The modern scientific physician: 7. Theory of medicine

Olli S. Miettinen

Medicine was a "productive art" (Aristotle), and now it is an aggregate of such arts. It thus is supposed to have products, and indeed it does. Hippocrates' empirico-rational medicine emphasized the cognitive products the concepts of which it introduced — diagnosis and prognosis. In this *gnosis* genre of medicine's products, the diagnosis versus prognosis duality has been retained up to this day, except that just recently "etiognosis" has been posited as a gnostic entity separate from diagnosis.[1,2]

Production of gnosis and that of health itself are matters of human action; and according to a pre-eminent leader in the theory of human action — *praxeology* — "action without thinking, practice without theory are unimaginable."[3] Aristotle presumably was of the same frame of mind, as he is said to have remarked, perhaps in a fleeting episode of a medical educator's snobbery, that he considered a gentleman sufficiently educated if he knew the theory but not the practice of medicine. Yet today, while countless ladies and gentlemen know the practice of their own specialties of medicine, they do not really know the theory of medicine. Practice without solid theory actually is the reality even in modern 'scientific' medicine of the Flexner-codified sort.[4] There does not even exist, at present, a codified body of theoretical tenets that ought to be adopted by practising physicians to guide their production of gnosis and health.

Perhaps the most fundamental tenet of praxeology bearing on scientific arts such as those of modern medicine is this: "science never tells a man how he should act; it merely tells how a man must act if he wants to attain definite ends," as "ultimate decisions, the valuations and the choosing of ends, are beyond the scope of science."[5] So, an orientational concern in the theory of medicine is, Who is the decision-making "man"? We still hear about doctor's orders, but is it not that at issue is the client's health, that it is his/her valuations and ends that matter?

Physicians like the honorific "Doctor" but do not always know that the word etymologically refers to *teacher*. Might it not serve as a fundamental tenet of the theory of medicine that the clinician's principal responsibility is to teach the client about his/her health — including, in modern medicine, how prospective intervention might change it for the better? If so, then analogously for the practitioner of community medicine.

This tenet obviously is, or would be, predicated on actually *knowing* about the individual's or community's — the client's — health. The imperative of aiming at such knowing — and not merely at opining — indubitably is, or at least should be, a core tenet in the theory of medicine. Related to this, theory of medicine should define the nature of what this knowing is about. It should be understood for orientation that, in general, medical gnosis is about the hidden, the unknowable, questions subject to probabilistic answers only; and theory is to define what the *correct probabilities* are, in principle. Modern scientific physicians should be able to agree that the correct diagnostic probability is the *proportion* of instances like the one at hand (diagnostic profile) in general (in the abstract) such that the illness in question is present; that the correct etiognostic probability is the *proportion* of instances like the one at hand (illness, antecedent present; etiognostic profile) in general such that the antecedent was causal to the illness; and that the correct prognostic probability is the *proportion* of instances like the one at hand (prospective intervention; prognostic profile) in general such that the intervention effect, course or outcome in question actually will occur.[1] In this framework, the practitioner's gnostic knowing is principally — or most characteristically — about the relevant general (abstract) proportions, their magnitudes.

Where gnosis is scientific beyond the imperative of rationality, the presumed magnitude of the gnosis-relevant proportion derives from medical science; and more specifically, this aspect of scientific gnosis is a matter of deploying knowledge.

Emblematic of the state of the theory of medicine is its treatment in eminent textbooks of medicine. Osler's *The Principles and Practice of Medicine* did not, despite its title, address the principles of medicine at all: the content was solely about particular illnesses. A current textbook entitled *Principles of Internal Medicine*[6] has an early section entitled "Quantitative Aspects of Clinical Reasoning." This section begins with quite a telling passage: "The process of clinical reasoning is poorly understood but is based on factors such as experience and learning, inductive and deductive reasoning, interpretation of evidence ... and intuition that often is difficult to define." So, there indeed is said, implicitly, to be no established body of theory for setting gnostic probabilities and, what is more, no commitment to pursue it and the deployment of general knowledge in such a logically tenable framework. Instead, "clinical reasoning" is given an *a priori* status — as though it in itself were a domain of worthwhile descriptive inquiry (into the cognitive psychology of physicians) as opposed to it calling for normative development and adherence to cognitive norms.

Theory of gnosis-oriented medical *research* — of gnostic science — can be said to exist to the extent that there is agreement about its associated concepts and principles. For, to quote a pre-eminent humanist-intellectual of our time, "where concepts are firm, clear and generally accepted, and the methods of reasoning and arriving at conclusions are agreed between men (at least the majority of those who have anything to do with these matters), there and only there is it possible to construct a science, formal or empirical."[7] Like the theory of medical practice (medicine for short), that of directly practice-relevant (gnosis-oriented, quintessentially applied) medical research also remains poorly developed. Diagnostic research is still, with some notable exceptions,[8] being held back by a misguided theoretical framework for diagnosis itself;[1] etiognostic research has languished because of the absence of this very concept;[1,2] and in respect to prognostic research on the central issue of effectiveness of interventions, the US government has gone to stipulate *against* randomized controlled trials, something that now is recognized even by the government itself as having been "one of the signal failures of the federal effectiveness effort."[9] US government stipulations *for* randomized controlled trials in general diagnostic and specifically screening-diagnostic research, quite eminent at present,[10] I predict also to turn to regrets.

The Hippocratic, prescientific ideal was a physician learned, wise, modest and humane. In these terms, the modern scientific physician, while still not having access to broadly agreed-upon theory of medicine, might nevertheless be:

- wise enough to pursue the adoption of intellectually tenable concepts and principles — theory — of the practice of medicine (in addition to being learned about the relevant substantive topics);
- wise enough to resist established and authoritative yet less than compelling ideas about the essence of medical gnosis and of gnosis-oriented and interventive procedures, about the useful properties of these procedures, and indeed about the essence of medicine in general and that of scientific medicine in particular;
- wise enough to appreciate that no client presents a unique challenge but, instead, yet another instance of a gnostic profile familiar to the specialty, calling for the specialty's general, theory-guided and knowledge-based translation to gnostic probability (guideline-defined perhaps);
- wise and modest enough to appreciate that knowing the theory and subject matter of practice, while a prerequisite for understanding directly practice-relevant, gnosis-oriented research, is not tantamount to mastering the design, conduct or interpretation of the latter;
- wise and modest enough not to substitute delusions or pretenses of the scientist-physician for those of the Aesculapian god-physician, not even when actually a scientist; and
- modest and humane enough to appreciate that the clinical doctor's principal responsibility beyond knowing about the client's health — gnosis — is to teach the client about his/her health — for the client's own valuation and, insofar as the client desires, decision making; and, analogously for the community doctor.

All of these qualities, I believe, (s)he should have.

Dr. Miettinen is with the Department of Epidemiology and Biostatistics and the Department of Medicine, Faculty of Medicine, McGill University, Montreal, Que., and also with the Department of Medicine, Weill Medical College, Cornell University, New York, NY.

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Correspondence to: *Dr. Olli S. Miettinen, Department of Epidemiology and Biostatistics, Faculty of Medicine, McGill University, 1020 Pine Ave. West, Montreal QC H3A 1A2; fax 514 398-4503; olli.miettinen@mcgill.ca*

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