Alexander L. Gungov

Patient Safety

The Relevance of Logic in Medical Care

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For my beloved Albena

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Preface

Safety, security, and certainty always go hand in hand. This is Zygmunt Bauman's view of today's liquid modernity. Safety depends on and is determined by security and certainty. Unsafety is a symptom of undermined security and volatile certainty. Bauman points out, with regret, that in countering the troubles pertaining to all the elements of the above triad in today's society only symptomatic treatment is offered. Even more, it is not realized, or is concealed, that there is a different etiological treatment at one's disposal and the symptomatic approach is portrayed as etiological.[1] This drawback seems to be noticed by James Reason, who claims that in providing patient safety the system defense plays a leading role, whereas the personal factor in improving safety is of subsidiary importance. The apt metaphor of mosquitos and swamps which he uses depicts the personal factor, i.e. human errors, embedded mostly in personal faults, which should be avoided as mosquitos, and the systematic factor as swamps. Reason has no doubt that it is much more efficient to dry the swamps than to exterminate mosquitos in combating human errors.[2] Therefore, he obviously prioritizes security over safety.

The significance of system security in fighting medication errors is made a keystone by Charles D. Hepler and Richard Segal;[3] this also highlights the determinative position of security as regards safety. We also believe in the fundamental function of security and the derivative status of safety. In other to achieve the WHO standard of good health care—maximum benefit at minimum risk[4]—the security which underpins safety needs to be reevaluated. From a philosophical point of view this reevaluation of security requires rethinking the system-defining concepts of "medicine"

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1 Zygmunt Bauman, *Community* (Cambridge: Polity Press, 2001), 27; Zygmunt Bauman, *In Search of Politics* (Cambridge: Polity Press, 1999), 49, 145; Zygmunt Bauman, *Liquid Modernity* (Cambridge: Polity Press, 2000), 36.

2 James Reason, "Human Error: Models and Management," *The BMJ*, March 2000 (320), 768–769.

3 See Charles D. Hepler and Richard Segal, *Preventing Medication Errors and Improving Drug Therapy Outcomes: A Management System Approach* (Boca Raton: CRC Press, 2003).

4 Росен Коларов, "Клинични пътеки в лицево-челюстната хирургия", (Rossen Kolarov, *Coverage According to Clinical Area in Face and Jaw Surgery,* in Bulgarian) Медицински университет, Проф. д-р Параскев Стоянов", Варна, 2017, 47.

and "patient." In our opinion, to the debate between evidence-based medicine and patient-centered medicine yet a third dimension should be added—that of person-centered medicine. Person-centered medicine is rather different from the personalized medicine that has recently become fashionable. The latter is limited to individualized drug effects, design, and prescription,[5] whereas person-centered medicine focuses on the personal aspects of a patient.[6] This type of medicine emerges when healthcare shifts its focus from "curing disease" to "healing illness" and when the principle that "a patient is more than a disease" is adopted.[7] We are inclined to join Ken Bryson's view of the person as a three-layered stream of relationships: in the first layer a carbon-self is formed which includes "our genetic structure and the whole of the environment," in the second layer of relationships, a social-self is "a social perspective," and in the third the social-self is formed as self-awareness.[8] Such an idea of the person will provide some certainty in avoiding the predicament ascribed to the alleged end of history when, according to Paul Berman, Francis Fukuyama's "Last Man" and Herbert Marcuse's "One-Dimensional Man" "turn out to be the same unhappy person."[9] Furthermore, in the words of Leon R. Kass and Jean Buttigieg, person-centered medicine "will not allow the achievement of perfect bodies at the price of flattened souls."[10]

Person-centered medicine is destined to sail against the current in adversary times of financial market dominance when "in the area of medical care . . . 'dispensing' is taking priority over 'consulting.'"[11] Persons are not only alienated, reified, and reduced to labor force or consumers but are converted to sheer statistical units:

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5 F. Randy Vogenberg et al., "Personalized Medicine. Part 1: Evolution and Development into Theranostics," *Pharmacy and Therapeutics* 35, no. 10 (October 2010): 560.

6 "Doctors usually have the advantage over vets in that they can talk to their patients; for vets, life would be so much easier if their patients could talk," Martin Alder, *Human and Veterinary Medicine: Theme Issue Will Look at Ways in Which Doctors and Vets Can Work Together*, *The BMJ* 330 (April 2005): 858–859.

7 Ken Bryson, "The Ways of Spirituality," *Sofia Philosophical Review* X, no. 2, 2017; 26–27.

8 Ibid., 10–11.

9 Paul Berman, *A Tale of Two Utopias: The Political Journey of the Generation of 1968* (New York and London: W.W. Norton & Company, 1996), 336.

10 Jean Buttigieg, *The Human Genome as Common Heritage of Mankind*, *Studies in Medical Philosophy,* ed. Alexander Gungov and Friedrich Luft (Stuttgart: ibidem-Verlag, 2018), 203.

11 Jean Buttigieg, "Gadamer and the Enigma of Health," *Sofia Philosophical Review* VIII, no. 1, (2014): 5.

> They are perfect candidates for acquiring statistical value; statistics just longs to process them through its infinite reports. The abstract statistical units can easily be fit into the mould of those hit by the next typhoon, hurricane, nuclear disaster or financial crisis; they could emerge as objects of austerity measures, an industry privatization, rationalization, or downsizing; they could be seen as war refugees, human/civil rights activities, or resolute protestors in springtime under the North African sun or EU integration devotees amidst the . . . winter cold; they could become almost anything that is capable of being considered on a mass scale. They do not have to produce, they do not need to consume either; their duty is always to exist in the statistical reports and often, or sometimes, to be present outside these reports too. They are the new ideal type towards which global society in the third millennium is rushing.[12]

This is the milieu of rampant uncertainty and insecurity where person-centered medicine (expressing and relying on the intersubjective relationship of patient and physician both as persons) is summoned to lay the grounds for patient safety. The person-centered approach is acting in the same direction as Friedrich Luft's warning that "Big Data" in patient care could easily be turned into an Orwellian "Big Brother." Here also comes a belief that, for the achievement of meaningful results, philosophical assistance is desperately needed in the interpretation of the medical "Big Data."[13]

Against this quite unfavorable background, we try to elucidate the relevance of logic to patient safety and to medical care in general. We agree with Graber's assessment that "medical diagnosis is essentially a special case of decision-making under conditions of uncertainty, and ideas for improving these decisions can arise from almost any discipline, including the social sciences, business fields and military scholars."[14] Logic as a discipline belonging to the field of the humanities plays some role in medical decision-making and is capable of playing an even more palpable one. Pat Croskerry's observation that clinical decision-making is underestimated in the area of patient safety and his claim that "good decisions translate into safe care" make obvious the need to look for and elucidate the application of logic in clinical medicine. We firmly believe that logic should contribute to clinical practice through what Reason has called

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[12] Alexander Gungov, "Real Semblance Flourishing in Post-Consumerist Society," *Sofia Philosophical Review* VII, no. 2, (2013): 102.

[13] Friedrich Luft, Foreword, in David Låg Tomasi, *Studies in Medical Philosophy: A Philosophical Analysis of Patent Self-Perception in Diagnostics and Therapy*, *Medical Philosophy,* ed. Alexander Gungov and Friedrich Luft (Stuttgart: ibidem Verlag, 2016), 17.

[14] Mark L Graber et al., "Cognitive Interventions to Reduce Diagnostic Error: A Narrative Review," *The BMJ Quality & Safety* (April 2012): 19.

"flesh and blood decision-making" in order for it not to get stuck in "often robotic, models of clinical decision-making that have little practical application in the real world of decision-making."[15] The specificity of clinical decisions surpasses the scope of ubiquitous quantative methods and demands employment of non-actuarial models.[16]

Logic, broadly viewed in the continental philosophical tradition, as well as within the intellectual heritage of American pragmatism, is ready to supply clinicians with a vast set of qualitative resources. Among the advantages offered by the above philosophical trends are Giambattista Vico's *verum-factum* principle, Charles Sanders Peirce's abductive reasoning as the logic of discovery, Immanuel Kant's determinative judgment, Georg Hegel's speculative thinking, as well as some insights from Edmund Husserl's phenomenology. Certain assistance can also be received from the 19th century British logician John Stuart Mill's inductive methods.

Logic, being a set of tools and rules of reasoning, is particularly needed and useful because, as Mark L. Graber among many others points out, "faulty or inadequate knowledge [is] uncommon."[17] Logic, especially one guided by philosophy, provides immense opportunities for reaching a level of clinical reasoning more appropriate to the needs of patients. It can resolve the dilemma between formalistic ratiocination and ingenious and heuristic comprehension usually called "intuition" and regarded as subconscious. Logic, properly understood, has the potential to serve as insightful thinking—for instance, in the form of ampliative abductive inference. This kind of logic is not alien to intuition viewed as "the action of literally 'enter with the sight' [sic] this form of (patient, provider, and beyond) perceptional knowledge."[18] Intuition helping in clinical practice is not just a dark enigmatic tool with sometimes marvelous outcomes but

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15 Pat Croskerry, "The Theory and Practice of Clinical Decision-Making," *Canadian Journal of Anesthesia* 52, no. 6 (2005): R2.

16 Pat Croskerry, "The Importance of Cognitive Errors in Diagnosis and Strategies to Minimize Them," *Academic Medicine* 78 (2003): 775.

17 Mark L. Graber et al., "Diagnostic Error in Internal Medicine," *Archives of Internal Medicine* 165 (July 2005): 1493.

18 The etymology of intuition is derived from Latin *intueor*. David Låg Tomasi, *Medical Philosophy: A Philosophical Analysis of Patent Self-Perception in Diagnostics and Therapy*, *Studies in Medical Philosophy*, ed. Alexander Gungov and Friedrich Luft (Stuttgart: ibidem Verlag, 2016), 257.

doubtful reliability. Clinical intuition comes close to the century-long tradition of intellectual intuition, which is both totally rational and lucidly conscious. Bearing all this in mind, this book makes an attempt to find in logic indispensable help for the medical student and intern as well as for the physician to be simultaneously *medicus* and *doctor* "who not only observes, examines, discusses, diagnoses, treats but also understands, knows, comprehends, and "measures.""[19]

[19] Ibid., 25.