

Título: VITALISM AND TELEOLOGY IN THE BRAZILIAN BIOCHEMISTRY RESEARCH COMMUNITY

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Resumo: Microbial interactions with their hosts are commonly referred to as directed by intentional processes (for both sides), and even explained by metaphors of war. This may lead to the formation of epistemological obstacles, as defined by Gaston Bachelard. In this work Bachelard's notion of epistemological obstacle was employed to identify vitalist and teleological conceptions amongst participants of XXXIX Annual Meeting of Brazilian Society of Biochemistry and Molecular Biology. A questionnaire with selected excerpts of scientific papers from high impact factor journals was answered by 97 participants of this annual meeting (39 under-graduates, 42 graduate students, and 16 professors and researchers). Obligate intracellular pathogens, as protozoans and bacteria, were addressed in the selected scientific papers. We could detect vitalist conceptions (animism) and an antropomorphic vision of the biological processes under evaluation in the answers and also in the acceptance or not recognition of these obstacles in the excerpts. The unitary and pragmatic obstacle was manifested by a teleological approach of the evolution processes, expressed in apologies of immanent purposes in organisms' adaptation. The presence of figures of speech, metaphors and analogies (verbal obstacle) were verified in explaining the evolution, the pathogen-host cell interactions and the immune system, also present in the excerpts. These results demonstrated that the debate about the mistakes that an inappropriate language can cause on the interpretation of microbiological processes is absent between the scientific community, as well as a critical reading of the papers. This work aims to contribute to an indispensable debate on the construction and development of scientific knowledge of host-pathogen interactions, indicating the necessity to emphasize the materialist character of sciences at the inseparable scope of research and education.

Palavras-chaves: Evolução, Teleologia, Vitalismo, Bachelard, Antropomorfismo