The Physician as Teacher

Epistemic function, cognitive function and the incommensurability of errors

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Summary

In many Hippocratic writings, the writers’ attention is often focused on registering and discussing medical errors. Far from being sporadic and fortuitous, these discussions represent a privileged rhetorical resource in order to produce different effects. The aims of my paper will be: 1) to determine some of the most important contexts in which errors become the object of medical discourse; 2) to distinguish, per exempla, the typologies of errors made object of discourse; 3) to give an epistemological outline which may clarify which functions these discourses have and whether these functions respond coherently to a conscious plan of medical knowledge.

The discussion of errors is a rhetorical strategy used by Hippocratic physicians in relation to a variety of different subject-matters. The aims of my paper will be:

1) to determine some of the most important contexts in which errors become the subject-matter of medical discourse;
2) to establish, per exempla, the types of errors which are made the subject-matter of such discourse;
3) to provide an epistemological outline which may clarify the functions of these discourses, and discuss whether these functions respond coherently to a conscious plan of construction of the medical knowledge.

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Before addressing the question in hand, it would be expedient to provide some clarification of a terminological and methodological nature: from a modern epistemological standpoint, a distinction needs to be made between the concept of ‘error’, understood as the difference between a phenomenon and a (scientific) image which seeks to provide a description and explanation of such a phenomenon, and the concept of ‘mistake’, understood as the outcome of (occasional) failure to conform with a rule of procedure or as the outcome of a lapsus in terms of observation or, more frequently, practice. It is obvious that with regards to the first meaning, error is the ‘theory-laden’ product of cognitive activity, emerging through the intersection and mutual distinction of the concepts of ‘truth’, ‘falseness’, ‘correctness’ and the ‘applicability’ of a scientific proposition.\(^2\) What is debated in those cases where error is detected within an explanatory framework is the veracity of results obtained by the collective body we know as experimental research, and, from the moment of its detection, responsibility for the error is shared on a parapersonal level by the scientific community which produced it. The meaning of ‘mistake’ also makes reference to a concrete, circumscribable act, for which a scientist (researcher or physician) is individually responsible. This does not encroach, either in terms of method or of merit, upon the correctness of propositions and explanatory models through which the discipline

\(^2\) Strictly speaking, the notion of ‘error’ must be accepted by any epistemology as an integral element of a theory on scientific practice. In fact, ‘error’, within an experimental logic, consists of a sort of concept-limit in relation to which the researcher must carefully measure and organize his own investigative strategy. It does not constitute a mere potential risk, but the normative principle intrinsic to standard experimental procedure allowing for the acquisition of an increasing degree of accuracy. The production of a descriptive image of reality implies, in fact, the conduction of an experiment which might reveal the causal and quantitative structure of the phenomenon; namely the measurement of its dimensions. All the same, measuring is never the same thing as discovering the real value. The experimental scientist must bear in mind this difference between true values and measured values, or the errors of measurement, and thus take them into account and minimize them. ‘Possiamo, dunque definire come ‘errore’ la differenza fra il valore vero di una grandezza e il valore che misuriamo. Solo che non conosciamo affatto ne potremo mai conoscerlo, il valore vero. In realtà, possiamo fare solo delle stime, sia relative al miglior valore che abbiamo trovato, sia relative alla incertezza con cui diciamo che questo è effettivamente il miglior valore. Nella pratica, è proprio riferendoci a questa incertezza che parliamo di errore. Possiamo dunque considerare sinonimi i due termini’ (Bonifacio-Vidal 1999, 734). A researcher, therefore, must specify the different classes of possible errors, and in relation to each of these must determine which cognitive instruments may allow for the most elevated degree of control over his own standard experimental procedures.