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What kind of science is useful for public managers – and for what purpose?
On the possibilities of a transformative role of science in the public sector

131 - Social Competence in Action: Inter- und transdisziplinäre Erkundungen im Dreieck Praxis-Lehre-Forschung

Abstract

Purpose: The paper questions the current perception of low relevance and demand for scholarly (scientific research) competence on the part of civil servants through identifying practical and transformative uses of scientific knowledge in professionals' practice, thus arguing for scholarly competences in professional degree programs.
Design/methodology/approach: The paper conceptually develops a theory of practitioners' knowing in action that reframes the use of scientific knowledge as a part of practical inquiry.
Findings: The paper formulates the notion of extended 'scientific temper' to open up space for reflection in action in the context of everyday professional practice and to avoid the pitfalls of technical rationality. It argues for an ontological – as opposed to mere epistemological – dimension of knowing in action. It suggests that changes in practitioners' stance in line with the extended 'scientific temper' enables specific uses of (post-structuralist) scientific knowledge.
Practical implications: The paper sketches principles of didactics in training scholarly competence on the part of civil servants in line with the notion of extended 'scientific temper' and post-structuralist paradigms in science.

Keywords:

scientific competences, research methods, professional degree programs, public administration, public management, social practice, epistemology

Science and public administration: demand for scholarly competence on the part of civil servants

Modern liberal democracies have been resting for quite some time on the marriage between "more or less formalized bodies of knowledge and specific administrative mechanisms" (Rutherford 1999, p. 50) – a marriage in which science and a new type of societal steering in the form of governing of populations and their territories along the principles of scientific management. Nevertheless, the demand for scientific (scholarly) competence on the part of civil servants remains quite low. This holds true despite the current calls for evidence-based decision making, and an increasing preoccupation with tasks that might benefit from scholarly competence (policy analysis and advice, institutional and

administrative design, commissioning and conducting evaluations and external research studies, involving scientists through participatory arrangements).

Some scientific competencies are typically understood to be part of the civil servants' general skill portfolio. Yet the focus lies on *use* rather than *production* of expert or scientific knowledge. In the UK, the competence to undertake research through literature reviews across a variety of sources and the ability to analyse and interpret information is required as a skill even at the lowest pay grade level, i.e. administrative assistant or equivalent (UK CSHR 2015). With the exception of 'science and engineering professions', research is understood as collecting expert findings and opinions (as opposed to acting *as* an expert by producing said findings), nevertheless including the acknowledgement of the plurality of scientific debates as well as quality control (UK GOS 2010). These notions are somewhat confirmed by the *Tuning-PA* project that identified 'competencies related to analysing and to solving PA-related problems by applying appropriate scientific methods as one of the six major areas of competencies in PA programs (Reichard and van den Krogt 2014). Yet, scientific competence is "less relevant for future practitioners but they are essential for academic careers" (ibid., p. 8). In Austria, a specific expert civil service career track has long been discussed but never implemented. For federal-level employees, a loosely standardised set of trainings called *Grundausbildung* ('basic training'), provided jointly by the Federal Public Administration Academy (under the auspices of Federal Chancellery) and the respective ministry, is obligatory. It does not include any general courses for competencies related to the use or production of scientific knowledge nor does it follow scholarly standards of writing.[1]

Given this low demand for scholarly competencies from civil servants and their low use in everyday professional practice, how prominently should such competence be featured in the curricula of public management/PA programs, in particular those aimed at professionals? Can there be a form of science that is more useful for professional practice, and that transforms students and their working environments and challenge existing organisational practices with their economies of power, knowledge and interests? How could such a science be delivered through a lens on learning and didactics respectful to professionals' embeddedness in their work environments and cultures? The rest of this paper will address these questions.

Reflection in action, technical rationality, and the 'scientific temper'

As practitioners 'converse' with a situation in the process of going about a task, they attempt to see the situation *as* something that is in their repertoires (Schön 1984, p. 138). This is not purely a cognitive process, 'seeing *as* something' is inextricably tied to 'doing *as* something'. Making the situation intelligible is done within the context of doing, i.e. with practical purposes and as guiding and orienting action. Dewey (1938, cf. Burke 1994) in this vein speaks of a practically grounded inquiry (based on a set of 'propositions') that results in 'judgements', i.e. implications on how to proceed ('predicate').

[1] For details see here: https://www.oeffentlicherdienst.gv.at/vab/seminarprogramm/allgemeine_ausbildung_und_weiterbildung/grundausbildung_2016.html.

Applying a practitioner's repertoire (or "putting together from what you have", Vickers 1976, p. 2 in Cook and Brown 1999, p. 381) means to work on the situation at hand, with its materials, following some kind of practical scheme (or 'theory-in-action', Schön 1984). Practical schemes often mobilise more or less formalised 'instruments' (cf. Engeström 1987) that serve as cognitive tools – rules, standard procedures, routines, templates, rules of thumb etc. – but nevertheless often make use of specific materials at the 'scene' (filing systems, forms, computer programs, imaging equipment, room arrangements etc.). Conversing with the situation involves experimenting, i.e. testing whether the applied practical scheme fits and leads towards desired purpose in a manner of verifying a 'hypothesis'. If the situation 'talks back' and resists (cf. the concept of 'dynamic affordances', Cook and Brown 1999), the practitioner reconsiders the scheme and 'instruments' used. Heidegger (1927, cf. Dreyfus 1991) speaks of four levels of such encountered resistance, leading to variously deep interruption and reflection in and of action. This conversation with the situation, including reflecting, experimenting and navigating while drawing on various sociomaterial resources, can be described as knowing in action (Schön 1984).[2]

Nevertheless, the practitioners' stance towards this practical inquiry is important – aversion towards uncertainty and time pressure might result in experiencing a pressing need for an immediate stabilisation of the situation. The 'situation' is a product of a practical inquiry, an inquiry that does not lead in a determinate direction but is instead improvisational and open-ended. Typically several practically intelligible and navigable situations are possible; yet an uncertainty-averse practitioner participates in a fast reduction of the multiplicity through *enactment* of a provisional, yet single and coherent practical reality. Indeed, practical inquiry is an accomplishment that goes beyond just 'knowing' the situation (epistemology). Through action, i.e. mobilisation of materials and 'conversation' with and moulding of the scene following a practical purpose, the situation is *enacted* – and enacted as a single particular reality. Practical inquiry is an ontological accomplishment.

The application of the so-called technical rationality to the situation involves forceful reduction of the situation to fit one blueprint at the expense of losing the richness and multiplicity of ways forward. One risk of this reduction is that it makes practitioners inattentive to observations that would fall outside of their conceptual categories (ibid.). Another is the lure of "changing existing situations into preferred ones" (Simon 1972, p. 55). Technical rationality and technical professional knowledge are also not very good at addressing problems that are not very well structured or which are messy in other ways – such as *wicked problems* described by Rittel and Webber (1973), of which there is, particularly in relation to societal steering and an increasingly crowded stage, a growing amount. Technical rationality has, in this sense, also political implications. Schön (1984, p. 41) observes that technical rationality works only in a situation of agreement about ends. Choice of means can then be treated as a technical (administrative, managerial) problem. Conflict about ends is, however, political, and one of the ways how situations get 'messy' and resist easy reduction to technical schemes. Part of the problem is the seeming rigour of technical professional knowledge, associated status of experts,

[2] To describe knowledge *used in* action (i.e. stocks as 'possessed') as well as knowing *as part of* action (as the described epistemological performance), Cook and Brown (1999, p. 53) speak of 'epistemology of practice'.

and the psychological difficulty in letting go of said knowledge, only to then have to face complexity. Applying technical rationality makes the world seem ordered and predictable, and solidifies the practitioners' place about how things are to be done.

Professionals tend to look at formalised, explicit and decontextualised scientific knowledge as a set of tools for expanding their repertoire for the purpose of reducing the complexity and instability of encountered situations. Said knowledge is seen as objective, politically neutral and providing valid causal explanations. Nevertheless scientific credibility of said knowledge is perhaps less important than its practical efficacy (Lassnig 2009). Instead of subordinating science to technical rationality, Dewey (1938) constructs a different understanding of a scientific approach. A practitioner's stance towards a situation should rest upon careful and 'objective' observations and involve an interim suspension of judgement (Campbell 1995, p. 101). Dewey's 'scientific temper' can nevertheless be expanded into ontological territory. Social sciences deal with problems that are complex – and complexity *per se* describes the impossibility of a single legitimate simplification of a situation. The practitioner should thus hold on to parallel competing hypotheses and resist the compulsion to reduce the ontological multiplicity of the situation into a single reality for as long as tenable (cf. Law and Singleton 2014). In this way, scientific temper should incorporate a normative stance of ontological pluralism in pursuit of democratic aspirations. This implies sensitivity towards forms of knowledge different from rigid causal models to be put into immediate practical use. Wagenaar (2011, p. 291) describes such forms of knowledge in which things are connected not only causally, "but also, and perhaps more pertinently for our ability to act effectively and appropriately in an indeterminate environment, through affinities, echoes, associations, correspondences and resonances". This would also mean that a new kind of science might be required – a science able to cope with complexity and plurality, democratic, and participatory.

Such an expanded notion of scientific temper has theoretical and normative connections to what Zanetti and Carr (1997) term the 'critical edge'. Basing on Gramsci's notion of *praxis*, in which the theoretical and the practical are integrated into an interplay of experience and reflection, Zanetti and Carr formulate a concept of critical theory education for civil servants. A "dialectic appreciation of administration would [allow to] perceive social reality as being in a state of constant transformation" (ibid., p. 219). Instead of preoccupation with control, civil servants should recognise and work through contradictions, oppositions and negations in a genuine communication process. They would thus act as 'transformative intellectuals' and 'critical specialists', with a decisive role in the creation of counterhegemonic spaces, "where articulation of alternative views is nurtured, validated, and encouraged" (ibid., p. 220).

A new science for civil servants

Building on the extension of Dewey's notion of scientific temper and the suggestion for a new kind of science, this section introduces some of its post-constructivist and post-structuralist foundations as well as some of the learning objectives and didactic principles for fostering the acquisition of scholarly competencies by PA/PM professionals and embodiment of the extended 'scientific temper' in practice.

Each scientific account, through its theoretical and methodological apparatus (cf. Barad 2003) enacts a specific reality, especially when in line with criteria of legitimacy valid for a particular scientific community. Thus science does not speak an objective truth about a singular reality but instead enacts multiple more or less powerful realities that frame how a specific problem may be constructed and addressed. It influences the distribution of power and resources in society and is inherently political. The capacity of professionals to enact multiple realities requires the ability to reframe the problem in different conceptual vocabularies and search for scholarly literature across a range of communities. Professionals should be able to appreciate the diversity of science, i.e. that various communities pursue various standards of conducting research, inquiry, dealing with data, and writing, as well as the possibility of simultaneously having multiple valid yet contradictory scientific accounts. That also implies appreciation of the situatedness and partial perspective of research, appreciation of and ability to evaluate a range of research designs, and, finally, methodological reflexivity.

Professionals should understand science as inherently problem oriented and as a practical 'toolbox,' but at the same time resist its subordination to the ideal of technical rationality. Teaching can start with linking a practical, concrete problem in an organisation or society to several scientific debates and bodies of knowledge. The aim is to realise that ways of seeing prefigure ways of acting in ways more subtle and yet more powerful than instrumental recommendations. Choice of an 'instrument' is political in the sense that the enactment of a reality also involves specific enactment of actors around the problem (different across the multiple realities in terms of power, visibility or agency, for example). Comparison across realities enables identifying winners and losers as well as possible audiences of research, which ultimately nurtures an understanding of public administration, the society or an organisation as historical constellations of actors with varying interests instead of single homogeneous objects. This also enables a focus on epistemic politics, i.e. explanations why some scientific accounts and forms of knowledge become hegemonic and some become silenced. This puts professionals in a position in which they can strengthen their reflexivity on the impacts and strategic aspects of the choice of form of knowledge (or methodological and theoretical apparatus in their own research) for tackling a practical problem.

As indicated above, the term 'research' can be understood in various ways. The position advocated here stresses particular ways of using scientific knowledge to solve a practical problem and framing this endeavour in a research context. Practical problem solving involves development and testing of practical schemes or theories-in-action, where such schemes and theories should incorporate scientific 'instruments'. Together with the notion of extended 'scientific temper', with its interim suspension of judgement and careful collection of data across options, use of scientific knowledge by professionals acquires distinct characteristics. In addition, problem-solving endeavours can be conceptualised as 'research' projects by embedding them in participatory and action research/evaluation frameworks. In so doing, the criteria of success would extend beyond the actual solving of the problem. Participatory and epistemic processes before, during and after such a practical inquiry would turn practical reflection to a more formalised and systematic collection of existing and generation of new knowledge, and spawn critical reflection on the choice of realities involving their

pertinent actors. A particular challenge arises in the form of design of policy/organisational measures meaningful across multiple realities at the same time (cf. Law and Singleton 2014). Overall this should lead to an enrichment of the practitioners' repertoires, a more reflected and sensitive 'tread' as they go along solving problems in practice, and a means of thinking in counterhegemonic spaces with the involvement of pertinent actors.

Underlying this is a theme of a normative image of future PA organisations with respect to knowledge and science. Such an image might go beyond the guiding image PA organisations built for themselves out of theories of evidence-based policy making or learning organisation in several respects: (1) living and coping with plurality of (scientific) narratives – 'ontological multiplicity'; (2) making epistemic selection processes explicit and reflected, i.e. focus on process and engaging with, rather than denying, complexities and uncertainties; (3) understanding the role of science not as a provider of definite – and hegemonic – expert knowledge ('content'), but in its process role too, as a socially engaged and emancipatory process of managing and coping with complex and contested issues.

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