Mertonian norms

CUDOS is an acronym used to denote principles that should guide good scientific research. According to the CUDOS principles, the scientific ethos should be governed by Communalism, Universalism, Disinterestedness, Originality and Skepticism.

CUDOS is based on the **Mertonian norms** introduced in 1942 by Robert K. Merton.[1] Merton described "four sets of institutional imperatives [comprising] the ethos of modern science": "universalism, communism, disinterestedness, and organized skepticism."[2] These four terms could already be arranged to form CUDOS, but "originality" was not part of Merton's list.

In contemporary academic debate the modified definition outlined below is the most widely used (e.g. Ziman 2000).[3]

- **Communalism** All scientists should have equal access to scientific goods (intellectual property) and there should be a sense of common ownership in order to promote collective collaboration, secrecy is the opposite of this norm. [4]
- **Universalism** All scientists can contribute to science regardless of race, nationality, culture, or gender. [5]
- **Disinterestedness** according to which scientists are supposed to act for the benefit of a common scientific enterprise, rather than for personal gain. [6]
- **Originality** requires that scientific claims contribute something new, whether a new problem, a new approach, new data, a new theory or a new explanation.[7]
- **Skepticism** (Organized Skepticism) Skepticism means that scientific claims must be exposed to critical scrutiny before being accepted. [8]

1 Counternorms

As a balance to the Mertonian norms, the following counter-norms are often discussed [9]

- **Solitariness** (secrecy, miserism) is often used to keep findings secret in order to be able to claim patent rights, and in order to ensure primacy when published.
- **Particularism** is the assertion that whilst in theory there are no boundaries to people contributing to the body of knowledge, in practice this is a real issue, particularly when you consider the ratio of researchers in rich countries compared with those in poor countries, but this can be extended to other forms of diversity. In addition, scientists do judge contributions to science by their personal knowledge of the researcher.
- **Interestedness** arises because scientists have genuine interests at stake in the reception of their research. Well received papers can have good prospects for their careers, whereas as conversely, being discredited can undermine the reception of future publications.
- **Dogmatism** because careers are built upon a particular premise (theory) being true which creates a paradox when it comes to asserting scientific explanations.

2 See also

- Robert K. Merton
- Scientific method
- Philosophy of science
- Scientific consensus
- Open science data

3 Notes

[1] Merton 1973

[2] Bruce Macfarlane & Ming Cheng (2008). "Communism, Universalism and Disinterestedness: Re-examining Contemporary Support among Academics for Merton's Scientific Norms". *J Acad Ethics* (Springer) (6): 67–78. doi:10.1007/s10805-008-9055-y.

[3] Ziman 2000

[4] Merton 1973, pp. 273-5

[5] Merton 1973, p. 270

[6] Merton 1973, pp. 275-277

[7] Ziman 2000

[8] Merton 1973, pp. 277-8

[9] Mitroff 1974

4 References

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