Abduction in Akkadian Medical Diagnosis

Abstract

Ancient medical diagnosis has been studied from different perspectives. Texts that have been translated and analyzed by Assyiriologists and Physicians shed the light on ancient practices. Although their works are amazing, several aspects remain mysterious. I propose here to study Akkadian medical diagnosis from the perspective of philosophy and argumentation, and to compare it with the inferences at stake in modern medical diagnosis.

The ancient medicine in Mesopotamia has been widely studied [1, 5, 3]. The main source has been the Diagnostic Handbook [6, 4, 7], written in Akkadian language (a Semitic syllabic language written in cuneiform). This is a medical treatise created in Babylon in the middle of the eleventh century B.C. and recopied through the first millenium B.C. as part of the cuneiform tradition (see Heessel, N.P. in [5]). All these medical diagnosis texts are usually written as omen with conditional structures and in clay tablet.

By focusing on the Ancient medicine itself, we have exactly the problem of defining if this is a science or a magical practice. In fact, it does not seem possible to talk about a rational medical science because Mesopotamian medical practice is completely "contaminated" by magical practices. So, we could consider that the Mesopotamian medicine is more a magical practice than a rational one. The problem has always been how to recognize Babylonian epistemology and theory with the biased sources at our disposal ([3] p. 11-12). Nevertheless, does Babylonian medicine is as un-scientific as it has been said?

If we focus on the inference, and not in the magical aspect, does the Babylonian medical argumentation really differ from the medical diagnosis that we know nowadays? The point of this study is to analyze the inference itself in Mesopotamian medical diagnosis without taking into account if we are in front of a magical or scientific practice. I will explain the inference at stake in modern medical diagnosis and why I consider it as an abductive inference[8, 2], at least sometimes. Then, I will put forward different examples of Akkadian medical diagnosis and I will confront them with abductive reasoning for medical diagnosis. By taking into account the inference at stake in Akkadian medical diagnosis, we see how the inference and the reasoning are not so different from the modern one. In fact, it seems that ancient medical texts use the same kind of reasoning than the modern ones. This reasoning (abduction) is an ignorance preserving reasoning and it is different from induction and deduction. We are not led to a new belief or knowledge, but we work with hypotheses that continue

being conjectural, even if we use them in a further reasoning. Here, we could go back to my starting point and set the following questions. If we consider modern medical diagnosis is a rational thinking and it is an abductive reasoning, why would we consider that the Ancient medical diagnosis that use the same kind of inference is an irrational thinking? If we only check the inference at stake, both rely on the same schema. Nevertheless, further analysis would be needed to really clarify the role of the different elements in an abductive schema in Ancient Mesopotamian diagnosis. Besides, of course, abductive reasoning is problematic. For example, what is the criterium for a correct abduction? Referring to medical practice, what makes a diagnosis a good diagnosis? What is the role of the different elements inside the inference schema? However, it provides the basis for a deeper understanding of medical practice in general and Ancient medical practice in particular.

References

[1] Ria. reallexikon der assyriologie und vorderasiatischen archäologie 7, 1990.

[2] C. Barés Gómez and M. Fontaine. Argumentation and abduction in dialogical logic. In L. Magnani and T. Bertolotti, editors, *Handbook of Model-Base Science*. Springer, 2017.

[3] M. J. Geller. *Ancient Babylonian Medicine. Theory and Practice*. Wiley-Blackwell, Sussex, UK, 2010.

[4] N. Heeßel. *Babylonisch-assyrische Diagnostik*. Alter Orient und Altes Testament, Band 3, Münster, 2000.

[5] H.F.J. Horstmanshoff, M. Stol, and C.R. van Tilburg, editors. *Magic and Rationality in Ancient Near Eastern and Graeco-Roman Medicine*. Brill, Leiden-Boston, 2004.

[6] R. Labat. *Traité akkadien de diagnostics et pronostics médicaux*. Paris/Leiden, 1951.

[7] J. A. Scurlock and B. R. Andersen. *Diagnosis in Assyrian and Babylonian Medicine*. University of Illinois, 2005.

[8] J. Woods. *Errors of Reasoning. Naturalizing the Logic of Inference*. College Publications, London, 2013.