No Exceptions for Hottentots! Methods of Comparative Educational Science for Special Education Research

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> I have often heard from some persons, that it was little beneath a miracle that God should give men, to express the thoughts of the mind, rather by motions, which are affected by the lips, the tongue, the teeth: than otherwise, and that so universally, that there is no nation so barbarous, no not excepting the hottentots, which cannot speak in a language. (Johann Konrad Amman, 1692/94)

Introduction

Since the first translation of Johann Konrad Amman's *Surdus Loquens* into English (*The Talking Deaf Man*, 1694; first published in Latin in Amsterdam in 1692 and in German in 1747), there has been an internationalized discourse on special education topics (in the following, we translate "Heilpädagogik" as special education). This marked the beginning of a rich tradition of international reflection on special education, which in the 18th and 19th centuries was in no way inferior to the preoccupation with general educational topics (cf., Verstraete 2005). The founder of German-language comparative historiography on special education, Max Kirmsse, reported more than 10,000 relevant publications in his 1911 contribution to Adolf Dannemann's Enzyklopädisches *Wörterbuch der Heilpädagogik* (*Encyclopaedic Dictionary of Special Education*) under the heading "Schwachsinnigenbildungs- und Fürsorgewesen in den einzelnen Kulturländern" ("Education and care of the feeble minded in various civilized countries"), comprising more than 120 columns and a comprehensive bibliography.

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Kirmsse's own account draws on more than a century of research. He presents *spectacular* findings, such as the *fact* that "cretinism, idiocy and psychological abnormality up to the limits of normality" can be found "in large areas" of the African continent, which is illustrated, among other things, by Egyptian "idiots" who "let their hair grow long and to whom the people pay homage" (ibid., 1429). Furthermore, in the introduction, it is said about Asia that "little has been done for the cretins, idiots and imbeciles," but that "the earliest welfare efforts in favor of the abnormal were made by followers of Islam" (ibid., 1446). Finally, about Austria, we learn, for example, that the first "school for the feebleminded that we know of" was founded by a teacher named Guggenmoos in Salzburg in 1828 (ibid., 1500), and that there is currently (1911) no shortage of "nursing homes for severely idiotic children" (ibid., 1502).

Throughout Kirmsse's accounts, there are a mixture of what could be seen as contemporary facts, anecdotes, hearsay, and beliefs. However, anyone who considers this to be a weakness of comparative special education that has long since been overcome is recommended to read the history of "Heilpädagogik" on sonderpaedagogik.de (<http://www.sonderpaedagoge.de/geschichte/>), which is by no means better and is not an exception. Although comparative special education has made some progress in recent years (cf. Putnam, 1979; Klauer & Mitter, 1987; Mazurek & Winter, 1994; Booth & Ainscow, 1998; Mejer, 1998; Albrecht, Bührli & Erleyi, 2006), it can hardly be described as a systematically developed, well-established research discipline. It probably has less influence and visibility in the general educational discourse today than in Kirmsse's time. This may seem surprising in the age of PISA and TIMSS, OECD and IEA, and EURYDICE and UNESCO, but unfortunately, as discussed below, it is not. On the contrary, it is to be feared that the currently prevailing forms of comparative research will contribute even further to the marginalization of special education topics.

To shed more light on this statement, I would first like to (1) briefly outline the development of the comparative study of special education and then (2) discuss which fundamental social changes are reflected in its transformation. On this basis, I will then (3) address the "world view" of today's comparative research to conclude (4) by asking where the opportunities for future comparative special education research could be searched for. Historically, the "Hottentots," who called themselves Khoe, i.e., simply "people," were always

a largely freely fantasized symbol of incomprehensible underdevelopment (cf. Merians, 2001). In today's prevailing educational research, special education clientele are at risk of degenerating into the Hottentots of the present, i.e., into an incomprehensible sample of non-standardized and, therefore, invisible people (cf., Hörmann, 2007).

Two reservations should, however, be made in advance. First, I am convinced that there are no specific methods of comparative education. I agree with my academic teacher, Fritz Seidenfaden, that all scientific pedagogy is based on comparison (1966). What does exist, however, is the use of research methods with an explicitly comparative intention, and this is the only issue that can be addressed in the following (for the current discussion, see Rust et al., 1999; Mertens & McLaughlin, 2003; Rust, 2003; Carnoy, 2006). Second, I share the conviction with my Norwegian colleague Kamil Øzerk (2003) that there is no special needs education, but only *one* education for all, which is admittedly practiced by some and not infrequently in an exclusionary manner. The topic of special needs and special educational formats are summarized below as "special needs education" solely due to the kind invitation to the Second International Conference on Special Needs Education in Vienna in 2006, which prompted the following considerations.

A Brief History of Comparative Special Education

"Had you or I been born at the Bay of Soldania, possibly our thoughts and notions had not exceeded those brutish ones of the Hottentots that inhabit there […]." Locke's essay *Concerning Human Understanding* (1689/90) uses repeated references to conditions elsewhere to emphasize the importance of circumstances for education and upbringing. Conversely, since the expeditions of the 16th and 17th centuries, travelogues from neighboring countries and distant corners of the world have been a source of inspiration for local education. Whether Abbé de l'Epee's *Institution Nationale des Sourds-Muets* in Paris (from 1771) or Samuel Heinicke's *Chursächsische Institut für Stumme* in Leipzig (from 1778), such places were famous among contemporaries, frequently visited by interested parties, and described in all possible languages, such that they could become a model for the education of the deaf all over the world (cf. Möckel, 1988, Winzer, 1993). Such case descriptions of special institutions or practices are probably the oldest forms of comparative

engagement with special education. Disselhoff (1857) and Kirmsse (1911) cite dozens of sources, and the *Bibliothek für Bildungsgeschichtliche Forschung* (online at <http://www.bbf.dipf.de>) contains hundreds of other (mostly German-speaking) examples.

Such reports and news items can hardly be described as comparative educational research. In most cases, the "comparative" aspect consisted only of the fact that the reported facts and the reporter or the addressee of the report did not come from the same cultural background. Nothing more than anecdotal comparison was sought, either in terms of method or content. This only changed toward the end of the 18th century and in the course of the 19th century with a new wave of research trips, which now explicitly served pedagogical comparative purposes, for example, when Jens Baggesen (1792/93) visited Pestalozzi on behalf of the Danish government or John Tilden Prince (1892) visited Prussian schools on behalf of the Massachusetts Board of Education (cf. also Fraser & Brickman 1968). In this context, a new type of literature also emerged within comparative curative education, which could be characterized as "The education of the deaf and dumb in Abistan and Bebistan" (countless examples of this can also be found in Kirmsse and other contemporary handbooks of pedagogy) and which can still be found frequently today (cf. in addition to the anthologies mentioned above, also Juul, 1989; Kusta, 1990; Michael & Upton, 1993; Miles, 1997; Meyer, 2003; Hyde, Ohna & Hjulstad, 2005; Kivirauma, Klemala & Rinne, 2006). Depending on their origin and purpose, then as now, some of these comparisons sometimes come along as a message from the promised land, the next time as news from the underworld, or in other words, the distant example figures are configured as a starting point in the interests of the respective domestic discourses (cf. Zymek, 1975).

Only since the 1950s have these two rather anecdotal and unsystematic comparative literatures been increasingly supplemented by a new type of international comparison, the comparison of national systems either (a) on the basis of national self-descriptions of relevant structures and data or (b) on the basis of international comparative studies. The former are increasingly to be found in international databases (UNESCO, OECD, EURYDICE) and reports (cf. e.g., the annual *Education at a Glance* reports of the OECD 2005b). Their most important characteristic is that the analyses are mainly based on reports and statistics from the respective national authorities.

In these cases, comparisons are essentially comparisons of self-representations. The latter are linked to the rapid development of empirical comparative research since the founding of the *International Association for the Evaluation of Educational Achievement* (IEA) at the end of the 1950s (cf. <http://www.iea.nl/brief_history_of_iea.html>), whose best-known product is probably the comparative studies on mathematics and natural subjects (currently under the name Trends in International Mathematics and Science Study TIMSS; cf. <http://timss.bc.edu/timss2003i/ conference_IR.html>). They are based on the model of national comparative studies as they have developed in the United States, in particular since the 1920s (cf. Caswell, 1929; Dorn, 1998; Saunders, 1999; Kifer, 2001; Slavin, 2006). It should also be noted that these are not usually government-independent sources of information, but that the relevant steering committees, and almost always the entire funding, depend on government agencies and/or international cooperation between agencies (such as the OECD). At best, they are commissioned research.

For comparative special needs education, it is worrying that in these large-scale comparative studies, special needs education plays no or only a marginal role. It is sometimes recorded separately (cf. e.g. UNESCO, 1995; Mejer, 1998), but appears within the comparisons themselves either only as a burden (if included) or as a reason for exclusion (if not included), whereby there are regularly considerable grey areas of exclusion (cf. Zlatos, 1994; Elliot et al., 1995, 2001; Thurlow et al., 1996; Almond et al., 2000; Wuttke, 2006). This also applies to the national standards currently being pursued in large parts of the world, such as "No Child Left Behind" in the United States (cf. Clapper, 2003; Koretz & Barton, 2003; Pullin, 2005) and almost all international comparative studies such as PISA (cf. Hörmann, 2007).

The disappearance of the special education clientele is entirely consistent with the research logic of these studies, the aim of which is usually to map national distributions of performance and indicate ways of optimizing them (cf. for many OECD 2001; Peterson & West, 2003; Fitzner, 2004). Performance is measured as a linear increase or decrease in certain cognitive competencies (Ramseier & Brühwiler, 2003; Klieme et al., 2003; Maag Merki, 2005), in which all those who exhibit non-linear behavior (whether for linguistic, cultural, cognitive, or other reasons) automatically appear to be less competent and thus have a negative impact on results (cf. e.g., Linn, 2005; Meyerhöfer, 2005). Moreover, for example, in the case of PISA, there are no predefined

performance levels; rather, these are statistically constructed *ex-post* from the respective partial data using Rasch modulation. This can lead to the effect that, depending on the choice of distribution adjustment, up to a quarter of the participants can be identified as highly incompetent, regardless of the extent to which pupils with particular learning difficulties were represented in the population (cf. Wuttke, 2006). The result is a division of pupils into hierarchically graded competence classes, in which alternative forms of performance or cultural diversity are reduced to mere sources of incompetence in relation to apparent high performers.

From Placement to Measurement

The changes in the scope, methodology, and orientation of comparative special education (and comparative education as a whole) are not simply due to internal scientific dynamics but are also an expression of a much more fundamental change that at least encompasses Western societies. It concerns how existential problems such as health, security, education, and salvation are dealt with in these societies, i.e., all those biographical risks for which individuals and society itself become responsible in secularized societies due to a lack of trust in God and surrender to fate (see also Hopmann, 2003, 2006).

Such problems are ill-defined because it is difficult to determine when someone is sufficiently healthy, educated, secure, or certain of salvation. It is, therefore, difficult to transfer them, like well-defined problems, into private responsibility, market, or individual solutions without at the same time triggering fears about how crises and disasters can be overcome and how precautions can be taken. The characteristic solution to such problems in post-Reformation societies was to *place them somewhere (in German: verorten)*, i.e., to institutionalize and professionalize them in public institutions such as hospitals, parishes, schools, prisons, courts of law, etc. (as described, for example, by Weber 1923, Foucault 1977, or Abbott 1988, each in their own way). In nation-building, this mechanism became entrenched in the bartering of taxes and loyalty in return for collective services of general interest (see Leibfried & Zürn, 2006 for many examples). Although this did not solve the ill-defined problems, it embedded the social risk associated with them to a certain extent within social security services. The members of society were able to take significantly more social and economic risks

through such socialization than they would ever have been able to if they had only had individual protection. In this process, special education needs also gradually became part of society's responsibility. This happened partly through specialization within existing care facilities and partly through independent institutions.

Management by placement

Management by placement	**Input regulation**	**Process regulation**	**Output regulation**
State	Placement Resources	Action plans *(e.g., guidelines) (by current and former professionals)*	
Organization (e.g., district, provider)	Distribution to various places	Administration *(by former professionals)*	
Unit	Institutions	Enactment *(by professionals)*	Treatments

As shown in the figure above, *management by placement* was characterized by the professions' extended discretion to shape the specific institutions themselves. Surprisingly, until a few decades ago, there was no systematic review of whether the respective placements achieved what was attributed to them for their problem area (cf. Hopmann, 2003, for the education sector). Differentiation and expansion have been the response to growing social doubts about professions and institutions' performance or increasing social pressure. As a result, for example, the expected length of stay in educational institutions or educational measures has increased from a few years to 20+ years in the European normal case (cf. OECD, 2005b on today's length of stay). Similar multiplications can be assumed for the entire area of ill-defined problems, from health care to security, and even in the area of "salvation," we can find considerable increases with its countless secularized therapy variants (cf. Abbott, 1988). The result is that, at any given time, at least half of all five- to sixty-five-year-old Swedes are institutionally involved in dealing with one of these problems, either as a client or as a professional. Unsurprisingly, even if resources remain the same in absolute terms or even increase in most cases, the expansion of the clientele and services may appear in relative terms as a reduction in the room for maneuver for the

individual institution or the clients concerned (cf. information at <http://epp.eurostat.ec.europa.eu>).

Whether it is due to this resource-consuming expansion of placements or to other social upheavals (such as the end of systemic competition, globalization, structural change, etc.), it is indisputable that the placement strategy toward the end of the 20th century has fallen into a worldwide crisis of legitimacy and structure, which it is unlikely to survive unscathed. Depending on the social theory perspective, this is either seen as a late consequence of the Western modernization process (e.g., Foucault, 2006; Beck, 2007), a conversion of Western societies under the pressure of globalization and competition (e.g., Esping-Andersen, 1994; Bommes & Halfmann, 1998; Leibfried & Zürn, 2006; Meyer, 2005) or—for better or for worse—an economization of areas of society that had not previously been controlled analogously by the free market (e.g. under the heading of New Public Management; cf. Hood, 1991, 1995; Schneider & Pröller, 2006). However, it is undisputed that this change affects all sectors of public life, which are described here as being characterized by ill-defined problems, such as the judiciary (cf. Maier, 1999), the healthcare system (cf. Gottweis, 2005; Hajen, Paetow & Schuhmacher, 2006), the military (cf. Thompson & Jones, 1994), schools (cf. Thom, Ritz & Steiner, 2002; Hopmann 2006), and the rest of the welfare sector (countless other examples in Scharpf & Schmidt, 2000; McLaughlin, Osborne & Ferlie, 2001; Evers, Rauch & Stitz, 2002; Schedler & Proeller, 2006).

It also seems to be undisputed that the transition to various forms of *measurement* is central to the current reorientation, whether these are labelled indicators, benchmarking, standards, accountability, and so forth (cf. Künzli, 1998; Klatt, Murphy & Irvine, 2003). To the extent that measurement determines the management and control of service provision (accountability), it replaces generalized resources for institutions with specified subsets, the use of which is indicated in detail and the misuse of which is sanctioned (cf. Hood, 1991; Benz, 2006; countless other examples in Buschor & Schedler, 1994; OECD, 1995; Pollit & Bouckaert, 2004; Schedler & Pröller, 2006). This new accountability goes hand in hand with social exchange relationships that are built on contracts in which specified expectations are imposed on clients, contractors, or other participants in the form of target agreements, action agreements, voluntary commitments, etc. (cf. Akerstrøm Andersen, 2003; Blomquist, 2004; Vitale, 2005).

This change is often misunderstood as a shift from process to product management on the assumption that the new forms of management for ill-defined problems are primarily concerned with the control and quality of the results achieved. At least the research to date on partial aspects such as the privatization of public service provision (cf. Weizsäcker, Young & Finger, 2006), the formation of quasi-markets (Bartlett, Roberts & LeGrand, 1998), or performance measurement in schools and other areas (Amrein & Berliner, 2002; Dubnick, 2003; Berliner, 2005; Deretchin & Craig, 2007; and many more) casts doubt on such assumptions. Rather, it seems to be a question of *expectation management*, i.e., how disappointed expectations or (un)fulfilled hopes are dealt with. For example, underachievement is primarily a problem for those schools or other locations whose professionals and clientele had clearly expected something different (cf. e.g., Whitford & Jones, 2002; Hood, Rothstein & Baldwin, 2004). Our project on expectation management in Norway (ASAP; cf. Hopmann, 2006) also shows that, for example, only those schools or school owners who were at the bottom of the national student achievement tests perceived the results as problematic and as an urgent cause for action if they had not expected to be at the bottom of the scale anyway. The others merely saw the results as further confirmation of their self-assessment, which was no cause for concern.

What is eliminated by the transition from placement to measurement is that certain providers or professions had privileged access rights to certain problems and clients (cf. Bartlett, Roberts & LeGrand, 1998; as the latest offshoot in the German debate: Aktionsrat Bildung, 2007). In their place, there is a constantly challenged negotiation about who expects what kind of services from whom, when, under what conditions, and at what cost (Akerstrøm Andersen, 2003; Schedler & Pröller, 2006). A central problem here is that indicators and other descriptions of expectations can only ever represent a partial section of the total set of ill-defined problems, often with the unintended side effects of emphasizing certain aspects of a problem at the expense of all the others (numerous examples for the school sector in Herman & Haertel, 2005; Jahnke & Meyerhöfer, 2006; Deretchin & Craig, 2007). In this transition, ill-defined problems only seem to become well-controlled or controllable events. Unfortunately, every test or indicator necessarily only represents a small section of the totality that was previously placed under the institution's responsibility. This leaves many problems unattended,

particularly when the responsibility for the whole problem (such as education or health) can no longer be found. The management of expectations is shown in the figure below.

Management by expectations (measurement)

Management by expectations (measurement)	**Input regulation**	**Process regulation**	**Output regulation**
State	Expectations Resources	Standards *(by appointment)*	Evaluation
Organization (e.g., district, provider)	Various providers	Administration *(by provider)*	Accountability
Unit		Enactment *(by whoever seems to fit the task)*	Assessment

The surplus of problems not covered by the standard expectations is increasingly transferred to temporary programs that stand in for the inclusive performance of the previous institutional professions. For example, the patient who disappears in the jungle of indicators becomes the object of a "patient in focus" program (cf. e.g., Keane Baker, 1998), the unresolved educational problems of the school become the "anti-bullying programme" (cf. e.g., Olweus, 2006), and the citizen is allowed to be "at the centre" of public interventions that are broken down into countless partial services (cf. for many, Bogumil, Holtkamp & Schwarz, 2003). Quite obviously, the question of who is liable for unmet expectations also seems to be a central motive (cf. Cannell, 1987; Hood, 2004; Hood, Rothstein & Baldwin, 2004). Seen in this light, the increasing moralization and contractualization of the role of the client (responsibility for one's own learning, health, ability to work, security, retirement, etc.), which has characterized countless policy programs in recent years, is the necessary flipside of the gradual transition from placement to measurement (cf. Akerstrøm Andersen, 2003). At least temporarily, it attempts to transform the loss of institutional security experienced as social dismantling into measurable individual attributions. This management of missing values is displayed in the figure below.

Management of missing values (measurement errors)

Management of missing values (measurement errors)	**Input**	**Processes**	**Output**
State	**Expectations Resources**	*Non-met expectations encountered by temporary programs*	**Moralization** Transforming anxieties into value policies (e.g., bullying, immigration, multiculturalism).
Organization (e.g., district, provider)	**Changing places**	*Unintended effects as external/unique constraints*	**Revaluation** Transforming diversity into risks and assets.
Unit		*Non-standardized performances as individual failures.*	**Diagnosis** Transforming social risks/contracts into biographical mishaps.

The Measurement of Education

The social change from placement to measurement outlined here is what deprives comparative education of its traditional foundations. Whereas previously national systems and/or their institutions were the backbone of the comparative business, it is now increasingly open and questionable where which comparative elements are embedded and how:

- The respective "unit of analysis," i.e., what is actually the object of the intended comparison, becomes questionable (cf. generally Heidenreich, 1991; Rosenmund, 1999, 2000). For example, where are special educational needs addressed: in the same school, in different schools, outside and within schools; in the same age group, in different age groups; at the same time, at different times; within the same curricular sequences or in different sequences, etc.?
- The question arises as to how something is to be considered comparable and whether this standard is explicitly given or implicitly assumed, as is the case with the competencies of PISA (cf. for example, Klieme et al., 2003, Maag Merki, 2005). For instance, are there certain skills or certain requirements that can be scaled in the same way regardless of the initial

situation (which most student achievement tests such as PISA assume), or do different educational subjects have to overcome such different educational challenges that uniform scaling can be ruled out?

- It is questionable what should be considered equivalent: For example, is the composition of expected education for all participants adequately described by the respective content of the training (according to the so-called "opportunity to learn" principle; cf. e.g., Stevens, Wiltz & Bailey, 1998), or does such a description leave out precisely that which is constitutive for the sustainability of individual educational trajectories (cf. Hopmann, 2007)?
- It is always questionable whose definition of expectations should determine the horizon of measurement because expectations are not fixed ontological or empirical quantities but a matter of social negotiation to which research has no privileged access. Whether the expectations of the surveyors or the surveyed, the normalized or the abnormal, or the regulated or the spontaneous best characterize the matter in question, which is never predetermined but must be decided again and again in practical, programmatic, and political terms (cf. Vulliamy, 2004; Hopmann, 2000, 2001).

In terms of research, this requires a transition from an expressionism that outlines more or less permanent structures to an indicator-adding pointillism that no longer depicts the relationships between the selected measuring points as distances located in an overall picture but rather as model-induced correlations between individual indicators. More recent educational research, such as TIMSS and PISA, takes this into account; for example, by replacing the comparison of real overall units (schools, classes, school systems) with the comparison of distributions of characteristics to which real pupils and teachers can be freely assigned in relation to the chosen level of comparison (cf. e.g., Baumert, Stanat & Watermann, 2006; Krauss, 2006). The downside of this approach is that only very limited statements can be made about specific schools and specific teaching strategies (cf. Rauin, 2004). However, even if individual school data were specifically collected and aggregated in the study, the predictive validity of the measurement results would not be particularly good (cf. e.g., Gray, Goldstein & Thomas, 2001; Dolard, 2002; Ladd & Walsh, 2002; Linn & Haug, 2002). No matter how fine-meshed the performance parameters and context data collected are, they cannot adequately reflect the complexity and contingency of each particular school day.

The risks this poses for comparative special education have already been indicated above. The least damaging aspect is that the special education clients are either not represented at all or only very inadequately (cf. Zlatos, 1994; Elliot et al., 1995, 2001; Almond et al., 2000; Clapper, 2003; Koretz & Barton, 2003; Hörmann, 2007). It is more serious when normalities are asserted on the basis of pointillistically constructed reference contexts to which the education system must orientate itself (cf., for example, Klieme et al., 2003; Aktionsrat Bildung, 2007). In such a case, school system structures, teaching strategies, and learning standards are decided on the basis of a naively utilitarian determination of the greatest possible added value for as many people as possible, regardless of the fact that other individuals may need something completely different under different conditions and regardless of the fact that this added value is a fleeting variable that cannot be reliably predicted either within or across different measurement designs (cf. Slate, 1997; Saunders, 1999; Ladd & Walsh, 2002; Gorard, 2006; Martineau, 2006).

In addition, short-term value-added strategies may compel those involved to maximize the respective applicable measured values, regardless of possible negative effects on other development (cf. for many Braun, 2004; Berliner, 2005; Deretchin & Craig, 2006). In the school sector, one of the possible results of this pressure is the notorious "teaching to the test," which is regularly to the detriment of those with learning difficulties (Moxey, 2005), while another is the marginalization of those who do not fit into the expected framework (McGill-Franzen & Allington, 1993).

Special Education Measurements

Contrary to Voltaire's well-known dictum about the indeterminable distance between the genius of Locke or Newton in comparison to a countryman, a Hottentot, or a Laplander, this distance is entirely calculable in the age of measurement. The only question is on the basis of which parameters and whether special education needs can and may be inferred from this. Empirical comparative research that relies exclusively on large comparative organizations will only be able to deal with this topic in the same stepmotherly fashion as these studies (see Hörmann, 2007, for a summary).

The volatility and contingency of expectations require research designs that do not take the apparent self-evidence of latent classes and implicit

competencies for granted but instead make the diversity and contradictory nature of interests and practices the starting point for their own research practice. This is not a new topic for special needs education insofar as it relates the general debate about special needs and their origin and legitimacy in different contexts only to a specific occasion, namely comparative studies (cf. e.g., Booth & Ainscow, 1998; Albrecht, Bührli & Erleyi, 2006).

The question is then whether there are specific research strategies that are particularly suitable for such purposes as a complement or alternative to the predominant measurement. In principle, it should be noted that it is not the methods as such that determine whether or not they are suitable for such purposes, but rather the respective methodologies, i.e., the scientific and/or substance-theoretical embedding from which they are used (cf. Greene, 1994; Bruner, 1999). As self-evident as this may sound, it is not so self-evident at a time when the educational research industry is reducing methodological questions to the smart tailoring of items. In other words, the central question for special education measurements is how they themselves methodologically organize their subject matter and how much they allow themselves to be accountable for the opportunities and risks of the chosen strategies.

In this sense, at least three fundamental challenges for comparative curative education can be described:

- ***Reconceptualization***
  In the world of expectation management, there are no binding results and fixed outcomes. Whatever exists must be seen as an expression of a specific constellation of expectations and measurements, the validity of which cannot be extrapolated beyond their context of origin (cf. Loewenberg, Ball & Lampert, 1999; Hopmann, 2006). In other words, the first step must be to recognize that there are no definitions, not even "socially constructed" ones, of special education needs. Each research attempt must first develop its own particular frame of reference. One way of doing this could be the counterfactual use of international and/or professional standards and/or everyday understandings. They would not be used to define "what is," but they can be used as a starting point from which the difference of what is different can be named (a classic special educational example of this strategy is still Thomas, 1928; for the school sector, see Pinar, 1975).

- ***Re-analysis***
  On this basis, the respective results must then be re-analyzed from multiple perspectives. Not in the mistaken belief typical of many models of triangulation that a picture of the "whole" can be found at the intersection of different readings, but rather in the knowledge that the diversity of world perceptions is and remains incommensurable in principle and is due to the matter itself (cf. e.g., Mathison, 1988; Loewenberg, Ball & Lampert, 1999; Koro-Ljungberg, 2004; Talburt, 2004). Technically, such readings can refer to post-structuralist, phenomenological, or other "qualitative" ways of interpreting diversity (cf. e.g., Manen, 1990; Casey, 1995; Smithmier, 1996; Lincoln, 2001; Ghesquiere, Maes & Vandenberghe, 2004; Bengtsson, 2005, 2006; Dressman, Wilder & Connor, 2005; Erevelles, 2005). However, such approaches are also quite possible within the horizon of the interpretation of quantitative-empirical data if it is seen that in the pointillism of measurements, the drawing of the connecting lines is a question of modeling. It arises in the eye of the beholder—and can be changed (Garcia & Pearson, 1994; Linn, 2000, 2005).
- ***Replication***
  One possible strategy, particularly in view of the constantly growing amount of data, could be a "sceptical replication" of the studies presented. There is a general lack of replication studies in the educational sciences. Here, however, these studies are explicitly not recommended in order to confirm or reject the data of previous studies, but rather in order to be able to collect and productively process the diversity and contradictions of possible measurements in the difference of approaches, interpretations, and findings (cf. for example, Slate, 1997; Schafer, 2001; Anfara, Brown & Mangiore, 2002).

In the age of measurement, contrary to the good faith of the scientists involved (cf. Hanushek & Raymond, 2003; Klieme et al., 2003; Aktionsrat Bildung, 2007), decisions are not primarily made according to scientific criteria but in social negotiation processes, which usually turn the validity of parameters and their usability into questions of power. After all, expectation management is about the redistribution of considerable resources and vested interests. Anyone prepared to shrink special education's professionalism to a catalogue of the banal "what every special educator must know" in anticipatory

obedience (cf. for many Council for Exceptional Children, 2000) will only be repaid in kind. The same applies if the implicit constructions of difference in the PISA studies are taken up without being asked and declared to be a problem of their own (cf. von Stechow, 2006; von Stechow & Hofmann, 2006).

Comparative special education can, therefore, not define itself by asserting a little more originality and colorful diversity in the current scientific community. However, it also does not help much to indignantly point out the obvious limits and interests of the currently prevailing measurements and refuse the measurement business itself (such as Heitger, 2004). This would mean leaving the management of public expectations to the normalizers without a fight (cf. Hopmann, 2000; Berliner, 2002). The challenge is rather to stand up for other forms and parameters of measurement wherever political, social, and educational decisions are made, to show that and how it can be possible, even in the age of measurement and under the conditions of expectation management, to take into account the expectations of those who cannot make their voices heard on their own.

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