

ARTICLE

Critique of influential epistemological presuppositions in clinical reasoning

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Abstract

Evidence-based medicine is an important resource in modern clinical reasoning. It is, however, widely discussed how judgement, experience and patient perspectives are supposed to be integrated in evidence-based decision-making. They are recognised as important aspects, but their epistemological status has remained unclarified. In this article, it is argued that we need to consider four different yet related epistemological problems in order to obtain a better understanding of these aspects in clinical reasoning. Even though judgement and values are mentioned in the decision-making procedure, better clinical reasoning is typically linked to detached, atomistic, neutral and monological conceptions of rationality. In this article, it is argued that rational clinical decision-making must also include position-dependent experiences, values and dialogical deliberation.

Keywords

Clinical reasoning, decision-making, deliberation, detachment, dialogue, epistemology, evidence-based medicine, expertise, judgement, knowledge, monologue, person-centered medicine, position dependency, rationality, values

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Introduction

The objective in this article is to challenge a widespread view that judgement, experience and patient perspectives are primarily a source of bias that leads us away from “good medicine”. Of course, judgements are sometimes wrong or biased, but the uneasiness about these concepts, even in those more realistic accounts where they are recognised as standard parts of medical practice, for example in David Sackett and colleagues [1] often cited definition of evidence-based decision-making, should alert us to certain unanalysed problems in our assumptions. Evidence-based Medicine (EBM) and the rational clinic are influential strategies meant to improve clinical decision-making and this is, therefore, a significant context in which to relate these problems. EBM has arisen in the last twenty years as a promising means to connect applied medicine to the continuing research projects that ground therapies, yet its advocates have paid too little attention to the practical elements that constitute and enable clinical judgement and, in particular, how that judgement includes patient perspectives.

The aim of this article is to challenge influential epistemological models focused on detached, disengaged thinking and decision-making as solely determined by processing of information bits, neutrality and the dominance of a monological discourse, in Taylorian terms

[2-4]. All of these are problematically implied in the various articulations of the EBM movement.

In the following, I will use analytical strategies of position-dependency and philosophy of practices to support a critique of dominant epistemological models. The positive side of this critique is that it opens up the way for understanding how clinical reasoning can include patient perspectives. It is impossible to address these issues without touching on the governance of organised healthcare. Thus, I will show how my critique encodes a response to the managerial organisation of medicine and healthcare.

Detachment and position-dependency

Modern medicine and healthcare struggle with the problem of integrating detached knowledge – knowledge that comes, for instance, from randomised controlled trials – with particular standpoints and practical judgements in decision-making. When a perfectly informed clinician confronts a patient, how does his information and his understanding of the history come together to create a strategy of decisions and treatments in practice?

The gap between expertise and application is a significant problem in Western culture, philosophy and epistemology as well as elsewhere. The conditions of

detachment and abstraction have long been thought necessary correlates of real knowledge. Particular experiences and perspectives are mistrusted in epistemological models developed in the Seventeenth Century and earlier; for example, in Platonic thinking. We are often deceived by our common sense experiences. We, for example, see the sun move across the sky, while astronomers tell us this is really the earth moving around the sun. Philosophy in the seventeenth century and afterwards sought a solid foundation in order to distinguish those statements that are false from those that are true. In order to establish such a foundation, we should view the world from nowhere, the ultimately detached standpoint.

This is not just a philosophical idea, but is an analytical strategy that is part of scientific, institutional, medical and several other practices. Modern scientific thinking strives for objectivity and pursues research without worrying about the ideological, economic and political effects of results and without caring if they fit the opinions of specific persons. We need rigour and systematic procedures in order to tell whether an intervention has caused a patient to get better. In questions about health and disease, our involved, engaged and particular standpoint might make us vulnerable, so that we accept certain conditions as normal, even though they could easily be cured [3].

I think the idea of position-dependency (promoted for example by Sen [5], Nussbaum [6], Taylor [2] and by Wartofsky [7]) is an important analytical tool. In some practices, we need detached and uninvolved standpoints; in others, we are dependent on particular and concrete standpoints. Yet, a further qualification is needed. Position-dependency should not primarily be seen as linked to our position as observers, rather it should be linked to our positions in practices.

In Seventeenth Century philosophy (Cartesian, empiricist) the epistemological models depended heavily on visual metaphors [8]. Was the idea in the mind really representations of outer reality? Did it really mirror the world? Descartes' work is full of examples of the illusion to which our senses are vulnerable – 'we see a tower and think it is round, but can we trust this idea?' After Descartes, epistemology was dominated by the issue of whether our mental ideas really mirror reality.

It is also a useful idea in explaining what position-dependency means. From my position, I can see a table, some books, a computer, *etc.*, but I cannot see the window behind me. This, however, might lead to the widespread thought that position-dependency and particular standpoints are important and useful, but that my illusions can be observed from a more detached position of 'no one in particular'. The observation and visual metaphor leave us the impression that we are necessarily dealing with a higher and lower, with more inclusive and less inclusive. I think it is more fruitful to pursue a line of thought where position-dependency is linked to practices and activities. Observation is an important activity, but it is not necessarily the basic or foundational form of representation.

Marx Wartofsky, for example, argues that one of the main problems in the dominant epistemological theories is

that they treat picturing and mirroring as basic representations. If picturing and mirroring is considered the basic model, we will keep on colliding with the problem of the mirage and its correlate, the problem of whether our internal ideas and pictures are mirages. Pictures are, according to Wartofsky, not basic and simple; " 'pictures', 'copies', even 'mirror images' are among the most extraordinary complex cases of representation" [9]. Our skills in perceiving and handling pictures are developed through a long historical process and are not just simply and immediately given in the statement: 'human observing reality'. Picturing is also linked to historically developed human practices and activities.

If position-dependency is determined primarily by overt or hidden observational metaphors, they will be automatically subordinated to detached and more inclusive standpoints. An understanding of position-dependency that escapes the mirror metaphors in relation to clinical practices and activities checkmates this automatic assumption of inferiority. In our family, with our friends and of course with professional practices, we strive to deal with the challenging conditions that disease, suffering and pain present in our life. These activities and practices are of course different from scientific and expert practices, but they are not necessarily inferior.

When I feel sick, my first impulse is not to go to the doctor, but to talk to family members and friends or consult a book or the Internet. My activities, which collectively designate an informal research project, are aimed at finding out what the condition is and whether it is worrisome. If I get worried, I might consult the doctor. Together with my family and my social network I discuss how to handle the risk of H1N1. For example, should I go to the doctor or not if I experienced some of the symptoms? When we go to the supermarket or when we choose transportation to go to work, questions about how to handle our own health and risk of diseases are involved. And the questions become much more pressing and demanding if, for example, one suffers from a chronic disease. In the everyday practices one is involved in, strategies and knowledge are developed in order to deal with the challenges of, for example, diabetes or chronic pain. Such activities are not just dependent on how one perceives or observes the problem. Position-dependency based on observation will not help us understand this; while position-dependency, where position is seen as diverging because it is linked to different practices and strategies for handling and dealing with health, disease, pain and suffering, is a more promising analytical approach.

Atomistic bits, components in the mind and decision-making

The modern conception of rationality is often based on the idea that our mind is an information processing machine. Ideas, impressions and experiences express distinct inputs and their states in mental processing. The advantage of this conceptual schema is that simple atomistic ideas can be

tested and checked in a relatively straightforward way. The idea that this is also the basis for practical decision-making is widespread. The general philosophical image is of a decision-maker who receives input from the world in information bits, then processes these bits by consulting a memory bank, forming the appropriate connection between the bits and other bits, out of which a picture of the world is formed, on the basis of which a calculation is made about means and ends to fulfil target goals [2].

Even though 'ideas' and 'impressions' no longer figure as such in contemporary theories of clinical decision-making, similar work is done through a terminology of decision-making, which often refers to mechanical, computer-like processes. In Wulff and Gøtzsche's terminology, the decision-maker must follow different steps. He/she collects data, makes diagnostic decisions, answers questions about the certainty of the diagnosis, decides the therapy and observes treatment results [10]. The steps are both deductively and inductively processed, but the gap between the processing – the formation of the picture of the situation – and the decision, still remains.

In order to compensate for the over-emphasis on processing in their theory, Wulff and Gøtzsche add humanistic components (empathic-hermeneutic and ethical) to the 'medical' decision-making process mix, but does this really help us explain how a decision is made? These factors supposedly must be included to complete the description of decision-making, but have we thus explained the gap between processing our picture of the situation and the decision? Is this really a rational way to make a decision?

The picture of the human mind as an entity that perceives and checks discrete units of information and then synthesises them in order to reach a practical goal has not been easy to shake off, even when its flaws have been pointed out by numerous critics, from Foucault to John Searle. In the context of medical decision-making, we find this picture and its critics, at the heart of the dispute about EBM. It is broadly agreed that prescribing a certain pharmaceutical product should only be considered if one has evidence that it works. It is also broadly agreed that all therapeutic recommendations depend on diagnostic knowledge of the patient. However, it is at this point that the mystery of the decision-maker intervenes.

Evidence does not and cannot determine the decision. The typical description in the evidence literature shows how one goes about constituting an evidence profile from different pieces of data and then one makes a judgement, leading to a decision that determines the therapy for the patient. But this merely makes judgement and decision exogenous intruders on this scene.

It is contended that there are resources in an Aristotelian perspective that can help us solve the mystery of decision-making. The Aristotelian model challenges the picture of the mind as an information processing machine, promoting, in its place, a deliberative, dialogical process as the model for clinical judgement and clinical reasoning. Here, means and ends are continually negotiated and deliberated.

Deliberation, here, refers to the unity of the process between receiving the information and making therapeutic decisions. The physician deliberates about expert concepts of health and disease, not just because they lack knowledge or their knowledge is imperfect, but because curing and treating the patient is always a work in progress, with an uncertain outcome [11]. A treatment that seems effective for the patient in a specific situation might be harmful for the patient in a broader perspective. Deliberation is therefore not just important because there are different means to an end, but because there are a multiplicity of ends to consider.

Physicians aim to improve the health of a patient, but health is not simply defined by professionals or experts. Health is also part of our everyday deliberation about how to live our lives. The patient might understand health in another way than the doctor and therefore in order that deliberation results in the best healthcare practice; his or her perspective must be involved in the deliberation project. A rational judgement and decision in clinical practice must, in the light of this kind of deliberative thinking, be a social and dialogical negotiation about the ends and the relevant means in this process.

This kind of deliberation, however, is not easy to implement in the contemporary clinic, given political and institutional mandates that are based on narrow interpretations of the optimal healthcare outcome from the point of view of the state or the private insurance bureaucracy. Given this frame of reference, the success of a practice is defined by an outcome measurement and the performances are monitored by different bureaucratic institutions. In the new managerial practices, the outcome, or the end of the practice, is pre-defined. There is a specific aggregate target by which the success of a practice can be checked [12]. Therefore, the model where clinical decision-making is a social negotiation about the ends and the means challenges institutional mandates as well as widespread epistemological conceptions. The complexity of modern healthcare, the numerous ends that are pursued by modern biomedicine in our lives – from curing life threatening diseases to the most intimate aspects of the way we live our lives (diet, sex *etc.*) - makes the negotiation of these ends even more pressing. Unless we develop communities, practices and institutional frameworks where such deliberation can be carried out, we will be unable to answer these questions in a reasoned and rational way.

Neutrality and values

The information processing model of the mind makes it the case that validity names the end result of a procedure that matches outside facts with inside percepts or concepts. In this way, we build our picture of the world. And if the matching procedure has proceeded correctly, this picture is neutral, since it is composed of value-neutral units of information. The facts can be distinguished from the ways we use the knowledge for different purposes and valuation of the picture [2].

The philosopher J.L. Mackie, for example, describes objective values as entities of a strange sort that if they existed would be different from anything else in the universe. We cannot find a place for them in the fabric of the world [13]. Values are considered to be, instead, a kind of subjective projection of our desires on the objective world. Preferences are an example of values that exist in human beings – as subjects – and not in the factual objective world.

This model is not explicitly articulated in evidence-based medicine and in models of clinical decision-making; however, it seems to be implied in several accounts. Sackett and colleagues, who recognised the importance of patient's choice and values, interpreted their values as preferences.

'Preferences' is a term that is borrowed from economic decision-making models, which postulate an ideal market and consumers whose purchase express preferences. The concept has especially been used in utilitarian theories of values [14]. Preferences are (in these models) a kind of individualistic, subjective entity projected on the objective reality. Some persons like bananas others prefer apples. This is just how it is.

Sackett's use of 'preferences' isn't explicitly couched in terms of rational choice theory, customer behaviour or in utilitarian philosophy. Yet it is a clue that there is a commonality between his model and theirs. Some persons like treatment 'A', others prefer treatment 'B'. How these preferences are generated, the background, the reasons and the social context for this 'like' or 'dislike', is not included in this concept of value. Notably, preferences seem uninfluenced by healthcare "providers", as though they were simply providers of information and not framers of it.

Jerome P. Kassirer claims that since: 'our medical decisions become more and more standardized and codified, we should take care to ensure that critical therapeutic choices are not based exclusively on formal guidelines' [15]. Decisions can be individualised if choices between different outcomes are made possible. This is important because patients might view them differently. 'In such cases we should identify a patient's preferences scrupulously' [15].

Here we have a paradox in which, on the one hand, we have the picture of the expert and scientific measurements on the side of facts and the patients' perspectives on the side of preferences and values and, on the other hand, we have experts individualising their decisions. The question is: does individual preference really exhaust itself in a menu of choice? Or do the choices determine what those preferences will be? This is not an abstract paradox: the more rigid the choices, the more the patient "choosing" them is actually surrendering his or her sense of values and preferences to what is at hand. Over the entire history of the patient's relationship with healthcare institutions, this adaption will erode the "preference" of the patient to a hollow proxy of real choice.

In everyday life and in the numerous health-related activities that ordinary people engage in, patients struggle to deal with conditions like health, disease and suffering within many contexts. The knowledge they accumulate is not detached or abstract, but dependent on the practices

they have developed, the experiences they have had, the networks they depend on, their expectations about quality of life, their worries about others, *etc.* Individualised healthcare that is dialogic will have to take the knowledge from such contexts into account. Values and norms are, of course, part of such activities, but exclusive focus on the contribution from patients as a 'value component', as though they were abstract consumers in a market, filters out essential aspects of the way they handle their life conditions, which in turn impact upon the entire course of treatment. Individualised treatment is not satisfied simply by taking the patients' preferences about a medically defined outcome to define the course of treatment. In order for treatment to be individualised, a deliberative clinical practice should be developed in which the medically defined outcomes are unpacked in terms of all of the dimensions of the patient's concerns. In such a practice, it would be impossible to make a hard distinction between facts and values, with the doctor on the one side and the patient on the other.

Monological and dialogical model

Consistent with the epistemological emphasis on viewing discrete units of data impartially is the Western tendency to monological practices. Based upon the mind as a mirror model, in which communication basically consists of a search to find the correct alignment between inner representations and facts [4], the monological premise is that all the different 'parole' we possess converge in the realm of representation. This picture has been extensively criticised by Heidegger, Wittgenstein, Quine, Rorty and a host of other modern philosophers. As Taylor points out, it is not a common referent that binds individual languages, but an ongoing involvement in social practices [4].

Yet the critique of the monological model has not exorcised it. Rather, it still dominates contemporary discussion concerning clinical reasoning and decision-making. It is as if the clinical decision is something that goes on in the mind of the doctor. He processes different bits of information and evidence and then makes a decision about what to do in the specific situation.

The neo-Aristotelian and Wittgensteinian trend in contemporary philosophy of medicine has focused on criticising this monological legacy in medical reasoning. For this school, medicine is always a social practice in which exemplary decision-making takes place. Within professional social practice, there are norms and standards that tell you, 'when you practice medicine, you do it like this'. The rules and norms are not necessarily articulated or listed somewhere; rather, they can be read off common patterns among the routines of healthcare practitioners. They are publically accessible because one can watch other practitioners and learn from them.

Yet, despite the important work of the critical school of medical philosophy, it is missing an aspect of contemporary medicine that urgently requires our attention. Though we challenge the monological model on the level of professionals and practitioners, our dialogic counter-model must also be strongly linked to the practices

of patients and citizens and their norms. It must not, in other words, be unconsciously influenced by the historical autonomy of medicine into drawing boundaries delimiting the pure clinical space and confine itself to what happens there. That space is no longer purely delineated and independent within the social whole, if it ever was.

Conclusion

EBM has become the most discussed and influential new medical *Agendum* in the last two decades. EBM has proposed a method for improving knowledge and rationality, grounding clinical and political decision-making. In its early phases it was especially a reaction to the dominance of laboratory medicine and a strategy for curbing the commercial interests that might influence doctors. EBM evolved, however, in the last part of the twentieth century, as it was caught up in an extraneous struggle between an older, autonomous medicine and a political and managerial context that sought to impose standards, particularly of a cost-benefit kind, on medical procedures. Some hoped that EBM would provide a forum in which the complex and conflicted interests pulling at the modern healthcare system could be articulated and settled. Yet, EBM has turned out to be an *Agendum* that continues to encode old conflicts and disagreements about knowledge and rationality. The extensive discussions about clinical judgement that have taken place between EBM advocates and their critics reflect this. While EBM is to be applauded for its effort to make information transparent and accessible, evidence doesn't of itself give us decisions. Indeed, medicine does and always has needed clinical judgment, which is very different from formal information processing.

I join with other critics of contemporary medical decision-making in advocating the Aristotelian concept of practical wisdom to help explain how decision-making actually happens within 'real world' clinical practice. That explanation deviates from the mechanical model: decisions are not just instances of calculating means that can be used to achieve fixed ends. It is a public process where means and ends are discussed and negotiated between different clinicians and patients.

The development of such dialogical processes of deliberation is, however, impeded by ideas about detached knowledge as the best kind of knowledge, decision-making as processing of discrete units of information in the mind of an individual, the idea of neutrality and the monological conception of human knowledge and decision-making. These ideas have been extensively criticised, but they are still implied in some arguments in evidence-based medicine.

It is possible to develop a clinical practice where patients' perspectives are organically included within therapeutic practice. This does not require reversion to the time when clinical judgement was treated as part of a mystical intuitive realm. The answer, instead, lies in a broad sense of deliberation, which promotes practice-based position-dependency and results in the integration of social and public deliberation into the flow of clinical work and

decision-making. Deliberative clinical practice redraws the epistemological spaces traditionally allotted to the doctor (representing science and knowledge) and the patient (representing values and preferences). At the beginning of dialogue, the epistemological spaces are always not allotted and it is this process that defines where the agents are, epistemologically, with regard to each other. In this way, decision-making can be developed as a negotiation about means, ends and knowledge in the individual case.

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