

Biomedicine, Suffering, and Sacrifice: Myths and Prototypes in Cell and Gene Therapies

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Abstract : Cell and gene therapies (CGTs) result from the intense manipulation of cells or the use of techniques such as gene editing. They have been increasingly used to tackle rare diseases or conditions of genetic origin, such as cancer. One might expect such a complex scientific field to be dominated by scientific findings and evidence-based explanations. However, people engaged in scientific argumentation also mobilize a range of cognitive operations of which they are not fully aware, in addition to drawing on widely available oral traditions. This paper analyses how experts discussing the potentialities and challenges of CGTs have recourse to a particular kind of prototypical myth. This sociology study, conducted at the University of Sussex (UK), involved interviews with scientists, regulators, and entrepreneurs involved in the development or governance of CGTs. It was observed that these professionals, when voicing their views, sometimes have recourse to narratives where CGTs appear as promising tools for alleviating or curing diseases. This is said to involve much personal, scientific, and financial sacrifice. In his study of traditional narratives, Hogan identified three prototypes: the romantic narrative, moved by the ideal of romantic union; the heroic narrative, moved by the desire for political power; and the sacrificial narrative, where the ideal is plenty, well-being, and health. It is argued here that discourses around CGTs often involve some narratives - or myths - that have a sacrificial nature. In this sense, the development of innovative therapies is depicted as a huge sacrificial endeavor involving biomedical scientists, biotech and pharma companies, and decision-makers. These sacrificial accounts draw on oral traditions and benefit from an emotional intensification that can be easily achieved in stories of serious diseases and physical suffering. Furthermore, these accounts draw on metaphorical understandings where diseases and vectors of diseases are considered enemies or invaders while therapies are framed as shields or protections. In this way, this paper aims to unravel the cognitive underpinnings of contemporary science - and, more specifically, biomedicine - revealing how myths, prototypes, and metaphors are highly operative even when complex reasoning is at stake. At the same time, this paper demonstrates how such hidden cognitive operations underpin the construction of powerful ideological discourses aimed at defending certain ways of developing, disseminating, and governing technologies and therapies.

Keywords : cell and gene therapies, myths, prototypes, metaphors

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