

Tomasz Rzepinki

Knowledge Revision in Contemporary Medicine – the Case Study of Cardioprotective Research

The main purpose of this paper is to reconstruct the process of knowledge revision which has led to changing the decision algorithms in invasive cardiology (e.g. PTCA – Percutaneous Transluminal Coronary Angioplasty), cardiac surgery (e.g. CABG – Coronary Artery Bypass Grafting) and has provided the basis for developing the new type of cardioprotective pharmacology. The present analyses will serve as a point of departure for suggesting a solution to two important problems of knowledge revision that were identified in the classical model proposed by C. Alchourron, P. Gärdenfors and D. Makinson (1985). Firstly, I will describe the method of identifying those elements of biomedical knowledge that were to be refuted in the example under analysis. Secondly, I will show the process of constructing the hypothesis that filled the explanatory gaps that resulted from the eliminated elements of knowledge. For the purpose of the present analysis, I will use the model of abnormal hypotheses developed by S. Bromberger (1966). It will be demonstrated that formulating the abnormal hypothesis led to the discovery of the phenomenon of cardioprotection by C. Murry, R. Jennings and K. Reimer (1986), which initiated a development of new therapies in invasive, surgical and pharmacological cardiology. The present considerations will show the current relevance of the epistemological problem of knowledge revision in analyses that focus on changes in medical decision algorithms.