The “Sanitary Inspection of all School Recruits” in Switzerland
Military, School Reforms and Health at the Turn of the 19th Century

Die “sanitarische Eintritts-Musterung aller Schulrekruten” in der Schweiz
Militär, Schulreform und Gesundheit um 1900

(Ed.) This paper discusses the nationwide physical and mental examination of school children that was conducted in Switzerland around 1900. In a first part the article considers the international context of large-scale examinations of school children that focused on physical and mental health. In a second part the paper shows that there are two reasons why the metaphor “school recruits” made sense. In Switzerland the annual census of the physical and mental health of school children was carried out over a period of nearly 20 years. On account of its systematic and federal character and its annual repetition, the comparison to the medical examination for military service was in a certain sense merited. But there was a second underlying sense of the analogy. It was that the examination should be carried out correctly: As the military had its own surgeons, so should the schools have school physicians. But why should children be examined in the first place? In a third part, the article analyzes how the annual censuses served to advocate the introduction of special classes.

(Ed.) Der Beitrag beschäftigt sich mit den flächendeckenden Untersuchungen zur physischen und mentalen Gesundheit von Schülerinnen und Schülern in der Schweiz um 1900. Im ersten Teil wird der internationale Kontext von large-scale Untersuchungen aufgearbeitet. Der zweite Teil beschäftigt sich mit den “Schulrekruten” und diskutiert die Gründe, weshalb diese Metapher für die Probanden zutreffend war. Aufgrund des systematischen und nationalen Charakters sowie deren jährlichen Wiederholungen lag der Vergleich zu den medizinischen Untersuchungen für die Militärdiensttauglichkeit durchaus auf der Hand. Aber auch eine zweite, eher unterschwellige Analogie zum Militär war vorhanden: die Untersuchung sollte nicht nur angemessen durchgeführt werden, sondern die Schulen sollten, wie das Militär über eigene Chirurgen, über eigene

1 This article is part of a broader research project on the transfer of knowledge between the Swiss military and the Swiss schools conducted together with Lukas Boser and Michèle Hofmann.
Medical inspections can. The third part focuses on the reasons for the examination, where

Health: To a broader social, scientific, and political issues like the latest developments in psychiatry, school reforms, and the expansion of the welfare state.

Thus, the use of the metaphor "school recruits" is an instructive "symptom" of how the medical examination of children was not only more or less naively concerned with their health, but linked to broader social, scientific, and political issues like the latest developments in psychiatry, school reforms, and the expansion of the welfare state.

1 The "Inspection" of School Children

Regardless of whether other countries also used martial metaphors, the concept of thoroughly examining "the whole body of the child" and their "mental powers" was rather popular internationally around the turn of the century: "Children's bodies started to be observed, recorded, described, weighed, measured using diverse technologies, and assessed both physically and psychologically" (Turrel 2008, 8). The trained psychiatrist Maria Montessori, for example, "designed an anthropometer" that facilitated the work of the researchers. As she put forward in The Montessori method 1909 "the measurements of the children's height should be taken by the schoolmistress every month, the "weight of the child" "every week". However, at casa dei bambini, which she founded in Rome in 1907, additional examinations were performed by a physician and Montessori herself. Hence, Montessori had printed biographical charts - an example of which can be found in the chapter Anthropological considerations, where in addition to height and weight, "chest measurements", "skin color", "hair color", various measurements of the head and "details of hereditary antecedents" were to be filled in. Thus, the physician "notices any malformations; describes any pathological conditions with care" (Montessori 1919, 73ff.). Such examinations were in no way limited to Montessori's "children's houses", but were quite common and performed not only at schools. They were a standard psychiatric procedure, as for example Emil Kraepelin's influential textbook Psychiatry shows (Kraepelin 1903, 343ff.). The military took similar measurements.

At the end of the 19th century, the medical examination for Swiss military service included measurements of height and the chest, examinations of the teeth and eyes. But, of course schools and military were not only concerned with the body, but also with the mind: Mental disorders were a reason to be declared unfit for military service (Anonymous 1875, 150ff.). A well-known example for the school's interest in mental processes are the various inquiries made by G. Stanley Hall. For Hall's The content of children's minds on entering school 200 children were tested. Did they recognize certain insects and animals (like ants, snails, squirrels) and plants (heat, maple, potatoes), did they know their body (ribs, lungs, heart), certain concepts (island, river, numbers), were they familiar with proverbs, could they tell a story, repeat a verse? Hall compared his results with tests that were carried out in Berlin and in Kansas. By the way, Hall's results "proved" that "city life is unnatural" (the tested children from the country ranked higher) and demonstrated "in a striking way the advantage of the kindergarten children, without regard to nationality, over all others. Most of the latter tested were from the charity kindergartens, so that superior intelligence of home surroundings can hardly be assumed" (Hall 1893, 23ff.).

At the end of the 19th century countless "large-scale anthropometrical examinations" were being carried out, as Lucy Hoesch Ernst pointed out in 1906. In her thesis, which was supervised by the influential pioneer of educational psychology Ernst Meumann, Hoesch Ernst herself carried out "anthropological-psychological examinations of school children in Zurich". She measured, for example, the height and weight, the chest, the head and the lung volume of 700 children between the age of six and fifteen. In total she gathered 8750 measurements and compared her findings to international studies (Hoesch Ernst 1906, 1). In a further dissertation supervised by Meumann and submitted in Zurich, Alfonso Engelberger examined "the physical and psychological nature of six-year-old children on entering 2 For further examples see Hofmann 2012, 164.

3 For a hagiographic account of Maria Montessori's studies at the medical school in Rome, see Kramer 1988, 36ff.
school”. Engelserger examined approximately 500 school children in Munich, for example by taking the children's weight, height and different measurements of their heads (Engelserger 1905). Such large-scale assessments were quite common at the time. For example, the British report on the scientific study of the mental and physical conditions of childhood was based, as the title page proudly announced, “upon the Examination of 50 000 Children seen in 1888 to 1891, and of another 50 000 seen in 1892 to 1894” (Anonymous 1895). In his influential study on the eyesight of school children, which was published in 1867, Hermann Cohn examined 10 060 pupils (Cohn 1867). An official Danish commission examined 11 666 girls and 17 595 boys (for example with regard to height, weight, heart troubles, nose bleeding, anaemia, nervous disorders: 41% of the girls and 29% of the boys were determined to be sick (Herrel 1888, 16ff.). Axel Key’s Report for the Swedish school committee 1885, examined approximately 3000 girls and 11 000 boys: Roughly half of each were in poor health (Key 1889, 25, 310). These studies found that there were for the most part more sick children in the higher grades. Attending school appeared to be a health hazard, especially if one attended school over longer periods of time.

These percentages of sick children, which may appear astonishingly high, were on the one hand the result of poverty, malnourishment and of fears and assumptions, which in retrospect appear bizarre. On the other hand, they were also the consequence of the exhaustive manner in which the medical examinations were carried out: The more thoroughly an examination is conducted, the more health problems are revealed. Key’s examinations were certainly thorough: The “illnesses” he was interested in included nose bleeding, lack of appetite, gastro-duodenal disorders, cardiac diseases, joint problems, rheumatism, genital-urinary complaints or short-sightedness (Key 1889, 40ff.). At the turn of the century health meant always mental health, as well. Key found that approximately 6% of the girls and 2% of the boys suffered from nervousness (Key 1889, 34f., 44f., 61f., 310f.). The preoccupation with mental disorders of children was a new development at the end of the 19th century: The national authorities started to pay attention to so-called feeble-minded and abnormal children and special education classes grew more popular internationally (see e.g. Jackson 2000; Ruchat 2003; Trent 1994; Vial 1990). At the end of the 19th century, the obsession with physical and mental health was far from limited to the field of educational science. This period saw not only the beginnings of examinations of children and the development of a psychological, experimental educational science (see e.g. Depaepe 1993; Dudek 1990; Smuts 2006); the focus on hygiene was quite general. While hygiene “makes its way into the factories, […] inspects the markets, supervises bakers and butchers and even takes a look at the plans of the architects”, hygiene also finds its way into schools, a lecturer at the annual meeting of the teachers of Zurich emphasized in 1879 (Ernst 1880, 2). Welfare states with health insurances and social services developed, public health ministries were founded. The Swiss Federal Health Office was created in 1898 (for Switzerland see Lengwiler/Madráz 2010; Matter 2011; Ramsauer 2000; Wilhelm 2005).

2 A Metaphor With a Double Meaning

As Friedrich Prinzning emphasized 1906 in his manual on medical statistics “in many cantons of Switzerland, special attention is paid to the examination of school beginners” (Prinzning 1906, 97). Thus, the first federal “census of feeble-minded children at school-age including physically frail and morally depraved children” was carried out in 1897. The examinations were to continue until 1914 (see Ruchat 2003, 63ff.; Wolfsberg 2002, 75ff). The idea of such surveys of the mental, moral and physical health of all Swiss school beginners was not at all new, but because of its systematic and federal character and its annual repetition over a period of nearly 20 years, its comparison to the medical examination for military service was in a certain sense merited.

In Switzerland, compulsory military service and compulsory school attendance were established in various cantons at the beginning of the 19th century and only later became a part of the federal constitution: Compulsory military service was stipulated in 1848, compulsory school attendance in 1874. As in many countries, both forms of compulsory “service” were only gradually enforced (see Cribez/Huber 2008; Fuhreher 1999). In 1874, at the same time as compulsory school attendance was introduced at the federal level, a new federal law aimed at enforcing compulsory military service was adopted. While before 1874, less than 40% of men performed military service, the quota increased to more than 60% in 1914 (Jaun 1997, 69). Thus, the following statement with regard to compulsory military service applies equally to compulsory education: The laws stipulating compulsory military service tended to ignore the vast differences in the implementation of the laws (Hartmann 2011, 27). But in a certain sense, the situations regarding school and military were diametrically opposed: While in many countries the better-off classes were exempted from military service or benefitted from special provisions (ibid., 30), with regard to school attendance, the poorer children did not go to school or worked in addition to attending classes (Bauder/Crotti 2009).

Internationally “the imperatives of compulsory education”, “school failure and school dropout” were a “concomitant phenomenon” (Cohen 1999, 242ff). Only a truly compulsory school attendance turned dropouts and the less talented and ill children into a serious problem (Ruchat 1999, 274). Thus, the first studies on truancy were published at the end of the 19th century (Dunklake 2007, 19). As with compulsory education, the nature of compulsory military service changed once it was actually enforced: The medical examinations became more important and – due to the increased numbers of recruits – more demanding (Hartmann 2011, 101ff). The main focus of the military was undoubtedly on the physical health of its recruits. In 1875, the instructions for the Swiss military's medical examination included 108 different illnesses that counted as grounds for recruits to be declared unfit for service. Only five of these concerned the brain or the nervous system: Firstly, neuraglia and nervous pains, secondly, motoric nervous troubles, such as trembling, cramps or paralysis, thirdly vertigo, Huntington's chorea, epilepsy, catalepsy, sleepwalking – the latter three forms were marked with the comment that they are often only feigned –, fourthly, feeble-mindedness and fifthly, past or present mental illnesses (Anonymous 1875, 156ff). In the Statistical yearbook, only 38 of these 108 illnesses were listed. In a certain respect, mental disorders were increasing in importance, because the list also included dullness, mental illness, epilepsy and other nervous disorders (Anonymous 1902, 292).

Although the national census was not continued after 1914, this naturally did not mean that school children were no longer examined. Whereas a strict medical control was established in the Swiss military in 1875, the first secondary school physicians were appointed in the 1880s in Basel and Lausanne: The nationwide coverage by school physicians was established only in 1929 when a law was passed on tuberculosis (Imboden 2003, 46).4 The Swiss school sta-

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4 For the history of school physicians in Switzerland see also Hofmann 2008a, 2008b; Heller 2004; Zottos 2004.
At first glance, one might attribute the use of the term would encroach upon the moral Sentiments of the children. Subsequently, the Department of education, for example, queried whether it was truly necessary for the examination to be conducted by physicians, emphasizing that employing them would be an expensive affair. The head of the educational department of the canton of Schwyz pointed out that medical examinations similar to those carried out in the military would not be possible, because they would encroach upon the moral sentiments of the children. Subsequently, the Department of the Interior withdrew its initial outline and stated more precisely: “An accurate medical examination, such as is carried out with military recruits, is not the objective”. According to official reports, the examinations were mostly carried out by physicians in larger towns and villages. Compared to the teachers, the physicians found more afflictions (Statistisches Bureau 1897, XXIII). In 1910, an official memorandum of the canton of the Grisons noted that half of the canton’s “school recruits” had been examined by physicians: “The results speak strongly in favor of the examinations carried out by medical professionals” (Anonymous 1910, 57).

At first glance, one might attribute the use of the term “school recruits” to the fact that, as in the military, the health of all school beginners was systematically examined on an annual basis in the whole country. However, since this idea was neither original nor in dispute, the analogy between soldiers and school children also appears to have had another reason. Even the Swiss Department of the Interior emphasized that the school examinations and the military examinations could not truly be compared to each other. At school, “the medical examinations are not as precise” as those carried out during military recruitment (Hasenfratz 1929, 26). The comparison between school children and soldiers was particularly popular in the Yearbook of the Swiss society for school hygiene, which had close ties to the medical discipline and was often used by physicians and in articles that dealt with medical issues (such as ear examinations) or considered the “issue of school physicians” (e.g. Müller 1900, 19ff.; Laubi 1903, 60; Schüttler 1928, 293). Frequently, the intention behind the use of the term “school recruits” was therefore not to demand or emphasize that pupils should be examined. Rather, the underlying sense of the analogy was that the examination should be carried out correctly. As the military had its own surgeons, so should the schools have school physicians. After the 1930s, the term almost completely ceased to be used. Once medical control had been established at the schools, the analogy disappeared.5

5 On the impact of being undressed and measured in the military at the end of the 19th century, for many men, this was the first medical examination, see Hartmann 2011, 143ff.

6 See the temporal distribution of the occurrence of the term “school recruits” (Schulekranken) in digitalized Swiss journals: http://terro.seals.ch/digbib/browse4k (accessed 14 September 2015).

3 Statistics, Administration and School Reform

The first federal survey of the “feeble-minded children at school-age including physically frail and morally depraved children” in 1897 had been demanded by the Swiss teachers’ associations, which had concerns about the fate of “children, who, without being dumb or blind, are mentally weakly developed, but not entirely uneducable.” Many of those “unfortunate children” were forced to attend schools, “at which the due care and attention cannot be given”. In their official request, the teachers’ associations called attention to this “great humanitarian task”. Helping meant ensuring that there were sufficient classes for children with special needs. Based on the assumption that 1% to 2% of the children required special education, there were not enough classes (Anonymous 1898, 2f.). The first public special classes in Switzerland were established in Basel in 1888; in 1889 classes were introduced in St. Gallen and in 1891 in Zurich (Imbach 1894, 3f.). The development was rather fast: From two special classes with 40 pupils in 1888, to 106 separately located classes with approximately 2209 pupils in 1913 (Hasenfratz 1916, 61). Based on the records from 1911, roughly 3% of the primary school pupils attended special classes (Anonymous 1911, 226; Hasenfratz 1916, 61). In the school year 1936/37, 0.85% of the girls and 1.2% of the boys attended special classes (Anonymous 1937, 109f.). Thus, in spite of this rapid dissemination, the attendance of special classes remained considerably lower than demanded by the Swiss teachers’ associations. This is one of the reasons for the continuous federal census between 1897 and 1914: It was a measure to keep up pressure. One of the experts who organized the census, the teacher Konrad Auer, stated quite bluntly: The survey promotes “the integration of special classes into primary schools” and the development of institutions of special education (Auer 1899, 5). As a result of the objectives of the Swiss teachers’ associations and the census specialists, the published comments and the extensive tables exhibited a special focus on the “teachable children” among the “feeble-minded” ones and on their the attendance of special classes and placement in special institutions (Anonymous 1898, 14). The official report noted: “Some members of school boards who worked for the census, believed the aim of the survey was to impose special classes on the communities” (Statistisches Bureau 1897, XXVIII).

Several censuses of the mental health of school children had been carried out before 1897, e.g. in 1890 in the canton of Solothurn or in 1895 in Glarus (Statistisches Bureau 1897, XXX), which the teachers’ associations naturally were aware of (Anonymous 1898, 3ff.). However, there was another very important and official source for census data on the “mentally ill and idiots” before 1897, which the initiators were also quite well aware of: “The medical examinations of the recruits show that the percentage of feeble-minded or Extremely incapable children compared to the normally capable children amounts to 1% to 2%” (Anonymous 1898, 3). The census came to the same results as the military examinations: On average, between 1905 and 1914, 1% of the school children was considered to be feeble-minded (see e.g. Anonymous 1915, 198; Heer 1897). Hence, the results of the census had already been established before the survey of the children even began. Therefore it is remarkable that the analysis of the censuses only very rarely distinguished between girls and boys and did not comment on possible differences (Statistisches Bureau 1900, 12ff.). This

7 For an overview of the development of special education in Switzerland see Lussi Borer 2011; Wolfsberg 2002, 43-136; Strauss/Wolfisberg 2011.
at least would have been an opportunity to achieve new results compared to the medical examination for military service. Internationally, the distinction between girls and boys was quite customary, as for example Danish or Swedish surveys show (Hertel 1888; Key 1898).

In France, for example, an official commission came to the conclusion that 0.9% of the girls and 1% of the boys were abnormal. However, a different French survey found that 5% of the boys in municipal primary schools were abnormal. In their own survey Alfred Binet and Théodore Simon found that 3.7% of the girls and 5.35% of the boys were three years behind in their school subjects (Binet/Simon 1907, 11f., 68). Already in 1881, the official statistical survey of the school hygiene in the primary schools of the canton of Berne reported that 1.2% of the girls and 1.5% of the boys were considered not teachable. However, the need for therapeutic measures was even greater: The category “difficult to educate, i.e. pupils, the teacher has to pay special attention to”, included 17.5% of the girls and 22% of the boys.

The survey concluded: “These are disturbing figures” (Statistisches Bureau 1881, 51).

The criteria employed in the censuses were rather vague regardless of whether mental, moral or physical “illnesses” were to be determined. According to the survey’s instructions, estimating the degree of feeble-mindedness “may often appear difficult”. The instructions pointed out that pupils who had to repeat grades were not necessarily feeble-minded: “Children should only be classified as feeble-minded if the classification can be determined with certainty... Since the boarders between different degrees of intellectual talent are variable, the allocation of a child to one of the classes will frequently be difficult. However, in the majority of the cases, the decision will not be too difficult. Essentially, it is important to distinguish teachable children from not teachable ones and to distinguish feeble-minded children from poorly talented ones” (Anonymous 1898, 7ff).

Of course, as the experts of the time knew very well, the litotes “not too difficult” only serves to conceal the great challenge associated with distinguishing teachable children from not teachable ones, and with telling poorly and highly talented children apart. In his publication La Classification des enfants anormaux, the psychiatrist and Belgian pioneer of progressive education Ovide Decroly published 75 pages of systems and criteria: “The expression anormal [...] still lacks precision”, “there are nearly as many modes of allocation as there are authors who write about the subject” (Decroly 1905, 6f.). Decroly’s colleague Montessori – also an trained psychiatrist – also agreed: “It is not too difficult... the various disorders (Montessori 1902/2011, 61). Comments such as “immensely difficult”, “complicated distinction” were frequent in publications that dealt with abnormal children (Weygandt 1905, 3).

It is interesting to note that the census was carried out in a manner that was different to that intended by its creators. Thus the analysis of the first census mentioned nervous affections such as neurasthenia, nervousness, nervous crises, Huntington’s chorea and epilepsy. The summary tables included nervous illnesses, epilepsy and Huntington’s chorea were listed separately (Anonymous 1898, 16ff.; Statistisches Bureau 1900, 14ff.). However, the questionnaire inquired only as to whether a child was to a lesser or higher degree feeble-minded or whether the child “being otherwise mentally normal” suffered from hearing impairments, bad eyesight or other physical afflictions preventing the child from keeping up with the class. The instructions indicated that “other affections” could include “stammering, Huntington’s chorea, epilepsy or other chronic afflictions” (Anonymous 1898, 7). Nervous afflictions such as neurasthenia, nervousness and nervous crises were not foreseen in advance. The fact that such disorders found their way into the census is not particularly astonishing. In a manner of speaking, this was the period during which psychiatry left the asylum and “neurotic” disorders gained previously unattained significance. Neurasthenia, hysteria or nervousness – initially treated by neurologists, such as George Miller Beard, Jean-Martin Charcot or Sigmund Freud – and psychotherapeutic treatments, such as suggestion therapy, hypnosis or psychoanalysis became increasingly popular (see e.g. Dowbiggin 2011; Gijswijt-Holst/Rutter 2001; Shorter 1997): It was the dawn of “the nervous century” (Mangegazza 1888). Thus, in addition to the issue of feeble-mindedness, new forms of mental disorders emerged: From the end of the 19th century, the difficult, nervous child started to become the international focus of both “special” and “normal” education (see e.g. Göppel 2010; Jones 2002; Quincy-Lefèvre 1997).

Initially, the census was not planned as an annual survey. Following the first census, the Swiss teachers’ associations repeated their appeal to the federal ministry. They proposed that all the children that were diagnosed as “abnormal” in 1897 should be re-examined more thoroughly in a follow-up survey. The Federal Statistical Office prepared a new questionnaire, which consisted of two parts: One for the physicians and one for the teachers. Under the heading “hereditary diseases”, diseases of the nerves (epilepsy, Huntington’s chorea, hysteria, hypochondria) or anomalies of the personality that occurred in the family were to be indicated. Cramps, vertigo, overexcitement, rage were to be noted, and the character and temperament of the children indicated: The prepared questionnaire included questions such as the following: Is the child dangerous, impulsive? Can emotional outbursts or violence be observed? The idea of a second census and the new questionnaire was confidentially submitted to the directors of special institutions and teachers of special classes. Due to its ample period and not very convincing experiences with medical reports, the Swiss association of the teachers of the deaf and dumb cautioned that such a detailed investigation of “abnormal” children would not be particularly fruitful. As a counter-proposal, the association proposed that an annual survey be carried out. Such a procedure would be simple and cheap and the advantage would be to know the number, age, place of residence, name of the “sick” children. Such children could then be closely examined and treated. It argued that the census would therefore be an important first step towards the establishment of the obligatory registration of “abnormal” children. The Department of the Interior was immediately convinced by this proposal: “Since the state makes school attendance compulsory and therefore claims certain parental rights, it should also take over the duties involved”. Thus, the department stated “that it would be very advisable to establish everywhere such medical examinations of school begin­ners, which are already being conducted at schools that have school physicians, similar to the medical examination of the recruits.” The proposed questionnaire was rather simple: Name, year of birth, place of residence, occupation of the father (or the mother), type of sickness or affection, remarks. As with the initial examination, the Department of the Interior was to fund the census. Most of the cantons agreed and a new questionnaire was prepared (Statistisches Bureau 1900, 36ff.). The governmental inquiry relied on statistics to promote a school reform.8 At the same time examining “school recruits” was an attempt to “isolate” “sick” children and to treat them. Thus, the census was a first step towards a “compulsory registration” of “abnormal” children, as well (Statistisches Bureau 1900, 48).

8 For the rise of educational statistics in Switzerland see Czika/Freymond/Lussi Borer 2013; Martmüller 1982.
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