INTERFACE
–JOURNAL OF EUROPEAN LANGUAGES AND LITERATURES
ISSN: 2519-1268

Issue 20 (Spring 2023), pp. 7-35
DOI: 10.6667/interface.20.2023.198

Success and Failure: Education reform in long-term historical contexts in Central Europe (and a short detour to contemporary China)

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Abstract

From a historical perspective, this article tries to demonstrate that reforms in education follow certain patterns. Hence, four phases could be distinguished in the long-term implementation of educational change: the idea phase, the negotiation phase, the implementation phase, and the consolidation phase.

As opposed to very similar concepts in sociology, I argue that –in practice– education reforms do not always unfold completely but are also prone to fail. Each phase might take decades to fully evolve and ensure the reform's continuity. And yet, no phase must be skipped. If one or even several phases are ignored, the reform could be severely at risk and might collapse, either in parts or completely.

At the same time, there is a reciprocal influence of ideas that are transferred from one educational system to another by multipliers.

This thesis is substantiated with exemplary sketches on the development of educational reforms from the 19th to the early 21st century, with a focus on Germany and China.

Keywords: education reform, Johann Friedrich Herbart, digitalization, social credit system, China, Germany

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The agencies of history do not issue return tickets. And historians usually don't waste their breath discussing the tracks not taken. But it seems worthwhile to analyze the wiring diagrams and station buildings and, above all, the route maps and locomotives to learn from the past; and in the case of this article's topic –to improve the future of education.

Hence, this article follows an apparently beaten track, taking a ride through the history of education to explore several leading questions: How do education reforms evolve? And in doing so, can we discern regular patterns? Moreover, what could we possibly learn from the processes of implementation to avoid costly failures and, in turn, improve the positive impact on our schools and universities? However, this is a hypothesis: the beginning of an exploration not its conclusion. Neither do I offer a detailed schedule that could be applied to any reform, nor do I claim concrete and bulletproof validity for my hypothesis. My aim is more modest: to simply draw attention to the (scarcely researched) question whether the successful implementation of education reforms might depend on the adherence to processes, patterns, and phases. In other words: could reforms, as a rule, fail if their protagonists ignore or interfere with hidden, almost organic laws of evolvement in the planned change of educational structures (without necessarily following systems theory)? And when I write about reforms here, I mean large-scale, profound changes to an education system, almost always accompanied by historical caesuras: wars, the collapse of empires, or, as recently, a pandemic.

While there exists a small body of works on this topic, especially in Chi-

nese and American contexts, exploring patterns of change on a micro level (Li, 2017; Coburn et al., 2012; Hallinger & Heck, 2011), few take a historical, long-term perspective while relating to education systems in Central Europe, especially Germany. Hence, questioning the long-term implementation of reforms and, above all, the acknowledgement of failure appear here –despite their relevance– to constitute smaller fields of research.[1] At the same time, I loosely try to synchronize my hypotheses and questions with research on school theory (Fend 2006; Gerstner & Wetz, 2008) and, especially, the lively dialogue between Chinese and western scholars on contemporary education and school reform (Meyer, 2022; Green et al., 2021; Cai, 2019; Lee & Kennedy, 2017).

As mentioned above, the transfer of ideas between different cultural areas and their education systems has been well documented; consequently, my depiction of reciprocal influences in China and Germany bears no claim to originality. When analyzing education reforms, it yet seems vital to realize that – fortunately – no major reform is implemented in a sterile chamber. And no education system is an island: We can discern historical influences and must consider that ideas are contagious. When reforms are eventually on track, however, they are not only driven by ideas and people but, if successful, will follow regular patterns, phases that evolve almost organically.

What is more, it could be said that there are two important factors in this very process: time and communication. Reforms require time to mature. And they must be negotiated. The current failure of the hastily implemented digital reforms in the German school system – keyword: *DigitalPakt Schule* – would be just one example. Even the Federal Court

1 Cf. the comparative studies of Jürgen Schriewer (2003; 2007) dealing with education reform from a historical angle; while Gita Steiner-Khamsi (2016), David Philipps and Kimberly Ochs (2003) have, among other topics, dedicated their research to policy borrowing. These fields of research are instructive yet have not focused on models of failure, exploring conditions under which reforms will peter out, collapse, or even harm and endanger a working education system. Although this article follows the historical scope of the aforementioned scholars, it seems appropriate at this point to refer to another, related and extremely neglected field of research: Micro-studies on the failure of individual educational institutions –also due to incorrectly implemented reforms– are almost non-existent. Drawing on internal sources, the author has written brief reports on the failure of two educational institutions in Germany. Both institutions turned dysfunctional –in addition to other reasons– due to improperly implemented reforms. Cf. Fechner (2017; 2019). However, these weak attempts rather tend to reinforce the impression that a vital field of knowledge has been ignored by research.

of Auditors recently stated that the *DigitalPakt Schule*, which had been endowed with no less than 6.5 billion euros to boost the use of digital learning in schools, remained ineffective and had to be stopped (Wiarda, 2022). Warning signs, of course, had been visible some time before the ignominious end of the ambitious reform. In a poll commissioned by the German teachers' and scientists' union GEW (*Gewerkschaft Erziehung und Wissenschaft*) many of the surveyed teachers had already expressed their discontent in February 2020, especially criticizing tenuous information policies (Mauss, 2020, p. 6). Considering this situation, we might also assume in general that digital communication exerts more pressure on the parties concerned. Today, the instructions of the supervisory authorities are sent out at a more rapid pace than in the past and often require immediate responses. On the one hand, this increases the ability to react to potential hazards. On the other hand, at this pace, consultation on the implementation of measures, objection and negotiation are hardly possible.

But *DigitalPakt Schule* also finished on a dead-end track because measures against the spread of the Coronavirus were –simultaneously– implemented in Germany, in an even more hasty and indiscriminate manner, especially in the school sector. A second assumption may be made here: The implementation of a reform requires regulated processes and must not be overlaid and thus disrupted by other large-scale measures. In Germany, the ensuing perturbations did not allow for a structured negotiation process that might have crucially improved the –hitherto indiscriminate– introduction of digital tools and distance learning (Fechner, 2020). In addition to the financial loss, there were also pedagogical side effects, such as a steep increase of psychological illnesses among schoolchildren and youths (Naumann et al., 2021) as well as among students (Ravens-Sieberer et al., 2022), a continuing decline in reading ability exacerbated by the application of digital tools (Sälzer, 2018, p. 6), an increase in violence during the home-schooling periods (Fickermann and Edelstein, 2020) or a rising number of psychological illnesses among students (Ravens-Sieberer et al., 2022). The same dynamics, though, is true for an entirely different reform: When China severely restricted after-school tutoring at short notice in July 2021, its suppos-

edly constructive measures immediately created havoc in the education sector (McSpadden, 2021).

But what could be done to implement education reforms properly? As mentioned, we can learn from history –heeding the aforementioned factors of time and communication, while raising our awareness of crucial patterns in reform processes.

For the history of education knows numerous, decisive and eventually successful reforms. In modern times, historical upheavals, i.e., wars and revolutions, acted as catalysts in almost all cases. They made the old education systems, with their transmission of traditional values and hierarchies, appear unsuitable to cope with the new and unusual challenges. At the same time, utopias, germinating reform approaches, and concepts from other countries were taken up to question, challenge or even replace central elements of the old system. In this article, I will therefore also look at the country that could currently exert the greatest influence on educational reforms in Germany: China.

In Central European history, one can first draw a wide arc from Comenius (Thirty Years' War) to Wilhelm von Humboldt (Napoleonic Wars) to the reforms after World War I and the reorganization of education in Germany after 1945. However, on their way into practice, reform concepts changed due to lengthy negotiation processes, histories of conflict, in which sometimes the original intentions dissolved, even turned into their opposite –as with the epoch-making proposals of the Zook Commission of 1946 and the progressive reforms in the Soviet Occupation Zone.

More precisely, four phases can be distinguished in the implementation of educational reforms. Firstly, the *idea phase*, during which a reform is designed in theory, not infrequently with utopian connotations. Secondly, the *negotiation phase*, which accompanies the (conflict-ridden) transition through the politico-administrative level into exemplary practice, as yet limited to a small number of schools and universities. Thirdly, the actual *implementation phase*, an adaptation of the reform concepts into

practice on a broad, nationwide scale –which in some cases might take decades. Eventually, this often leads to a *consolidation phase*, during which reform concepts are routinised and implemented on a long-term basis, often without being questioned –until the next historical upheaval. Each phase might take decades to fully evolve and ensure the reform's continuity. And yet –this is the gist of my article– no phase must be skipped. If one or even several phases are ignored, the reform could be severely at risk and might collapse, either in parts or completely. But before we embark on a trek through the history of education, I would like to reiterate the factors of space, technology, and time. In earlier eras, it took longer traversing the land to implement reforms and laws. Likewise, rudimentary communication technology slowed down the pace. Today, digital information rockets around the globe within seconds. Back then, despatches were transported by stagecoaches, and later by railroads and automobiles. Reforms grew more slowly and more stably, and at the same time their phases could be defined less precisely. Today, it seems to be the other way around: reforms are carried out within a very short period of time, and their implementation can be tracked precisely. At the same time, implementation seems more arbitrary, less stable, more prone to failure.

These gradual, almost sedate processes can be observed in the first major –successful– educational reforms in Central Europe. After Austria had failed to successfully challenge Prussia's supremacy in the Seven Years' War (1756-1763), its Emperors Maria Theresia and Joseph II would initiate reforms on a large scale. Ignaz von Felbiger (1724-88) was charged with the monumental task to reposition the Austrian school system in 1774 (Conrads, 2005). Surprisingly, the industrious abbot had acquired his experience by reforming Prussia's primary schools in Silesia; being inspired, among other sources, by Johann Friedrich Hähn and *Heckersche Realschule*, a Protestant institution famous for its innovative teaching practice (Lambrecht, 2021, p. 42). Henceforth, teaching in the elementary schools of the multi-ethnic Habsburg Empire would be clearly regulated with a central school code. Felbiger not only defined the curriculum and even the methodology, but also monitored the schools with a centralized reporting system. From Lake

Constance to Bukovina, the performance, behavior, and attendance of all students could now be recorded in detail. Unfortunately, not only the term "Schema F," i.e., running procedures exactly according to the book, has survived from this period, but also the administrative and statistical control of the school system (Weiss, 1896). However, it took decades until the system was implemented in a reasonably stable manner throughout the Empire –then, however, ensuring Austria-Hungary's inner coherence until the end of World War I, when Woodrow Wilson's *Fourteen Points* "accorded" the peoples of Austria-Hungary "the freest opportunity to autonomous development." (United States President, 1918). A proposition, of course, that led to the implosion of the multinational Empire –and the subsequent, alas short-lived flowering of Central Europe's probably most audacious school reform, instructed by Otto Glöckel in Vienna (Urbanek, 2006).

In turn, another more suitable example can be found in the introduction and course of reforms in Prussia from 1806 onwards. At that time, the French under Napoleon I defeated Prussia, partly because they had very consistently implemented their own educational reforms in the years following the French Revolution.

At first, a two-track system can be discerned in Prussia. On the left track was Friedrich Ludwig Jahn, who pursued a grassroots pedagogy shaped to reach as many young men as possible for his *Wehrsport*, i.e., military sports or "The German Art of Gymnastics" (Jahn & Eiselen, 1816). His exercises were structured according to athletic ability. Although Jahn unfortunately was not free of antisemitic tendencies, they largely dispensed with class or intellectual hierarchy. In other words, Jahn's gymnastics train stopped at every station and invited *most* able-bodied men to board. Even today, many elements of Jahn's gymnastics have survived in the physical education curricula of German and Eastern European schools, albeit without the ideological components that dominated in the 19th century.

On the right track, the train moved faster and access was much more exclusive. There, the Stein-Hardenberg reforms (1807) were intended

to accelerate the upper tiers of Prussia's education system. This also involved hierarchical centralization, which, however, provided extensive freedom in the higher education sector. The main author, Wilhelm von Humboldt, was able to design a progressive, streamlined system in theory, which, among other aspects, postulated the extensive separation of state and university as well as the freedom of both teaching and research. Thus, Humboldt intended to provide a liberal framework that would enable students to develop their individual talents and aspirations. However, the reactionary developments at that time, following the Carlsbad Resolutions (1819), frustrated Humboldt's progressive efforts. They paralyzed the higher education system of the German states for decades to come but clearly should be understood as part of the negotiation process.

This system's engine was developed by the philosopher and Kant successor Johann Friedrich Herbart (1776-1841). During his reforms in the school sector, he even created pedagogy, here: teaching methodology, as an independent subject.

For this purpose, he developed the formal steps theory. According to this system, the acquisition of knowledge could be brought about in four steps: clarity, association, system, and method. Thus, the teacher first had to determine the prior knowledge of his pupils. Secondly, he supported them in absorbing new knowledge through association. He would, thirdly, organize this knowledge into a system with them. And finally, he would practice it methodically with his pupils. Herbart's theory seemed to be applicable to every –intellectually gifted– student without exception. It would be further differentiated by him over many years and lectures. When he eventually published the second (and amended) version of his "Outlines of Educational Doctrine" in 1841, he was –shortly before his death– able to include even the smallest details and possibilities. It seems vital to note that Herbart's "Outlines" were not necessarily meant for the classroom yet their tailor-made pedagogical approach could easily be applied to school-teaching where they experienced an overwhelming success.

After Herbart's death, Tuiskon Ziller (1817-1882) expanded his academic teacher's pedagogical approach into the *Herbart-Ziller Formal Steps Theory*. During the 19th century, Ziller thus successfully consolidated the assumption that human beings could be –without any doubt or fail– educated in the classroom. The repressive and authoritarian atmosphere in the German states and eventually the *Reich* favored the hierarchical spread of an approach that was certainly perceived as something unrivalled and new. Humans could be educated in a controlled manner, in small steps.

By the time of the Weimar Republic (1919-1933), Herbart's conception of human nature had gained almost universal acceptance at secondary schools and universities. The teaching methods were no longer associated with Herbart's philosophy (Oelkers, 1989), which had accumulated enough independence, appeal, and adaptability to survive even during the Third Reich and the GDR. However, Herbartianism experienced an overwhelming boom in the Federal Republic of Germany, in the cognitive hothouses of the three-tiered school system. This time in a new form, more strongly influenced by methods of quantifiable measurability, especially after the introduction of PISA, the Program for International Student Assessment. A similar development took place –almost independently– in China.

I do not have the space here to go into detail about the course of the left track of the school system. In the middle of the 19th century, fierce negotiations took place there: Numerous reform schools –the respectable Cauersche Anstalt (1818-1834) may be mentioned as an example– had to withstand financial and political pressure that still drove many of them to ruin. Even Friedrich Froebel's kindergarten in Blankenburg was banned on August 7, 1851 –three years after the failed revolution of 1848. In fact, the authorities considered it subversive to let children play freely in a garden (Sauerbrey & Winkler, 2017). Ferdinand Stiehl's restricitve *Regulative* (1854-72) finally complemented Herbart's approach. In their purely practical definition of elementary school and teacher training in Prussia (i.e., religious and patriotic curricula), they created the foundation of a conditioning authoritarian state that had lit-

tle in common with Herbart's filigree instructions. Until well into the second half of the 19th century, educational innovations were either discussed among primary school teachers (Schnell, 1856) or tended to take place abroad, for example with Ignaz Paul Vital Troxler (Troxler, 1834) in Switzerland or Leo Tolstoy in Russia (Толстой, 1862).

Around 1890, the left track emerged from the tunnel again. Now, on the one hand, large conferences were held on the weaknesses and the need for reform of the theory-heavy and reactionary German school system, which apparently struggled to prepare students to overcome the challenges of an increasingly industrialized, unified Germany striving to find "A Place in the Sun" among the global powers (von Goßler, 1891). On the other hand, a small group of reformers started their own schools to overcome the shortcomings of the educational system in practice. The first and perhaps most important was Hermann Lietz. Although Lietz was a nationalist, he oriented himself –admiringly– towards British public schools. The concrete model for him was Cecil Reddie's school of Abbotsholme, which he visited several times, and which even inspired him to write a utopian school novel: "Emlohstobba" (Lietz, 1897). With this blueprint, he thus founded the first German reform school proper, Pulvermühle near Ilsenburg in 1899. Other schools based on the same model were to follow in the years to come. Before World War I alone, these were: Stolpe am Wannsee (1900), Haubinda (1901), Schloss Bieberstein (1904) and Grovesmühle (1914). What they all had in common was a holistic pedagogy that was to be effective far from the temptations of the big cities. Teachers who had taught with Lietz in turn founded their own schools or moved to schools whose pedagogical concepts they would decisively shape with the experience they had gained at Lietz' flagship school in Haubinda. Paul Geheeb, for example, founded the Odenwald School (1910), running it together with his wife Edith until both emigrated to Switzerland with a group of Jewish students in 1934. There, they later founded a new school, the École d'Humanité (Näf, 2006). Robert Killian moved from Haubinda to the first Waldorf School in Stuttgart in 1919. Thence, its founder Rudolf Steiner gave him a relatively free hand to turn his pedagogical experience into a fruitful contribution to Waldorf education. Essential elements of Waldorf

education were thus not "invented" by Steiner but adapted by Killian (Fechner, 2016). These are the main lesson periods and their exercise books, the handicraft lessons, horticulture, the extensive renunciation of textbooks, grades, and corporal punishment; then the realization of co-educational lessons and the *Jahresarbeiten*, a year's practical or theoretical research on one major topic, presented at a school assembly. Of course, not all pedagogical elements were adopted from Haubinda. Expressive dance was very much in vogue at the time and was spiritualized into eurythmy by Steiner himself (Amrine, 2017). Lesson periods –one or more hours of one subject taught daily for a period of up to six weeks– had originally been conceived by Bertholt Otto (Schwitalski, 2004, p. 39). And the field measuring was already familiar to Steiner and the Austrian teachers at the Stuttgart Waldorf school. Since Felbiger's reforms, it had become a school subject in Austria-Hungary because the expanding empire needed surveyors (Rothe, 2011, p. 19).

However, school reforms on a broad scale did not begin in Germany until after the First World War. In a similar way, as in the case of Johann von Felbiger's and Wilhelm von Humboldt's reforms, the lost war served as a catalyst. From a purely external point of view, the *Reich* had failed to assert itself against other global powers. Obviously, the education system had to be reformed, especially since improvements there –unlike in the economy and the military– seemed conceivable without great difficulty. As mentioned, the first Steiner school was founded in 1919. In the same year two other famous institutions were established: the best-known German boarding school, Schloss Salem, and the Bauhaus University in Weimar. Both impressed with a wealth of innovative educational approaches. In the early years of the Weimar Republic, dozens of other similarly oriented schools also opened their doors for the first time.

Their general aims were similar: humans should not be educated conforming to the requirements of society. Instead, society had to develop and integrate human talents and abilities. After the existential crisis of the First World War, this approach was not limited to niches. Now there were negotiations on how fast, how comfortable, and how far one could

travel in education. The positions of these negotiation processes were manifold: there was the pedagogical tradition, the disrupted society, the new supervisors, the visionary school founders, the teachers, but also the parents and pupils. Against this challenging background, educators often inspired and helped each other. Fritz Karsen –head of the Karl-Marx-Schule in the Berlin *Bezirk* of Neukölln and a civil servant at the local school supervisory authority– for example, visited many of his most innovative colleagues and published a volume about their work (Karsen, 1923). In doing so, he was supported by Prussia's progressive minister for education, Konrad Haenisch (Dudek, 2000, p. 939). These processes also took place outside Germany, beginning well before the First World War. One need only recall the schools of Francisco Ferrer, František Bakulé, Ervin Batthyány, Maria Montessori, Rabindranath Tagore or –perhaps still most influential today– Alice and John Dewey's Laboratory School in Chicago (1896). What is more, educators and academics exchanged ideas in organizations such as the League of Decisive School Reformers or the New Education Fellowship, whose international conferences between 1923 and 1932 also fostered a lively discourse. There, Maria Montessori, Peter Petersen, Adolphe Ferrière, A.S. Neill, Paul Geheeb and even Martin Buber formed a network whose discourses appeared to be constructive, inspired by the daily practice of progressive schools.

In this development, we are eventually able to clearly identify the different reform phases. The idea phase, which began around 1890, transitioned into the negotiation phase with the founding of the first reform schools at the turn of the century. Then, until World War I, it was a matter of testing innovative pedagogical designs in practice and, at the same time, of negotiating with the authorities and the parents. The First World War brought those processes to a temporary halt. But after the Armistice, educational work continued with increased vigor and speed. In the implementation phase during the 1920s, the reforms –via legislative processes– even made the transition to state schools and were also received academically. However, the National Socialists' seizure of power prevented the reforms from entering the consolidation phase.

For the Nazis had no interest in complex reform processes in education. They dismissed teachers who did not fit into their ideology but did not change the education system, which, by and large, remained repressive. What is more, they took over the alternative, left-wing track of after-school activities via the Hitler Youth. There, rival reform-oriented organizations –boy scouts, *Jugendbünde*, and *Jungenschaften*– were systematically eliminated after 1933 (Reulecke, pp. 126).

Thanks to international networking, development processes could nevertheless be continued in exile. An excellent example is provided by the State Bauhaus, whose holistic pedagogy was taken up in the late 1930s –along with some of its faculty– by the progressive Black Mountain College in North Carolina (Blume, 2015). After the end of the Second World War, the modified Bauhaus impulse moved back to Germany; manifesting itself at the Hochschule für Gestaltung (HfG) in Ulm, which exerted considerable influence on the intellectual life of the Federal Republic of Germany and acted as an engine for the '68 movement. Among the founders, staff and students of Bauhaus, Black Mountain College, and Hochschule für Gestaltung we can notice a remarkable continuity. The founding rector of HfG, renowned product designer Max Bill, had been a Bauhaus student; together with him, former Bauhaus masters Walter Peterhans, Helene Nonné-Schmidt, Johannes Itten and –as director of the Black Mountain College– Josef Albers belonged to the small former faculty that established HfG Ulm (Wachsmann, 2018). Unfortunately, the Hochschule für Gestaltung itself only lasted until 1968 because conservative politicians in the state of Baden-Württemberg closed it down, for financial reasons. It had probably been the single-most important educational project resulting from the Zook Commission's suggestions for the reform of education in Germany. And, ironically, Hochschule für Gestaltung's closure almost coincided with the end of the negotiation phase. Then, the Brandt administration was beginning to apply the ideas, which HfG had crucially helped to develop, to the West German education system (Brandt, 1969, p. 29).

Similar interactions, processes that involve individual reformers, span decades, cultural areas, and continents can also be observed between

Germany and China. But let us go back to the long 19th century. In 1995, Jörg Möller demonstrated that modern Japanese education was decisively influenced by the work of the Herbartian Emil Hausknecht, who was responsible for reforming Japanese secondary schools, teacher training colleges and German Studies departments between 1887 and 1890 (Möller, 1995). Only a few years later, Herbart's pedagogy also reached China via Japan, introduced by Wang Guowei (Ye, 2020, 204). This would hardly be remarkable if Herbart's concept of step-by-step learning did not also enjoy a certain resonance in contemporary China. Li Qilong would translate many of Herbart's works into Chinese, among others "Outlines", published in 2002 by Zhejiang Education Press in Hangzhou. If we focus closer, the picture becomes more complex: Li Qilong also invited Wolfgang Klafki –an eminent German education scientist, loosely located in the tradition of the reform movement– to East China Normal University in 1986. Both would cooperate to facilitate the transfer of historically grounded ideas and concepts in education research from Germany to China (Meyer, 2022, p. 18). Hilbert Meyer even claims that Chinese interest in Herbart –and his filigree didactics– has been fed by the urge to find alternatives to the quantifying approach predominantly practiced in the United States:

> Offensichtlich ist die deutsche Bildungstheoretische Didaktik insbesondere deshalb für kritisch orientierte chinesische Erziehungswissenschaftler interessant, weil sie helfen kann, sich von der Hegemonie der stark an Managementmodellen orientierten und regelmäßige Leistungskontrollen fordernden US-amerikanischen Curriculumtheorie zu emanzipieren.
>
> [Obviously, German educational didactics is particularly interesting for critically oriented Chinese education scholars because it can help to emancipate from the hegemony of US curriculum theory, which is strongly oriented towards management models demanding regular achievement assessments.]
>
> (Meyer, 2022, p. 19)

However, it would be no contradiction to argue that Herbartianism and

its meticulous instructions bear a certain affinity with US curriculum theory. In Germany, the propositions of the Zook Commission (1946), strongly influenced by North American teaching concepts (Zook, 1946), were implicitly rejected by German educators and administrators in the American Occupation Zone immediately after the Second World War. Egalitarian high schools with discussions, work in groups, citizenship lessons, exchange projects with American students were apparently not considered appropriate for children that had just shed the brownshirts of the Hitler Youth. And there were few teachers who could have transferred those propositions into practice, thus guaranteeing the smooth restart of the school system in western Germany. Moreover, the Zook Commission stated that

> Fragen der Schulverwaltung, der Schulunterhaltung, Messungen und Tests der Schulgebäude und Schulausstattung, der Lehrerbildung, der Lehrplangestaltung, selbst der pädagogischen und Kinderpsychologie werden [in den Ländern der amerikanischen Besatzungszone, M.F.] arg vernachlässigt. Pädagogische Bestandsaufnahmen sind praktisch unbekannt.
>
> [Questions of school administration, school maintenance, measurements and tests of school buildings and equipment, teacher training, curriculum development, even educational and child psychology are sorely neglected (in the *Länder* of the American Occupation Zone, M.F.). Pedagogical assessments are practically unknown.]
>
> (Zook, 1946, p. 55)

As already mentioned, some twenty-five years on, in the wake of the 1968 protest movements, the West German Brandt administration would eventually introduce some of the suggestions propounded by the Zook Commission. The advent of the standardized PISA tests in 2000 and the gradual introduction of digital school administration would further contribute to the fusion of assessment-based North American pedagogy and West German didactics –that still bore a resemblance to Herbartian teaching methods. Again, it should be noted that the reforms evolved in

phases: commencing with the idea phase immediately after the end of World War II. Followed by continued negotiation until the early 1970s, when reform concepts eventually were put into practice on a federal scale, materializing into restructured curricula, newly founded schools and universities, built to mirror the aspirations of a social-democratic society. Then, slowly consolidating until the *Wende* years of 1989-90, when the renewed (and increasingly left-leaning) West German school system was considered as tried and tested, deemed suitable even by conservatives as Helmut Kohl and Franz-Josef Strauss to be applied to the new *Länder* of eastern Germany.

By contrast, the same development could not be witnessed in the Soviet Occupation Zone. Even before the founding of the German Democratic Republic in 1949, the negotiation phase was skipped, and utopian concepts were directly put into practice. The ratification of the *Gesetz zur Demokratisierung der deutschen Schule* in June 1946 would, on the one hand, ensure that schools and universities (and their personnel) could instantly conform to ideological stipulations: denazification, empathy for the Soviet peoples, an egalitarian school system, the abolition of religious education, the banning of private schools, the elimination of tuition fees, an orientation towards the needs of work and production (Anweiler et al., 2013). On the other hand, the majority of (experienced) teachers had been entangled with Nazi politics and were forced to leave their positions (Uhlig, 1970, p. 384). Their youthful replacements were not only inexperienced but also had to cope with an initial lack of suitable teaching materials, damaged buildings, material hardship and jam-packed classrooms (Geißler, 2000, p. 100) –a constellation that, among other factors, would contribute to the reform's initial failure and East Germany's dramatic backlog in the following decade(s).

As we know, ideas are transferable. More often than not, successful competitors in the geopolitical arena serve as a source of motivation, even inspiration. Austria-Hungary's education reforms were inspired by Prussian schools. Prussia, in turn, felt challenged by Napoleonic France and its promotion of an administrative élite. Towards the end of the 19th century British public schools would become role models

for the German reform movement. In the same vein, it could even be argued that the failed Boxer Rebellion (1899-1901) might have facilitated the success of Herbartianism in China. The defeat of 1918 would drive an unprecedented wave of new and reform-oriented institutions in Germany and Austria. After the Second World War, Soviet and US pedagogics would not least gain a foothold in Germany, because the theories of Makarenko and Dewey were propagated by victorious enemies. And there was no end to inspiration by competition: the Sputnik Shock (1957) would induce Georg Picht to publish his seminal treatise of the *Bildungskatastrophe* (1964) which served as a blueprint for the Brandt Administration's *sozialliberal* education reforms of the 1970s. Eventually, even the PISA-Test and the Bologna Process could be linked to the fall of the Iron Curtain. For the apparently successful states of Western Europe and their former Eastern European competitors had to re-organize their education systems in a multipolar world, streamlining European education as whole, in the belief that Anglo-American tertiary education holds the key to success.

Admittedly, these are hypotheses: they need to be substantiated by further research. But against this setting, it is no longer surprising that Herbartianism could be strongly embraced in the Far East, especially in China, as education reformer Lan Ye (East China Normal University) explains:

> For a hundred years, classroom teaching had been shaped by the Herbartian approach in two different forms. In the first half of the twentieth century, teaching was strongly influenced by Herbartian didactical theories borrowed from Japan for training teachers to teach in the modern school system (also adopted from Japan). From the 1950s until the start of the Cultural Revolution, classroom teaching was then under the powerful impact of Kairov's didactical theory –a Soviet form of Herbartian theory [...]. As a result, Herbartian teaching ideas had found deep roots in the daily teaching habits and behaviors of millions of Chinese teachers, even in the 1980s when China re-opened itself

to the world.

(Bu, Xu & Deng, p. 202)

Lan Ye (with her concept of New Basic Education) is, of course, counted among the reformers in China, concerned with strengthening students' personalities in the classroom (Ye, 2009). At the same time, Lin Junyue, mastermind behind China's Social Credit System (SoCS), developed a kind of strict and digital Herbartianism for society, combining human intelligence and surveillance with quantifying methods to measure, control and improve the social behavior of citizens (Drinhausen & Brussee, 2021). Superficially, his conception of social control was inspired by the American Credit Score System, calculating the credit rating of (potential) borrowers. But it should take twelve years to bring this system, which originated in the banking industry, to a comprehensive implementation that would also affect schools across society (Raphaël, 2019). Moreover, as we have seen in the history of education, these transfers should never be considered as single journeys. Chinese models of social control have already been tested in practice –in cooperation with DFKI (German Research Centre for Artificial Intelligence). From the current level of technology, it is easy to develop and implement digital control systems in schools. Taking China as an example, it has been technically possible to electronically measure and process physical signs of pupils' attention in class. Tracking devices in school uniforms, the use of drones and facial recognition can also be used to determine the whereabouts of so-called "system crashers" in real time (Kutscher, 2019). With a social credit account, digitalized assessment would be also conceivable that directed offenders on a structured route to the middle of society, and which would go far beyond simple reporting or a mere grade report (Gaillard and Louvet, 2019) or the digital control of reading assignments, as already practiced with members of the Chinese Communist Party (Erling, 2019). Comprehensive digitalization would not only generate school data, but also differentiated movement and contact scenarios, which could be supplemented medically by fitness trackers. Negative social influences, alcohol, and drug abuse, but also inertia deviating from the norm could thus be treated more professionally. With digital communication already in place, caregivers would

of course be able to intervene curatively in case of deviant patterns. If necessary, almost the entire socio-educational control process could be carried out digitally, accompanied by algorithms, up to and including judicial and executive elements (Catá Backer, 2019).

In retrospect, the connections between Herbartian education, the economization of the education system and the Social Credit System –which was designed to work as securely and predictably as possible– become more apparent and even close into a circle. Contrasting the mostly performance- and success-oriented Western form of the economization of education, the Chinese approach also includes physically measurable interest, eagerness to learn, behavior, and hence social behavior in a more intimate sense in its calculations and system of sanctions. On the one hand, one can endorse this development. On the surface, technology helps people to control, improve and measure their behavior. Thus, a safer and more just world seems possible. On the other hand, this kind of control strangles freedom, the source of creativity, of human progress in general. A society would achieve the opposite of its intentions: it would slip into stasis, into coma. And the situation is serious: in China, social credit appears to enjoy a high level of acceptance, especially among materially and socially privileged groups of the population (Kostka, 2018).

Herbart's thesis of human *Bildsamkeit* has certainly contributed to the success of economization and the implementation of the social credit system, directing the conditioning of humans. But the boundaries to private life that Herbart was capable of drawing in the 19th century have been dissolved 200 years later in the People's Republic of China, by digitalization devoid of morals and by a growing neglect of basic human rights. Moreover, the Chinese model, which has been tested in practice with German support, could also be used in Germany. Even if considerations of mentality, politics, technology, law, pedagogical traditions, and expenditure might contradict this assumption, we should acknowledge that global competition has been slighting the west's invisible walls erected to defend social achievements that have been won in decades, even centuries of emancipatory and democratic struggles. The costly (and foreseeable) failure of current education reforms in

Germany, such as *DigitalPakt Schule*, further underlines the hypothesis that research on the remodeling of schools and universities also needs to critically focus on the very processes of change. In the same vein, it needs to strengthen discourses that rigidly analyze the cost-benefit ratio of digital innovation and critically take stock of the educational surplus value of technical progress. Consequently, political concern for the turnover and economic success of IT companies must never influence decision-making processes in the education sector (Füller, 2020). And, of course, digital technology should never be used as an end in itself. Instead, the human factor should be prioritized, especially at a time of teacher shortage and a steep increase of noticeable psychological problems among young people. Taking all this into account, the negotiation phase has probably just begun in Germany. In comparison to other countries like Denmark (Laursen, 2022), the necessary changes have not been discussed properly. As late as 2020, the Federal Republic's biannual report on the state of education would portray digital reform as a project that could be applied wholesale, entailing very few side effects at no extra financial and pedagogical cost (Autorengruppe Bildungsberichterstattung, 2020). And yet, even basic questions indicate the amount of work the digitalization of schools might hold: how would Germany's 16 federal states integrate the benefits of digitalization into their curricula, differentiated by school forms, grades and subjects? How would they adapt their *Didaktik* and their teacher training? In doing so, how would they augment and reshape their (constrained) education budgets? Besides, how would they efficiently contain the eminent dangers of digitalization, as outlined by a rising number of scholars (Lankau, R. 2023; Patzlaff, R., 2021; Alter, A., 2017; Bergmann, W. & Hüther, G., 2013; Guggenberger, B. 1997)?

Creating an educated awareness for the challenges of digital school reform seems even more crucial, as some governments that would be willing to fulfil the social credit model's promise of digital justice could possibly enjoy majority support from present and future generations, regardless of its dictatorial implications (Zuboff, 2019).

In this sense, reform discourses are not limited to schools, but extend

deep into society, where we are all called upon to engage in the ongoing process of negotiating the implementation of digital technology.

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[February 2, 2023
March 22, 2023]