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6. THE PARADOX OF BEING A TEACHER

Institutionalized Relevance and Organized Mistrust¹

At least the Western world is thoroughly educationalized – that is, it is a world in which not only social problems are constantly assigned to education, but a world that defines its very own present and future in an educational language. Accordingly, all sorts of people and interest groups engage in participating in the educational business by highlighting alleged deficits in the schools and by proclaiming pertinent solutions to these problems. The educational realm sometimes resembles a colorful chorus composed of alerters, barkers, prophets, and also cynics, with altogether more cacophony than euphony. However, some of these voices have recipes that dominate at times, whereas some other voices represent recessive modes of arguments.

As a rule, these know-it-alls are not professionals – that is, they are not the central actors in the educational field, the professionals, but rather people ‘outside’ of it. Being ‘outsiders’ does not make these important agents feel bad, as may be demonstrated by the example of Walter H. Heller, the economic advisor to the president of the United States and the keynote speaker at the very first OECD conference on education in 1961 in Washington, D.C.: Amid the Cold War Sputnik shock, he claimed the importance of education: “May I say that, in this context, the fight for education is too important to be left solely to the educators” (OECD, 1961, p. 35). Another fine example may be seen in the vice-admiral of the U.S. Navy, Hyman G. Rickover, and also in his counterpart, the Soviet Navy admiral Aksel Ivanovich Berg, who, in the wake of Sputnik, both engaged in debates on educational reforms. Or, to take a more current example, in the OECD Director for Education and Skills, the physicist, mathematician, and statistician Andreas Schleicher, or in Microsoft founder Bill Gates, who together with his wife Melinda wants “to support innovation that can improve U.S. K-12 public schools and ensure that students graduate from high school ready to succeed in college” (“What we do: College-Ready Education Strategy Overview,” n.d.).

These initiatives from ‘external’ influences aiming to reform school have often caused specific reactions on the part of the actors ‘in’ the field, the teachers, and those people in the educational sciences who understand themselves to be the attorneys either of the teachers or of the educational field (or of both). A particular striking example is the German academic discussion with its emphasis on a specific idea – the ideal of educational autonomy as the asserted education’s ‘freedom’ from

social, economic, and political contexts. The idea of educational autonomy had been advocated when Germany was forced to turn into a democratic state during the Weimar Republic. Wilhelm Flitner for instance (1928/1989) – one of the Mandarins of the German educational theory in the 20th century –, wrote that educators have to ignore both political plurality and education towards educational plurality and that instead they should look exclusively to a higher instance for orientation: the true Community (p. 244). In Flitner's understanding, this was the true *Volk*, the invisible Church, having a place in the inward spiritual world of the individual Person. It is in this, Flitner continues, that the autonomy of education lies when we examine the societal dependencies (p. 244). Flitner does not negate the necessity of tension in political life; he insists that education has some intrinsic laws that must not be denied, for that would mean abandoning educational responsibility (p. 248). Politics is external – meaning that it is controversy and plurality – and its limits lie where the inner freedom of the duty of education begins (p. 252).

Even after the Second World War, the idea of educational autonomy was defended, often being traced back – true *Volk* had been abandoned – to the alleged existence of a “fundamental educational idea” (Flitner, 1950/1974, p. 9; see also Benner, 1987, p. 9) that may have theological roots, as Flitner argued, may be dependent on philosophical trends and be framed by social expectations; nevertheless this idea “has its autonomy” (Flitner, 1950/1974, p. 9) and differs therefore substantially from other ideas, and that bears its value and dignity in itself (see also Tenorth, 2004).

Ennobled by this idea of the autonomy of education, the actors ‘in’ the field often react with irritation to reforms initiated by actors ‘outside’ the field. Whereas teachers may strike or, more efficiently, ignore reforms to a large degree, educational scientists may be outraged by reform initiatives that contradict the dignity of educational autonomy. Again, the German discussion may help to illustrate this. When PISA was actually launched, it was immediately seen in the educational sciences as an instrument of economy, as a “value-for-money ideology” (Frühwald, 2004, p. 42) that would conquer the educational field, that intended to incapacitate humans by training them as obedient *homines oeconomici* (Krauz, 2007), extinguishing the epitome of the educational autonomy, *Bildung*, and its individual bearer, the *Persönlichkeit* (Herrmann, 2007, p. 172). A similar reaction can be found 40 years earlier in the context of the foundations of PISA (Tröhler, 2013a), namely, during the educationalization of the Cold War, when comparative testing was being introduced to the American schools and the unionized American school administrators were protesting vehemently (American Association of School Administrators, 1966).

It is more than evident that there is an obvious contradiction and tension between the increasing importance of education in an educationalized world on the one side, and the claim of educational autonomy (or related ideas) on the other. Living in an educationalized world precisely means that education is assigned to solve social problems and the coming challenges of a developing society, and not educational problems. When around 1980 the Korean automobile industry entered the U.S. American market, and Detroit – the indigenous car industry – collapsed,

President Ronald Regan erected a *National Commission on Excellence in Education*, identifying the problems of the automobile industry ultimately as problems of the education system of the United States (National Commission on Excellence in Education, 1983). In other words, at least as well as we may want to talk about the economization of education, we are also entitled to talk about the educationalization of the economy, of the Cold War, and even of the overall project of the nation-states, which in the 19th century were all erecting their school systems for the future citizens to be fabricated.

People have always been educated, and intellectuals have often reflected on education. But the phenomenon of assigning almost any conceivable problem to education arose only around 1800 and was a fundamental cultural shift in the West. This shift, like any other fundamental cultural shift, created its own stars and heroes, who did not invent this shift but reinforced it due to their persuasion and charisma. In the present case, that star was the Swiss Johann Heinrich Pestalozzi (Tröhler, 2013b). Ever since this cultural shift of the educationalization of the world started (and we are still far from emancipating ourselves from it), one occupational group has been particularly promoted. But up until the end of the 18th century, members of this group were not systematically trained, if at all, they usually stood under the control of local priests or pastors and seldom did they earn enough money, therefore being forced to additionally engage in farming or to serve as sextons or cantors in the local churches: We are talking here about teachers. With the educationalization of the world, however, teacher education was first spreading in the non-academic school environments, and later on, gradually expanding, reached the universities. This collective training or education career, naturally, was not met without frowns, critical voices, and even intellectual sarcasm (Labaree, 2004). Nonetheless, the more educationalized the world grew, the more elaborate and sophisticated teacher education became, for teachers were defined as crucial actors to implement the educational expectations of individuals, societies, and different organizations.

The impressive collective career of the teachers has led educational scientists to claim that the vocation of a teacher is in fact not only a vocation, but a profession, similar to the profession of a lawyer, a physicist, or a priest, who have been trained at the universities (and at the traditional university faculties) since the Early Modern Period. The purpose of these professions was seen as in supplying individuals (or groups) with advice or guidance, be it in cases of (in)justice, health/disease, inward peace/despair. Even though a carefree life of the professionals was more or less guaranteed, their 'business' was always seen as fundamentally different from the one like trade, craft, or administration, and their pertinent pursuit as situated in the suburbs of the 'normal' economy, being to some extent independent, yet still essential for society. It goes without saying that the fields these professions represent – the legal, the medical, and the religious – are envisioned autonomous, not exposed to the demands of economy, state, or military forces. It is in the above-mentioned context of the social role of professions that the autonomy of education was claimed.

There is no doubt that the expectations towards teachers are enormous, and in some countries the wages of teachers represent these expectations, such as in Luxembourg or in Switzerland, where the salaries are considerable, although in other places the salaries are average, like in Portugal or Finland, below average, like in France, or even very modest, like in Hungary or Poland. However, at the same time, teachers are constantly mistrusted to meet these expectations. The paradox here, then, lies in a situation when the teachers are continuously being better educated – that is, professionalized, exposed to advanced training programs – yet, despite this exponential growth, they seem to enjoy less trust. They share the late fate of other professions, like medical doctors (Conrad, 2007, pp. 14ff.), when their expertise as professionals decreased in importance. What is being said about medicine could be identically applied to education: “Medicine,” Porter (1995, p. 91) reports, “meant powerful professionals whose expert judgment was rarely questioned” until the mid-20th century. However, by the mid-1960s, professional judgment was increasingly seen as subjective: “We must show that the exercise of professional judgment and the desire for objectivity are complementary propositions” (as quoted in Porter, 1995, p. 92). Doctors were (no longer) perceived as monarchs of their practices but as “firm individualists” with little disposition to merge “into a large-scale research program” (p. 205). And indeed, the development in the medical sector was crucial for the development in the education field. Professionals are being seen as too individual and fallible in contrast to evidence provided by empirical intervention studies – based on the model of clinical research – to generate statistically verified (evidence-based) knowledge (Tröhler, 2015).

However, this paradox has a long tradition in which teachers were and are assigned a fundamental mission – to fabricate the virtuous, industrious, prudent, and loyal citizen – but at the same time are largely mistrusted. I will demonstrate this thesis in five steps by focusing largely on two – maybe for different reasons – outstanding figures in the history of education, Johann Heinrich Pestalozzi and Burrhus F. Skinner. First, the issue of the importance of the good teacher is demonstrated, indicating simultaneity of its mission and mistrust (1). Then, the very different historical, institutional, and intellectual contexts of Pestalozzi and Skinner serve to indicate how similar educational settings were thought to meet the high(est) educational expectations (2). Behind these similarities, as step three indicates, lie certain ideas of teachers acting as God’s deputies on earth (3), working to fulfil meticulously predefined steps of development understood as steps towards infallible progress (4). Finally, the solution put forth both by Pestalozzi and Skinner are interpreted as not fostering virtuosity in the art of teaching, but, on the contrary, minimizing its significance and by that also reinforcing the paradox stance towards the teachers between being “the prophet of the true God and the usherer in of the true kingdom of God” (Dewey, 1897/1972, p. 95) on the one hand and the mistrusted subjects on the other, following immediately upon the act of entrusting professionals with missions of redemption (5).

THE IMPORTANCE OF TEACHERS AND THEIR DISTURBING FALLACIES

One of the currently most discussed theses in education today is John Hattie's (2003, 2008) synthesis of over 800 meta-analyses concerning school achievement. For the synthesis Hattie identified 138 single factors related to school achievement that he clustered into six groups. The central question is how these groups are related to what Hattie calls "effect sizes," which is a measure of the effect of various "influences" (or variables) on student learning and improvements of test scores. The six groups are:

- student
- home
- school as an organization
- curriculum
- teachers
- teaching strategies

The comparison of these six groups revealed a clear result. The largest "effect size" is (besides the student) related to the teachers. It is teachers that primarily determine student achievement, under the condition of elaborated professional skills and therefore under the condition of a set of factors. Hattie identified eight of these influential factors; the three most important dimensions of expert teachers' behavior (Hattie, 2003, p. 15) are:

- Challenge (having high expectations, encouraging the study of the subject, valuing surface and deep aspects of the subject);
- Deep Representation (the ability of a teacher to know not only what they want to teach, but also how they will organize and structure it in the context of their particular students and their circumstances);
- Monitoring and Feedback (positive reinforcement, corrective work, clarifying goals).

Hattie's slogan following these factors is: "Teachers make a difference." However, this slogan is somewhat misleading, for this difference is not directed to the teacher as a person but to teaching as an art: "Not all teachers are effective, not all teachers are experts, and not all teachers have powerful effects on students. The important consideration is the extent to which they do have an influence on student achievements, and what it is that makes the most difference" (Hattie, 2008, p. 34).

Hattie's insights are, of course, neither very surprising nor very new. The problem that "not all teachers are effective" nor "experts" and that not all have the same "influence on student achievements" has been one of the central challenges throughout the history of education and has guided leading educational experts to find solutions ever since the world became educationalized. Today, some concerned parties focus on the utmost importance of "pre-service teacher preparation," such as the National Council for Accreditation of Teacher Education,

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some focus on best practices, serving as models (Darling-Hammond, 2006), and still others address the challenges of teacher education in a transnational world (Bruno-Jofré & Johnston, 2014). All these efforts to better understand and enhance teacher education (a myriad of books and articles could be added to the list) are devoted to serve the teachers in their mission in an educationalized world, and yet there is another trajectory that counteracts all these contributions, namely, strategies of minimizing the significance of teachers in order to guarantee the success of teaching as a crucial social activity. Minimizing the significance of teachers does not necessarily indicate the indifference towards education, quite the contrary. But more than the teacher, the environment and the idea of specific principles of development, which are both related to each other, make the teacher if not superfluous, then of less importance. The mediating factor in the dynamics between the environment, the child, and the child's development is not so much the teacher but something 'beyond' or 'above,' as will be demonstrated taking the examples of Pestalozzi and Skinner.

PESTALOZZI AND SKINNER: THE URGENT SOCIAL NEED FOR EDUCATIONAL EFFECTS

Both Pestalozzi and Skinner developed their educational arguments during periods of great transition that caused fundamental fears and anxieties to which educational strategies were addressed, but teachers were largely excluded. Pestalozzi is situated in the transition from the *Ancien Régime* to the modern nation-state and Skinner in the transition from the nation-state to the post-national era. Both saw the world at risk, and both developed an educational program embedded in a particular context different from a 'conventional' classroom. From a specific point of view, the two could not differ more in terms of concrete construction of an ideal educational context, but they did agree upon the construction of education as in a successful and infallible development and progress.

Our two charismatic characters were fundamentally concerned about the future and propagated education as a remedy. In the middle of the Napoleonic Wars, Pestalozzi said in May 1807, "The dream of making something of people through politics before they really are something – that dream in me has disappeared. My only politics now are to make something of people and to make as much out of people as at all possible" (Pestalozzi, 1807/1961, p. 251). And in the middle of the European turmoil of the Congress of Vienna (1814/15) Pestalozzi wrote, "There is no rescue possible for the morally, intellectually, and economically corrupt part of the world except through education, that is, through educating humanity, *Menschenbildung*" (Pestalozzi, 1815/1977, p. 165).

This commitment to education as a major (if not unique) remedy for social problems emerged in the time around 1800, and Pestalozzi was certainly one of the key figures in this educational turn of the overall culture, which has persisted up to today. It is in this context that Skinner wrote in 1976, in a new preface to his

utopian novel *Walden Two* (originally published in 1948): “The choice is clear: either we do nothing and allow a miserable and probably catastrophic future to overtake us, or we use our knowledge about human behavior to create a social environment in which we shall live productive and creative lives and do so without jeopardizing the chances that those who follow us will be able to do the same” (Skinner, 1976, p. xvi).

Although Pestalozzi became the icon of teacher education and teacher unions throughout the 19th century in Europe, Japan, and North America, he trusted neither teachers nor educational institutions including the school. For him, the best possible education – actually the only real possibility – could only take place at home in contact with the loving mother, because it was she who helped the children’s innate powers and faculties to develop in a harmonious (= human) way. The place of this true education is the *Wohnstube* at home, the living room or sitting room, a room of protected social interaction. It is no coincidence that Pestalozzi’s most famous book dealing with his educational method was entitled *How Gertrude Teaches Her Children* (Pestalozzi, 1801/1932), which referred to Gertrud in Pestalozzi’s village novel, *Leonard and Gertrude* (1781), where no school existed and the children got their education at home. A mother knows that the real world ‘out there’ is “not God’s first creation” and would come before the child’s eyes as “a world full of lies and deception” (Pestalozzi, 1801/1932, p. 350) and affect the child’s development towards morality. In this way, mothers in their living rooms are preservers of the good, and they are responsible for children’s development towards (religious) morality: “The core from which the feelings rise that are the essence of worship of God and morality ... emanates completely from the natural relationship between the under-age child and his mother” (p. 350). Accordingly, the first manual for education was called *Pestalozzi’s Book for Mothers, or Instruction for Mothers Teaching Children to Realize and Talk* (published in 1803); a later edition was adapted somewhat for the needs of the classroom and had the subtitle: *Edited to be more suitable for elementary schools* (published ca. 1806).

The role that the living room plays in Pestalozzi’s educational ideal is in Skinner’s vision the secluded utopian community of *Walden Two*. *Walden Two* consists of approximately 1,000 people living in harmony with nature and their fellow men. Four social categories exist: workers, scientists, managers, and planners, the latter two representing the government. The planners are former managers who had conducted their tasks to the utmost satisfaction; the scientists are responsible for agriculture, observing children’s behavior, and the “educational process” (Skinner, 1976, p. 49). “Behavioral engineering” is praised as “man’s triumph over nature” (p. 70) and “social engineering” is identified as the new creation of a human order in which humanity can develop among humans. As long as the “psychological management of a community” functions, the “Golden Age” is right ahead, and the prerequisites of it lie in the construction of the ideal environment: “Right conditions, that’s all. Right conditions” (p. 84).

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GOD'S DEPUTIES, SUBSTITUTES, AND IMITATORS: MOTHERS,
PSYCHOLOGISTS, AND RESEARCHERS

Without a doubt there are religious motives behind the expectations of an ideal environment in which humanity would be developed. In this religious horizon of expectations, theology plays a role neither for Pestalozzi nor for Skinner. God – as the central focus of theology – either has a deputy on earth, as it is the case with Pestalozzi's ideal of the mother, or he is replaced by psychologists (“They’re our ‘priests’ if you like”; Skinner, 1976, p. 186), as in the case of Skinner, although Skinner (that is, his alter ego T. E. Frazier in *Walden Two*) admits that the major principle in education, the absence of punishing, had been discovered by Jesus (Jesus discovered “the power of refusing to punish”), although more by “accident” than through “revelation” (p. 245).

There is no doubt that there are fundamental differences between Pestalozzi's living room and Walden Two community, between the cornerstone of a loving mother and a cornerstone of estimating “mother love” as something chimerical and defining the family as the “frailest of modern institutions” (Skinner, 1976, p. 126): “Home is not the place to raise children” (p. 132).

However, there is a parallel that might be a little bit obscured, and that is the question of the role of the researcher (Pestalozzi, Skinner) in designing or creating an educational “total” environment guaranteeing the blossoming of the good. Towards the end of *Walden Two*, E. T. Frazier takes his old friend and visitor Professor Castle to a hidden point from which they are able to oversee all of Walden Two:

We were silent as he lay back on the ground.
“It must be a great satisfaction,” I said finally. “A world of your own making.”
“Yes,” he said. “I look upon my work and, behold, it is good.”
He was lying flat on his back, his arms stretched out at full length. His legs were straight but his ankles were lightly crossed. He allowed his head to fall limply to one side, and I reflected that his beard made him look a little like Christ. Then, with a shock, I saw that he had assumed the position of crucifixion.
“Just so you don’t think you’re God,” I said hesitantly, hoping to bring matters out into the open.
He spoke from the rather awkward position into which his head had fallen.
“There’s a curious similarity,” he said.
...
“I don’t say I am never disappointed, but I imagine I’m rather less frequently so than God. After all, look at the world He made.”
“A joke,” I said.
“But I am not joking.”
“You mean you think you are God?” I said, deciding to get it over with.
Frazier snorted in disgust.
“I said there was a curious similarity,” he said.

“Don’t be absurd.”

“No really. The parallel is quite fascinating.” (Skinner, 1976, p. 278f.)

Whereas God seemed to be the ‘partner’ of Skinner’s construction, it was Jesus for Pestalozzi, more precisely the parallel between the life of Jesus and his own. His affinity with Jesus Christ’s life of suffering and the promise of redemption led Pestalozzi almost automatically to use Biblical language when “the method” and its discoverer, Pestalozzi, were discussed. Even Pestalozzi himself set out to determine whether the Gospel of Matthew was in agreement with his method, and he made the following interpretation (1802/1952):

Now when His disciples had come to the other side, they had forgotten to take bread. Then Jesus said to them, “Take heed and beware of the leaven of the Pharisees and the Sadducees.” (Matthew 16: 5–6)

He [Jesus] warns his disciples against the styles of teaching, of even the most enlightened, most civilized, and most renowned men of his time formally appointed to the highest Church positions, and explains that their style of teaching was based on the decay of human nature rather than on the inward divine essence. (Pestalozzi, 1802/1952, p. 36)

Pestalozzi had a clear strategy of propagating the dignity of the method via his own biography, and it is striking how the public followed this line of ‘argument.’ The worried Europeans wanted common public education but education that would not call into question what appeared to be the last sure thing that one had – namely, religious certainty. The new had to combine with the old, and a new leader whose life apparently had so many similarities with the founder of Christendom could not be wrong, at least not in the basics. The educationalist and writer Johann Ludwig Ewald (1747–1822) wrote the following to Pestalozzi in May 1803:

Finally, I am writing you a proper letter, noble friend of man, martyr for humankind, for the good, Columbus of intellectual human education; God willing, crowned with the best crown of human regard, with love of the more noble, the notables, in the Kingdom of God. (Ewald, 1803/2009, p. 596)

Ewald then concluded:

In short: Christendom is a Pestalozzi method of developing religious concepts, educating a sense of religion, or your method is a Christian method of developing the intellectual abilities – or rather: Both spring forth from the one source, from human nature and its needs. (p. 598)

Pestalozzi enjoyed the role of agent of salvation, and one day in 1804, as he took his leave of his staff and pupils in his provisional institute in the Bernese village of Münchenbuchsee to go settle in Yverdon at the south end of the lake of Neuchâtel, he first spoke of Jesus Christ and then said: “When you think of Jesus Christ, so also

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remember me, in that I have striven to lead you to Him. It is only natural that on this last morning I remind you of what I was to you” (Pestalozzi, 1804/1935, p. 227). A young teacher who was present at the event, Lotte Lutz, wrote afterwards with great enthusiasm to her fiancé and later founder of a Pestalozzi School in Frankfurt, Anton Gruner: “I think that if they crucified him, he would welcome it, for he is Jesus Christ” (Lutz, 1804/1930, p. 1).

THE INFINITE SMALL LEARNING STEPS AND THE INFALLIBLE PROGRESS

Like many other intellectuals of his time, Pestalozzi followed a specific system of reasoning to grasp the idea of progress and development—namely, what is called cultural epoch theory, or the idea of a parallel development of the individual and mankind (Tröhler, 2014): “All instruction of man is then only the art of helping nature to develop in her own way; and this art rests essentially on the relation and harmony between the impressions received by the child and the exact degree of his developed powers” (Pestalozzi, 1801/1932, p. 197). The art of teaching is limited to assisting the innate power of development that represents the heritage of the development of mankind. How Pestalozzi translated the very fact of historicity into education can be seen in the realm of language education: “Nature used thousands of years to bring our species to the full art of language, and we learn this feat, for which nature took thousands of years, in a few months; but despite that, we must not do differently than to go the same route that nature has gone with the human race” (Pestalozzi, 1801/1932, p. 315). According to this finding, the pedagogy of school subjects was the natural order of the elements, the complete natural order following the order in the historical development of mankind: “The course of nature in the development of our species is immutable. There are not, and there cannot be, two different teaching methods – only one is good – and this is the one that accords perfectly with the eternal laws of nature” (p. 320).

Accordingly, education had to be understood as a fast motion of history, fulfilling a movement of “gapless progression” (Pestalozzi, 1815/1977, p. 174). In “domestic life” the “harmonious graduation of the humanly sublime to the divine heights” takes place, following “the very same graduation in humanity” (p. 175). The principle of this arrangement is the following, as Pestalozzi emphasizes: One has only to see how the art of education “progresses in a gapless way from its germs, from strength to strength, from skill to skill, from freedom to freedom! Take another look at domesticity, that it is suitable, at every point of education that a child has reached, completion and perfection of this very point, and by that to found the art of the child with psychological certainty from step to step, and, until its perfection, to protectively guide” (pp. 180f.). Pestalozzi had no doubt that this principle of education should be at the very basis of school education, too, although he never really developed a systematic curriculum theory.

In Skinner's conception of education there is no loving mother, but we find surprisingly similar arguments: Skinner's key to successful education is not the child's mother but a teaching machine, the instructional media that Skinner (1966) had developed in his article, "The Science of Learning and the Art of Teaching." This teaching machine was advertised in a film (Skinner, 1954): "With the machine you have just seen in use, the student sees a bit of text, or rather printed material, in a window." This bit could be a "sentence or two, or an equation in arithmetic." However, this bit is not complete; some "small part is missing, and the student must supply it by writing on exposed strip of paper." According to the created problem, the student's response "may be an answer to a question or the solution of a problem, but generally it is simply a symbol or word, which completes the material he has just read." The great advantage of this kind of learning, says Skinner, is that as "soon as the student has written his response, he operates the machine and learns immediately whether he is right or wrong. This is a great improvement over the system in which papers are corrected by a teacher, where the student must wait perhaps till another day to learn whether or not what he has written is right" (Skinner, 1954).

Skinner sees three fundamental advantages of the machine: immediacy, individuality, and perfectibility:

- *Immediacy*: Immediate feedback has two effects: (1) "It leads most rapidly to the formation of correct behavior. The student quickly learns to be right" and (2) "The student is free of uncertainty or anxiety about his success or failure." Skinner says this makes "work ... pleasurable." Coercion is no longer needed, for a "classroom in which machines are being used is usually the scene of intense concentration."
- *Individuality*: The machine allows student "to move at his own pace." Therefore, it solves the problem of traditional teaching "in which a whole class is forced to move forward together, the bright student wastes time waiting for others to catch up, and the slow student, who may not be inferior in any other respect, is forced to go too fast."
- *Perfectibility*: A third feature of this propagated machine teaching is that "each student follows a carefully constructed program." This program leads "from the initial stage, where he is wholly unfamiliar with the subject, to a final stage in which he is competent." The student progresses "by taking a large number of very small steps, arranged in a coherent order. Each step is so small that he is almost certain to take it correctly" (Skinner, 1954).

The fact of small steps increases the chance of success, and success in turn motivates the student to continue ("positive reinforcement"). Skinner promises that this setting is not only better in terms of motivation but also in terms of efficiency: "A conservative estimate seems to be that with these machines, the average grade or high school student can cover about twice as much material with the same amount of time and effort as with traditional classroom techniques" (Skinner, 1954).

TEACHERS AND SCHOOLS

It could seem that there is a difference between Skinner and Pestalozzi, for Pestalozzi emphasized nature and Skinner a mechanic technology. That is true to a certain degree, but it was Pestalozzi who propagated his teaching method the following way: “If a person invented a machine to cut wood inexpensively, I would acknowledge all the advantages on this machine, and now that I have without any doubt invented a better reason-machine, I propagate seriously the advantages of this machine for a while” (Pestalozzi, 1802/1958, p. 525).

The mechanical language in describing the art of teaching is not misleading, for in his famous book *How Gertrude Teaches Her Children* (Pestalozzi, 1801/1932), Pestalozzi reports an encounter with Pierre Maurice Glayre, a Swiss lawyer and politician, to whom he had explained the educational method he had been (unconsciously) practicing:

I naturally pounced every moment upon matters of fact that might throw light on the existence of physico-mechanical laws according to which our minds pick up and keep outer impressions easily or with difficulty. I adapted my teaching daily more to my sense of such laws; but I was not really aware of their principles, until the Executive Councillor Glayre, to whom I had tried to explain the essence of my works last summer, said to me, ‘Vous voulez mécaniser l’éducation’ [you want to mechanize education]. (I understood very little French. I thought by these words, he meant to say I was seeking means of bringing education and instruction into psychologically ordered sequence; and, taking the words in this sense) he really hit the nail on the head. (p. 196)

Psychology was the catchword, or better psychological laws: “I felt my experiment had decided that it was possible to found popular instruction on psychological grounds, to lay true knowledge, gained by sense-impression at its foundation, and to tear away the mask of its superficial bombast” (Pestalozzi, 1801/1932, pp. 190f.). Teaching thus depended simply on manuals and textbooks that represented the psychological progress of the children; and these textbooks were promised and in part published by Pestalozzi. The parallel to Skinner is striking: Programmed learning with its teaching machines was based on the assumption of a progressing order. In both cases, the teachers or their art of teaching do not really matter, as long as they have their faith in the sublimity of the teaching aids developed by the researchers in their mission to redeem the world.

Not today’s stakeholders in educational policy with their trust statistical data, not heroes like Pestalozzi, and not ambivalent people like Skinner trust(ed) teachers to be artists in the classical sense, to be virtuosi in the art of teaching – quite the contrary. None of them even considered teachers to be a profession like the profession of lawyer, priest, or medical doctor. In contrast, lawyers, priests, and medical doctors were and are not entrusted with a mission to redeem the world. They may help individuals or companies, alleviate their problems or guide

them, but it was never thought that all the social problems and the development of the world would depend on them. The dark side of this megalomania coin, the redemption of the world, is: The pathway to heaven is not to be invented or detected but is predetermined and to be found in alleged laws, identified by psychology, the academic discipline of the soul and its idiosyncrasies. In this setting, teachers are not exploring or interpreting but following the logic of development. They are restricted actors, perhaps somehow like Virgil in Dante's *Divine Comedy*; they are accepted because of their conceded rationality and virtuousness but they are not pure and sacred like Beatrice; they belong to *Inferno* or *Purgatorio* rather than to *Paradiso*, although their mission is to lead children to the latter, while being suspiciously monitored by those imagining themselves to know in fact the real and true pathways.

Dante Alighieri wrote the *Divina Commedia* in the second decade of the 14th century. In the spiritual realm of the late Middle Ages human progress infallibly had to end in harmony with God. An institution like the public school was far from having been on the agenda of people like Dante; education was self-education, religiously determined and not seldom connected to an ideal pure woman, as we find also in Petrarch's Laura (immortalized in the *Canzoniere*) a couple of decades after Dante's *Divina Commedia*. Purity in form of women has ever been the dream of concerned men, be it the original Heloise (written in 1094–1165) after the castration of her lover and husband Abelard or the new Heloise, Saint-Preux's unreachable love in Rousseau's *Julie ou la nouvelle Héloïse* (published in 1761) or even Gertrud in Pestalozzi's first part of *Lienhard und Gertrud* (published in 1781). It was Pestalozzi who created the fictional teacher *Glüphi* based on the model of Gertrud in 1785, in the third part of his novel *Lienhard und Gertrud* (published in 1785). Nevertheless, when it came to the real organization of teacher education after 1800, Pestalozzi trusted in his method based on (alleged) eternal psychological laws much more than in the intuitive or creative art of teaching.

The religious energy behind the expectations towards education was first transformed into the educationalized program of nation building in the 19th century and then, after the Second World War, into the educationalized vision of One World (Tröhler, 2010), and it had its equivalence in visions and programs of teacher education (Rohstock & Tröhler, 2014). Not only virtuous, social, and laborious national citizens were to be fabricated, as in the 19th century, but cosmopolitan ones (Popkewitz, 2008). Under the conditions of today's claim for an inclusive education, this educationalized cosmopolitan vision addresses every human being all around the world:

I who erewhile the happy garden sung,
By one man's disobedience lost, now sing
Recovered Paradise to all mankind,
By one man's firm obedience fully tried
Through all temptation, and the tempter foiled

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In all his wiles, defeated and repulsed
And Eden raised in the waste wilderness. (Milton, 1671/1992, p. 444)

We must have no illusion that the religious background of the educationalized world has not many winners – all those, namely, who found their field in education: architects, caretakers at school, school furnishers, curriculum developers, text book publishing companies, inspectors, teachers, and the educational sciences together with psychology as heir of Protestant theology (Tröhler, 2011). As long as the expectations towards education grew and grow, and there are no indicators of decline, more schools will be culturally and politically backed up and invested in, currently more by IT companies than by state governments. The dark side of the educationalized world is, however, that teachers will gain even more rhetorical importance and, at the same time, will lose political influence and through that, probably, also social status.

This is the paradox of being a teacher, or, as Hargreaves and Lo (2000) put it in one UNESCO project, teaching is a paradoxical profession, facing the highest expectations and having less support: “Just when the very most is expected of them, teachers appear to be being given less support, less respect, and less opportunity to be creative, flexible and innovative than before” (p. 168). This increasingly leads to phenomena like burnout and moral problems (p. 171), creates the need for a new professionalism, a “principled professionalism,” as due to Goodson (2000), who argues about the distinction between professionalism and professionalization on the one hand and a differentiation of professional standardization from professional standards on the other (p. 182), and, ultimately, heading to “post-modern professionalism” as exemplification of the “principled professionalism.”

It is not the job of the teacher that is at risk but the quality of the job of teaching, which is currently being de-professionalized by the reign of standards and statistics into trivial practicalism:

To move beyond a deprofessionalizing practicalism, we need to investigate new attempts to unite professional practices with more practically sensitive theoretical studies and research modes. This would provide both new and up-to-date professional practices, backed up and informed by theory and research. What is required is a new professionalism and body of knowledge driven by a belief in social practice and moral purpose. Principled professionalism might cover the issues listed below and would grow from the best insights of the old collective professionals and the new professionals. (Hargreaves & Goodson, 2003, p. 131)

It will help, then, to redeem the school from aspirations of redemptions, to historicize the process of the educationalization of the world rather than to advocate it, and by that to lower its attractiveness to those know-it-alls, and to free teachers from missions nobody can fulfill anyhow. And it would then also help to collect systematic knowledge from the teachers’ experiences in their mission in counteraction

to the knowledge of the know-it-all. This kind of empirical research has not yet been elaborated in a satisfactory way, but it is urgently needed in order to close the unhealthy gap between expectations, together with their servants and catalysts, and what is feasible. Teachers' knowledge would help to gauge teachers far better than listening to modern missionaries with no historical consciousness.

NOTE

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