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Abstract: As moderators of the *FQS'* debate on the standards of qualitative social research, we remind the participants and the readers of the vastness and the variety of criteria involved in the discourse of philosophy of science. We present impressions on the change of these criteria in recent discussions. We urge the participants of this debate to become aware of the systematic and historical character of postulated criteria.

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1. Introduction

As long as scientists work for universities or institutes, they must engage in different activities besides their research: they teach, give exams and carry out administrative duties. In all these domains own independent problems of action have to be solved. This implies that there is no common orientation for action within these fields. Instead we find a historically grown and socially assured logic of action in each of these fields, i.e. a set of rules and procedures and how to work on and solve this central problem of action. [1]

First of all doing research is *work*—sometimes well paid, sometimes less well paid, and sometimes (especially during the phase of qualification) you get no financial reward whatsoever. In taking a closer look at science as work, one

1 Translated by Antje LETTAU. We would like to thank Tina PATEL, Michael ROTH and Konstanze SENGE for helpful criticism throughout the translation.

realises that this work is a result of processes of social differentiation and consists of a range of (not always) disparate subtasks, each of which has a logic of its own. For all these fields of scientific endeavours, we find socially negotiated and often very different goodness criteria. For a further debate on goodness criteria for qualitative social research we therefore propose to specify the area or aspect of goodness which is referred to in each case. [2]

On the one hand, we try to stimulate the discussion with the following considerations about the goodness criteria for qualitative social research; on the other hand, we try guide and moderate the *FQS*-Debate. We have attempted to articulate and detail these goodness criteria; the result is an outline of ideas, which we hope will be further elaborated and articulated in subsequent contributions from our readers. [3]

2. About the Situation and the Intention

In the course of history we find a multifaceted and rich debate about goodness criteria in science. In the inner-scientific (epistemological) discourse of the modern times we traditionally find those of epistemology and methodology in the first line. In the 20th century we observe a strong emphasis in this "arena of discourse" on the idea of "demarcation" and on the idea that scientific knowledge has an epistemological priority opposed to other human ways of knowledge and understanding, as well as an emphasis on the idea of value-free science ("Werturteilsfreiheit")—i.e. scientific reasoning and scientific criteria are said to be detached from "trans-scientific" social and practical implications. [4]

A distinction between "inner-scientific" and "outer-scientific" conditions, processes and argumentation was introduced to protect this notion: By doing so the undeniable historical interactions of social norms, morality, economy, production, and warfare, on the one hand, and science, on the other hand, can be kept out of the (inner-scientific) discourse, e.g. the discourse on goodness- and quality-criteria. In this respect, this distinction can be seen as a result of the scientists' successful struggle against the paternalism of the church and the state. [5]

Due to analyses in the history and sociology of science the normative and idealistic self-conception of science (characterised by the maxims of rationality, truth and self-sufficiency) has become questionable—especially in the last third of the 20th century. For instance, the KUHNian description of theory shifts in the natural sciences (KUHN 1973) and micro-sociological descriptions of scientific production processes (following MANNHEIM's tradition of applying the theory of knowledge self-reflexively to science) have revealed the restricted, limited, and questionable conception and monopoly of rationality and the importance of social structures and processes for scientific knowledge production. [6]

This more descriptive perspective on science-in-the-making represents a vital challenge to the common, normative ideal of rationality. In practice, scientific research works with fundamentally different "logics" than those of enacting an epistemological and methodical canon—especially when it is successful. The

theory of knowledge and understanding is a strategy of justification, conceived by those who work with exactly this strategy to earn a living (by doing research). Looking at the history of science one finds that the examples of new insights that were brought to light while obeying the rules of the theory of knowledge and understanding are few. Often enough intuition, coincidence, self-interest and stubbornness engendered new ideas. [7]

This disenchantment of the idealised demands of science involved a "profanation" of scientific work. In a more realistic approach science proves to be less withdrawn from other human products: Science is shaped by contextual (social, linguistic, interactive, medial, cognitive, etc.) conditions that have their own criteria and their specific influences and constraints on the way scientific thinking and working are carried out. The epistemological discussion has acknowledged this dependence of scientific work on contextual structures and processes. But it is quite a different question how this issue is dealt with in an argumentation of objectivity—e.g. when propagating empirical research results or raising funds for future research. It fundamentally weakens the "persuasiveness" of research results. Dependent on the context of discourse and the audience this relativisation is revealed or hidden. [8]

When it comes to discussing goodness or quality criteria of the (qualitative) social sciences in such a situation it makes sense to undertake a systematic "stock-taking" of the postulated and enacted judgement criteria that play themselves out in routine scientific research. On the one hand, this serves to clarify the discourse. From our point of view various disputes in this field arise, because different authors refer to diverse levels of quality or domains without making this explicit (to the reader or to him-/herself). This results in polarities that can be solved by taking in a meta-perspective. On the other hand, it seems necessary to us to discuss and clarify the broad spectrum of quality standards that play a role in inner- and outer-scientific discourses. Only by doing so can we balance the (often implicit) preferences and value-decisions that play a role in scientific production processes (when raising funds, interacting with research partners, publishing research reports etc.). Here one must take into account that one can undertake an analytical differentiation of levels, but when it comes to actual research situations and discourses, the criteria are linked and correlated in various ways. [9]

3. A Systematisation of Domains and Levels of Goodness-Criteria

It is not easy to organise the discourse domain concerning goodness criteria for scientific research, because the particular debates partly overlap and the arguments do not always belong to the same argumentative levels. Our systematisation can therefore be only a first attempt. We suggest eight standards and domains: Goodness (a) based on the logic of justification, (b) based on the logic of discovery, (c) based on honesty and integrity of the scientists, (d) based on methodological appropriateness, (e) as a result of human ethics, (f) as practical relevance of research, (g) based on scientists' politics of representation,

and (h) as a result of external science evaluation. Below, we take up each of these issues. [10]

3.1 Goodness based on the logic of justification

General justifying methodological criteria of the empirical sciences: Orienting to the idea of a unitary science ("Einheitswissenschaft") a standard canon of goodness criteria for the empirical sciences has emerged in the dominating epistemological traditions of the last century (i.e. Logical Empiricism and Critical Rationalism and their followers). This standard canon contains specific logical and methodological maxims—not regarding differential object characteristics or discipline specifics—which still characterise conventional methodology textbooks in the social sciences. [11]

In this context, prototypical aspects that refer to linguistic and conceptual characteristics and the relationship between scientific symbolisation or symbol systems, on the one hand, and reality, on the other hand, could be:

- conceptual accuracy/precision
- intersubjective clear/unequivocal concepts and statements
- objective use of concepts and statements
- reliable observations, measurements, etc.
- logical consistency of statements and statement systems
- empirical testability of statements concerning reality
- level of confirmation of statements
- representative statements for situations and persons
- validity
- truth of empirical statements
- aesthetics/simplicity and economy of theories
- power/capacity of integration. [12]

3.2 Goodness based on the logic of discovery

Conventional philosophy of science has identified the discovery and development of scientific knowledge and scientific theories as an area of reasoning, but in terms of its criteria this aspect has not been elaborated. Instead, it is often assigned to the "psychology of scientific working" and therefore excluded from the epistemological and methodological sphere. [13]

Here, certain kinds of conclusions and argumentations play an important role, including, for instance, inductive and abductive procedures and methods of inventing and discovering new knowledge. But these procedures cannot sufficiently guarantee certainty of knowledge. In discourses you find insufficiently systematised criteria, such as "creativity", "innovation", "stimulating content", and "surprise effect". [14]

3.3 Goodness based on honesty and integrity of the scientists

One recent discussion is concerned with the fundamental aspects of "honesty" and "integrity". In the conventional self-conception of the scientific community there is no need to expound on the problems of these concepts. Scientists are not permitted to lie, cheat, fake their results, or claim the merits belonging to others. [15]

Instructed by startling violations of such maxims, some (e.g. in Germany an expert committee of the "Deutsche Forschungsgemeinschaft") take steps to ensure good scientific practice. A canon of institutional sanctions and personal obligations shall reduce the danger of "scientific malpractice". Maxims and criteria refer to documentation and storage of data, legitimate identification of authorship (of texts), conflict management, and institutional procedures to control the standards to maintain emphasis on "qualitative" as opposed to "quantitative" characteristics of scientific production. [16]

3.4 Goodness as methodological appropriateness: self reflection and perspective taking

A number of aspects concerning the dependency of quality criteria and characteristics of the specific object of scientific knowledge have been introduced —typically criticising the idea of a unitary science (inspired by the natural sciences) for the social sciences and humanities. This is about epistemological considerations concerning the relationship between the structure of the epistemological object and appropriate scientific research methods. The basic argument arises from the fact that in their attempts to generate knowledge the social sciences and humanities are concerned with a self-same object: the epistemological subject (knower, knowing society) and epistemological object (known) are identical and are therefore, in principle, interchangeable. This identity makes this research fundamentally different from research in the natural sciences and, for example, is the very foundation of introspective methods. Following this view it is not a methodology (indifferent to the object of research) that decides on scientific appropriateness but adequate "fittingness" of the structure of the object and research methods—whereupon the object's structure is most important. [17]

In this context, considerations concerning the adequacy of scientific concepts arise that pertain to "modelling", the "image of man", and the "representation" of epistemological objects. One important aspect is that the object becomes constituted as a source of knowledge because of its representation (construction of the other—"othering"). The choice of scientific methods and the perspective (observer, participant) determines what the object will appear to be and what characteristics of the object will be observed. Structural characteristics of the interaction between the epistemological subject (scientist) and the epistemological object ("subject", research participant) greatly influence the conceptualisation of the object and the possible research results. [18]

In different traditions and disciplines one finds the following maxims:

- Self reflexivity of the epistemological "objects": the ability of the epistemological objects to give information about themselves, to think about themselves, etc. is a constitutive characteristic of the object of research.
- "Levelling" of the social relation between epistemological subject and object: "subjects" become research participants and co-researchers; under certain circumstances the epistemological "object" is treated as an expert for his or her contexts.
- Reflexivity: theories in the social and human sciences as well as the object/subject-models they include must not only apply to the epistemological object but also to the epistemological subject (the experiencing and acting scientist).
- Reflection of the demarcation between epistemological subject and object in the human and social sciences: substantiated decisions have to be made regarding the location in the transactional relationship between epistemological subject and object where data will be taken (on the "distal"-"proximal"-continuum; s. DEVEREUX 1968).
- Specification of vital categorical "object"-characteristics within the scope of an agreed-upon "historical-empirical process" (HOLZKAMP 1983).
- Multi-perspective descriptions: The (often diverging) descriptions of objects from the perspectives of different participators or observers are interesting with regard to the gain of in-depth information about the observer and its object. [19]

3.5 Goodness as a result of human ethics

Taking into account the ethics of interaction between the (structurally identical) epistemological subject and object as well as the scientist's responsibility to protect the issues of his or her research partner, a number of criteria have been evolved. Often professional scientific incorporations formulate these criteria in codes of ethics that apply to all of their members. These codes usually leave considerable room for interpretation. Among them you find codes such as not to do any physical, social, and mental harm to the participants, to tell them the truth (if possible), and to respect their right for privacy while working on the data. According to these research projects that stick to human ethics in their interaction with the participants are considered "good". Scientists often find these aspects annoying, because they represent restrictions to their scope of action in their field of research. The practical scientific significance and effectiveness of these criteria often arise only when appeals and warnings of a "critical public" get loud. [20]

3.6 Goodness as practical relevance of scientific research

Quality characteristics of scientific research results that have become increasingly important are the practical applicability, usefulness, and utilisation in technical, economic and social contexts ("technological relevance"). [21]

These criteria prove to be complex: On the one hand, producers of scientific knowledge often take a distanced approach to this aspect, because knowledge—just like art—is considered as valuable per se without taking practical usefulness into account, and insofar they postulate the "freedom of science" (often promised in social contracts). On the other hand, recent history has shown that for scientific knowledge that is supposed to have only little practical relevance (e.g. in basic research), domains can be found or searched for in which this knowledge gains high practical relevance. Opposed to this the actors in the scientific process can produce counterproductive effects by intentionally orienting to ephemeral practical relevance. Projects that focus on the practical implementation of knowledge can turn into a perishable good. [22]

Besides this practical relevance (or as HABERMAS and HOLZKAMP say: "technical relevance") of scientific research—i.e. the principal possibility to utilise scientific knowledge without regard to value characteristics of the purposes for which they are used—the aspect of the interest-oriented relevance is introduced (following HABERMAS 1965, HOLZKAMP 1972 calls this "emancipatory relevance"). Starting from ethical and sociological theories the utilisation of scientific knowledge can be rated with respect to certain interests or interested parties. For the human and social sciences this can be illustrated by looking at the following comparison: Do the research results serve the "other directedness" or "manipulation" of social dependencies/relationships in the sense of any ("dominating") interests or interested parties? Or do they permit self-knowledge of the epistemological subject/object concerning its living conditions and stimulate a stronger control over them (i.e. do they permit self reflection, self development and expansion of control over acting opportunities)? Obviously it is hard to arrive at this criterion by "intentional action"—in spite of many "partial" attempts in the social sciences of the 70s and 80s. [23]

3.7 Goodness based on the scientists' politics of representation

Aspects of goodness of scientific work that directly or indirectly arise from the scientists' impression management and social politics are of special interest for social scientist and bear a high risk. Micro-sociological studies on real research processes (ethnographies of scientific "laboratories" or of the production of scientific texts) describe a number of practices and practised criteria that only partially have to do with common "quality criteria". Instead, the scientists are predominantly concerned with adjusting, aligning, and self-representing to inner and outer scientific co-players and recipients. (Does a scientist have a nose for trendy and modern ideas, practices, persons, etc.? Can he or she demonstrate his or her being up-to-date, his or her group membership in a convincing manner?) [24]

These characteristics can be subsumed under the term "staging". For instance, they can refer to aspects like:

- Following current foci of public (medial, political etc.) discussions,
- following current booms of scientific theories or "paradigms",
- using the most prestigious instruments and procedures (the fastest, biggest computer, the most innovative data analysis, etc.),
- techniques of textual representation—e.g. conformity with standard schemata for text production, but also comprehensibility to laymen, entertaining qualities, etc.,
- social anchoring in scientific networks, societies, insider relationships, power structures, etc.,
- access to certain presentation media,
- co-operating with private and commercial instances (contacts with "the businesses and "the media", etc.),
- tactical skills in dealing with experts, bureaucracy, sponsors, etc. [25]

The more the particular scientist manages to be successful in different domains and arenas the higher the quality of his or her work will rank. It seems to us that these action and actor characteristics are currently very important, and that they play a considerable role in the construction of (social, economic) success or failure of scientific activities and their protagonists. [26]

3.8 Goodness as a result of external science evaluation

Certain procedures for the "evaluation" of scientific accomplishments have recently seen the light of day—especially due to science-external pressures on the allocation of resources in scientific research routine. These procedures are said to allow a differentiation between scientific top performance and average performance. In doing so different "indicators" and "measures" are being invented or adopted that claim to make a quality differentiation possible. [27]

These are only sparsely orientated to the traditional epistemological criteria. Instead, they emphasise "non-theoretical" characteristics that can easily be operationalised and quantified, i.e., economic standards and "social resonance" of scientific research. Such aspects represent discussed candidates for the "ranking" of persons and institutions in the context of science politics, they are becoming propaganda instruments in the context of adapting to the market-economy and of competition between universities, research facilities, professional trainings, and so on. [28]

Examples for this domain:

- Amount of texts a scientist publishes or members of an institution publish,
- acceptance of publications in certain "high-ranking" journals or publishing houses (i.e. according to evaluation by the expert culture),

- frequency of quotation of authors/publications in selective statistics ("impact-factor" etc.),
- gaining of governmental and private subsidies or sponsors,
- editing of (famous) periodicals,
- characteristics of education of an institution,
- age of a scientist,
- gender of a scientist. [29]

Works of authors that rank high in these external criteria are considered "important". [30]

4. Impressions on the Historical Change in Criteria Prioritisation

In the epistemological discussion up to the 1970s (which used to be very important at least for scientific research at universities) we mainly find inner-scientific epistemological and methodological aspects of quality evaluation (prototypes: objectivity, reliability, validity, truth). [31]

Arising from the discussion on political administrative planning of "big science" (allocation of resources, prioritisation of research) as well as from politically "left" science critics, practical or technical relevance as a goodness criterion became more and more important in these days. [32]

In the 1980s and 1990s disillusion and scepticism arose in the field of traditional inner-scientific quality criteria: The idea that scientific knowledge represents reality lost followers. The epistemological orientation changed towards relativity and discursive nature of scientific knowledge. The criteria that used to be considered relatively unproblematic became questionable and obsolete in the "internal debate" of most social sciences. [33]

The trans-scientific political criteria of science producers shifted from a commitment to social progress (or at least from discussing this demand) towards an orientation to stock exchange and particular, ideational, social and economic "capitals". [34]

In doing so, science has increasingly lost the chances of arriving at certainty of knowledge. Instead, the inner-scientific discourse has to offer a colourful diversity of more or less exotic and "postmodern" aspects (e.g. aesthetics and entertainment) that have only little to do with the former "serious" ambitions. If one can no longer rely on inner-scientific goodness criteria, one inevitably has to use other standards. [35]

The non-scientific public shows astonishment or lack of interest in this withdrawal from the claim to validity of scientific knowledge. Furthermore the desolate nature of scientific knowledge production often shows in public discourse: In cases when a decision is insecure one can find, as the popular adage goes, "three scientific

experts with four different opinions". The public no longer gives credit to scientific problem solving and autonomy. External other-directedness increasingly replaces internal or self-control in science. But the gain in efficiency appears problematic: The "transactional costs" for the predominant slogan "substitute control for confidence" (panels, application processes, etc.) are now considerable. [36]

The scientific community and the non-scientific public have been equally disenchanted by science and scientific knowledge. In this context science has lost its legitimacy and chances for self-directedness. This not only applies to questions of "big science" concerning allocations of huge research-investments, but also influences science and scientific decisions in fundamental ways: "Evaluation" of science, of professional training, and so on is a continuous boom everywhere in any possible or impossible manner. The participants in this "science game" are being expelled from their "ivory tower" of inner-scientific legitimation of projects and are being forced into social (non scientific, e.g. economic, administrative, and mass medial) discourses that heretofore have been unfamiliar to scientists. This is a complex and often contradictory process: In addition to bringing a breath of fresh air into scientists' stuffy authoritarian arrogance—a decidedly democratic process—politicians, investors, and the mass media now have unrestricted access to decisions on scientific priorities, projects and research concepts (marketing of knowledge production). [37]

5. Conclusions

We conclude: The levels of legitimacy and criteria on which scientific projects have to be based, have fundamentally changed over the past twenty years: they have been widened and diversified. The relevant discourse contexts have become more numerous and often more differentiated. Here we find a movement away from inner-scientific discourses about goodness criteria towards external discourses, i.e., those criteria that are common in economy, politics, and communication. Because of these new aspects, a different "mix" or "profile" of standards of criteria has emerged. In our view, these discourses have lost a common reference point. The fundamental question is therefore, "Should science now submit to the logic of economy, politics, and the media after it took centuries to liberate itself from church and state?" Does science give up its monopoly for the methodological decisions in the production of assured knowledge to receive, in return, financial and symbolic resources? [38]

To arrive at a clarifying and future-oriented discussion about goodness/quality criteria in (qualitative) social research it is not useful to follow a momentary "zeitgeist" of debates on criteria, quality and evaluation (modifying a statement of LAKATOS [1972] about KUHN: to be taken in by a "mob psychology"). It is also not useful to postulate quality standards "per se". Instead we suggest to begin by unfolding and explicating a broad spectrum of significant and interesting arguments. [39]

Moreover the structures and requirements of the social and scientific contexts and discourses, to which these standards (or their aggregations) are applied,

have to be articulated and tested with respect to their relevance for scientific work (also reflecting their historical change). It is only on this basis that we can adequately weight and balance the different aspects (for particular contexts) and, perhaps, develop profiles of different criteria. Adopting/accepting criteria always implies a value decision—and the question: Which values can I represent on the basis of my self-conception as a (qualitative) social scientist, considering the research question, database, scientific discourses, goodness standards, and overall consequences of my research? A responsible answer to these questions leaves (that is our hope) no margin for arbitrariness. [40]

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