#### **Abstracts**

#### **Tobias Wolbring**

## Anatomy of the Journal Impact Factor. The "Soziale Welt" in the Mirror of Bibliometric Indicators

Against the background of bibliometric indicators for the "Soziale Welt" and other German and English sociology journals we discuss basic criteria and effects of the journal impact factor. Beside the question what the impact factor actually measures, the paper focuses on the consequences of publication language and varying publication and citation cultures between and within disciplines. We conclude with the recommendation not to assess journals and particularly individual researchers solely on the basis of the journal impact factor, but to enrich evaluations by expert ratings and complementary indicators.

#### Bruno S. Frey and Margit Osterloh

#### **Impact Factors: Absurd Measurement in Academia**

Today researchers are primarily evaluated by indices such as the number of publications in scholarly journals with a high impact factor. The performance according to these indices strongly determines academic careers and the distribution of public research funds. In contrast, the contribution to scientific progress is of little importance. This system has major deficiencies. Are there viable alternatives? We suggest three proposals for discussion: Input instead of output control; more emphasis on random procedures; and open Post-Publication Peer-Review. The three proposals intend to strengthen qualitative evaluations in the "Republic of Science".

#### Richard Münch

#### All Power to the Numbers. On the Sociology of the Citation Index

Citation indices – just like all quantitative indices – are highly selective and do not meet the diversity of scientific research. By way of reactivity they create a reality in itself, which determines scientific practice. The fatal consequence is a narrowing down of the evolution of knowledge to a small spectrum of possible knowledge pratices. This is what this essay tries to demonstrate.

#### Werner Marx and Lutz Bornmann

### Bibliometrics in research evaluation – background, significance, and limitations

The traditional peer review process for the assessment of scientific performance has been increasingly supported by citation analysis. However, bibliometric methods require the use of appropriate indicators to be meaningfully and significantly. The trend of performing bibliometric analyses by amateurs is most problematic. Seemingly easy to handle tools serve requests of decision makers for impact data and rankings. In this article we plead for the application of professional citation analysis embedded into bibliometric research. For example, journal impact factors are not suitable for measuring the performance of a researcher, because they do not allow conclusions about the impact of single papers published in a specific journal. The h index measures output (number of publications) and impact (number of citations) in one single number and connects both parameters arbitrarily. Instead, percentiles are far better suited for measuring the citation impact of publications and researchers. Using percentiles, publications of researchers and their citations can be visualized as beam plots. Beam plots show at a glance, how productive a researcher has been in a specific year and how often his publications have been cited in relation to comparable publications.

Katrin Auspurg, Andreas Diekmann, Thomas Hinz and Matthias Näf

## The Research Rating of the German Council of Science and Humanities: Revisiting Reviewers' Scores of Sociological Research Units

Evaluations of scientific productivity are part of the common daily business in all scientific disciplines – including sociology. An extensive, but contested project to measure research quality in German sociology was the *Forschungsrating* of the *Wissenschaftsrat* (WR) that was completed in 2008. A group of 16 renowned sociologists evaluated about 250 research units using five categories from "excellent" to "not satisfactory". The evaluation of research was based on over 10,000 publications in a compiled database and about 700 submitted exemplary pieces of research (journal articles, contributions to edited volumes, editions of volumes, monographs). How can this ambitioned project retrospectively be assessed? How is the return compared to the investment? The article aims at a reconstruction of the evaluation on the level of research units. Results prove that the judgment of research quality is overwhelmingly influenced by output measures such as the number of publications in peer review journals. To a large extent the judgments can be predicted by few quantitative indicators. Obviously, the experts also took the size of units into account.

Loet Leydesdorff and Staša Milojević

## The Citation Impact of German Sociology Journals: Some Problems with the Use of Scientometric Indicators in Journal and Research Evaluations

We analyze the citation impacts ('cited') and citation practices ('citing') of sociological journals which publish mainly in German, and discuss major drawbacks of using the journal impact factor (IF) to assess the quality of these journals. First, sociological literature moves

Abstracts 253

very slowly in terms of citations, whereas journal impact factors (IF) measure short-term impact at research fronts. Second, the citation distributions are heavily skewed because of the so-called Matthew effect (Merton) of cumulative advantages; one should not use quasi-averages (such as the IF) given this skewness. The alternative of using non-parametric statistics (e.g., percentiles), however, requires delineation of the reference sets. We discuss the unsolved problems in the case of (inter)disciplinary delineations and show empirically the ecological fallacy in attributing journal characteristics nevertheless to individual papers. Algorithmic constructs (e.g., the various rankings) cannot be used for policy or management purposes without validation or specification of statistical error.

#### Jan-Christoph Rogge

#### The social preconditions and effects of quantitative performance measurements. Results of a survey of young academics

Although the debate about the Journal Impact Factor and other forms of quantitative performance measurement rages on those whose performances shall be assessed through these instruments have rarely been consulted on this topic. In a first attempt to fill this gap, this article studies the effects of quantitative performance measurements on the work and careers of young academics in Germany. On the basis of 20 interviews with academics from ten different disciplines who already obtained their Ph.D. but have not yet received tenure, three arguments are developed: (1) In contrast to the academic tradition of pure devotion to the cause, the increasing use of quantitative performance measurement contributes to turning science into a "career job". (2) Especially those scientists who are focused on vertical advancement strategically try to enhance their publication output in order to increase their chances for success. (3) Self assurance and routine in the publication process largely depend on the support of mentors.

#### Jochen Gläser

#### The Journal Impact Factor in Sociology: Dangers of a non-measure

Owing to conceptual and technical problems, the Journal Impact Factor is not a valid measure of a journal article's quality. Still, it is employed because it can easily replace the assessment of content and promises objectivity as well as comparability. It will continue to be used as long as it can serve as a pseudo solution sciences for increasingly frequent evaluation problems particularly in the life, sciences. There is some hope that the emerging movement against the use of Journal Impact Factors grows faster than first attempts to use them in sociology.

#### Martina Franzen

#### The Impact Factor had it's day. Altmetrics and the Future of Science

The Impact Factor had it's day. Altmetrics and the Future of Science Abstract: Altmetrics is a response to criticisms of the journal impact factor as a means in research evaluation. By

extending the resonance spectrum from scientific sources covered by traditional bibliometrics towards non-scientific sources, Altmetrics draws on user-generated data in the Social Web. Altmetrics suggest measuring the broader impacts of research by numbers. Triggered by the idea of a democratization of science, the implementation of Altmetrics is booming. Moreover, Altmetrics tools act as a catalyst of the digital shift towards Open Science. As a side-effect, however, the accompanied demand for popularity might superimpose epistemic criteria.

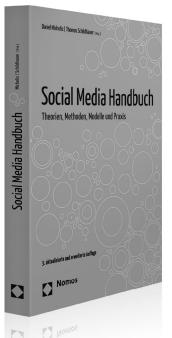
#### Peter Weingart

#### Nostalgia for the world without numbers

The argument between propagators and opponents of quantitative performance measures in research and higher education is at a stalemate. On the one hand are those who promote enthusiastically quantitative performance measures, not giving much thought to issues of misrepresentation and unintended consequences. On the other are the 'essentialists' denying the admissibility of transforming qualitative assessments into quantitative ones and reverting to a fundamental argument about the nature of science in general and the university as its core institution in particular. In between are the 'pragmatists' who occupy a strategic position in being the forward oriented vanguard combining reflective analysis and shaping the technology of indicators and their applications. I argue that the confrontation of promoters and essentialists is missing the point. Blind belief in the technology of numbers is as misplaced as its outright rejection that does not recognize the strength of social change driving it. In fact, individual scientists, universities and research institutions, large scientific publishing companies as well as science policy and bibliometricians are entangled in a tight arrangement in which quantitative measures have become the central currency and everyone profits from dealing with it in some way. Control by numbers is a social technology fired by digitization and has replaced trust in institutions. The old world of academia is thus past. There is no alternative to the pragmatists' efforts to shape that technology.

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## Aus der Reihe Pragmatik und Hermeneutik



#### Kommunikatives Handeln: Form und Würde moderner Weltgesellschaft

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Qua hermeneutic-linguistic-pragmatic turn wurde die Freisetzung kommunikativen Handelns kommunikationslogisch, entwicklungstheoretisch und diskursethisch entwickelt und die Form der Verständigung intersubjektivitätstheoretisch als Möglichkeit sozialer Identität bestimmt. Mit Peirce kann man das Verständigungstheorem als Intersubjektivitätsrelation lesen, Intersubjektivität selbst strukturlogisch "deduzieren". So präzisiert wird die von Habermas vollzogene Umstellung von Subjektivität auf formale Intersubjektivität über Kant, Hegel,

Husserl und Mead rekonstruierbar. Dabei kann das begründungstheoretische Defizit des nur postulierten Formganzen gesellschaftlicher Rationalität behoben, der formalpragmatisch ausgedünnte Lebensweltbegriff substantiiert und die nicht konsequent ausgeführte Methodologie mit der Trias von Metatheorie, empirischer Soziologie und Gesellschaftstheorie schärfer gestellt werden. Die relationenlogische Analyse drängt zur Neulektüre des Intersubjektivitätsgedankens.

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