classify it. But, Mayr points out, no two of the six billion humans living are the same. Mayr speaks of how Newton's framework of inalterable laws predisposes to a typology, as if by necessity, and goes on to speak of how Darwin's introduction of population thinking into biology makes an entirely different concept from the typological thinking one finds in the physical sciences. Population thinking gives rise to concepts, and although we may call them "laws" they are quite different from the Newtonian natural laws. They are subject to dual causation and are influenced not only by natural laws but by genetic programs as well, he says, a clear demarcation between inanimate and living processes.

We might add that where psychiatry and psychology are concerned, there are in addition evolving sociocultural processes transmitted from generation to generation through language and other modes of communication, further influencing the existing living processes and activities of Homo Sapiens and greatly complicating the stories the individual members of the species have to tell.

Stephen Jay Gould, in his last book, *The Hedgehog, the Fox and the Magister's Pox* (2003), saw these two ways of scientific knowing not as oppositional but as complementary. He spoke of how attempts to extrapolate from the exact sciences to the biological sciences were seriously problematic because of such matters as previously mentioned. For example, the phenomenon of emergence, a phenomenon that evolves out of the complexity of living systems. There, when A plus B combine to form C the resultant C can be more than just A plus B, can contain something new that has emerged in the new totality, non-linear and non-additive, something other than either or both, something that can be understood and explained in retrospect but could not have been foretold or predicted beforehand from any of the parts that so combined. Who, for example, could have predicted that as the first metazoans developed out of the protozoans, a creature would later appear in that slime, climb out of the water onto dry land, stand up, and Aeschylus, Sophocles, Dante and Shakespeare, Beethoven,

Bach and Mozart, would ultimately emerge? And other creatures such as we are, to appreciate their work?

Similarly with another phenomenon, the matter of chance and contingency that produces that which can be explained and understood only in retrospect but which too could not have been foretold or predicted. Who, for example, could have predicted, when the great lizards roamed this earth, such as Tyrannosaurus Rex. dominant in the American West, that a meteor would slam into the Yucatan, block out the light and heat for a long period of time, cause the death of the great exothermic lizards, except for a few, smaller ones insulated with feathers that became birds? And who could have predicted then that that small, shrew-like mammal and a few other slightly larger ones, would develop, vary, evolve, and ultimately become the dominant species, Homo Sapiens, and give rise to Aeschylus, Sophocles, Dante and Shakespeare, Beethoven, Bach and Mozart, and we others who can appreciate them? The effects of that chance and contingency on evolution could only be seen and understood in retrospect, never predicted. The factor of exact prediction, is at the heart of the exact sciences, the *Naturwissenschaften*, not the *Geisteswissenschaften*. There, in the historical sciences existing in time, narrative reigns.

The word “narrative” is derived from the Latin and the Greek words to know, or to come to know. As we use it, it tends to mean the connecting of a series of events so as to tell a story, usually with a beginning, middle and end, a story with entelechy, a striving toward an end, toward a goal that emerges to give meaning to the succession of events that otherwise would have meant nothing. It is as though we see a piece of paper filled with dots that seem random and to have no meaning, but when we take a pencil and connect the dots, meaning suddenly emerges, showing that the dots had had a point all along, although one not seen at the time. In psychodynamic work meaning arises similarly out of the establishment of psychic continuity and emerges from making the psychical connections between events. Otherwise the events themselves mean nothing and there is nothing to know except an accumulation of unrelated facts, like the mass of meaningless dots. Without that connection and continuity there is not really “knowing”, not in the larger sense.

A patient’s story may make sense and have a meaning up to a certain point, but then, for some reason, it loses its point, its centrality and the end toward which it was moving, that which the Greeks would call its good. Something else has happened, and the life changes and

symptoms appear instead. The point where it changed was a discontinuity, with the continuity to be restored by psychodynamic work so that the life and the discontinuity emerging from the other trend, could be understood and something done about it, restoring the original continuity, or a new one. What had happened here? True, there was biological machinery underneath, but there was something evolving in the life's narrative too. Is this not what is contained in a hermeneutics, the seeing of the data as constituting a text, albeit a coded, distorted, mutilated one, with discontinuities requiring explanation, exegesis, and a Rosetta stone to form an explanatory hypothesis? But how then does one distinguish the true hypotheses from the false ones, also made to fill in the discontinuities and give explanation to that which happened? How do we know that our explanations are not fallacious, just illusions, incorrect even though brilliantly explanatory, and how do we know they are true?

This was discussed earlier, but perhaps one can never know anything in an absolute sense, can only approximate the absolute. Perhaps one cannot really come as close to the absolute in the *Geisteswissenschaften* as the exact sciences can, but the absolute knowledge of everything escapes them too, for their science in its own way can be seen to keep moving and changing as well. Psychodynamic psychiatry and psychology take their cues from Darwin. Gerald Edelman with his "neuronal Darwinism" sees scientific understanding in both evolutionary biology and psychology develop much as Karl Popper, Thomas McGlashan and others see it happen in psychology, by a kind of pruning process on the hypotheses, from a preexisting set of alternatives, either or both on the neuronal and the psychological levels. From this pruning of alternatives knowledge grows, out of cycles of hypothesis proliferation and elimination, a result of the confrontation with experience. It grows out of the evolution of biological heritable traits with selection and elimination by experience. The process is blind but the alternatives that are turned to and that we accept are the ones that correct, confirm and/or add to the hypotheses about the story the patients are telling in their behavior and illnesses. Those alternatives that are acceptable are the ones that are found to be most advantageous. The evaluation of the hypotheses occurs with reference to and coherence with other available information. The many useless and disadvantageous ones wear away in culturally consensual interactions in time, if not immediately, suffering alteration in interactions with the multitude of "truths" held out there in other cultures. Is this not the very essence of Darwinism?

In addition, and particularly important, one must ever be on the lookout for the negative, for the ill effects of some belief systems, unintended but nevertheless unhappy in their results, and one must be ready to alter, even abandon those hypotheses if necessary. *Primum non nocere*: the first thing is not to cause harm. And in correcting the hypotheses so as to cause good and not harm, psychodynamic psychiatry and psychology move slowly and asymptotically toward the truth, if not in a straight line, at least forward. Max Planck, the theoretical physicist and developer of quantum theory, put it this way in his 1959 book *The New Science*, most pragmatically: “That world view is the best that is the most fruitful.” As such it is the most true, in psychodynamic psychology as in theoretical physics.

What drives all this, what does it strive toward? The term teleology in the cosmic sense has a bit of a bad name in this era of “Intelligent Design”, just as it did to Darwin in the middle and later 19th century regarding the idea of “special creation”. But teleology in another sense has always been essential to the historical sciences underlying medicine. We can see teleology as far back as the Hippocratic era where illness was seen as resulting from the thwarting of the innate, inborn entelechy, a classical Hellenic notion. The entelechy, the good, the end of the acorn was in becoming an oak tree, and it was built into the acorn to move in that direction or else be ill, so to speak. Similarly two and a third millennia later with the understanding of evolution by natural selection, where the entelechy lay in the forces driving life to adapt in order to survive, by the mechanism of natural selection. That was the engine of evolution. (Here Mayr preferred the term teleonomy for Darwin’s description, to avoid its being mixed up with a religious cosmic teleology such as nowadays in the concept of the so-called “Intelligent Design”.)

In regard to teleology Plato’s *Timaeus* quotes the Hippocratic hypothesis: “In men, the organ of generation, becoming masterful and maddened with the sting of lust, seeks to gain absolute sway, and the same is the case with the womb of women. The animal within them [the uterus, the *hysteron*] is desirous of procreating children, and when remaining unfruitful long beyond its proper time gets discontented and angry, and, wandering in every direction of the body, closes up the passages of the breath, and, by obstructing respiration, drives them to extremity, causing all varieties of disease.” Hence “hysteria”. So it is logical that the treatment would be “to light the lamps of Hymen.” The idea of the thwarting of teleology as the cause of disease was given a psychophysiological basis in the “wandering womb”.

Physicians have tended to understand things as physiologically teleological, even after the decline of Grecian rationalism and the triumph of Judeo-Christian supernaturalism that increased the role of vitalism and animism over mechanism. Freud, living during medicine's progressive rediscovery of Grecian rationalism including the factor of teleology, told of how, while making rounds with a senior colleague, the latter, on leaving a house with an ill woman, said to Freud that these were really matters of the bedchamber; the husband was impotent and the proper prescription for her would be: "*Penis normalis, dose[m] repetetur*". Shades of the *Timaeus*.

The relationship between the individual's history, teleology and narrative is, I think, self evident. There is no such history or teleology in the exact sciences and therefore there can be no narrative there. At the same time there cannot be so great an exactness in the historical as in the exact sciences. Limitation of exactness is something that exists in the historical sciences, in psychodynamic psychiatry and psychology, but in a way it also exists in the exact sciences as well, although not as much, not exactly the same, but greatly similar. One begins there too by formulating an hypothesis and then taking a chance and making a "bet" on that hypothesis in the search for that which will be, though ultimately inexact and incomplete, pragmatically most useful. We have begun the explanation by making a "wager" on the hypothesis, as Pascal would, hoping that hypothesis will illuminate the narrative. A propos of this Max Planck wrote in *The New Science* that where physics was concerned there were three worlds: first, the world of perception, of sense knowledge; second, the transcendental world out there beyond the retina and the fingertips; and, third, the world of physics, this latter being the only one based upon a hypothesis. This third world, the hypothesis, moves progressively, Planck says, receding from the world of perception and moving toward the world out there, becoming increasingly de-anthropomorphized and increasingly remote, abstract, quantitative and mathematical in its formulation as it goes. This is the world of physics, an exact science, not the world of psychodynamic psychiatry and psychology, but the latter is similar in this way, with an asymptotic progression of knowledge and the approximation of its hypotheses to the transcendental world, outside us and within us. As Planck says, in our science, as in life, we are always moving "from the relative to the absolute", in search of the latter and never fully achieving it. In the world of the exact sciences, the *Naturwissenschaften*, mathematics is the language. In the world of the *Geisteswissenschaften*, the humanistic and historical sciences,

including both evolutionary biology and psychodynamic psychiatry and psychology, the language is metaphor rather than mathematics, but the movement is in the same direction. The difference may really be a matter of degree, quantitative rather than qualitative.

Galileo too had said that the language of nature speaks in mathematics. Human beings speak in metaphor, but the difference may not be as clean as that. Alan Lightman, in his essay on “Science as Metaphor” in *The American Scholar* in 1988, spoke too of how as physical science advances it becomes more and more abstract, more and more remote from human experience, less and less the language of human beings and the way humans understand things. Yet he suggests that even in physical science metaphor plays a role and has profound influence, even on the scientists, for even in physical science, he says, “we are blind men, imagining what we do not see.” Planck believed too that even where physics is concerned we shall never fully reach or fully know the outside world. He says, “We are in a position similar to that of a mountaineer who is wandering over uncharted spaces, and never knows whether behind the peak which he tries to scale there may not be another peak still beyond and higher up.” With our psychodynamic psychology it is similar. But that is no reason to stop, no more for us than for the physicist. Planck quotes Gotthold Ephraim Lessing: “Not the possession of truth but the effort in struggling to attain to it brings joy to the researcher.” Planck then adds that “the value of the journey is not in the journey’s end but in the journey itself. . . . Health is maintained only through work.” And he says, “as with all life . . . so it is with science.” This is the journey of the psychodynamic psychotherapist and the patient, both of them joining in the process, in the journey.

We must not be overwhelmed by the triumphalist claims by the practitioners of the exact physical sciences, of their achieving of an absoluteness that we cannot achieve. Albert Einstein himself saw it quite differently, with humility, and he spoke in a manner relevant to our work and to what we and the patient seek in it. “Human nature,” he writes. “always has tried to form for itself a simple and synoptic image of the surrounding world. In doing this it tries to construct a picture which will give some sort of tangible expression to what the human mind sees in nature. That is what the poet does, and the painter, and the speculative philosopher and the natural philosopher, each in his own way. Within this picture he places the center of gravity of his own soul, so that he will find in it the rest and equilibrium which he cannot find within the narrow circle of his restless personal reactions to everyday life.” In this

regard he sees the theoretical physics of the natural philosopher as different from the other world pictures. He sees it as requiring a “scrupulous correctness and internal logical coherence, which only the language of mathematics can express. On the other hand [the physicist] has to be content with reproducing the most simple processes that are open to our sensory experience, because the more complex processes cannot be represented by the human mind with the subtle exactness and logical sequence which are indispensable for the theoretical physicist.” Einstein did love Mozart too, as he loved theoretical physics.

He went on to say, “If . . . [all the general laws upon which the thought structure of theoretical physics are built] . . . were fully known, one ought to be able to deduce from them, by means of purely abstract reasoning, the theory of every process of nature, including that of life itself.” But he hastens to add, “I mean *theoretically*, because in practice such a process of deduction is entirely beyond the capacity of human reasoning, . . . [and] . . . is not due to the nature of the universe itself but rather to us.” It is a limitation of the human mind. Einstein advocates an intellectual and scientific humility for scientists, and we had ought to remember that when we hear that which can seem a kind of arrogance, as Mayr thinks of it and as we might think too, in the hubris of the radical neurobiological reductionists as they tell us how they will be able to explain everything and solve, maybe even say they have solved, “the mind-body” problem, the problem that has evaded human solution since Heraclitus and Democritus.

So Einstein and Planck try to teach us humility and the acceptance of the limitations of our human minds. But there is more than humility here to be learned. There is the possibility of danger too, grave danger to be avoided. There is danger in the denial of the individual and his/her individuality, the denial of variation in the population and that which is uniquely and individually human, as the radical reductionists tend to do. And what can that lead to?

In his 1988 book, *Murderous Science: Elimination by Scientific Selection of Jews, Gypsies, and Others; Germany 1933-1945*, Benno Muller-Hill, Professor of Genetics at the University of Cologne, studied what had happened there. He urged present day psychiatrists to review the psychiatric journals of that time and keep in mind what can tend to happen when such a reductionistic point of view prevails. He describes that view and its consequences, and he says that “to reduce other people to the status of depersonalized objects is of no help to them whatsoever. The ‘scientific’ psychiatrist does not console those in despair, he calls them depressed. He does not unravel the tangled thought processes of the confused, he calls them

schizophrenic. If he speaks to those in despair, to the confused, to those who think slowly, as a wise, friendly person speaks to another person, then he is no longer considered to be an objective scientist.” He worries that then “the patient, this ‘other person’ continually becomes more remote and less significant.” He asks “if this whole style of investigation, together with its predictions, is anything more than an ever more marked degradation of the individual until he becomes a mere cipher? It seems . . . that the inexorable encroachment of mechanistic science, which began in the eighteenth century in the Age of Enlightenment, on activities more properly belonging to the human individual who speaks and gives signs, has had unforeseen and devastating effects. In science all that really matters is getting interesting, accurate results as quickly as possible; there is simply no time to talk to patients. Moreover the language of the experts is a restricted, unelaborated jargon, . . . and is suitable only for communication among themselves.” He says that “it does not describe reality, . . . but, rather, abstractions of abstractions. So conversation between patients and experts is increasingly difficult, if not impossible. And the introduction of machines in no way eases the situation, for the more expensive and complicated the machines, the more the investigator distances himself from the person who is being investigated. This attitude reduces the person to a subservient depersonalized object.” Could it not lead to that, at least in part, in dealing with the individual patient, even if not all the way to another Holocaust? Just little, individual Holocausts?

The capacity for and our attention to the narrative, the story he/she is telling, represents, emerges from, and attests to the humanness and individuality of the human being. Seeing the individual as one of a number of variants in a biopopulation leads to the understanding of and hope for the further development of the psychosocial aspects of the species. As the individual interacts with other individuals in the biopopulation, that in turn results in the development of somethings new, and then change by selection and adaptation within the social context, which is followed by growth of the results. The narrative protects against the dangers of excessive objectification and dehumanization. We must hold on to the idea of the narrative as a kind of oasis in the desert, just as monasteries and places of learning were in the Dark Ages, for the sake of our science and our work, and for the protection of the humanity we serve.

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