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the public and political sector can react to the findings of educational research can be seen from the example of the publication of the OECD's Programme for International Student Assessment in Germany, but also in a whole group of other countries (e.g. Austria, Denmark, Luxembourg, Norway). In Germany, educational policy was seriously shaken by the Programme for International Student Assessment (PISA). As a consequence of its results, the basic structures of the school system were questioned and changed in several federal states and new national curricular benchmarks (standards) and nationwide evaluation procedures were set up, along with reform programmes from pre-school education right up to teacher-training programmes.

The progress which has been made in educational research confirms beliefs that – similar to the health sector – future political decisions and professional measures in the area of educational science should increasingly take empirical evidence into consideration. Several European countries (e.g. United Kingdom, Netherlands, Germany or Nordic countries) are already showing quite pronounced tendencies towards this.

Conclusion

However, educational research is still a long way away from medical research in its scope and magnitude of funding. At present, educational research is first and foremost capable of providing descriptive knowledge which identifies problem situations and challenges. This knowledge is highly relevant for evidence-based educational policy as it provides reference points for political decisions. Studies (for example, with longitudinal designs) which identify causally relevant conditional factors and thus provide explanatory knowledge are particularly helpful in this area. However, these studies are very complex and expensive. There is a special demand for studies providing knowledge of effective measures to achieve specific aims under given conditions in an educational system. In order to obtain this type of technological knowledge, systematic experiments in the laboratory and in the field are necessary, together with cleverly planned intervention studies. In the future, these types of studies must be strongly supported in order to provide better knowledge bases for political and professional players in the area of education in Europe.

The Necessity of Empirical Research, Cultural Values, and the Insufficiency of Technological Knowledge in Education

■ Fazal Rizvi

Professor Manfred Prenzel's account of the challenges facing education systems in Europe is, in my view, perfectly accurate. He is absolutely right that a key challenge facing democratic societies is how to prepare their citizens for effective political participation. As societies become ever more complex, a major task for educational sciences is to determine how to promote and sustain literacy so that students are able to acquire the knowledge and skills they need not only to have fulfilling lives but also enrich the communities in which they live and work. In a democratic society, everyone must have this opportunity for political participation – to realize their own potential and be able to contribute to their society.

Prenzel argues furthermore that educational systems face the challenge of creating a larger pool of talented people who are able to understand and negotiate the demands of the future, while ensuring that this is done in a manner that is socially equitable. However, if the future is characterized by dynamic and rapid advances in knowledge, and by fast changing modes of production, then educational systems can no longer focus merely on pri-

mary and secondary education, but need to regard life-long learning as essential. And if we are all to become life-long and life-wide learners then educational sciences need to develop new systems of curriculum, pedagogy and assessment. And finally, Prenzel argues that as Europe experiences profound demographic shifts, educational systems must become more serious about cultural diversity, catering to the needs of migrants.

To meet these historically unprecedented challenges, Prenzel insists, that a more rigorous empirically-based approach to educational research is necessary, so that policies and practices are driven more by evidence than by prejudice or simply precedent. Currently, most educational research, Prenzel maintains, is capable only of describing situations and challenges, and is poorly placed to provide explanatory knowledge of how particular conditions cause certain outcomes. According to Prenzel, what is needed is a «type of technological knowledge, systematic experiments in the laboratory and in the field», «together with clearly planned intervention studies». In this way, educational research should aspire to the status of medical research.

Now while it is hard to deny the importance of vigorous and robust empirical research, it is, in my

view, a mistake to assume that on its own technological knowledge of the kind Prenzel celebrates is sufficient to meet the challenges Europe and, indeed the rest of the world, faces. This is so because the sole emphasis on empirical research risks sidelining the fact that education is essentially a normative activity, the goals of which are highly contested. In this way, the analogy with medicine is somewhat misleading. Medicine has largely become a technical field because there is a wide-ranging agreement over its goals, while education centers on competing ideas about how a society ought to be constituted and how individuals should be prepared for participation in that society.

An exploration of these complex questions requires much more than technological knowledge. Essential to educational sciences is a historical understanding of the social norms that education is expected not only to reproduce but also to contest. An examination of social norms demands moreover philosophical analysis of what counts as a valuable life and a moral community for which education has a major responsibility for preparing its citizens. Prenzel appears to assume the nature of the society in which students are prepared to participate to be self-evident. This is far from the case, especially in a Europe that is characterized with growing cultural diversity, changing social mores, and globally networked economic relations. In education, to assume a view of society to be self-evident is to marginalize the most important political questions facing education. Effectively, it is to depoliticize educational debates.

The consequences of this depoliticization are not hard to detect, even in Prenzel's own analysis of the challenges facing the educational system. For example, his emphasis on technological research reduces discussions of cultural diversity in Europe to questions about the integration of migrant students into the mainstream schools and society. The key issue becomes a technical one, concerned with factors that contribute to their success and integra-

tion into a set of existing norms. Pushed aside here are the debates about the social norms themselves, and how schools might themselves need to change to fully capture the benefits of diversity. Educational research becomes largely focused on the problems of the migrant students, while relational issues of intercultural relations, and the changes required in local European students, are mostly ignored.

Another example of the consequences of depoliticized research in education is evident in the comparative studies of educational performance, as provided by such programs as PISA. The comparative data PISA produces is by definition nation-centric, that is, it treats national categories to be perfectly discrete and self-evident, and it assumes the skills it tests of numeracy and literacy to be globally applicable. Now while it would be churlish to deny the valuable information that PISA provides, what the PISA's technicism subdues are the political debates about what knowledge is most worth in an era of global interconnectivities. What its methodological nationalism fails to indicate is how the information PISA provides is limited in its generalizability, and how indeed it might be used in differing contexts to pursue particular educational ends.

In this short commentary, I am of course not denying the value of technological research in education. In various specific contexts and for specific purposes, it can be invaluable. However, to frame educational sciences exclusively in technical terms is, in my view, to fail to recognize that an examination of educational issues requires bringing together both empirical and normative considerations – both facts and values. Facts about educational processes always incorporate certain values; and any effective discussion of educational values necessarily demands grounding that discussion in facts. The challenges facing educational systems in Europe, and indeed around the world, are far too complex and important to ignore the importance of this fundamental truth.

What's Wrong with an Evidence-based Educational Policy for the Knowledge Society as a Model of Educational Social Science?

■ Michael A. Peters

In the Introduction to the SCSS Position Paper the editors mention a list of theorists which includes among them the group of post-war French philosophers and theoretical sociologists most of whom are no longer with us – Jean Baudrillard, Pierre

Bourdieu, Michel de Certeau, Gilles Deleuze, Jacques Derrida, Michel Foucault, Jacques Lacan and Jean-François Lyotard, as well as some distinguished European scholars still with us but near the end of their careers such as Jürgen Habermas, Zygmunt Bauman, and Anthony Giddens, among others. Many of the scholars that figure in this selective list are philosophers while some are also sociolo-

gists. None of the philosophers would call themselves «social scientists» and, indeed, my guess is that neither would most of the sociologists. They would balk at the term «social theorists» even though in this publication little concession is made to theory. None would readily identify themselves with the either performative and measurement approach taken to social science policy planning nor the largely behavioral and economic agenda set out under the head «The Next Generation». Indeed, if anything the scholars named in the list referred to in relation to the question of quality would want to problematize a conception of science assessed in terms of outputs. Unfortunately, the report is bedeviled with definitional problems of «social science» and «humanities» and their relation despite the brief reference to the «cultural turn». The selectivity of a list that is supposed to speak to the quality of the European legacy but where are the anthropologists, the historians, the feminists, and the cultural studies theorists (to name a few relevant areas of study)? One might ask about the overwhelming economic and empiricist policy orientation of the report that is supposed to identify challenges and opportunities yet rests on the laurels of «theory» and the name-recognition of distinguished scholars engaged in theory construction.

Manfred Prenzel's contribution *Challenges facing the educational system* follows suit and takes an even more pragmatic measurement and policy orientation with an overwhelming emphasis on «testing», «evaluation», «reliability», «indicators», «surveys», «sample designs», «monitoring». Prenzel, driven in part by the approach and ethos of the larger document, focuses on «the development of a scientific monitoring system, both within Europe and worldwide, [which] has been driven by the importance which education has in a global knowledge society and the fact that this importance is becoming increasingly clearly recognised.» Prenzel goes on to argue what has become almost a mantra for OECD and national planning agencies: «In a knowledge society, education becomes a prominent production factor for the further development both of the individual and that of society. Beyond that education in general creates relevant preconditions for physical and mental health and for the readiness to engage in different areas of human expression. However, the dynamics of a knowledge society also bring new challenges for learning. What is needed is intelligent knowledge which can be applied flexibly. Learning is not restricted to a certain life phase or an institution (school); it becomes a continual task ranging across the life span.»

He then identifies four main challenges for educational systems and thus educational research in Europe: full society participation for everyone (analyzed in terms of «competences»); lifelong learning (with an accent on training); migration and (social and economic) integration; and, evidence-based

education policy which, unlike medical research, is allegedly still largely descriptive and as yet unable to provide causally relevant conditional factors for achievement.

What is wrong with this picture? There are numerous criticisms to be made. First, a social scientist ought to take issue with the crude empiricism embraced by Prenzel who assumes that the social theory of the knowledge society is a «given» and all that remains is system description, measurement, evaluation and monitoring. An emphasis of social theory and its relation to social science would want to contest this narrow instrumental positivism and the view of social science planning that accompanies it. I do not have the space to go into the philosophy of social science to demonstrate what is wrong with this view of logic and method – questions that have been systematically raised by a range of scholars well before Habermas' *On the Logic of the Social Sciences* (1967/1988) and fiercely contested thereafter. Some reflection on how knowledge is constituted in the social sciences would be a useful corrective of Prenzel's scientism and his implicit doctrine of epistemological unit and maturity (Foucault 1972; Wallerstein 2004). Given Prenzel's emphasis on policy it is no less important to reflect philosophically on social science policy and social science for policy that purports to promote the development of systematic, intelligent, and effective public decision making (Kitcher 2001; Mitchum/Frodeman 2004). But these broad epistemological issues concerning the status of the social sciences and their relation to policy really constitute only the preliminaries. When we move to the substantive notion of the «knowledge society» as a socioeconomic theory of development and modernization for education then we enter another contested domain.

While the ideology of the «knowledge society» has firmly taken root in liberal capitalist societies its historical roots, epistemological, ethical and political dimensions have not yet been fully appraised (Peters/Besley 2006). Indeed, when it comes to the vision that informs Prenzel's view he adopts an unproblematic and ahistorical theory that is systematically ambiguous between conceptions of «knowledge society» and «knowledge economy» – reflecting a deep disciplinary gap between economics of knowledge and sociology of knowledge and postindustrialism that has led to the development of two independent and separate discourses that rarely speak to one another (Peters 2007). Indeed, for the very reason – a pertinent historical fact about the formation of social science disciplines – I prefer to talk about «knowledge cultures» in an approach called «cultural knowledge economy» based on the significance of the «communicative turn» which is associated with contemporary notions of modernization (and postmodernization) motivated by processes of informational development within «knowledge capitalism» (Peters/Besley 2006).

In the age of «knowledge capitalism» (Peters/Britez/Bulut 2009) we can happily talk about different approaches to education policy and especially the differences among the World Bank's «Knowledge for Development», OECD's adoption of «new growth theory», and conceptions like Burton-Jones (1999) who analyzes knowledge in positive terms as new forms of global capital. Each of these conceptions provides different prescriptions and knowledge futures. National policy constructions of the knowledge society take on different commitments (and values) and also emphasize different elements especially under different political regimes that run the spectrum from the dominant neoliberal paradigm to more traditional social democratic alternatives (Peters 2010a). In this context we can talk of three different policy eras and maintain that the question of analyzing the relationship between educational policy and policy evaluation leads directly into the heart of theoretical positions in policy science and into historical reconstructions of knowledge and rationalities underlying educational policy and evaluation (Peters/Weber/Britez 2010).

More recently, the knowledge economy discourse has taken new forms based around concepts of learning, openness and creativity (Peters 2010b). The recent policy discourse on the creative economy (UNCTAD 2008) has only begun to impact upon national, regional and world development policy and the role and significance of education in this context has yet to be properly addressed (Peters/Marginson/Murphy 2009; Marginson/Murphy/Peters 2010; Murphy/Peters/Marginson 2010; Araya/Peters 2010). The notion of learning economy focused around national innovation strategies also has great significance for both formal and informal education and perhaps the most policy-relevant strand is the «open science economy» and models of open science, informed by open source models and buttressed by philosophical and social theories of the open society (Peters/Britez 2008; Peters/Roberts 2010). In any event, in this policy environment social science can't be divorced from social theory or from social and political philosophy, and measurement and evaluation can't be considered in isolation from the social theory competition that is taking place around all the major concepts – their histories and trajectories. In the knowledge economy education takes pride of place as the leading productive sector, especially higher education and research universities, and yet we do not have sufficient theoretical clarity or interdisciplinary collaboration to produce the appropriate blended policy discourses or anything like a unified social theory that can articulate the possibilities, let alone agreement on what should be measured for what reasons. We are only becoming aware of the importance of cultural and historical traditions in helping to determine approaches to the development of knowledge cultures. This awareness has become pronounced in an era of recession where BRIC and

oil countries now lead the international growth stakes and have the massive funds for public reinvestment in education and associated information infrastructures. At the historical point when Europe and Anglo-America (together with its neoliberal ideology of market fundamentalism) are floundering and some commentators say are declining in world significance, China, India and Brazil are rising. This observation highlights the question of different cultural and geopolitical approaches to the knowledge economy and in particular to the restructuring of higher education that has the potential to reverse export-education of the U.S. and Europe in ex-colonies and the flow of international students, a point that emphasizes how nation and regional policy needs to be contextualized within a dynamic global system still emerging. At this early stage of our enquiries we should take care that measurement, monitoring and evaluation do not drive either the policy process or social science theory formulation.

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Die Erziehungswissenschaft am Gängelband der Bildungspolitik

■ Walter Herzog

Wer in der Erziehungswissenschaft eine Sozialwissenschaft sieht und die Auffassung vertritt, Bildung und Erziehung würden als «Funktion der Gesellschaft» (Dilthey) hinreichend verstanden, der wird gegen den Text von Prenzel wenig einzuwenden haben. Wer dagegen im «Sozialwissenschaftlichen Standardmodell» (vgl. Bischof 2008, S. 548ff.) eine unzulängliche Grundlage für eine pädagogische Wissenschaft sieht, der wird sich mit dem Text kaum befreunden können. Zu einseitig wird ihm die Argumentation erscheinen; zu wenig wird er den vermittelnden Charakter pädagogischen Handelns und pädagogischer Institutionen berücksichtigt finden (vgl. Herzog 2008, 2009).

Schule war noch nie einfach der Kinder wegen da. Aber es war auch immer die Meinung vorherrschend, dass die Bedürfnisse der Kinder, ihre unterschiedlichen Begabungen und verschiedenartigen Interessen ein Anrecht darauf haben, in der Schule Beachtung zu finden und anerkannt zu werden. Indem sich Prenzel bei der Herleitung der Herausforderungen für die (europäische) Bildungsforschung gänzlich auf die Seite der Gesellschaft schlägt, übergeht er die individuellen Bedingungen von Bildung und Erziehung praktisch vollständig. Keine Rede davon, dass Bildung zwar angeregt, aber nicht gemacht werden kann, dass Lernen ein Vorgang ist, den die Lernenden selber vollziehen müssen, und dass der Erziehung Grenzen gesetzt sind, die nicht nur in der Gesellschaft, sondern auch im Erzieher und im Edukanden liegen.

Von Bernfeld (2006), der auf die dreifachen Grenzen der Erziehung hingewiesen hat, stammt die treffende Umschreibung der Erziehung als «Summe der Reaktionen einer Gesellschaft auf die Entwicklungstatsache» (ebd., S. 51). Damit findet sich ein Ausgangspunkt für die Festlegung von *educational topics*, der um einiges reichhaltiger ist als der undialektische Ansatz von Prenzel. Bernfelds Formulierung hält in Erinnerung, dass der Mensch nicht nur ein gesellschaftliches, sondern auch ein natürliches Wesen ist. In ihrer einseitigen Ausrichtung an den Erwartungen der Gesellschaft segelt Prenzels Argumentation im Kielwasser der Pädagogischen Anth-

ropologie, die dem Edukanden nicht nur eine «unendliche Lernbedürftigkeit» (Roth 1966, S. 115) und «prinzipiell unbegrenzte Lernfähigkeit» (Roth 1971, S. 32) angedichtet hat, sondern diese im selben Atemzug als «unendliche ... Formbarkeit» (ebd.) und «unendliche ... Erziehungsfähigkeit» (Roth 1966, S. 149) ausgelegt hat. Wie der Sozialisation im «Sozialwissenschaftlichen Standardmodell» nicht einfach die Aufgabe zukommt, das Individuum in die (moderne) Gesellschaft einzuführen, sondern seine Menschwerdung zu gewährleisten, galt der Pädagogischen Anthropologie die Erziehung als Formung einer unbestimmten menschlichen Natur.

Auch wenn in Prenzels Text explizit keine anthropologischen Äusserungen zu finden sind, ist seiner Argumentation kaum zu folgen, wenn ihr als Prämisse nicht eine hohe Plastizität der menschlichen Natur vorangestellt wird. Nur wer davon ausgeht, der Mensch werde «ebenso unfertig für unsere heutige Zeit geboren wie vor Tausenden von Jahren für die damalige Kultur» (ebd., S. 132), kann die Ansprüche der Wissensgesellschaft *tel quel* zum Massstab nehmen, um den Auftrag der Schule zu bestimmen. Nicht nur im Allgemeinen leitet Prenzel die Herausforderungen für das schulische Lernen direkt aus dem gesellschaftlichen Bedarf nach höher qualifizierten Arbeitskräften ab, auch im Konkreten verdanken sich die behaupteten Notwendigkeiten einer besseren Ausschöpfung des «brachliegenden» Begabungspotenzials und der schulischen Anstiftung zu lebenslangem Lernen einer platten Deduktionsbeziehung zwischen Gesellschaft und Schule. Selbst die spärlichen Hinweise auf den *individuellen* Nutzen von Bildung (wie Gesundheit, Schutz vor Arbeitslosigkeit oder Identitätsbildung) gehen kaum über die Perspektive der Gesellschaft hinaus.

Indem er die Schule allein durch die Brille der Gesellschaft wahrnimmt, trägt Prenzel zur Pädagogisierung politischer Probleme bei. Selbst wenn es nicht in seiner Absicht liegen sollte, führt die Missachtung der Politik als *praktischer* Bedingung der Pädagogik (vgl. Blass 1978, insbes. Bd. I, S. 43ff.) zu einer argen Verkürzung der Analyse. So werden die Probleme von Migrantinnen und Migranten bzw. ihrer Kinder bei diesen selber geortet und die Politik von jeder Verantwortung für bessere Integrationsmassnahmen entlastet. Ganz ähnlich im Falle

des weiblichen Fernbleibens von naturwissenschaftlich-technischen Berufen. Prenzel diagnostiziert ein motivationales Problem, während mindestens so plausibel eine Erklärung wäre, die über individuelle Ursachen hinausgeht und die Situation von gut qualifizierten Frauen in Gesellschaften mit konventioneller Geschlechtsrollenteilung in Betracht zieht. Das geringe Interesse von Mädchen an naturwissenschaftlich-technischen Berufen wäre danach weniger auf eine defizitäre Lernmotivation als auf eine antizipierte Unvereinbarkeit von Familie und Beruf zurückzuführen. Da diese in nicht-technischen Berufen (wie dem Anwalts- oder Lehrerberuf), die leichter selbstständig oder teilzeitlich ausgeübt werden können, weniger gegeben scheint, wählen Frauen oft solche Berufe. Wo die Vereinbarkeit aber auch bei naturwissenschaftlichen Berufen (wie dem Arzt- oder Apothekerberuf) gegeben ist, entscheiden sich Frauen sehr wohl auch für diese Berufe.

Indem er sich über die Politik als Rahmenbedingung der Pädagogik hinwegsetzt und einseitig Partei für die Gesellschaft nimmt, gerät Prenzel argumentativ in eine heikle Lage. Illustriert an der Behauptung eines «brachliegenden Begabungspotenzials» stellt sich die Frage, wie in einer freiheitlichen und demokratischen Gesellschaft zu legitimieren wäre, dieses Potenzial vermehrt auszuschöpfen, nur weil ökonomische Sachzwänge dies nahelegen. In westlichen Ländern ist der Varianzanteil der Schülerleistungen, der durch *schulische* Faktoren aufgeklärt werden kann, kleiner als in Drittwelt- oder Schwellenländern (vgl. Fuller/Heyneman 1989). Dies nicht zuletzt deshalb, weil die Schulen in westlichen Ländern eine vergleichsweise homogene Qualität aufweisen (vgl. Hofer 1990). Eine weitergehende Ausschöpfung der Begabungsreserven würde daher Eingriffe in die Familie nahelegen. Aber kann dergleichen ohne Verletzung der familiären Privatsphäre und des Erziehungsrechts der Eltern geschehen? Es mag für die Bildungsforschung ein sinnvoller Ansatz sein, «to analyse the background conditions of different competency gains which result, amongst other things, from the degrees to which different family surroundings provide encouragement and motivation». Aber lassen sich die gewonnenen Erkenntnisse dann ohne weiteres in «major societal interventions» umsetzen?

Zwar kann man schwerlich dagegen sein, wenn sich politische Entscheidungsträger vermehrt auf Ergebnisse wissenschaftlicher Forschung stützen, aber eine *evidence-based policy* erweist sich im Falle von Bildung und Erziehung als hoch problematisch. Und zwar aus dem bereits genannten Grund der konstitutiven Bezogenheit von Pädagogik auf Politik. In demokratischen Gesellschaften sind Schulen öffentliche Institutionen, über deren Gestaltung nicht die Wissenschaft – zumindest nicht allein – befindet, sondern der politische Konsens, der aus Mehrheitsentscheidungen hervorgeht. Während die Anwendung medizinischen Wissens (*evidence-*

based medicine) den Umweg über die Politik nicht machen muss, weil Gesundheit ein politisch unumstrittenes Ziel ist, ist dies bei der Umsetzung pädagogischer Erkenntnisse anders. Wenn Entscheidungen über die Institutionalisierung von Bildung und Erziehung nicht mehr dem Widerstreit der politischen Interessen ausgesetzt, sondern aus vermeintlichen Fakten abgeleitet werden, dann bedeutet dies eine massive Einschränkung des Prinzips der Öffentlichkeit. Aus Demokratie wird Technokratie.

Gegen eine evidenz-basierte Politik liegen im Falle der Bildung jedoch weitere Gründe vor. So scheint Prenzels Lob der «exceptional quality of the methodological foundations on which current educational research in Europe is based» reichlich übertrieben zu sein. Wo sind denn zum Beispiel die Kompetenzmodelle, die über bloße Klassifikationen hinausgehen und *Entwicklungsverläufe* modellieren? Wissen wir – über eine Fülle von unverbundenen Indikatoren hinaus – tatsächlich, was die *Qualität von Schule und Unterricht* ausmacht? Kann man die bildungspolitischen Reaktionen auf PISA in Deutschland (und anderswo) wirklich der *methodischen Qualität* der verwendeten Tests zuschreiben? Zweifellos macht die erziehungswissenschaftliche Methodik Fortschritte. Aber über ein Instrumentarium, das die Komplexität und Prozessualität von Schule und Unterricht verlässlich abzubilden vermag, verfügen wir weiterhin nicht. Was uns faktisch vorliegt, ist eine Fülle an Einzelstudien, die sich auch durch Metaanalysen theoretisch nicht integrieren lassen. Erkenntnisse über die Wirksamkeit einzelner Variablen und Variablenbündel sind aufgrund der zumeist geringen Effektstärken kaum dazu geeignet, das Lehrerhandeln normativ anzuleiten oder zu beurteilen. Dass wir sogar über ein «scientific monitoring system» für unsere Bildungssysteme verfügen sollen, halte ich für einen schlechten Witz – wenn ich daran denke, was die beiden bisherigen Monitoring-Berichte zum Bildungssystem der Schweiz an verwertbarem «Steuerungswissen» gebracht haben (vgl. SKBF 2006, 2010).

Wie wissenschaftlich solche Monitoring-Systeme auch immer sein mögen, solange sie Bildungsprozesse lediglich im Rahmen von Input-Output-Modellen, angereichert um einige Kontext- und Prozessvariablen, darzustellen vermögen, geben sie die schulische Realität nicht nur äusserst verkürzt wieder, sondern wecken aufgrund ihrer simplen Linearität auch Erwartungen an die Schule, die diese nicht einzulösen vermag (vgl. Herzog 2007, 2010). Allerdings passen die technologischen Modelle bestens zur schleichenden Unterwanderung von Demokratie durch Technokratie.

An dieser Stelle zeigt sich nochmals, wie fragwürdig eine evidenz-basierte Politik im Falle von Schule und Erziehung ist. Prenzels direkter Vergleich mit der medizinischen Forschung unterschlägt nicht nur die Relationiertheit von Pädagogik und Politik, sondern auch die ganz andere Wirkungsweise pädagogischer Interventionen. Zu be-

haupte, mittels streng kontrollierter experimenteller oder Längsschnittstudien liessen sich Erkenntnisse über Kausalprozesse gewinnen, die technisch verwertbar sind, ist im Falle von Bildung und Schule schlicht falsch (vgl. Herzog 2008; Pawson 2006, S. 51ff.). Die Wirksamkeit einer ärztlichen Behandlung liegt auf der körperlichen (biochemischen) Ebene und kann in ihrer Ursächlichkeit tatsächlich experimentell aufgedeckt werden. Das Medium pädagogischer Wirksamkeit ist jedoch die Kommunikation, deren Erfolg grundsätzlich nicht im gleichen Sinne garantiert werden kann wie derjenige eines Medikaments oder eines chirurgischen Eingriffs. Wo der Behandlung im medizinischen Fall *als solcher* Wirksamkeit attestiert werden kann, weil sich die Einnahme des Medikaments oder die Manipulation am Körper als trivial erweisen, da ist eine pädagogische Intervention nur erfolgreich, wenn sie vom Adressaten angenommen wird, was in keiner Weise trivial ist (vgl. Benner 2010).

Gesamthaft gesehen, vermag Prenzels Argumentation weder in politischer noch in pädagogischer Hinsicht zu genügen. Was als Anpreisung einer erfolgreichen Sozialwissenschaft daherkommt, erweist sich als Bumerang für die Erziehungswissenschaft. Denn diese wird von Prenzel geradezu schutzlos den Interessen der Politik ausgeliefert. Die Erziehungswissenschaft am Gängelband der Europäischen Union? Eine schreckliche Vision!

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An Alternative Future for European Educational Research

■ Gert Biesta

V*ital Questions*, the position paper from the Standing Committee for the Social Sciences of the European Science Foundation, is an ambitious document as it aims to describe «the current state and future prospects of the social sciences in Europe». It is important not to underestimate the potential impact of documents like these. They tend to occupy a pivotal position in a wide range of influential networks and can therefore quickly become an «obligatory passage point» (Latour 1987) for any further contributions to the discussion. It is notoriously difficult to get documents like these «right» as they need to find a fine balance between inclusivity, purposefulness, judgement and political expediency. This is particularly difficult in the domain of the social sciences where there exists a plurality of visions about what counts as good research and where, more importantly, this plurality is gen-

erally seen as a strength rather than a weakness. Those who make contributions to documents like these generally follow one of two strategies. One option is to use the occasion for pursuing a particular approach or agenda, either based on a belief that this is the one and only way forward for the field or for the more pragmatic – and as some would say: cynical – reason that the occasion provides a unique platform for the promotion of one's own particular views. Another option is to engage more explicitly with the responsibility that comes with speaking from such a visible and potentially influential position, aiming to represent a broader notion of the field and its challenges and possibilities than one's own particular vision.

It is perhaps unfortunate that the ESF Standing Committee has only sought contributions from single individuals (albeit that some of the contributions in *Vital Questions* have been co-authored). It is definitely unfortunate that the author of the section on education and educational research has de-

cided to articulate only one possible configuration of the field of educational research. This is not because there would be no place for this particular view within the spectrum of approaches that characterises the field of educational research. It is first and foremost because, by doing so, the author fails to provide readers with an insight in the current state of affairs within the field. This makes it virtually impossible to judge the specificity of the approach put forward. Within the overall document this is ironic for two reasons. One is that in the introduction to *Vital Questions* it is explicitly stated that «science, including social science, proceeds by controversy» and that «social science, like other science, has to be both selfcritical and transparent.» The presentation of only one possible configuration of educational research not only masks existing plurality in the field but, by suggesting that there is no alternative, also lacks self criticality. The second reason has to do with the fact that in the (much more balanced) introduction to *Vital Questions* the absence of a strong division between the social sciences and the humanities is seen as one of the distinctive features and strengths of European social science, particularly when compared to North America. The field of educational research is no exception to this, and when one looks across Europe one can see this wider outlook clearly represented in the different manifestations and configurations of educational research.

It is therefore remarkable that the author of the section on education puts forward a conception of educational research that is almost exclusively a social science approach that shows very little traces from the humanities. In this regard the approach outlined in the section is, at least from a historical standpoint, quite un-European. The author presents the field of educational research partly as a «monitoring system» that needs to provide educational policy makers with «reliable and valid indicators for lesson and school quality». In addition, the author sees the task of educational research as identifying the factors that can explain educational «output» and educational «success». The author thus presents a technical or technological view of educational research in which the task of research is confined to the generation of technical solutions for practical problems through the generation of what the author does indeed refer to as «technological knowledge».

There are a number of problems with this approach, and they are actually quite well known. At the most general level – that is when we look at education as a system – it may indeed be possible to identify patterns and correlations. But there is an important gap between the patterns that can be found at macro level and the connections that are being made at micro level. One reason for this is that while at a macro level the educational system may display quasi-causal behaviour, at micro level connections between «input» and «output» variables

are always made by individuals who, as the introduction to *Vital Questions* emphasises, «can make their own decisions». That is why even if research can identify patterns at macro level they can never simply be translated into solutions at micro level. It is, however, always at the micro level – where real individuals make real choices and real decisions – that change needs to be achieved, as there are hardly any «steering points» that operate at macro level, and probably there are even none at all.

A second problem with the technological view of educational research is that it relies on a problematic separation of means and ends, operating on the assumption that science can only focus on facts and means and that aims and ends have to come from policy or politics. Such a truncated view of scientific rationality denies the important contributions that research can make through clarification and critical engagement with human practices such as education. In addition to a technical or technological role, research can also play what De Vries (1990) referred to as a «cultural role», one in which research does not provide the field of practice with solutions but with different ways of understanding. Such a role is as practical as the technical role, as what is often needed in order to address a problem is not a solution but first and foremost a way to understand what is going on. Interpretation, clarification and critique are therefore important modes of educational research as well, and while they can work in synergy with more technical or technological approaches, the latter can definitely not replace the former. This is precisely why the Continental traditions in which social science and the humanities are not separated but work in conjunction is of crucial importance for a broader conception of educational research. Ultimately, a technological view of educational research can become politically naive and even irresponsible if it does not consider the potential implications of the knowledge it generates or if it simply accepts the values, visions and directions of policy makers without critical scrutiny. In this respect it is highly significant, for example, that in 2003 the government in Northern Ireland decided against school league tables.

The problem with a technological view of educational research is that it misses the important role of educational research in generating interpretation, understanding and critique and thus runs the risk of promoting a view of educational research that is politically naive and ultimately even irresponsible. It is also a view that, by approaching the educational system as quasi-causal, forgets that any connections – connections between variables, connections between teaching and learning, connections between input and output – are always made by people who can think and reflect and who have the agency to act in a number of different ways. A technological view is unable to engage with education as a social reality *sui generis*, which is a further reason why we need a much broader conception of

educational research.

That a technological view lacks the resources for criticality is not only demonstrated by the fact that the challenges for educational systems in Europe are simply equated with the challenges for educational research in Europe, but also by the fact that the challenges that are presented seem to come straight from policy speak and are in no way critically interrogated. Thus we read that everyone should participate in society and politics without asking questions about what it is one should be participating in and who sets the agenda and conditions for participation. Thus we read about competences without any critical questions concerning the particular notion of human action implied in this idea. Thus we get lifelong learning, without any mention that the requirement for flexibility and adaptation is not a natural fact but stems first and foremost from the demands of global capitalism. Thus we get a predominantly economic rationale for education, without asking question about why the economy – and in most cases this means the market economy – should be the main driver of education policy. There are of course also important social justice dimensions to these discussions, both with regard to employment and with regard to access to education, but the point is that all these questions – which are crucial in a value-laden domain as education – seem to be outside of what educational research is supposed to occupy itself with.

A final problem with the approach presented in the section on education is that it ends up with the mantra of evidence-based educational policy and practice and the suggestion that if education becomes like medicine, all problems will eventually be solved. Apart from the fact that the practice of medicine and the practice of education are incomparable – being a student is, after all, not a disease just as education is not a treatment or a drug – the problem here is that empirical research has actually

questioned the idea that we can understand the 'success' of modern medicine by seeing it as based upon evidence (see, for example, Latour 1988). In addition there are important epistemological and praxeological questions that need to be asked – and have been asked – about the ideology of evidence-based practice (see, for example, Biesta 2007). These questions do not deny that research has a role to play in the improvement of educational practice, but the connection is far more complicated, multi-faceted, and political than what the call for evidence-based educational policy and practice suggests.

This does not completely disqualify the contribution on education in *Vital Questions*, as questions about technology, about problem-solving, and educational inequality and about opportunities for all belong to the most central issues of the field of educational research. But the view of educational research espoused in the contribution on education is worryingly narrow and suggests a way forward which is very unlikely to be able to address these and future challenges in any meaningful and significant way. For this we need a more rounded conception of educational research in which a focus on patterns, correlations and suggestions for action goes hand in hand with interpretation, understanding and critique. To do so in a productive, synergetic and collaborative way is perhaps the greatest challenge for contemporary educational research, and at least one of the most urgent ones to address.

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Social Science and Education: Challenge and Rhetoric

■ Richard Smith

What can social scientists contribute to the development of education? Manfred Prenzel notes that there are four main areas where the nations of Europe face challenges. At one extreme there are young people who barely engage with formal education at all beyond the most elementary level. Prenzel mentions Portugal and several Mediterranean countries in this context; in my own UK nearly a million young people each

year are to be found in neither employment, education nor training (NEETS).¹ At what might seem the other extreme, modern societies need highly educated technocrats and specialists of all sorts, from information technology to law and medicine. But the sense of different extremes is illusory, since those who are to develop advanced skills and capacities must be recruited from the widest pool of talent possible. Another challenge is that of lifelong learning, as the increasing pace of change in people's working lives demonstrates the need for continuous acquisition of new skills and capacities. The

idea of lifelong learning was briefly in vogue in the UK a decade or so ago but the phrase is now mainly heard in connection with cuts to government funding of adult education. A fourth challenge is provided by globalisation and migration, as people learn to integrate into new societies or (perhaps *and*) think of themselves in cosmopolitan terms, as citizens of the world. Of course we might solve that problem by bringing net migration down «from hundreds of thousands to tens of thousands», which is the aim of the new UK coalition government.

My point in making reference to recent developments in my own country is not to take a particular position in our own local political debate. It is to offer a reminder that the four challenges Prenzel sets out as «main challenges for educational systems in Europe» and «for educational research in Europe» are inescapably political and ethical (or moral: I shall use the two terms interchangeably). The problem of NEETS is not just that it means «huge follow-up cost in remedial education and, at the extreme, crime and punishment»: the greatest loss, as he immediately adds, «is in wasted potential», the loss for these young people of a sense of identity and meaning in their lives. The need for highly educated specialists must be balanced against what many people would say is the right of all young people to have a fulfilling education, and not simply because we can never be sure which of them might turn out to be the doctors or lawyers of the future. Questions of justice press themselves here in many educational contexts. For instance, if we regard university education as primarily the development of capacities that the graduate then puts at the service of her community it is less difficult to justify the cost of universities to the state than where the acquisition of graduate-level qualifications is seen essentially as a good for the individual graduate (and marked as such by the requirement to pay back much of the cost of university study, as in the UK). The good of lifelong learning lies not just in the benefits to the economy of the «re-skilling» of older workers who otherwise become increasingly useless: to go on learning can mean to live a more richly imagined life. It is difficult to express that in terms of individuals' «rights» or societal needs as usually understood, but to think in terms of such a life is immediately to feel the moral pull of the idea. The treatment of immigrants raises more political and ethical issues than can even be sketched here. They include the reciprocal obligations of the developed world to the developing world that it has long exploited and continues to exploit, questions about whether it is acceptable for immigrants not to «integrate» if that is their wish, and questions about just what, in pluralistic societies, is the «mainstream» which politicians and others often suppose they should join.

Clearly Prenzel is aware of these political and ethical dimensions of education and educational

research. Yet the broad tenor of his article is such as to marginalise them in favour of what I shall here call the technological. Consider first his title: «Challenges facing the educational system». Education is here conceived as a *system*. It is easy not to notice that this is a metaphor. Its more literal use is at home in talk of a central heating system, in need of testing at regular intervals and adjusting from time to time. You want to know if your central heating is efficient, and you need reliable ways of measuring whether it is. Much the same can be said of railway transport systems, or waste management systems. The technological systematicity of Prenzel's approach can be read from his short list of what social science has achieved for education. It has produced «new test conceptions and evaluation models which allow reliable measures of advanced competencies», «A great number of reliable and valid indicators for lesson and school quality», «sophisticated procedures which make economical sample designs and analyses of background conditions possible at different aggregation levels». In short, social science has been busy mimicking the physical sciences, modelling, measuring and establishing methods. And the way forward is for more of the same. Educational research is much less well funded than medical research, Prenzel laments in his Conclusion, and often provides little more than «descriptive knowledge». So what we chiefly need are: «Studies providing knowledge of effective measures to achieve specific aims under given conditions in an educational system. In order to obtain this type of technological knowledge, systematic experiments in the laboratory and in the field are necessary».

Now of course we need knowledge (though I would want to add «understanding» and «insight» and several other words for the raising of our awareness and the expanding of our horizons) about education if the alternative is ignorance, prejudice or mere ideology. The trouble is that the wholesale importation of terminology and methods from the physical sciences into what we call the social sciences brings a whole range of distortions, as should by now be familiar. They include the way that over-emphasis on measurement, on outcomes and performance indicators, fosters a culture in which only what can be measured becomes valued. A dreadful and memorable example of this occurred in a UK hospital recently where managers were so preoccupied with performance indicators, with government targets and cutting costs, that «patients went unwashed for weeks, were left without food or drink and were even unable to get to the lavatory. Some lay in soiled sheets that relatives had to take home to wash, others developed infections or had falls, occasionally fatal.»² At least 400 deaths appear to have been involved (*ibid.*). Schools and universities that become obsessed with «outcomes» easily lose sight of the wider educational goods for which those outcomes are merely prox-

ies. For instance, a university moves up the UK higher education league tables if it awards more First Class degrees. One way to do that is the complex and perhaps costly business of improving teaching. A simpler way is to mark more generously or to lower the threshold for a First, but this does not obviously constitute an educational good.

Another distortion is that the mimicking of the hard sciences, or «physics envy» as it is sometimes called, tends to reduce rationality to just one kind: to instrumental reason where we think solely in terms of finding means for ends. Prenzel supplies a good example when he writes of «providing knowledge of effective measures to achieve specific aims». Consideration of aims or ends then becomes marginalised, no doubt because it can seem vague or subjective by contrast with the hard, scientific flavour of «effective measures». This process has been going on for some while in European policy documents. For example, the 1995 European White Paper, *Teaching and Learning: Towards the Learning Society*³, declared that questions about just what education is for are obsolete, writing that «Everyone is convinced of the need for change, the proof being the demise of the major ideological disputes on the objectives of education» (p. 23). It is interesting to note that such apparent neutrality on matters of value often goes hand-in-hand with neo-liberal economic assumptions (Velissariou 2008): where we no longer ask what education is for, simplistic answers that foreground servicing the economy and international competitiveness are always at hand to fill the vacuum.

Questions about the purposes of education are unmistakably ethical questions, since ultimately they are questions about what kind of life we want to live and want our young people to live. To what extent does education exist in order to equip them to function «effectively» in our modern economies, and to what extent should education help them to learn that successful functioning does not constitute the limits of human potential and the noblest use of human powers? Is the nineteenth-century ideal of acquainting them with, in the words of the British humanist Matthew Arnold and echoed in the German conception of *Bildung*, «the best that has been thought and said», still applicable in our own time, and if not, then why not? Such questions cannot be answered by even the most «systematic education-monitoring system» (ibid., p. 30) or by the measuring of inputs and outputs. Now it might be said that such questions are for philosophers, and not for social scientists. But this is just to restate the problem that I find at the heart of Prenzel's contribution, which lies in the tension between his evident sensitivity to the ethical dimensions of social science on the one hand, and a relentlessly technological conception of the discipline at the

other. Are social scientists essentially jobbing technicians, skilled only in finding efficient means for achieving ends either laid down by others, particularly politicians, or simply assumed in the spirit of the times? It is particularly ironical to ask this question in the context of a document on the contribution of European social science, since *European* conceptions of social science, and in particular the German notion of the *Geisteswissenschaften* as an approach to humane understanding that refuses to take natural science as a model, offer an alternative to the Anglophone and positivistic model and its obsession with quantification and measurement that I have called «metricophilia» (Smith 2010).

Let me emphasise, in conclusion, that I am not dismissing the use of measurement, or of empirical research in general, in education. I have only been concerned here to emphasize the danger of research of this kind becoming hegemonic to the point where all other ways of researching education are seen as marginal or merely quaint. I am also a little sceptical of the assumption of a clear and simple link between empirical findings and educational policy.⁴ Lastly, it is hard to avoid the thought that Prenzel's text is heavily rhetorical, with its talk of «systematic systems», of «technological knowledge» and laboratory experiments, of medical research as the model, and the way that «education» turns without blushing into «educational science». Perhaps such rhetorical, highly figurative language may help to give certain kinds of «social scientists» access to the ears of the politicians and the research budgets they control. But there is a paradox, at least, in making a rhetorical case for any kind of science, social or otherwise.

Notes

- 1 927'000 people aged 16 to 24 – 15.3 per cent – were classed as NEETS between the start of January and end of March 2010: <http://www.telegraph.co.uk/education/educationnews/7745421/900000-young-people-classed-as-Neets.html>
- 2 http://www.timesonline.co.uk/tol/life_and_style/health/article7039285.ece [28.6.2010]
- 3 http://europa.eu/documents/comm/white_papers/pdf/com95_590_en.pdf
- 4 There is no space here to develop this point (see Bridges et al. 2008).

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Monitoring the Educational System?

■ Paul Smeyers

It is, to say the least, peculiar, that a scholarly contribution dealing with the challenges facing the educational system, starts from observations such as that social science research has produced «new test conceptions and evaluation models which allow reliable measurements of advanced competencies» and «a great number of reliable and valid indicators for lesson and school quality»; or that social science has produced «theoretical models which allow characteristics of social and cultural background to be surveyed and interpreted» and «new sophisticated procedures which make economical sample designs and analyses of background conditions possible at different aggregation levels». If this were the case, why are we left with so many problems in schools and society – or is it simply the fact that we (policymakers and practitioners) do not want to deal with these? Seriously, to be sure, it can be argued that something has been produced which is valuable up to a point; that some insights indeed have been gained through indicators which are interesting from a particular perspective, but to state all of that bluntly without further qualifications or reservations is surely stretching our presumed understanding, overestimating what we are capable of. The model that is supposed to do this job originates from the «hard sciences» and has been applied to understand the market (economy) and societal developments (sociology). Leaving aside whether this was a great success in the mentioned areas, it remains questionable whether the presuppositions on which such a model relies can do justice to the educational context. Is it the case that educational research gives us fixed and universal knowledge or does it rather contribute to the task of improving upon our practical knowledge of the ongoing educational activities? This is not to deny that various models of explanation may find their place in trying to understand what is involved in teaching pupils and students, in child-rearing, in continuing education and in educational policy and evaluation and so on – of which Prenzel's interest is an example – but it is to raise questions about the model and about the single method that is offered or prioritized. That means that doubts may be raised concerning the progress in theories and methods which have, according to Prenzel, «created a systematic education-monitoring system both at an international and a national level,» and moreover about what is aimed at as well.

Evidently, at least at first sight there is nothing wrong *per se* with the challenges that Prenzel identifies for educational systems in Europe. Who could be against participation in society for everybody, against encouragement to study science and technology, or against taking up new learning challeng-

es or alleviating the difficulties and negative consequences of migration and enhancing the benefits of mobility. But the discourse that is offered, for example where the lacking of «participation» is addressed is one of «huge follow-up costs in remedial education and, at the extreme, crime and punishment», which leads to his claim that «the greatest loss is in wasted potential». And in dealing with new blood for the challenges of the future it is about the «correction» of «motivational differences», or when lifelong learning is at stake, of making available instruments «to enable reliable measurements of flexibly applicable knowledge which can be easily connected to further contexts». Resisting such discourse does not imply that values should be placed high on the agenda of education «again» (if that were possible at all), but that a particular way of dealing with reality that obfuscates (or even silences) this dimension should be opposed. The real danger is not so much that values play a less important role, but that we get used to or convinced of the fact that we could speak of reality via an apparatus that does not take values into account. Otherwise, what is meaningful and significant, what makes sense for us, is excluded and so-called neutral concepts that identify what is effective and efficient set the stage and become the only reality we can conceive of. It is not so much a threatening disintegration of the social realm that should be countered by overarching norms and values, but rather a totalizing transformation of the social realm into a system. It is indeed not impossible that a social system has the capacity to create an «inhuman» environment that nonetheless can function perfectly because of its technological smoothness. Silently, but dangerously, we have become accustomed to the discourse of the market which invaded all areas of human life education included. And though it is ridiculous to deny that education has to fulfil certain functions towards society, it is wrongheaded to approach it exclusively in these terms.

That all of this culminates in an argument in favour of evidence-based educational policy invoking one or other form of the so-called «gold standard» is no surprise at all. What is baffling is that the author seems unaware of the criticism of such a stance when he expresses (blind) confidence in «studies (for example, with longitudinal designs) which identify causally relevant conditional factors and thus provide explanatory knowledge» or where he refers to «systematic experiments in the laboratory and in the field» – there is nevertheless no shortage of critical stances. Indulge me in identifying just a few¹: that descriptive knowledge is as essential if causal analysis is to succeed (in other words, that causal mechanisms cannot be isolated but instead

have to be understood as specific to context and intentions if they are not to lose their causal power); that educational reform becomes little more than managing the challenges of implementing proven practices; that the practical is absorbed by the technical; that the focus is all on what schools do (or fail to) and not on the systemic social injustices and inequalities that are largely responsible for the inequalities seen in school performance or that the «unity of science» idea (of which the core principles are best exemplified by the physical sciences with randomized experiments) ignores the interpretive turn and the associated concept of intentional causation and embraces the idea that politics is external to educational science.

I am therefore not sure what this paper is really about: Is the author seriously discussing the challenges facing the educational system and offering a critical analysis of these, or is he developing an ar-

gument in favour of a particular kind of research? If it is the former he is in my opinion doing a poor job. If it is the latter, he has not even started to take seriously what has been argued for in philosophy of science or in philosophy of educational research. Some have argued that if you tell a lie big enough and keep repeating it, people will eventually come to believe it. Education indeed pays off.

Note

1 Here I list some of the arguments developed by Margaret Eisenhart, Thomas Schwandt and Kenneth Howe (cfr. *Educational Theory* 55(2005), issue 3). I have dealt with the «gold standard» in much more detail in other essays for instance in Smeyers (2006).

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What is Vital to Social Science and Education?

The Imagined Unity that Purges the Sensibilities of Science

■ Thomas S. Popkewitz

When reading Penzel's European Science Foundation's (ESF) position paper *What is Vital to Social Science and Education*, I felt caught in a surrealistic world of fantasy projected as the realism of social science.¹ My disconcertedness (and amazement) was further compounded by the ESF's purpose «to describe the current state and future prospects of the social sciences in Europe».

If I take the general ESF mandate seriously, what is given as the «vital» quality of science is a pseudo-realism. Readers are told that the education sciences have the knowledge to make the future Knowledge Society in Europe. The sciences know the competences that all children need and, at the same time, find the cures for those European children whose educational deficiencies are produced by parents' inability to encourage and motivate students. Science, in this article, provides the «cleverly planned intervention studies» to elicit data for «evidence based» policy recommendations. The empiricism is called «intelligent knowledge». The instrumental role of social science is illustrated in current international measurements of educational performance and outcomes that monitor educational progress, such as OECD's Programme for International Student Assessment (PISA).

My approach to the claims about «intelligent knowledge» through this empiricism is to apply evidence – historical and empirical – in order to allow the argument to stand or fall on its own rules and

standards. First, I examine the empiricism claim about the certainty of the future in what is already known. Second is to historically examine the empiricist warrant by focusing on the emergence of the turn of the 20th century social sciences. Third is to argue that the empirical claims of the article are, in fact, anti-empirical and philosophically idealist. Existing data are ignored to project a given, certain world controlled by the particular view of science.

Science and the Illusion of Finding the Philosopher's Stone

The «intelligent knowledge» of the knowledgeable expertise seen as «vital» in this article imposes a particular argument about certainty. Knowing the competences needed for the abstraction named as the Knowledge Society² introduces an epistemological certainty. The certainty is embodied in the assertion that the competences needed are already known and the only problem left to social science is its empiricism for monitoring progress for the Knowledge Society. That certainty erases differences, tames complexities, eliminates ambiguities, and eradicates inequities and inequality.

The claim of certainty has little to do with the social sciences. First, the notion of science as monitoring is less about science and more about the application of social technologies to govern, such as the development of psychometric tools in classifying and ordering children. The assumption of unity and certainty reduces science to the mere imple-

mentation of technologies. Second, the assumption of a transcendent knowledge about measuring learning and achievement is historically particular. National moral, political, and cultural principles intersect with and give definition to the pedagogical programs of schooling (Schissler/Sosyal 2005). The knowledge systems of pedagogy are assembled, for example, through the social philosophical traditions of *Bildung* in Germany, the *Baccalauréat* and *L'Agrégation* traditions of France, and the early childhood philosophy emanating from Italian Reggio-Emilia (Tröhler in press). Second, the pedagogical models that order the selection and organization of competences in school subjects are historically derived from particular nation forming projects whose foundations intersect with religious cultural themes about salvation that serve as part of the secularization occurring (Tröhler/Popkewitz/Labaree in press).

The search for certainty in this article becomes analogous to the philosophers' stone of the medieval alchemists. Whereas the alchemist searched for the chemical processes that provided the elixir of life and immortality, Penzel's (re)visioning of the alchemist's Great Book makes the problem of life and science as the gathering of empirical evidence to monitor the input, contextual, and output factors of schooling. The outcome of this contemporary elixir is progress whose uncertainties, ambiguities, and complexities are left erased through a utopian vision tied to consensus and harmony about the present, no less the future.

The oddity of this (re)vision of the philosopher's stone is twofold. One it elides the theoretical and methodological discussions that underlie the development of the social sciences through its assertions of science as merely a technical practice. At least from the reflections on Thomas Kuhn's *Structure of Scientific Revolutions* (1970), there is the continual tension between social science as striving for universality and being mired in uncertainty and contextual influences. Second, the contribution of social science in planning the future is, at best, highly contested, politically dangerous, and historically as having no validity (Popkewitz 2006). The dangers of this acting as the sage for planning the future are embedded in this article. There is, for example, Prenzel's assertion that the social sciences contribute «intelligent knowledge» that will produce «the mental health» of individuals and societies. While not a psychiatrist, I think that democratic societies should be leery of defining society as pathological and then pretending to have the technologies for governing the recovery. While such prophecies about the future are seductive, the sociologist Peter Berger (1967) warns «Don't trust them!» No one really knows what 21st century skills are needed to foster success for individuals and nations. A different prophecy made through the metaphor that the applications of scientific knowledge can identify new «blood» that will enable societies to find the

manpower to meet future challenges. The metaphor of the «Blood» conjures up images of life but also cruelty; a word historically linked to nationalism and eugenics.

The Lack of Historical Warrant for What is Given as the Social Warrant of Social Science

What is «vitally» missing in this article is an historical understanding of the social sciences. One can think of the science as a social project in relation to the enlightenments' commitments to reason and rationality. These commitments entail exploring the limits of the apparent commonsense and working in counter-intuitive ways to make visible its «facts» that intern and enclose the possibilities of change. Historically, the disciplinary emergence of social science through the 19th century was to explore the issues of the possibilities and limits of modernity. If I take the major social scientists of these early years, Emil Durkheim, Sigmund Freud, Karl Marx, and Max Weber explored the theoretical, methodological and historical complexities and limits of modern societies through bringing to-the-fore elements of enlightenment hopes about reason and rationality (science). Post-World War Two social sciences, with different complexities and disciplinary trajectories, were enlisted by the new welfare states in the projects that entailed a new internationalism related to the Cold War and (re)visioning of the democratic state in relation to the enlightenments' values transcribed into concerns about equity, human rights and justice.

This historical recognition of the European enlightenments as background attitudes to the social sciences is important in reviewing this article. The correlation studies to monitor student performance that Prenzel posits do not make social science. The research spoken about is more about policing the boundaries of the existing spaces that order and classify people. The assumptions of unity and certainty ignore the theoretical and conceptual diversities in the social sciences. If the social sciences are exemplified through national traditions, these differences become immediately apparent (Levine 1995; also see Wagner 2004). British social sciences in the late 19th and early 20th century, for example, conceptualized society and individuality through a Newtonian image of the social world that included a secular ethic, the atomic view of nature in the human world, and evolution as a process that combined with a strong concern with measurability. The French traditions of sociology, in contrast, started with postulates of societal realism in which the social formation predominates over individual propensities. Society was seen as a source of normative and moral sentiments that prevailed in the construction of individuality, such as in Durkheimian sociology. German sociology, in contrast, empha-

sized an interpretive (hermeneutic) subject of Bildung capable of self-determination through identifying and making choices between good and evil. German sociology was to understand the expressive subject, to recognize the cognitive subject, and to analyze the voluntaristic subject. Today's «culture wars», debates about structuralism and subjectivism, the «linguistic turns», among others, point to the diversity and debates in contemporary social sciences.

The homogenizing of the diversity in the social sciences also entails confusion between the conceptual devices that serve methods to order and classify the empirical and ontic things of the world. OECD's PISA categories about the practical knowledge to learn from science and mathematics do not emerge from any empirical studies of how children think and reason. The theoretical entities named as «practical knowledge» are constructed through a form of philosophical idealism that is given empirical substantiation through the measurement devices. The «practical knowledge» is categorized by particular abstractions that serve as a thought experiment about how children might use that knowledge when measured in psychometric studies. The «facts» measured did not exist before that thought experiment.³ The categories of «practice» are not something uncovered and its «reality» exposed to appropriate and gauge human practices. The monitoring devices of PISA, to continue with this example, are a method of thought, a grid of psychological, economic and sociological analysis, an imagination, and a method of governing through a priori assumptions about what the system should be (see Tröhler 2009).

The historical particularities of what Prenzel gives as universal entail non-empirical rather than empirical values. The German discussion of PISA, for example, merges two different traditions of knowledge – one related to competences that concerns utilitarian conceptions of knowledge and Bildung, a notion about inner life of the person that has no measurement and thus is not a concept in a positivistic sense (Tröhler in press). The historical distinctions of competences and Bildung embody a long conflict within Germany about knowledge rooted in denominational distinctions of Lutheranism and Calvinism.

Idealism as an Ahistoricist and Anti-Empiricist Realism

Ironically, the empiricism argument is a utopian one about salvation that misses empirical evidence. There is abundant evidence (almost an industry) about the unforeseen and unanticipated consequences of school reforms. This is immediately evident in the next article of the volume on «The Janus Face of Migration in Europe». «The Janus Face» does not assume certainty and a simple empiricism of «monitoring» but lays out the task of

social science as seeking to come to grips with the complex consequences in the relations of globalization, governance and democracy as within the context of Europeanization.

The erasure of empirical evidence in the name of empiricism has social and political consequences. The utopian claims about the monitoring technologies obscure the wealth of data about social and cultural differentiations and exclusions embodied in the processes of schooling. Again to return to the given exemplar of PISA, disaggregating the measurements within nations makes visible the differential qualities of education. The comparison among regions with and without «immigrant» populations in Germany, for example, underscores the correlations of social divisions in educational conditions.

The American use of «high stakes testing» in reforms can pursue further the overwhelming empirical evidence about the contradictory and sometimes negative results of the monitoring called for. The «high stakes testing» reforms are to address educational inequalities that follow similar psychometric procedures as PISA. Its consequences are to produce differential instructional practices between poor and middle class children. Berliner (in press) argues that the testing program enables an apartheid system. Instruction geared to testing based skills learning predominates for many poor and minority students. One consequence is the disengagement of these students from schooling. Middle class schooling, in contrast, give greater focus to the arts and problem solving. The latter «soft» skills of learning are identified in almost all longitudinal studies of youth as important for determining college completion, earnings, and a host of other outcome variables about later life. While PISA's overt focus on «practical knowledge» is different from the US High Stakes testing, they are both based on the same epistemological models. These models cannot be assumed, as in Prenzel's article, but whose limits require the attention of a vital social science.

Making social divisions as merely the problem of more efficient teaching or parents' motivating children misrecognizes the problem of social differentiation. What is vital in the social science is its ability to clarify, as best as possible, the conditions of schooling that produce differences.

If the task is to explore what is vital to the social sciences and education, the article lacks any broad understanding of the role of social science as a practical, theoretical, social and historical endeavor. The social sciences are important to understanding the nuances of changes occurring in multiple spheres of society as they relate to, for example, the formations of citizenship, family and community. They provide systematic methods to understand the implications of change as they relate to schooling. The social sciences entail also ways to historicize the present and its taken-for-granted «facts» about what is thought, «seen», and hoped for. At first glance, the narrative provided by Prenzel might be

related to the particular knowledge interests of Habermas' (1968) located in «the empirical-analytic» sciences. Yet this article vitally lacks the systematic questioning that gives intellectual vitality to this paradigmatic approach, and ignores the different knowledge interests that are vital to a functioning social science. The technological reductionism misconstrues, obscures, and elides the purposes and the possible contribution of social science to policy and social life.

Notes

- 1 Due to the limits of space, the following arguments and its references are drawn from, in part, Popkewitz 1984, 1991 and 2008; Wittrock/Wagner/Wollman 1991; Latour 2000 among others.
- 2 I use the term abstraction to give attention to the notion of The Knowledge Society as not an empirical «fact» but a way to think about, order and «see» disparate phenomena happening in the world that require some interpretative framing.
- 3 See Poovey (1998) for a discussion of this making of facts that become facts through a historical examination of Adam Smith's idea of markets.

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