



Mètode Science Studies Journal

ISSN: 2174-3487

ISSN: 2174-9221

metodessj@uv.es

Universitat de València

España

Peretó, Juli; Porcar, Manuel
Standards. The building blocks of complexity
Mètode Science Studies Journal, vol. 11, 2021, -, pp. 64-65
Universitat de València
Valencia, España

Disponible en: <https://www.redalyc.org/articulo.oa?id=511766954024>

- Cómo citar el artículo
- Número completo
- Más información del artículo
- Página de la revista en redalyc.org

redalyc.org

Sistema de Información Científica Redalyc

Red de Revistas Científicas de América Latina y el Caribe, España y Portugal
Proyecto académico sin fines de lucro, desarrollado bajo la iniciativa de acceso
abierto





STANDARDS

THE BUILDING BLOCKS OF COMPLEXITY

Monograph coordinated by Juli Peretó and Manuel Porcar

Without standards, the world as we know it would not be possible. International and supra-cultural standards and norms have been a key factor in engineering, as well as in the development of industrial societies. Despite the obvious successes in electronic and mechanical design, other technological areas present difficulties for the application of standards. In the field of biotechnology and synthetic biology – which aims at studying living things from an engineering perspective – standards are desirable, but whether they can be widely adopted remains to be proved.

This monograph reviews the sociological and scientific aspects of standardisation and delves into the more problematic facets of universal standardisation, especially in the biological field. Are standards possible in synthetic biology at all? What are the limitations to the universal use of modular and interchangeable parts in a cellular context? Could it be that the biological world resists standardisation, similarly to the field of software engineering, where these attempts have not progressed? And should some kind of standard be applicable in synthetic biology, what qualities might be required in an environment of open science and responsible research and innovation?

JULI PERETÓ. Full Professor of Biochemistry and Molecular Biology at the University of Valencia (Spain) and researcher at the Institute of Integrative Systems Biology I2SysBio (University of Valencia - CSIC). He is a member of the Institute for Catalan Studies and the founding partner of Darwin Bioprospecting Excellence SL (Science Park of the University of Valencia). He explains metabolism to biotechnology students and, as a member of the Biotechnology and Synthetic Biology lab, his research interests include bioprospecting, metabolic modelling, and the history of ideas about the natural origin and artificial synthesis of life. ✉ juli.pereto@uv.es

MANUEL PORCAR. Researcher at the University of Valencia (Spain) in the Biotechnology and Synthetic Biology lab of the Institute of Integrative Systems Biology I2SysBio (University of Valencia - CSIC) and president of Darwin Bioprospecting Excellence SL (Science Park of the University of Valencia). Among his fields of research are bioprospecting in environments hostile to the search of microorganisms of industrial interest, as well as various aspects of the development of synthetic biology as an emerging discipline. He is currently the coordinator of the European H2020 project BioRobooST, which brings together 27 public and private institutions from Europe and six partners from Asia and America with the aim of promoting an international standardisation process in synthetic biology. ✉ manuel.porcar@uv.es

This monograph on standards and norms is visually accompanied by a series of iconic works of art: in their compositions, Magritte, Escher, Warhol, and Bacon played with shapes, repetition, and variations, concepts that play a key role in both the establishment of standards and their potential success or failure. But in these pages, we will also find two different works of art: on the one hand, the Rosetta stone, one of the first pieces that can account for human social complexity. On the other hand, the manuscript of one of Bach's compositions, proof that the use of standards and patterns – in music and language – can lead to the creation of something truly beautiful and unique. On the left, René Magritte. *Golconde*, 1953. Oil on canvas, 100.6 × 80.7 cm.