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Words, Numbers, Charts & Co: some quantitative-qualitative comparisons between Switzerland and Austria¹

Many years ago at some occasions the paper by Friedrich Engels from 1847 about the Swiss revolution were mentioned or even read in some Viennese circles, saying that at the – in his opinion – only occasion when the Austrian Dynasty tried to achieve something historically progressive, it were the Swiss ('Urschweizer') who opposed this most forcefully and won against Civilisation. Such ambivalent feelings can often be found in Austrian rhetoric about Switzerland ('it is easy to be good if you are so rich'), however, the main treatment is by and large driven by neglect – in particular if it comes to real attempts to learn from each other. The author has some significant experience, as his friend from school studied at ETH in the early 1970s, and so Zurich was one of the first destinations of autonomous travel, then per hitchhiking, of course. One experience was to visit as a free-rider a lecture at ETH by a Keynesian Economist, and another more significant experience was to see in Zurich Heidi Weber Haus by chance an exhibition about the quite revolutionary Social Democratic Viennese Communal Housing Politics of the 1920-30s – it needed to go to Switzerland after 12 years education and gaining 'Maturity' in the Austrian Province to hear about these Austrian accomplishment.

In spring 2014 the author had also the opportunity to join an Austrian industrialists' fact finding mission about Swiss vocational education, and somehow to observe at the same time how the Swiss system was presented to the visitors by some of its protagonists, and how the Austrians perceived and discussed it. It was quite clear that the interests of a researcher are different from those of practitioners; and a particular strong observation was how difficult it is to contextualise the many small and specific issues presented and attended into the more general systemic aspects and differences which were also communicated to some extent. As a result the author had the intention to go more into the issues, and to reflect on what Austrian education policy makers could learn from Switzerland if they were able to learn something.

¹ Draft chapter, revised version published as 'Words, numbers, charts: Comparative charting of education systems' in: Katrin Kraus & Markus Weil, Hg. (2015) Berufliche Bildung: historisch - aktuell - international: Festschrift zum 60. Geburtstag von Philipp Gonon. Detmold: Eusl, 245-251.

Quite much reading and attempts towards statistical comparisons followed, but there was not enough time to produce something.

As there had been many discussions also with Philipp Gonon at many occasions, this contribution was taken as an opportunity to go a bit into some of the issues. We both were always somehow independent and interested observers of the strengths and weaknesses of apprenticeship, without supporting it in a 'fundamentalistic' way. We have also discussed about how to use numbers, and transform them into meaningful information and knowledge, and there was a plan also to produce a stylized chart of the Swiss education system according to the approach the author has used for Austria several times in his presentations.

So for the current small piece two topics are selected, one is how systems charts are used to represent specific issues and to mask others, and to which extent the use of quantitative information might contribute to understanding; the other topic concerns 'permeability', and its documentation by statistical data as an aspect of the structure of education systems.

Words, numbers, charts: comparative charting of education systems

The figures 1 and 2 compare the structure of the official representations of the 'national' education systems to representations by the author based on participants' data per years of age. The first version of the Austrian system was produced for the contribution about Austria by Altrichter/Posch to the International Encyclopedia of Education 1994. At this time the situation was very different to today, as it was quite difficult to acquire the data about the participation per age cohorts in the education system. Several aspects must have been solved by assumptions and constructions. Today the data are available in the internet, and by comparison the author experienced that the Swiss data and their documentation is much more transparent and generous than the Austrian one.

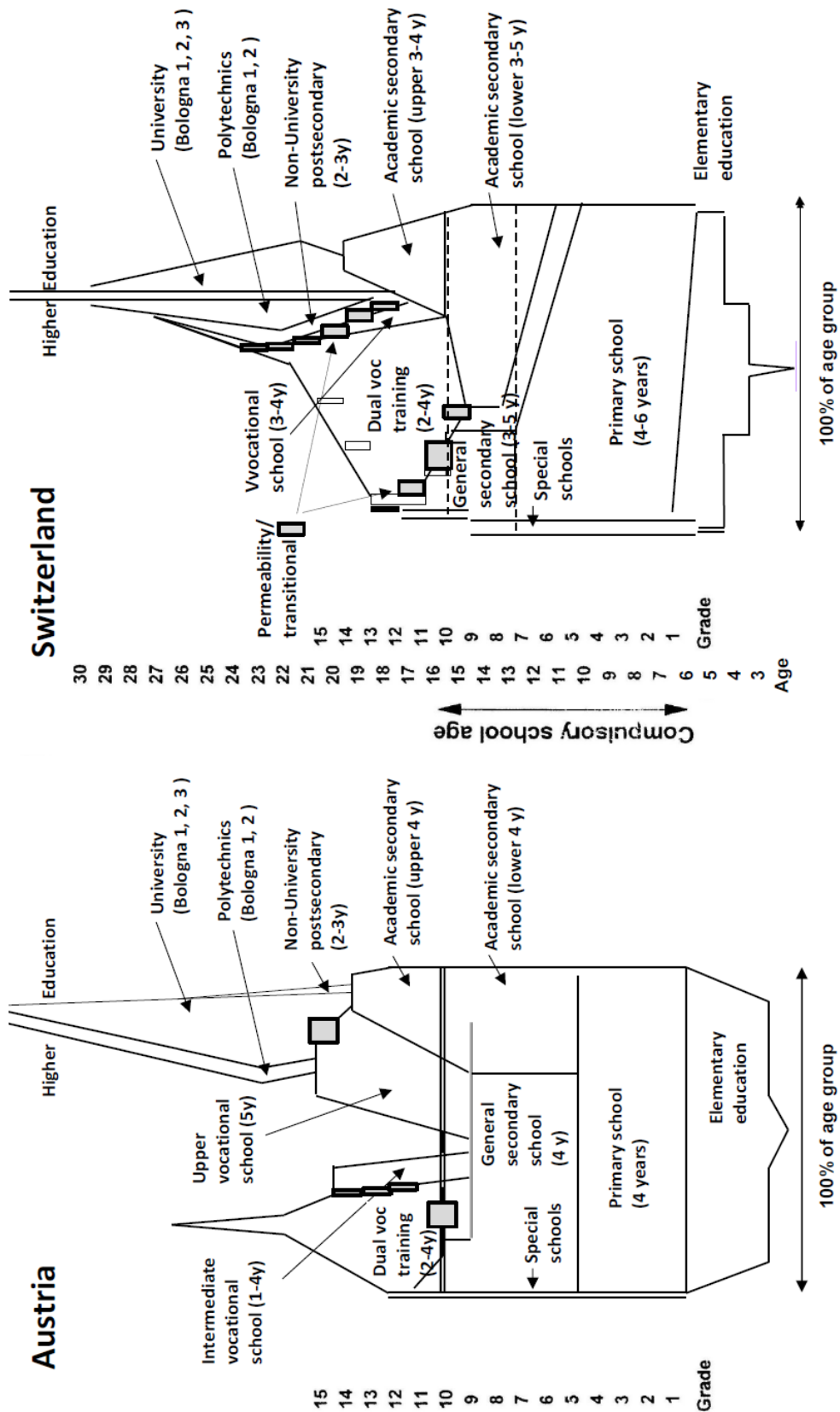
A basic decision for the construction of the original Austrian chart was to document the deep split between the lower and medium levels of vocational education on the one hand, and the upper level academic and vocational institutions that provided the 'Matura' examinations and the entitlement for the access to university studies. Another aspect that followed more or less automatically from the use of quantitative data for the representation was the visibility of the

amount of early drop-outs immediately after compulsory education. At this time this was a quite conflictual issue as the existence of early drop-outs was politically suppressed, and the dominating statistical representation of these times (difference between number of students in grade 10, the first year after end of compulsory schooling, and the size of the normal age cohort at this grade, the 16 year olds) actually gave almost non existing drop-outs (the figure being reduced by students from other age cohorts in the grade; the simple representation was abolished when the drop-out indicator became negative, because the students at grade 10 became increasingly mixed by age). This changed in particular when early school leaving became an indicator in EU politics.

If we compare the official representation, the phenomenon of drop-outs still does not exist, as only the 'positive' types and institutions of education are included. Nevertheless, we see quite strong differences of the messages coming out of the official charts.

- The Austrian chart gives first a very strong visibility for the still separate institutions of special education; second strong horizontal separations between the primary, lower secondary, and upper secondary levels are indicated (a gap which for the academic track of schools is overemphasised); third the tracking at the lower secondary level is clearly marked, and finally tertiary education is built upon the school sector only (the apprenticeship system being charted aside).
- The Swiss chart puts first a big emphasis on a comprehensive portrayal of the elementary, primary and lower secondary levels with a dominating primary school and an undifferentiated lower secondary school; second the chart documents explicitly the possible paths of further careers at upper secondary and tertiary levels; third the apprenticeship system clearly dominates at the upper secondary level (Austria rather emphasises the colleges of higher vocational education); and finally the tertiary systems spans over the whole range of upper secondary education, with the polytechnic sector being built upon the vocational baccalaureate from apprenticeship.

Fig.2 Representation of the Swiss and Austrian education system based on participation



Source: Own figures based on Statistics Austria and Swiss Federal Statistical Office data

What kinds of information or knowledge does the quantitative perspective (Fig.2) add to the organisational charts? Making an attempt to ‘match’ comparable elements of the systems, we have to take into account that a ‘national’ Swiss chart is to some extent ‘fictional’ as it provides an average of the different cantonal systems; therefore many oblique lines represent some distribution of participation already in compulsory schooling. Another difference is that the Swiss system looks quite a bit ‘lighter’ than the Austrian one, and more concentrated to three elements: (i) primary school, (ii) academic secondary school (which includes the lower secondary ‘erweiterte Ansprüche’ and the upper secondary Gymnasium), (iii) apprenticeship; the Austrian system is more diversified to six major sectors.

In contrast to the comprehensive presentation in the organisational chart the participation is broken down according to the available statistical categories at lower secondary level (Grundansprüche named ‘general’; erweiterte Ansprüche named ‘academic’; ohne Niveau-Unterscheidung, which is the smallest and seems to prevail mainly in Cantons with shorter primary and longer secondary education) and distinguishes also the three categories in apprenticeship (Anlehre, EBA-Attest; EFZ-Fähigkeitszeugnis). The ‘erweiterte-academic’ track is much wider than in Austria, and must also provide for many transitions into apprenticeship, whereas in Austria rather transitions from the ‘general’ tracks into upper level vocational colleges take place. In apprenticeship the Anlehre and the Attest provide very small sectors only, somewhat in contrast to the extensive discussion of differentiation of apprenticeship in Gonon/Maurer 2011.

Another aspect treated in the quantitative chart concerns the statistical categories which explicitly provide for permeability: Übergangsausbildungen up to upper secondary or tertiary levels, Vocational Baccalaureate and Pasarelle. These categories are explicitly displayed in the Swiss education statistics, however, are not so easy to observe in Austria. Put into the Swiss chart, the proportions of students in these categories seem rather small related to overall participation; this cannot be directly interpreted, because a small proportion might represent an overall high or low permeability: if permeability is basically high, only few people need specific provisions; if it is basically not sufficient, a small compensating proportion would indicate a not so favourable situation.

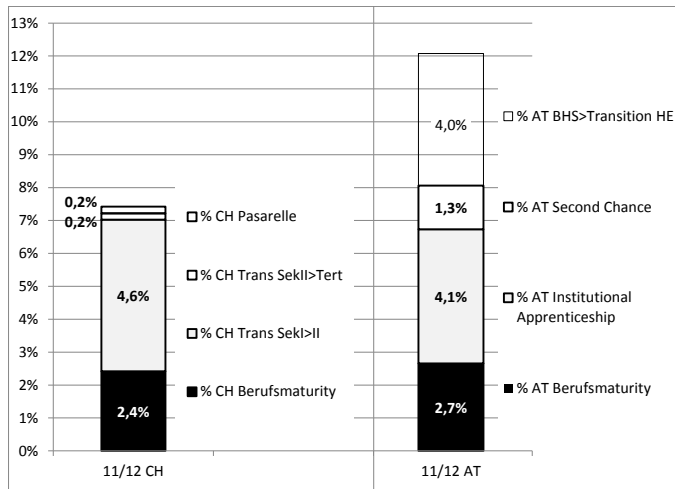
‘Permeability’ – tricky questions

Comparing the presentations and discourses about permeability, Austria and Switzerland seem completely opposite cases. In the Austrian debates and programmatic about education policy a low degree of permeability and an urgent need for improvement is clearly stated by most observers from which camp ever (a notable exception are representatives from the full-time school vocational institutions). In Switzerland the presentations during the above mentioned visit, as well as various available materials clearly state that permeability could be achieved as one of the most important strengths of the system.

So the author asked himself, how the comparative quantitative proportions would look like in the two contrasting systems. Fig.3 tries to compare the amount of young people in provisions for permeability, and if we take this as an indicator, the contrast between Austria and Switzerland would not really exist. For Switzerland the small proportions in the Pasarelle and the Übergangsausbildungen to the tertiary level seem to contrast somewhat to the significance put on them in the presentations.

The main difference would rather be that the provisions in Austria are not so easy visible in Austria, as they are partly provided outside of the education establishment by Labour Market Policy (institutional apprenticeship which seems equivalent to the Übergangsausbildungen up to upper secondary level). The explicit second chance provisions might be difficult to compare, as the age composition might include older people at least in Austria, so the figure probably overstates the proportion. A difficult question concerns the inclusion and measurement of the provision of access to higher education by the upper secondary vocational colleges. In fig.3 the actual transitions are related to the upper secondary student population with the colleges themselves counted as ‘higher vocational education’ and thus tertiary. In this perspective Austria includes a similar or higher proportion of young people in permeability provisions than Switzerland.

Fig.3 Proportions of young people in provisions for ‘permeability’.



Conclusion

The comparison has posed some tricky questions at least to the author firstly about how to assess permeability using education statistics, and second about what it means in a systemic perspective if we consider the vocational colleges as part of secondary or tertiary education. Maybe these questions can inspire Philipp Gonon for further looks at the issues.

Remark: More detailed charts can be found in the internet <http://www.equi.at/dateien/at-ch-charts.pdf> , and an annex about comparative data <http://www.equi.at/dateien/at-ch-annex.pdf>

Literature

Altrichter, Herbert & Peter Posch (1994) Austria: System of Education. In: T. Husen/ T. N. Postlethwaite (Eds.): *International Encyclopedia of Education*. 2nd edition. Oxford: Pergamon, p 423 - 432.

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Fig 1

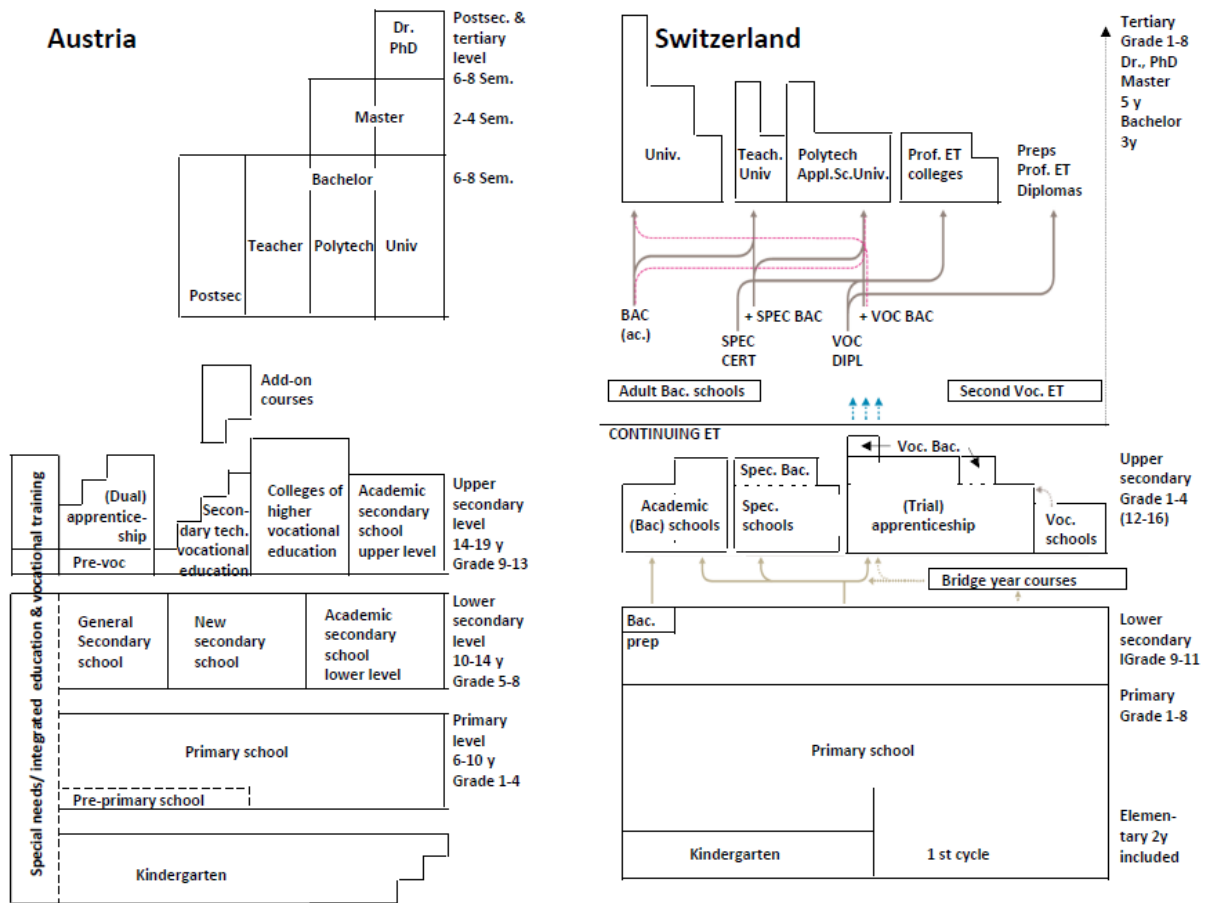


Fig.2

