

## **The Ampliative Leap in Diagnostics: Abduction in Clinical Reasoning**

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Ch. S. Peirce's notion of abductive reasoning based on a heuristic leap from single manifestation of symptoms and signs to the assertion about a particular disorder bearing in mind the general nosological rule does not bear neither apodictic necessity of deduction nor inductive probability but seems really productive in clinical diagnostics. It supplements the well-trodden path of differential diagnosis through the method of exclusion and disjunctive syllogism with an efficient and logically structured instrument. The abductive reasoning complements the better known strategies of gestalt, examining all possibilities, multiple branching process, and searching for the maximum. Its logical character draws upon the principles of coherence and teleology as well as on Hegelian dictum of grasping totality and Gadamerian hermeneutical circle. The abductive inference possesses obvious affinity with I. Kant's reflective judgment where for a single event the corresponding concept or general rule is searched for.

The abductive conclusion is a plausible hypothesis featuring practical reliability for undertaking further actions and engaging in continuous ratiocination. Abduction leads to a notion that is produced with the active participation of imagination. In this way, it comes close to Giambattista Vico's imaginative universal where general and particular are fused in a unique fashion.

The abductive reasoning appeals to the imagination of the diagnostician as well as to his/her grasping the coherency of patient's health status, teleology, and hermeneutical character of the totality of human physiology and socio-cultural personality. The routine differential diagnosis would require excluding from the spectrum of suspected diseases the ones that do not fit into the entire health condition of a given patient. While diagnostics via ampliative abduction will try to produce a hypothesis relying on clinician's imagination and experience supported by the hermeneutical approach as well as by the principles of coherency and teleology; later embodied in homeostasis as those mechanisms that restore the suitable conditions common for the

organism before a deviation occurs.<sup>1</sup> Human life, though, cannot be reduced to physiology of restoring the equilibrium. It demands homeostasis to be transformed within the context of the socio-cultural existence of a person. Deciding about a diagnosis via the method of abduction, doctor will draw upon the multifaceted teleology of human personality and upon the vision of totality of the particular health condition beginning with the patient's anamnesis; proceeding to the available symptoms and signs; paying attention to posture, gait, and facial expression; listening to the voice intonation and timbre as well as to the speech consistency and sophistication; finally, "look for the illness in the eyes of the patients"<sup>2</sup> and even try to detect it in one's mood. All this happens at the background of the possible nosological entities that might account for the present disease.

Clinician's assertion about the proper diagnosis is not so much a discovery of the correct disease as a creation of the notion of the specific clinical picture of the given person. Putting the proper diagnosis is not simply an act of accurate comprehension of how a certain nosological entity has manifested itself but an expression of doctor's ingenuity in constituting a unique reality, the particular health disorder of a single patient. Producing such a specific diagnosis is not a goal per se but a guaranty for an appropriate treatment and adequate prognosis.

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<sup>1</sup>Edmond A. Murphy, *The Logic of Medicine* (Baltimore: The John Hopkins University Press, 1997), 139.

<sup>2</sup> Hans-Georg Gadamer, *Enigma of Health: The Art of Healing in a Scientific Age* (Stanford, CA: Stanford University Press), 98.