

The role of statistics in the digitised and globalised world

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Resumo: The term 'statistics' is used differently; it can refer to a science, a technology, a certain kind of information or institutions. Essentially, statistics is the science of learning from data. Certainly, it is a modern technology that is part of the standards of today's information age and society and is used in a wide array of fields. The history of statistics goes back a long way, accompanying historical eras, technical developments and political turning points just as the census in year zero. Statistics play a fundamental role in modern societies: they are an essential basis for policies, they support business decisions and they allow citizens to evaluate the progress made. But the power of statistical knowledge also poses dangers. From a cognitive tool that emancipates and promotes participation, it can transform itself into a true technocratic tyrant, to varying degrees, behind evidence-based decision-making, mainstream management ideologies and governing-by-numbers. Statisticians are justifiably convinced that their work and its results contribute to making decisions more rational and thus achieving many goals of modern societies. Statisticians are all the more astonished that this contribution is partly not understood, that the information is misinterpreted or misused, and that they have recently been met with increasing mistrust. In order to fully grasp the reasons behind a growing gap and the dissonance between the enlightening capacities of statistics on the one side and the disturbed reception and perception on the other, it is necessary to analyse the driving forces of uncertainty in the amalgam of globalisation of risks, individualisation of societies and the shrinking capability of nation states to master the risks on behalf of their citizens. The younger phenomena of digitisation add completely new factors of uncertainty, since the digital age is not just a gradual evolution of previous phases of information and communication technology. Rather, a profound transformation is taking place in society, which fundamentally changes personal behaviour in everyday life, and leads to completely new mixtures of risks and opportunities, of winners and losers and of consumers and producers concerning data or information. It is spoken of as a data revolution, Industry 4.0 and the Internet of Things, to clarify the extent of the current structural conversion. However, technological developments do not happen in a vacuum, but are continually influenced by, and influence themselves social and political conditions, both of which are witnessing major changes. In this context, a profound epistemological shift is needed since complexity and irreversibility undermine the idea that science (and statistics)

can provide single, objective, and exhaustive answers. In the late modernity of risk societies, there is the epistemic and methodological necessity to empower people - citizens and policy makers - with the appropriate insight, to enable them to make the best possible decisions (e.g. for achieving sustainability and pursuing resilience) in a complex world. A discussion of this topic is relevant not only for the wide range of areas, where statistical methodologies and technologies are applied in practice. Rather, a reflexive scientific building block, containing epistemological and sociological elements, should be seen as a mandatory and complementary component of the basic programme in statistical methodology.