

IHS Sociological Series
Working Paper 108
October 2015

‘Muddling through’ and historical
institutionalism – Explanatory
devices for the long term
development of the dualistic Austrian
VET system

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Impressum

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Title:

'Muddling through' and historical institutionalism – Explanatory devices for the long term development of the dualistic Austrian VET system

ISSN: Unspecified

2015 Institut für Höhere Studien - Institute for Advanced Studies (IHS)

Josefstädter Straße 39, A-1080 Wien

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108

Reihe Soziologie
Sociological Series

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Founded in 1963 by two prominent Austrians living in exile – the sociologist Paul F. Lazarsfeld and the economist Oskar Morgenstern – with the financial support from the Ford Foundation, the Austrian Federal Ministry of Education, and the City of Vienna, the Institute for Advanced Studies (IHS) is the first institution for postgraduate education and research in economics and the social sciences in Austria. The **Sociological Series** presents research done at the Department of Sociology and aims to share “work in progress” in a timely way before formal publication. As usual, authors bear full responsibility for the content of their contributions.

Das Institut für Höhere Studien (IHS) wurde im Jahr 1963 von zwei prominenten Exilösterreichern – dem Soziologen Paul F. Lazarsfeld und dem Ökonomen Oskar Morgenstern – mit Hilfe der Ford-Stiftung, des Österreichischen Bundesministeriums für Unterricht und der Stadt Wien gegründet und ist somit die erste nachuniversitäre Lehr- und Forschungsstätte für die Sozial- und Wirtschaftswissenschaften in Österreich. Die **Reihe Soziologie** bietet Einblick in die Forschungsarbeit der Abteilung für Soziologie und verfolgt das Ziel, abteilungsinterne Diskussionsbeiträge einer breiteren fachinternen Öffentlichkeit zugänglich zu machen. Die inhaltliche Verantwortung für die veröffentlichten Beiträge liegt bei den Autoren und Autorinnen.

Abstract

Austria with its specific 'dualistic' structure of VET, including both, a strong full-time schools sector, and a strong apprenticeship system lies in-between the established classifications of VET. This structure is not a result of 'systemic' political decision making; rather the different institutions have evolved more or less in parallel. A remarkable phenomenon is that the formal structure remained quite stable through history along very different regime periods (the Habsburg Empire, 1st Republic, two Fascisms, 2nd Republic).

Challenges are first to identify the specific structural traits, and second to explain the historical processes. Methodologically, artefacts of historical analysis are combined with statistical sources; the main task is a consistent interpretation of the material, based on institutionalist approaches and trying out different versions of these. A main result is the questioning of the strong distinction of punctuated and incremental change in historical incrementalism.

Zusammenfassung

Österreich liegt mit seiner besonderen 'dualistischen' Struktur der Berufsbildung, die beides umfasst, sowohl einen starken Sektor von beruflichen Vollzeitschulen als auch eine starke Lehrlingsausbildung, zwischen den etablierten Klassifikationen der Berufsbildungs-Strukturen. Diese Struktur ist nicht das Resultat von 'systemischen' politischen Entscheidungen, sondern die verschiedenen Institutionen haben sich mehr oder weniger parallel in beträchtlicher Unabhängigkeit entwickelt. Die stabile formale Struktur, die sehr verschiedene Regimes (Habsburg-Reich, 1.Republik, 2 Faschismen, 2.Republik) überlebt hat ist ebenfalls ein bemerkenswertes Phänomen.

In diesem Beitrag werden erstens die besonderen (bleibenden) strukturellen Merkmale identifiziert, und zweitens Versuche der Erklärung der geschichtlichen Prozesse präsentiert. Methodisch werden Artefakte aus der Geschichtsschreibung mit neu zusammen gestellten statistischen Darstellungen kombiniert; als wichtigste Aufgabe wird eine konsistente Interpretation des Materials auf der theoretischen Basis von institutionalistischen Ansätzen angestrebt. Ein wichtiges Ergebnis ist die Infragestellung der deutlichen Unterscheidung von ‚punktuellen‘ und ‚inkrementellen‘ Wandel im historischen Institutionalismus.

Keywords: Austria, VET-history, institutionalism, muddling through

Schlagwörter: Österreich, Berufsbildung, Geschichte, Institutionalismus, ‚Muddling Through‘

Acknowledgement

This paper is an extended draft of a paper given at the International Research Conference 'History of Vocational Education and Training: Cases, Concepts and Challenges', 8-9 September 2014, University Zurich, organized by Philipp Gonon and Esther Berner; a revised version will be published in the conference volume.

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Introduction

Austria has a specific ‘dualistic’ structure of VET that lies in-between the established classifications, with a strong full-time schools sector, and a strong apprenticeship system. The historical emergence of this structure is analysed on the basis of institutionalist approaches, combining artefacts of historical analyses and statistical sources as the main material.

Two challenges are taken up, first issues of classification, and of the identification of persisting structural traits: how can we say that a structure, or elements of it, has persisted or has changed? Second, the explanation of the historical emergence of the current structure: have there been critical junctions, where the development could have taken another course? In terms of classification of VET structures, the threefold typology of state systems, apprenticeship systems, and enterprise-based systems does not apply to Austria, and the new concept of a collective skills system covers only apprenticeship as one part of the Austrian VET structure. Moreover, the well-known Anglo-Saxon notion of VET as a track for low achievers does not fit to the Austrian structure, as a substantial part of VET (the higher level VET colleges) is tightly linked to higher education by providing the entitlement for university access, and by a new classification that has set the institutions in between the secondary and the tertiary cycle.

If we look at the historical development of the structure, the question arises, to which extent the establishment of a certain institutional pattern can be identified as persisting along different historical periods. One phenomenon of the development of Austrian VET is that at first sight the pattern of institutions remained quite stable through history along very different regime periods (the Habsburg Empire, 1st Republic, two Fascisms, 2nd Republic), however, substantial changes of the distribution of institutions also appear within this structure. The broadening of participation in VET, from a selected minority to more than half of a cohort during the 20th century is a main gradual change. The societal changes related to this ‘expansion’, and the co-evolutive changes in other sectors pose important questions for analysis and understanding.

Concerning the explanation of change, the overall structure has never been an object of ‘systemic’ political decisions. Rather the different institutional sectors of VET have evolved more or less in parallel along certain trajectories, without deliberate decisions about co-ordination or their ‘systemic’ relationships – sometimes changes have been realised even after the fact (e.g., when the VET colleges have quantitatively taken over the academic track, even as paths to higher education). Here the somehow forgotten concept of ‘muddling through’ is tried out as a lens of looking at the development. Its focus is on political decision making, which is understood as a flow of small gradual and local decisions taken in reaction to upcoming challenges, and based on local practical knowledge (this concept was

developed in the 1950s and 1960s as an alternative to the broad analytic rational science based and ‘systemic’ approaches; Lindblom 1959). An alternative lens which is currently of high attention is the much more complex approach of historical institutionalism that makes a basic distinction between gradual and punctuated change, and has identified some basic explanatory patterns of change, that are much more theory-loaded than the muddling through approach (Busemeyer/Trampusch 2011; Trampusch 2014).

This paper tries to achieve some limited tasks. The main aim is to bring the Austrian long-term development into a kind of systematic argument, using material from existing historical analyses, and for more recent time periods also quantitative data. The second aim is to develop arguments for an explanatory understanding of the long term development, using the institutional perspectives. The basic figure of the argument is to start with current structural traits and preoccupations in the education discourses and to look whether and how they appear more deeply historically rooted. The analyses started with the project about collective skills systems (Graf/Lassnigg/Powell 2011) are extended in three directions: first to look at the overall system, represented by the duality of apprenticeship and fulltime VET schools, second to try out conceptually the muddling through approach as compared to historical institutionalism, and third to rethink the applicability of the specific development patterns of historical institutionalism to the Austrian history.

The chapter first outlines the current structure of VET in Austrian education, then starts with an interpretation of the institutional development/changes for the period for which consistent quantitative data about participation exist (20th century), and embeds the education structures in a broader framework about the historical development of education as an institution. Secondly the lenses of muddling through and the development patterns of historical institutionalism are tried out vis-a-vis the stylised historical changes. The summary gives some ideas about the explanatory power of the approaches, and poses open questions.¹

Traits and development of Austrian VET

Current structural traits

The structural traits can be illustrated by some stylized quantitative measures (as available indicators choose different categories, and look at different units, specific figures vary a bit, and we give here only robust orders of magnitude). The Austrian system is one of the earliest institutionally differentiated systems of compulsory schools in the OECD area. After four years of common primary school, the differentiation to a selective higher level academic track (AHS-Allgemeinbildende Höhere Schule) and a common mass general school

¹ See for a more extended documentation of the material used the presentation at the Zurich conference at <http://www.equi.at/dateien/zurich-hist-conf-14-pres.pdf>.

(Hauptschule, gradually transformed into NMS-Neue Mittelschule) starts at age ten, and four/five years later a further differentiation of hierarchically tracked vocational education programmes follows at age 14 (fulltime schools) and 15 (apprenticeship). Austria shows one of the highest proportions of vocational education at the upper secondary level that comprises two different systems, apprenticeship and full-time VET schools and colleges, the latter following the tracked structure of medium (BMS-Berufsbildende Mittlere Schule) and higher level schools/colleges (BHS-Berufsbildende Höhere Schulen) with different values being attached to their credentials (for terminological simplification the fulltime VET school are called VET schools, distinguished from apprenticeship, which also includes a separate part-time VET school). VET is also differentiated to hundreds of occupational categories related to the economic sectors (grossly manufacturing, construction, business, services).

The proportion of VET at upper secondary level ranges between three quarters and almost zero in the OECD area, the OECD and EU averages lying around 45 per cent. In the institutional measurement by OECD-EAG-Education at a Glance statistics about 70% of Austrian students at upper secondary level attend VET, near the maximum and five to above ten per cent higher than in Switzerland and Germany. A closer look at the age composition shows that among the 15-19-years old young people 85 per cent or more participate in education in the observed countries as well as in the EU; however, among the 20-24-years group the participation in education is more than ten percentage points lower in Austria than in the reference countries or EU (above 30% vs. about 45%). This difference coincides in Germany and Switzerland with a proportion around 10-15 per cent in apprenticeship, whereas apprenticeship concentrates in Austria among the 15-19-years old people only. The national Austrian data present a more differentiated institutional structure, with overall 85% of the younger age group in education, a 2:1 proportion in full-time school vs. apprenticeship, and within full-time schools a 2:1 proportion in vocational as compared to academic education. The 5-years higher level VET colleges (BHS) pose an Austrian speciality,² which provide a double qualification for professional tasks as well as access to higher education comparable to the academic track via the 'Matura'-examination; in quantitative terms this track is about equally strong as apprenticeship (25-30% of a cohort), the medium level VET schools (BMS) are much smaller than the latter (around 10%).

As a key aspect of the Austrian structure the transition into fulltime VET schools is devised within the last year of compulsory schooling, thus there are very high incentives (and no opportunity costs) for starting such a programme. Apprenticeship starts one year later, and provides an additional choice after the end of compulsory school, with different and contradictory consequences: on the one hand, it provides another choice, if fulltime school proves as a false decision on whatever reason (making the first grade of VET school a kind

² This 'speciality', however, does not refer to a specific invention, but rather to the fact, that the higher level VET institutions, that existed in many countries until the 1960s or 1970s, have – against a common trend – not been upgraded to tertiary level in Austria – More recently a 'statistical upgrade' is under way in the new ISCED classification.

of informal orientation year for these young people), and also produces a portion of dropouts from schools; on the other hand, apprenticeship is to some extent turned into a second choice by this solution, as successful students are creamed off in particular by BHS. A third consequence of this structure is that some students, who plan to switch to apprenticeship use the first year of VET schools as an alternative for qualification – they thus avoid a one year preparatory school (PS-Polytechnische Schule) which was devised as a step for orientation between lower secondary school and apprenticeship. So at the transition between compulsory and post-compulsory school the structure includes a kind of 'anomaly' which has far reaching mixed and partly contradictory consequences.

Participation since the 1920s in VET

If we go back from the current structure to an observation of how it emerged historically, we can choose an institutional perspective that looks at how the various institutional forms were constructed and evolved, or a quantitative perspective that reconstructs how the participation evolved, at least for the time period about which consistent statistics are available. Statistics Austria provides participation data in upper secondary education starting from the early 1920s, which can also be grossly related to the population of the same age group acquired by the population census.

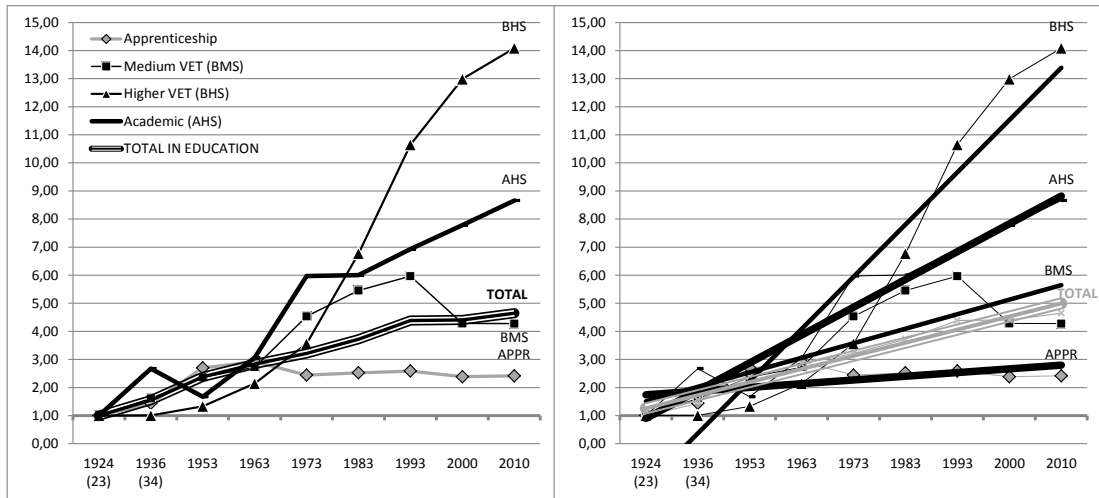
Table 1: Participation in upper secondary education 1924-2010 (student stock as percentage of 14-18/19 population)

	1924 (23)	1936 (34)	1953	1963	1973	1983	1993	2000	2010
(a) Per cent in education from population (student stock as percentage of 14-18/19 population)									
Apprenticeship	11%	16%	31%	33%	28%	29%	30%	27%	28%
Medium VET (BMS)	2%	4%	6%	6%	11%	13%	14%	10%	10%
Higher VET (BHS)	2%	2%	3%	4%	7%	13%	21%	25%	28%
Teacher education	1%	1%	1%	2%	2%	1%	2%	3%	3%
Academic (AHS)	2%	5%	3%	6%	12%	12%	14%	15%	17%
TOTAL IN EDUCATION	18%	28%	44%	52%	59%	68%	80%	81%	85%
NOT IN EDUCATION	82%	72%	56%	48%	41%	32%	20%	19%	15%
(b) Per cent increase of total participation in education per year (p.a.)									
% participation increase p.a.		3,7%	2,5%	1,8%	1,2%	1,5%	1,7%	0,1%	0,5%
(c) Proportion of fulltime schooling / apprenticeship (Index apprenticeship = 1,00)									
Fulltime school / apprenticeship	0,60	0,73	0,41	0,56	1,10	1,36	1,71	1,95	2,02
VET-school / apprenticeship	0,43	0,41	0,30	0,38	0,69	0,95	1,25	1,40	1,42

Note: Year of population census differ slightly from years at schools in the early points in time, indicated by the figures in brackets.

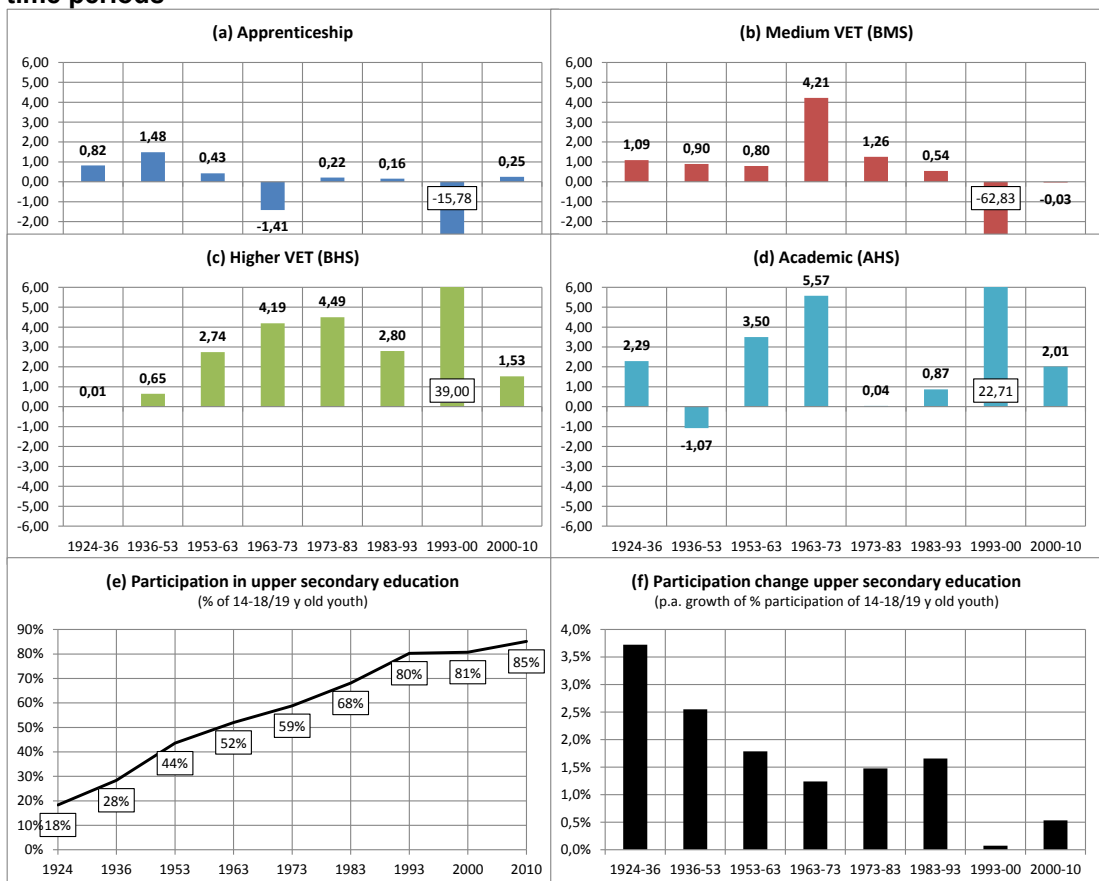
Source: own calculation based on STATISTICS AUSTRIA, students from 1924, population census, and demography statistics.

Figure 1: Relative change of participation in upper secondary institutions 1924-2010



Legend: Left panel: Index 1924=1.00; right panel: Trendline of index
Source: own calculations based on Table 1

Figure 2: Change of participation in upper secondary institutions in different time periods



Legend: panel (a)-(d) index of p.a. change of participation in programme / total p.a. change of participation (=panel f); panel (e) participation
Source: own calculations based on Table 1

Table 1 shows the proportion of students to the population, indicating the substantial overall increase of participation in education from a selected small group of less than 20 per cent in 1924 to the big majority of more than 80 per cent in 2010. The difference to 100 per cent includes the leavers without completed education (dropouts) and those who have completed a programme that lasts less than four to five years (mainly from BMS). Figure 1f displays the relative yearly increases of participation in the different documented time periods of somewhat different length. The overall increase was strongest during the 1920s and early 1930s, levelled off to a medium rate in the 1950s to 1980s, and went down to a low rate when already a high participation was reached in the 1990s.³

In the 1920s, when only a minority of young people attended post-compulsory education, apprenticeship outweighed the other alternatives with 11% vs. together 7%, thus more than half of overall participation enrolled in apprenticeship – this relationship changed substantially until the 2000s, when only one third of participation attended apprenticeship. Figure 1 compares the relative increase of participation in the different institutions, clearly showing that apprenticeship stagnated since the 1950s, and the full-time alternatives increased above average by different paths.

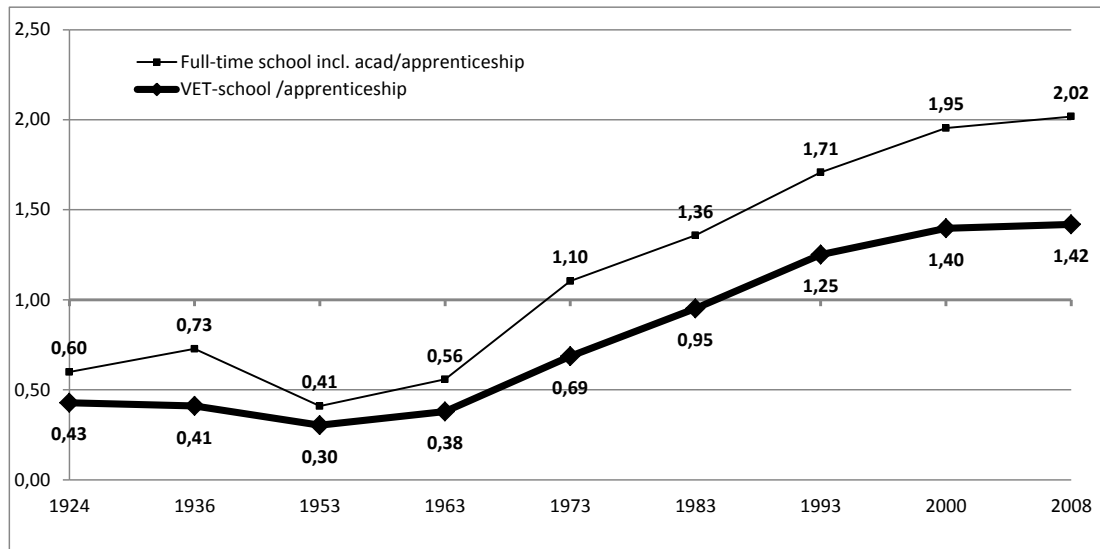
The increase of post-compulsory education was substantially borne by an increase of apprenticeship until the 1950s, in particular during the fascist periods 1936-53; before that the relative increase was borne by AHS (+2,3% p.a.), then by BMS (+1,1% p.a.) and then by apprenticeship (+0,8% p.a.). From the 1950s until the 1970s the AHS contributed most to the increase of participation, followed already by the BHS, and from the 1970s until the 1990s the BHS clearly took over. Figure 2 displays the change of participation in the alternative programmes relative to the overall change of participation in a more detailed way by time periods. Apprenticeship shows the biggest relative increase only during 1936-53; in each period until the 1990s except this one the increase of BMS was higher than that of apprenticeship. In particular during the 1963-73-period a regrouping took place that can be traced back to the prolongation of the VET school programmes by one year which automatically increased quantitative participation in these programmes. From the 1950s the BHS show a steadily increasing participation with the highest relative rates during the 1970s to 1990s.

The comparison between the VET programmes and the academic school AHS shows quite high increases for the latter in certain periods (1920s, 1950s and 1960s); however, during two periods restrictive developments of AHS and shifts towards VET took place, first during the fascist periods of the 1930s, when apprenticeship took over, and second during the 1970s and 1980s, when the VET colleges (BHS) clearly show the highest increases in

³ There are indications that the figures in 1924 in apprenticeship could be overestimated because of some tailback after the war; the increase till 1936 was not linear, rather in the later 1920s the figures have declined because of the economic crisis. In the 1930s the apprenticeship figures might be overestimated because young unemployed people without an apprenticeship contract should attend, in some regions and at some time periods even on a compulsory basis (Engelbrecht 1988, 193-197).

participation. These periods can be interpreted as ones when attempts of re-elitism were made in AHS, and a shift towards VET should prevent massification of the academic track.

Figure 3: Proportion of full-time schooling institutions vs. apprenticeship



Source: own calculations based on Table 1

Concerning the long-term development of the ‘dualism’ of full-time school vs. apprenticeship in VET Figure 3 gives two accounts, first from the beginning of the observed period VET schools enrolled always a substantial amount of post-compulsory participation with a proportion in VET programmes of 0,3 to 0,4 compared to apprenticeship; second this proportion has remained fairly stable until the 1960s, and from then the school sector started to grow much stronger, outweighing apprenticeship in the beginning of the 1980s, and levelling off in the 2000s at a proportion of 1,4. In terms of attempts for explanation, two questions arise: First, how did the early ‘duality’ come about? Second, how did the later change of the proportions evolve?

Longer term historical interpretation of participation

Before we seek for explanations, it is reasonable to analyse the development that has preceded the period covered by the participation data. We can start with the observation that only a small proportion of a cohort attended formal education in the beginning of the 1920s, which means that vocational education was by far not typical in these times, and that some quite severe processes of selection (and/or self-selection) must have been involved. During the observed period participation developed from an exception to the rule; however, the relationship between education and the social environment was not so much a topic as today, and social statistics has only marginally been developed.

As one strand of analysis we can try to embed post-compulsory participation into the emergence of the overall education system that has started from different, initially more or less separate origins (university and preparation for this, individual tutoring, religious institutions, popular education, apprenticeship, etc.). Apprenticeship and popular schooling have different origins, and we may ask, how the emergence of school based VET has been related to the development of mass compulsory education. The historical material – at least in Austria – is mostly related to the development of certain institutions (e.g., mass education, or business education, or vocational education), and does not look much at the interrelations between them.

In order to give more flesh to the above displayed quantitative participation figures, we can try to relate the abstract time series of table 1 to the succession of educational generations. This would request some criteria on which the generations are defined. As previous education influences later education, it seems interesting, how post-compulsory education builds on participation in compulsory education. Therefore we can select the timing of full participation in compulsory education as a starting point for the succession of generations. Table 2 gives an overview about how the four generations after the ‘generation zero’ which has first achieved full participation in compulsory education in 1859 flow through upper secondary education.

We can see that the ‘generation zero’ has potentially attended the upper secondary level during the boom period of the ‘Gründerzeit’ (which was also the only short period of political liberalism in Austria), and the next generation coincides with the planning period of the establishment of vocational schools (the Dumreicher period). The quantitative data start with the second generation after full participation in compulsory education has been reached, and the first two points in time, 1924 and 1936 fall into this generation and also the third one. Here we can also see that in the course of time the variation within generations becomes always bigger, as the potential timing of the offspring becomes always broader (see the graphic reconstruction in figure 4).

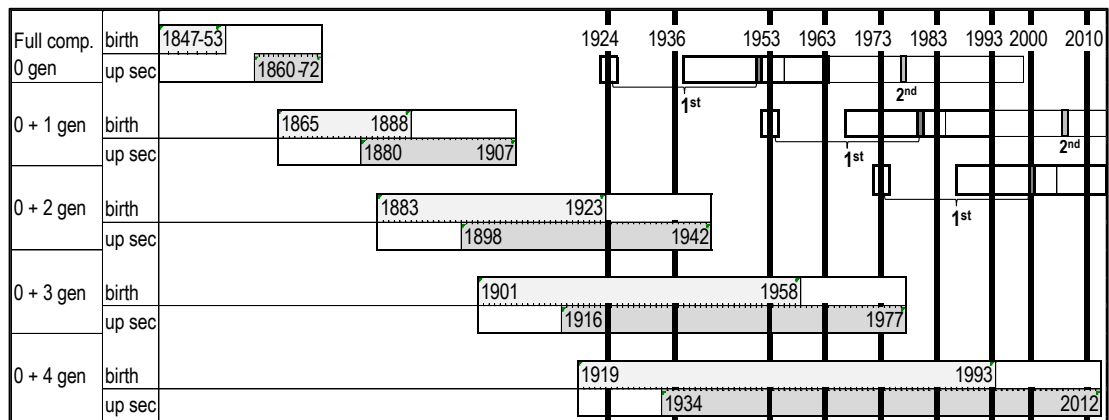
Table 2: Reconstruction of generations since full participation in mass education 1859

	Time	Age (y)	Birth cohorts
Full participation in compulsory education estimated	1859	6-12	1847-53
0 generation in upper secondary education	1860-72	13-19	same
0+1 generation in upper secondary education	1880-07	15-19	1865-88
0+2 generation in upper secondary education	1898-42	15-19	1883-23
0+3 generation in upper secondary education	1916-77	15-19	1901-58
0+4 generation in upper secondary education	1934-12	15-19	1919-93

Legend: From 6-12 years cohort 1859 in compulsory education estimation of time of birth (1947-53), then +18-35 years birth of next generation, and +15-19 years from birth to upper secondary education, etc.

Source: own modelling.

Figure 4: Reconstruction of flow of generations since full participation in compulsory education 1859 into upper secondary education



Legend: starting with the year when full participation in compulsory education is documented, the subsequent birth cohorts of generations in upper secondary education is documented in the main part, row 'birth' indicates the range of years of birth, 'up sec' indicates the range of years in upper secondary education; reading example: the second generation after the starting one (0+2 gen) is born between 1883 and 1923, and participates in upper secondary education between 1898 and 1942, thus being represented in the quantitative observation points of 1924 and 1936.

In the top right corner the subsequent 1st and 2nd generations from selected years of participation in upper secondary education are indicated: e.g., the children of participants in 1953 enrol in upper secondary education between 1967 and 1992, with the midway year 1980 (the midway year is separately marked for each generation).

Source: own calculations based on Table 1

Another view can be taken by reconstructing the stylised succession of the generations from one observation point to the next from 1924 to the 1970s (Table 3). As we know from research about social mobility and reproduction the parents' education has an important influence on their children's education, therefore the intergenerational pattern is an important factor for the development of participation (Lucas 2001). From the stylised account we can see that these intergenerational patterns are very much blurred (substantially more than an intuitive guess would expect). However, comparing the quantitative measures we can get an idea about how much the participation has increased from one generation to the next. Grossly we can see that the participation in 1953 (44%) represents to some degree the next generation of participants in 1924 (18%), and the participation in the late 1970s (59-68%) represents the next generation of participants in 1953 (and the second generation after 1924); in the same way the 2000s are related to 1973 (1st generation) and 1953 (2nd generation). From this account we can infer that participation in upper secondary education has increased by about 20 percentage points from one generation to the next, with a different time-dependent pattern: apprenticeship increased inter-generationally only from the 1920s to the 1950s, subsequently the VET colleges (BHS) mainly took over the increase of participation from the 1950s to the 1970s and from the 1970s to the 2000s. This historical account also indicates that the room for future generations to proceed by increasing participation will not exist in the same way, as a very high degree of participation has already been reached. Figure 2 has already shown that a shift from an increasing pattern to a redistribution pattern has occurred during the 1990s.

Historical account of ‘system building’ and institutional development

Basically the idea of systems is contested in its application to education. On the one hand this idea includes the notion of significant interrelationships between the various institutional elements of a national or regional educational structure; on the other hand the idea of systems includes the notion of a kind of unity that allows to deal with the variety of educational institutions as a kind of a single object (or a more or less closed framework). The approach taken in this chapter is situated somehow in between these notions, seeing the current educational structure as a kind of agglomeration of elements that were separate at their origins and have increasingly developed systematic relationships during the process of historical development. In this way a long-term emergent historical process of ‘system building’ can be assumed, which has increasingly established interrelations between three basic institutional elements of different quality: (i) cultural and academic elements: the university and its preparatory institutions, emerging primarily autonomously, and receiving privileges from emperors, and less so churches; (ii) political elements: the institutions of basic mass education of the populations, related firstly to the churches, and later to the emerging modern nation state; (iii) economical/professional elements: the institutions of vocational preparation, related primarily to employment and the economy.

These elements originally emerged and grew rather independently from each other, and in this process of growth interrelations between them developed. In a stylised manner we can say that firstly the elements of types (i) and (ii) grew together, providing increasingly consistent selection and career patterns from initial education to graduation from universities (the comprehensive reforms of the 1960s in several countries can be seen as a completion of this process, however, with remaining gaps and cleavages at the edge of these two types of elements). The elements of type (iii) remained separate for a longer time, and they also were much more diverse at their origins, with the old professions as part of universities as one basic element, and the institutions of the emerging crafts (guilds, etc.) as another basic element, later complemented by kinds of separate polytechnic academies lying in between the university and the apprenticeships of the crafts. The economic/vocational elements (iii) have been somehow structured in themselves, and also built relationships to the popular state institutions (type ii, e.g., by the Sunday and evening schools), as well as to the academic institutions (type i, e.g., by higher level military-technology institutions). In a stylised way, first more systematic steps to create interrelationships from the vocational institutions to the other types were taken during the liberal industrialisation period of the late 19th century, and a second step was taken since the late 20th century when the international organisations started to take attention from this part of education (e.g., some OECD projects in the 1980s, and later the World Bank in the 1990s).

The influential approach developed by Greinert (2005, 21) about the structures and emergence of vocational education takes attention of both levels, the systemic, and the institutional. On the one hand he focuses on the systemic level, seeing vocational education

tightly embedded in the cultures and worlds of work and the economy and polity, on the other hand he sees the historical development and change primarily situated on the meso level of the institutions: “As our work can show, successful education and training practice is not transferred by a policy of adopting the entire system, but at the much lower level of adopting training methods or vocational syllabuses.” (ibid., 21)⁴ This approach produces to some extent a contradictory message, as he focuses much on the systemic unity of the different VET models (school, market, dual), which should guide the institutions; however, then the question arises where the room for institutions to change should come from.

Asking, how the Austrian dualistic structure of VET emerged, key points can be seen on the one hand in the relationship between the full-time VET schools and apprenticeship with the part-time school for apprentices (Berufsschule) being a potentially linking element, and in the relationship between compulsory and academic education and VET on the other hand, with the building up of educational career progression pathways as an important asset. As we can read from the specific historical research, certain institutional differentiations have taken place that have led to the current structure.

A main characterising element of the Austrian dualism is the clear separation of the Berufsschule for apprentices from the full-time VET schools; another is the emergence of a definite second progression path towards higher education beneath the academic school through an early tracked structure of compulsory education instead of the development of a comprehensive structure. Originally those aspects have developed separately from each other, as apprenticeship was always a part of the economic structures and institutions, historically in the framework of the guilds and trades, and after the liberalisation as part of the trade regulation (Gewerbeordnung), whereas the predecessors of the Berufsschule were originally rather related to popular mass education (Sunday and evening schools), with very early set rules of compulsion to attend them.⁵ The origins of the VET schools are conventionally traced back to kinds of specialised academies with military education purposes, and later to institutions founded in different trades, which were situated at the edge of higher education. Three sectors stand out with different development paths: institutions related to the emerging industries (in particular textile) which comprised arts and technology, institutions related to commercial issues, and institutions related to home economics and women’s education. In the current educational governance structure these sectors are still reflected in different departments in the VET directorate of the ministry of education, with the part-time schools for apprentices being organised separately from

⁴ “[...] institutional arrangements [...] develop a considerable tendency towards inertia mediated through tradition [...] Models of vocational education and training are undoubtedly among these institutional arrangements, so that there appears little prospect of changing their basic structures fundamentally or of transplanting them to other countries or cultures.” (Greinert 2005, 21) or another expression “Structures of vocational education and training are not institutional arrangements that can be exchanged at will but are, as we have been able to show, integral parts of national cultures of work [...]” (ibid., 21).

⁵ See the ‘genealogy of the Fortbildungsschule by Hankiewicz (1974): Christenlehre-Wiederholungsschule-Sonntagschule-Zeichenschule-Gremial-Handlungsschule-Copieranstalt-Gewerbeschule-Fortbildungsschule.

fulltime schools in their own department and comprising the various occupational sectors within one integrated governance structure.

One perspective to look at the historical development is to trace the relationships between the different institutions/sectors in education, and in parallel the increasing involvement of the state in education that occurred simultaneously with the emergence of the state organisation itself (as sources for the understanding of the historical development see Archer 1979; Müller/Ringer/Simon 1987; Melton 1988; for a summarising account Lassnigg 2010). The latter aspects seem particularly significant with respect to mass education: we must contend that there was not an instrumental earlier-later relationship in which a pre-existing state took gradually or punctually over education, but that there was a parallel development in which the integration or take-over of education was an important part of the emerging state structure particularly during absolutism. Thus mass education was by itself an important part of state building, with the teachers being a big force within the emerging body of public officials, who had to serve the goals and interests of the state, and who were also severely controlled to this purpose. The relatively early state regulation of mass education can in this perspective be seen as a key element of the later emerging corporatist continental welfare model to which Austria is conceptually classified. Schools were in this sense also a huge part of the emerging bureaucracy, which is still reflected in the current governance structure: teaching is still legally classified as a kind of administrative execution (*Verwaltungshandeln*, cf. Seel 1996). Historical analyses of mass education point also to the high importance of religious indoctrination in the schools of the monarchy (Melton 1988) that is still found in the purposes of the predecessors of the *Berufsschule* (Schermaier 1970).

The question of institutional continuity and change can be addressed at different levels of observation, legal and systemic, institutional, and at the micro level of social practices within and around institutions. A gap seems to exist in that historical research was for a long time concentrating on the macro side, whereas continuity in fact is very much enacted at the micro level: even when big regime changes took place, the teachers and schools, as well as the enterprises and their staff to a large part have remained the same (even during the severe racist and political-ideological prosecutions by the fascist regimes, and also during the democratisation afterwards much of personnel has stayed). At the macro level of the legal and regulatory bases of education an interesting constellation is observed by historical research, as the basic constitutional and legal foundations were transposed from one regime to the other, however, main elements of regulations have always been neither clarified nor implemented, and quite fundamental stop-go-shifts, often in opposite directions have taken place also within regimes. Because the jurisdiction of different government levels could not be resolved in the 1st republic (1920) as well as in the 2nd republic until 1962, the basic education law from 1869 was in place also after the fall of the monarchy, then amended in 1927, and re-instated again after the end of the fascist periods. Amendments from the Austro-fascist period (1934), however, were kept in some regions also in the 2nd republic despite they did not conform to the legal and constitutional status.

The VET sector was always kept legally separate or at some distance from popular and academic education, except at the higher education level, where the different streams flow to some extent together. In the early and mid-19th century VET (apprenticeship and specialised institutions) were mainly privately organised or under the jurisdiction of the regions. Steps towards the integration into the overall education structures were increasingly made until 1882/83. The famous Dumreicher plan proposed to set up a network of trade and engineering schools (Staatsgewerbeschulen) across the monarchy under central jurisdiction; in parallel the mostly private commercial schools (Handelsakademien, -schulen) tried to acquire state recognition for their certificates. Within popular education separate tracks at lower and upper secondary level were installed for vocational purposes that, however, drifted towards the popular or the academic sectors: the Bürgerschule established at the three upper grades (6-8) of primary school for purposes of commerce and administration (1869) was transformed into the Hauptschule (1927) as part of compulsory education; the Realschule (1805) originally established as a vocationally oriented alternative to the academic track at lower and upper secondary levels gradually (1848, 1869, 1927) became a full part of academic secondary schools (1962), and served in between as a mediating mechanism between VET schools and higher education. On the other hand the part-time school for apprentices (Berufsschule) had its origins in the general Sunday and evening schools, and has shifted gradually towards the specialised vocational school of today. In a first phase two categories, general (across a number of trades: allgemein-gewerbliche Fortbildungsschulen) and specialised (for a certain trade) have evolved, depending on the local numbers of apprentices (except in cities the former dominated quantitatively). The regulation was originally situated at the regional level (Länder; regional laws were set up between 1907 and 1931). The main responsibilities were situated at the communal level (with a mixed public-private financing).

As outlined above a wide and diverse variety of VET schools evolved at local level in close relation to the economic activities, and developing different traditions in different economic sectors (trade and industry, commerce, agriculture and home economics). A main strand had workshops at the core⁶ which also traded their products (model workshops also for small enterprises), and the different types of institutions grew out of this diverse mixture of institutions. The rising credentialism linking higher level institutions to the also arising higher education institutes (1815 the Polytechnic Institute was set up, which is the forerunner of today's University of Technology in Vienna), and lower level institutions to the certificates from apprenticeship (journeyman, master) was an important differentiating factor. The set-up of the Staatsgewerbeschule from the 1880s started a process of differentiation of the apprenticeship-related schools from the fulltime institutions which was finished in 1925 when they were institutionally separated, and a fully decentralised structure of Fortbildungsschulen emerged (the early 1920s were a key period of regulating several aspects of apprenticeship; see also Trampusch 2014); the commercial (Fortbildungs-) schools were separate from the

⁶ Workshops were the core element of the school arrangements in all types, in the schools accompanying apprenticeship also; so new production methods should also be distributed by them.

trade-related ones, and mostly situated at the private full-time schools; a decentralised system in agriculture emerged in the 1920s and 1930s.

Institutional development paths of the Austrian dualism

Taking the documented change in participation up, we can ask how this was related to systemic and institutional changes. As the practices cannot be easily analysed, we can take the transitions as a representation of changing selection and progression practices at the micro level, which are at the same time influencing structures and influenced by them. In order to analyse the emergence of the dualism of school and apprenticeship three key aspects can be focused: (i) the continuity of apprenticeship through the enterprises and their institutional frameworks which have also been legally embedded; (ii) the relationship of the framework of mass primary schools to post-compulsory education and the included transition and progression paths; (iii) the political practices of setting up and further developing the VET school framework.

Apprenticeship has emerged from the guild system, and was mainly located in the enterprise sector, and regulated by laws concerning economic activities (not education purposes). A separate law about the enterprise training was not amended until the 1960s (and even at this time was still strongly objected by the employers' representatives). The emergence of the accompanying part-time school and its mandatory linkage to the enterprise practices was a historically late and gradual process, which has not really been completed until today.⁷ Important elements in the history of apprenticeship were the successful retaining of the organisational and political power of the economic chambers through several periods of severe attacks from the 18th to the 21st century, and the established status and continuous acceptance of this kind of training in the reproduction of the labour force and the enterprise practices on both sides, employers and employees.

The current patterns of transition and progression in education gradually emerged from the beginnings of educational institutions, with apprenticeship still being formally separate from the school based credentialism: access to an enterprise based apprenticeship only depends on the decision of the training enterprise, without being based on formal educational credentials; as a second step the obligation to attend Berufsschule takes effect after an apprenticeship contract is concluded. In contrast to this the fulltime VET schools are included in the progression and selection pathways of schooling. At the higher level (BHS) the access to higher education (engineering, business, agriculture), which in the first place operated

⁷ A huge gap still exists between the enterprise and school parts of apprenticeship at the level of political governance with the employee side focusing on the school and the employer side focusing on enterprise training; concerning the more practical coordination of the two parts; Steiner (2005) analysed the gaps in curriculum development; the Austrian EU-presidency 2006 posed even a focus on the cooperation between school and enterprise (Schneeberger/Petanovitsch/Nowak 2006); the analysis of the German Dual System in Busemeyer/Trampusch 2011 emphasizes strong tendencies towards 'segmentalism' in the big industries, meaning that the enterprises want to provide the whole training on their own, without so much state involvement, and needing no state schools.

through exams at a Realschule, was gradually opened in 1921 for excellent graduates (at commercial schools the Matura exam was voluntary; access to university studies, e.g. law, was possible through various extra courses and exams related to the Realschule). The school career and certain grades were also required for the access to vocational schools (academic lower secondary or good grades at Bürgerschule/Hauptschule, plus entrance exams). In the early period the medium level VET schools were quantitatively by far the dominating sector (see Tab.1); in the commercial sector much more stand-alone medium level schools (Handelsschulen) than higher level colleges (Handelsakademien) existed. They provided the same credentials as an apprenticeship, however, whereas apprentices received a wage, attention to fulltime schools had to be paid for. So from the very early times of establishing VET schools a separation and competition to apprenticeship, and an institutional closure of the latter has occurred that persists until today (‘Dualism’).

Beginning with the Dumreicher reforms in the 1880s and more or less finished in the 1920s and early 1930s parallel processes of institutional closure have taken place in apprenticeship on the one hand, and in fulltime VET schools on the other. The regulation and development of apprenticeship shifted to the local and regional level in close connection with the economic actors and structures, whereas the development and regulation of the school sector was increasingly concentrated at the central level, with the main jurisdiction shifting several times between the ministry of education and others more related to the economy (public works; trade and commerce).⁸ In the end apprenticeship ended up in a complex regulatory structure based on the trade law implemented by the ministry of economic affairs and the part-time school under the jurisdiction of the ministry of education and the Länder, with the regional social partners having a big say in this sector (the economic chamber being responsible for the administration of enterprise training and the final exams). The school sector got today’s integrated shape in particular in the 2nd republic, and was structured in a first period mainly on the administrative level, and later by the laws from 1962. Main decisions for trade and women’s schools were taken ‘autopoietically’ by the actors from the sector itself (principals and officials from the sector have devised its structure at famous meetings after 1946: ‘Ischler Beschlüsse’), the overall integration of commercial schools was provided by the school laws. Different from the politically disputed compulsory and academic school the development of VET schools and their extraordinary success in the later decades occurred silently, without much attention and dispute.⁹ Central and system-wide decisions about structures are simply not possible because of the scattered governance structure, thus also the ‘systemic’ change and development must be brought about through partial decisions in more limited and specific spaces.

⁸ The last institutions that were – at least partly – integrated into the overall network of schooling were the agricultural VET schools, which are still governed by the agricultural ministry, and the health schools which are governed by the health ministry are still not an integrated part of the public education system.

⁹ “Das berufsbildende Schulwesen nutzte ohne Zweifel klug die Möglichkeit, im Schatten der bildungspolitischen Auseinandersetzungen um die Gestaltung der allgemeinbildenden höheren Schule und ohne ideologische Verhärtungen rasch in eine starke Position zu kommen.”(Engelbrecht 1988, 515)

Institutional interpretations: ‘muddling through’ vs. institutionalisms

A common interpretation of the mode of change and development by education historians is summarized by one of the Austrian authorities in education research of the previous generation (and at the same time an influential social democratic politician), Helmut Seel (1996, 42) in saying that the order of the Austrian school is a ‘created’, not a ‘grown’ one, characterised by ‘interventionism’ and ‘constructivist rationalism’ and by periods of ‘initiative’ alternating with periods of ‘implementation’. This dictum can be questioned on the basis of the research presented above. The various strands of research about implementation and reform have already shown that reforms do not end but rather begin with regulatory decisions, and the confrontation of reform initiatives with material about their implementation typically shows first that the decisions often represent developments which have already emerged before, and second that initiatives are also often followed by periods of non-implementation. As a consequence the opposition of creation and growing must rather be changed into a complementarity of these mechanisms.

Revival of ‘muddling through’

Several approaches of understanding incremental policy change have emerged since decades. Margaret Archer (1979) in her big comparative sociological analysis of the historical emergence of national educational systems has concluded an opposition between centralised and decentralised systems with only the latter being able to develop incrementally, whereas centralised systems would only show punctual big changes after long periods (often a century) of stability – a ‘stop-go pattern’. Charles Lindblom (1959) also taken up by Aaron Wildavsky (1964), has made a more generalised argument of how political decision making would work: policy makers would not rely ‘technocratically’ on abstract modelling and evidence (considering all possible values, and all available knowledge) but on their hands on experience (‘successive limited comparison’), and would prefer small decisions to address actually pressing problems they see and understand (as opposed to big reform agendas that would change structures), and in this way only gradually contribute to change. This approach was forgotten for decades, and more recently rediscovered by researchers working about environmental problems. A key argument is that big reforms would presuppose an amount of knowledge and understanding which is mostly not available, and therefore include an irresponsible amount of uncertainties.

In the Austrian educational history we can find a kind of heroic story of reformers who have proposed big reforms, some being accepted, others not. However, a closer look at the accepted ones shows that the implementation was in most cases only very partial, and often has led to unexpected results. Striking examples are the long time until the compulsory school was actually realised, or the implementation of the tracked lower secondary Hauptschule that was decided in 1927 and full implemented in the 1960s, after four decades,

when already a new kind of differentiation due to achievement groups was emerging. In VET the implementation of the specialised Berufsschule also lasted from the 1920s to the 1960s and 1970s. The set-up of the VET schools framework and its expansion was completely an incremental process. The policy makers have discovered the consequences more or less ex-post, when they realised that BHS have outgrown apprenticeship, and more higher education entrants came from vocational than from academic schools (Lassnigg 2013). The driving forces were the stakeholders in the system, and the development was brought about at the level of administration until the law from 1962. A government decision in the early 1970s to expand the VET schools was taken at a point when the targets had already been almost realised. A phenomenon left to be explained is the ongoing shift on the side of the students' participation towards BHS. The hypothesis is that the inclusion of the first year of upper secondary VET into compulsory education – the above mentioned 'anomaly' – served as an important driving mechanism. In addition complex interactions between aspirations and institutional 'muddling through' have brought about this development, in which incentives were set on the one hand, and the difficult relationship of opening and closing access and progression was successfully managed within VET schools in a way that preserved the reputation despite the high degree of expansion.

Modes of change in historical institutionalism

Different kinds of institutionalisms can be distinguished (rational choice, sociological, or historical), which have quite remarkable differences that cannot be elaborated here. Historical institutionalism emphasises incremental/gradual change and posits as the main mechanisms of change a combination of critical junctures and positive feedback. Research in this paradigm has identified five basic modes of change: displacement, layering, drift, conversion, and exhaustion,¹⁰ which concern institutions that are superficially 'the same', however, change quite substantially at a second view (see Gospel/Edwards 2011, 3-4).

This perspective that seeks to understand changes of institutions which seem persistent is contrary to a traditional historical perspective that often traces back the 'roots' of current institutions to their predecessors, and thus is more focused on persistence and similarities.¹¹ For the explanation of the Austrian dualism of VET we can identify the following 'critical junctures':

- for the selection structure of schooling pathways the 'long form' of the academic track (8-years-gymnasium) starting at age ten and leading to university via the final examination (Matura) was devised in 1848/49, with the Bürgerschule-Realschule as a parallel track that

¹⁰ *Displacement*: still existing traditional institutions may become discredited or marginalised

Layering: layers of new institutions may be added to old ones

Drift: old arrangements may atrophy and cease to operate as intended

Conversion: institutions may be converted into functioning in a different way

Exhaustion: patterns of behaviour permitted may eventually undermine these institutions.

¹¹ In 2008 the Austrian ministry celebrated the 250 years anniversary of vocational education, taking the foundation of a first school of commercial drawing 1758 (k. & k. Commercial-Zeichnungsacademie) as the starting point.

included some more vocational purposes leading to technical higher education also via Matura examination; at this juncture the comprehensiveness of the lower secondary level was foreclosed,¹² and a first progression step to higher education from the vocationally oriented track was opened up in parallel very early in history;

- the creation of the higher level VET colleges in the 1880s can be seen as another juncture, which gradually provided access to higher education beneath their valuable vocational credentials, in the early times indirectly via extra exams at the Realschule, then in 1921 more direct access was provided for excellent graduates and stepwise for good students of the first two years;

- the full stepwise integration of the fulltime VET schools into a common standardised framework between the 1940s and early 1960s can be seen as a next critical juncture, which also gradually brought more steps towards higher education until today's full direct access, and which was reinforced by the basic government statement towards a further expansion of VET schools in the early 1970s; so this sector evolved as an upward career path from the high achievement tracks of the mass lower secondary compulsory school and served increasingly as a second alternative path providing access to higher education for students that had not taken the academic track at age ten;

- on the side of apprenticeship a first critical juncture can be seen in the very early decisions to treat the accompanying part-time school as part of compulsory (general mass) schooling, and consequently to enclose these institutions into the decentralised local governance structures of compulsory schooling, whereas the fulltime schools were developed from the central level; so the originally mixed and amalgamated structure of this field¹³ was gradually differentiated towards the Fortbildungsschule on the one hand and the fulltime VET schools on the other.

In terms of the basic modes of change found by historical institutionalism a long term process of layering can be devised from the perspective of the whole VET structures in which the fulltime VET schools were added to the pre-existing apprenticeship system. The evolving role of BHS in providing access to higher education in addition to their occupational and professional role can be interpreted as a conversion process, in which an originally marginal (and symbolic) role became a substantial one.¹⁴ The inclusion of the first grade of VET schools into compulsory education might also be seen as a conversion process, as this year has received a transitional role in the overall framework of educational careers, with a large amount of mobility after the first grade (Lassnigg 2012). Processes of drift might be

¹² An alternative proposal to start selection at age 14 by the state secretary Ernst von Feuchtersleben (who died in 1849) was turned down (Seel 1996, 60)

¹³ There are indications that even the high level Polytechnic Institute was in the beginnings accessible for apprentices as well as for other students (Hankiewicz 1974, 49-50).

¹⁴ This conversion was reinforced by the construction of the Fachhochschule in the 1990s, which attracted their students predominantly from BHS.

observed with apprenticeship which has gradually lost its dominating position, and has to some extent moved to the low end of VET. A basic theoretical question remains here, of whether the quite long periods of 'junctures' comply to the original concept in this approach, or maybe here a combination of junctures and muddling through might be applicable.

Results and some preliminary conclusions

Coming back to the questions posed at the outset, the question of the classification of persisting structures across the different regimes can first be answered by the fact, that the regulatory frameworks were even formally transferred from one regime to the other, and at the same time included substantial gaps at the points of transfer (in particular the distribution of responsibilities across authorities remained unresolved for many decades, leading to regulatory lock-ins). Historians see a remarkable persistence of institutions, with a plan from 1848/49 providing the shape of the overall structure in particular for the academic schools, the legal framework from 1869, amended in 1927, for compulsory education, and the plan from 1882/83 as the blueprint for VET schools. Austria has followed neither the shift towards a comprehensive school at the lower secondary level nor the tertiarisation of higher level VET institutions. This is still rather a matter of political and ideological dispute and appraisal than a matter of analysis and explanation.

This chapter has tried to go some steps towards explanation, and has in effect questioned the strong divide between punctuated-systematic and incremental change. This two kinds seem to flow into each other at closer inspection. Concerning punctuated change we can always observe rather forward and backward shifts than consequent implementation of decisions, and a high degree of incremental change seems to have occurred in the gaps of (legal and constitutional) regulation. A remarkable phenomenon is that the reasoning in central decision making seems to be driven in most cases by an inherent inclination to decide one and for all between overall models for the whole system – to give room for different parallel models was rather not conceivable at the level of regulatory decisions; however, at the practical level mostly parallel solutions prevailed, often for a long time, and sometimes definitely against the regulations.

It has been shown that the institutionalist approaches are certainly useful as heuristic devices. For their use as theories allowing explanation much more detailed analyses are necessary, which must be based on historical material that gives insight into the decision making of the involved actors. Good historical material for reanalysis is available (in particular Engelbrecht 1988); however, a significant gap seems to exist at the level of the decisions of the participants in education for their choices of programmes and pathways – these decisions being a key element of incremental change.

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Title: 'Muddling through' and historical institutionalism – Explanatory devices for the long term development of the dualistic Austrian VET system

Reihe Soziologie / Sociological Series 108

Editor: Beate Littig

ISSN: 1605-8011

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