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Towards Educational Typology of Slovene Industrial Entrepreneurs

Some methodological notes

The central idea behind my paper is to present the educational typology of Slovene industrial entrepreneurs active in the 19th and the first half of the 20th century. As the goal was to create a typology based on the entrepreneurs' level of education, some methodical shortcomings could not be avoided, such as oversimplification, which occurs when one tries to rank individuals into certain cohesive and representational types, and thus neglects the complexities and manifoldness present in the individual fates of industrial entrepreneurs. But considering that the school system, albeit being very intricate and prone to change, was still a coherent system, its roughest outlines could be schematized. The main goal was to study the biographies of Slovene industrialists and try to arrive at general conclusions by following the path of inductive reasoning. This brings me to the second methodological problem with which I was confronted, and that is the scarcity of information about the level of education achieved by industrialists, which can be found in various biographical sources. But all this considered, it is still possible to make some generalizations.

When speaking of education and entrepreneurship, there is one question that poses itself with regard to the interconnection between the level of education and an individual's disposition towards industrial activity. The burning question I was confronted with is the following: what role was played by education in the turn of events that led an individual to become an industrialist? To put it otherwise: was the level of education linked to someone becoming an entrepreneur? My thesis would be: the level of education played a minor role in shaping of entrepreneurs. The changing tendency of the level of education over the course of time suggests that it was a part of the changing social structures which shaped entrepreneurs' lives as an outward force. The change in the level of entrepreneurial education mirrors the tendency of a rising level of education of the capitalist society as a whole and thus does not have much to do with the inward, i. e. subjective, forces that made someone become an industrial entrepreneur. The merely objective conditions

can thus not be fully responsible for shaping an industrial entrepreneur, there was always a subjective element at work, that is a certain “something” contained in an individual’s dispositions. There were different objective outside factors besides education that shaped an industrialists life: his social origin and his profession. It is likely that the noticeable rise in the educational level of Slovene industrialists over time was the consequence of society’s structural changes in the modern era marked by increasing institutionalization of all areas of life. This process of institutionalization made itself evident in the area of education, resulting in an increased societal demand for formal knowledge.

Parallel to the increase in the number of various institutions controlling the lives of the individuals, we need to mention the magnified complexity of the production process and the machines used therein, which demanded an increasingly scientific approach and the application of a more abstract knowledge. To put it in Marxist terms, the changing processes and means of production caused the changes in the society’s superstructure, including education. If the early industrialists still gathered their knowledge of how factories are run and how machines work on an empirical basis and by following the relevant literature, their sons already received a degree of formal education higher than that of their fathers. The world became increasingly complex and those who wanted to be successful businessmen had to be flexible and follow those changes. But it was not just technology that had changed, also the society and the network of its relations became more and more diverse. A number of laws regarding all manners of business conducts and the employer-employee relations increased to the levels of unprecedented complexity. In this respect, it is possible to understand the increasing amount of lawyers involved in running of the companies. Their job was to navigate the often turbulent waters of relations between the workers and the company, company and the state and company and its various business partners. There was always a threat of something going wrong and the nature of lawyers’ education vested them with an ability to take care of troubles in a way that was in accordance to the law.

As it will be seen from the next chapter, the contemporaries living in the period under discussion cited the lack of quality (vocational) education in Slovenia as one of the greatest hindrances to increased industrialization. In this case, the same question can be posed again about the role of education in an individual becoming an industrial entrepreneur. My answer would once again be “no”. The examples of early industrialists show that they mostly possessed quite a low level of education, or that their education was of a decidedly humanistic profile. So what are the factors that made someone an entrepreneur? I think they are twofold: on the one hand there are the objective factors: social origin, profession and education; and on the other hand there are the subjective factors that instigated that final “push” between objective predispositions and the actuality of becoming an entrepreneur. The subjective factors can be subsumed

into something called “an entrepreneurial spirit”, that is into something purely subjective, independent of objective circumstances, meaning that there is certain “something” in an entrepreneur that eludes being classified and explained in an objective manner. The argument that lower education caused the lack of industrialization was accurate in the sense of the Slovene people as a whole. It was correct in its assumption that the lack of technically educated cadre not only hindered managing of the factories, but also in the sense that the pool from which entrepreneurs would emerge was definitely more limited. But the component of “entrepreneurial spirit” still came into consideration on an individual subjective level.

As the Slovene society was progressing on its way to modernity, one of the key structural changes was the rising level of formal education. So it comes as no surprise that the overall educational level of industrialists rose accordingly. Here is how Narte Velikonja, a writer and a lawyer, summed up the evolution of Slovene educational system in the ten years after the end of the First World War: “If we look at the development of the school system in the past decade, we can mark the establishment of the Ljubljana University, a vast expansion of elementary, secondary and vocational schooling and a tendency of founding new “realka” schools.”¹ Taking into account the efforts to modernize education, which the Habsburg government undertook prior to 1918, it comes as no surprise that the general level of education in the society as a whole increased considerably. All the structural changes undertaken in the previous 100 years made a merchants’ magazine called *Trgovski tovariš* (Commercial Companion) to publish this ironical statement in the late twenties: “Why today we demand from every barber to have a degree.”² This assertion, by pointing to a contradiction, perfectly illustrates society’s growing demand for formal education and the decrease of importance of apprenticeship. The dilemma implied in the joke is this: why would a barber need a formal education, if he can be schooled by his artisan master? The answer lies in the increased institutionalization of every aspect of society in the modern world. The main point of vocational schooling was not to transfer the core of artisan training from practical to abstract knowledge (which it did in a synthetic fashion by blending together abstract and practical knowledge into a new and modern whole), but to rid the master of the control he once had over the apprentice, and to transfer this power to the state and specifically to the educational institutions.

The first prerequisite in creating an entrepreneurial typology based on the level of an entrepreneur’s education is to define these levels. In the period discussed here, the nineteenth and the first half of the twentieth century, when Slovene industrial entrepreneurship was starting to develop, there was already

- 1 Narte Velikonja, “Razvoj šolske uprave”, in Josip Mal, *Slovenci v desetletju 1918–1928* (Ljubljana, 1928), p. 694.
- 2 “Trgovec in njegov sin kot naslednik”, *Trgovski tovariš*, Vol. 26, No. 8–9, 1929, p. 199.

an established educational system which bore the basic traits of a modern school system and can thus roughly be divided into three levels: primary, secondary and tertiary level. Each level's peculiarity and history will be the subject of the following short and cursory overview which is meant to give the reader a basic understanding of the educational system and its complexity.

The primary level was, at least after its 1869 reform quite a simple field. The compulsory schooling on the elementary level was instituted at the time of the enlightened empress Maria Theresa (1717-1780). The important part of the process of modernization she initiated was the establishment of the state school system. 1774 brought the legal establishment of compulsory education on the primary level. The rulers realized that the modern economic development was impossible without their subjects possessing at least basic formal knowledge. The organization of elementary schooling was fairly complex: it incorporated three types of schools: "normalke" (normal) schools were the rarest as there was only one per historical land and they had a very wide school program. The second type was the main schools organized in bigger cities, at least one per county. The last type of schools was the most wide-spread as it was organized in small towns and the countryside: the "trivial" schools, lasting only one year and providing its students with basic knowledge of how to read, write and calculate. The compulsory schooling encompassed all children between the ages of 6 and 12. Yet, the schooling was not free of charge. Although the elementary schooling was slow to take off, it nonetheless reached more and more children in the course of time.³

It was not until 1869 that a new law about elementary schools was enacted. It brought about deep changes; previously dispersed into three different types of schools, the new law brought about the unified, so called "people's" (ljudska) elementary school encompassing eight grades. The compulsory elementary education now lasted eight years, instead of the former six. This meant that all kids from the ages of 6 to 12, or sometimes even 14, were integrated into the system of compulsory elementary schooling. The new law also instigated the multiplication of the number of elementary schools, which were meant to reach as many children as possible. The curriculum was expanded from four subjects (writing, reading, arithmetic and religion) to teaching of the basic elements of the natural sciences, history, geography, geometry, singing and physical education.⁴ This law was in effect until 1929, when a new law divided elementary schools into two levels: lower and higher. The lower consisted of four grades (first to fourth), the second from fifth to eighth grade.⁵

3 Bogo Grafenauer, "Podržavljenje šolstva in splošna šolska obveznost", *Zgodovina Slovencev* (Ljubljana, 1979), pp. 379–381.

4 Peter Vodopivec, "Razvoj šolstva na Slovenskem", in Jasna Fischer et al. (eds.), *Slovenska novejša zgodovina 1*, (Ljubljana 2005), p. 61. Hereafter Vodopivec, »Razvoj šolstva«.

5 Ervin Dolenc, "Izobraževanje", in Jasna Fischer et al. (eds.), *Slovenska novejša zgodovina 1*, (Ljubljana 2005), p. 424. Hereafter Dolenc, »Izobraževanje«.

The secondary level of education was far more complex consisting of different types of schools. There were secondary schools which enabled their graduates to further study at the universities, technical or merchant higher schools. The two basic kinds of these schools were the classically oriented “gymnasiums” and “realke” (real) schools which were more concerned with teaching natural sciences and mediating knowledge which could be used in industry, artisanship and trade. 1849 brought about the reform of “gymnasiums”, which became institutions disseminating general humanistic knowledge. The learning period lasted eight years, but they were split into lower and higher “gymnasiums” and only by finishing eight grades students were allowed to receive a “matura” (graduation exam) degree which enabled them to go to a university. The classical “gymnasiums” were mostly transformed into real “gymnasiums” after the end of the First World War. The “realke” schools were meant as general middle vocational schools. The schooling period lasted three, six or eight years. Thus they were divided into higher and lower schools. After 1870 the eight-year “realka” school gained equality with a “gymnasium” and made it possible for its graduates to continue studying at the university. The graduates of the six-year program were able to study on technical or merchant higher schools. The lower “realka” school enabled its students to enrol in various vocational schools. In Ljubljana there was a “realka” school established in 1852. At first it only lasted three years, but in 1865 it became a six-year school.⁶

The other types of secondary schools were various artisan and merchant vocational schools. Since the 1880s, the government started to care more about artisan and merchant education on the secondary level. On the Slovene territory there was a state artisan school in Ljubljana (Državna obrtna šola) established in 1888 as a vocational school for lumber industry and artisanship. Since 1910, there was also a merchant school in Ljubljana, which accompanied the oldest merchant learning institution on the secondary level in Ljubljana, the Mahr’s Merchant School established in 1834.⁷ In the interwar period, the type of “meščanska” (civic) school already present in the pre-war times became very popular and its spread was sponsored by the government. The enrolment was possible for those who had finished five grades of elementary school. The schooling on a “meščanska” school lasted three years and was focused primarily on practical knowledge. After finishing “meščanska” school, pupils were able to continue schooling on various vocational schools or a teachers’ school. The network of various vocational schools also grew in the interwar period. The artisan vocational

6 Vodopivec, “Razvoj šolstva”, p. 61; *Enciklopedija Slovenije (hereafter ES)*, book 10, (Ljubljana, 1996), pp. 126–127, Vladimir Schmidt, *Zgodovina šolstva in pedagogike na Slovenskem, book 3* (Ljubljana, 1966), pp. 135–136, Magda Prevc, *Ljubljanska realka skozi čas* (Ljubljana, 2009), pp. 21–58, *Festschrift zur Feier des fünfzigjährigen Bestandes 1852–1902* (Ljubljana, 1902), pp. 7–30.

7 Aleksandra Serše, *Strokovno šolstvo v osrednji Sloveniji do leta 1941* (Ljubljana, 1995), pp. 30–65.

schooling was concentrated in Ljubljana's Technical High School (Tehnična srednja šola). Two merchant academies were also founded on the Slovene soil: one in Ljubljana and one in Maribor. The highly developed system of vocational schooling was the pride of Slovene school system, as opposed to the other parts of Yugoslavia. By providing properly educated cadres, it played an important role in the Slovenization of the industry.⁸

The tertiary or the higher education consisted of universities and higher technical and merchant schools. The primary factor that separated them from schools on the secondary level was the demand that those who wanted to enrol had to have degrees from the two main types of secondary schools: "gymnasiums" or "realka" schools. As mentioned above, the degree from a six-year "realka" school allowed pursuing the study at higher technical or merchant schools, while a degree from the eight-year "gymnasium" enabled one to study at the university. Since the mid-nineteenth century, "realka" schools split into six or eight year schools, the latter of which also allowed the students to study at the university. Before 1919, there was no Slovene university in Ljubljana, despite multiple efforts to establish one. Considering this situation, Slovene students were forced to study at the universities in Graz, Vienna and Prague (established in the early 1880s). The Austrian universities were thoroughly reformed after 1848. The philosophical faculties, which included also the study of mathematics and various natural sciences, became the backbone of the whole university. The reorganized system of higher learning also included higher technical and merchant schools. Prior to the start of the 20th century, the Slovene students were mostly theology students. This changed at the beginning of the 20th century, when law students took the lead. The students of technical sciences were the least numerous.⁹ This greatly contributed to the lack of proper technical cadres of Slovene origin in industrial enterprises and resulted in an "import" of technicians from abroad. This was a situation that many Slovene entrepreneurs and engineers tried to remedy with the promotion of technical studies among the Slovene youth. The downfall of the Habsburg Monarchy and the establishment of Yugoslavia brought about important changes in the field of tertiary education. The most important was the establishment of the Slovene university in Ljubljana in 1919, containing five faculties, among them a technical faculty which provided Slovene industry with engineers. The departments of technical faculty were: construction, architecture, electro-technical, mining, geodetics and chemistry.¹⁰ The establishment of a technical faculty in Ljubljana greatly minimized the need for foreign technicians in Slovene industry.

8 *Spominska knjiga 1888–1938* (Ljubljana: Državna tehniška srednja šola v Ljubljani, 1938), pp. 7–62; Mihael Presl, *Namen, razvoj in organizacija obrtnega in strokovnega šolstva drugod in pri nas* (Ljubljana, 1920), pp. 26–36; Dolenc, »Izobraževanje«, pp. 426–428.

9 Vodopivec, "Razvoj šolstva", pp. 60–61.

10 Dolenc, "Izobraževanje", pp. 428–429.

Basic entrepreneurial types

The two basic types of individual industrial entrepreneurs according to the level of their education are: the traditional type and the modern type. The naming of the types is based on two key elements: firstly, on purely chronological order of things, as the modern type of entrepreneur first emerged in the period when the process of industrialization had already begun in Slovenia, which meant that the modern type was not involved in the early stages of industrialization; and secondly, on the qualitative aspect of an entrepreneur's educational level, which existed on two levels: the modern types all had tertiary education, while traditional types posed a more varied picture, as they possessed primary, secondary or tertiary educations. This brings me to the next qualitative difference between the modern and traditional type, and that is the difference within the tertiary education itself. What distinguished the modern types from the traditional types was their technical, natural-science, or merchant education on a tertiary level. To summarize, the modern types' educational specificity was twofold: they had an overall highest level of education, and at the same time their education itself was a novelty among Slovene industrial entrepreneurs. So, what defines the newness of the modern type of industrial entrepreneur is not his level of education, but the quality of the said education; and it is this quality that manifested itself as a consequence of the modernization of the school system and the capitalist production process.

Both basic types of entrepreneurs consisted of different subtypes. The traditional type is especially very diverse, as it contains entrepreneurs with three different levels of education. The first category included entrepreneurs without much formal education, usually consisting of only elementary schooling and an artisan or a merchant apprenticeship. This subtype of entrepreneur was present mostly in the early stages of the industrialization and faded from the ranks of entrepreneurs as time went on and vocational secondary schooling further developed. This brought about a change in the relationship between the artisan master and his apprentice, as the importance of the institution of apprenticeship began to lose its role of a vessel for the knowledge transfer. This task was now taken over by the formal state school system. The second traditional subtype was the industrial entrepreneur educated on a secondary level. As noted above, the secondary level was quite varied containing different kinds of schools. It is safe to say that industrialists-to-be preferred vocational schools of the artisan or merchant variety. The entrepreneurs with a merchant education on a secondary level were quite numerous, as well as those who got the knowledge of their industrial branch through vocational schooling. With regard to the two main types of secondary education, the "gymnasium" and "realka" school, the latter was much more popular with entrepreneurs. Some of the early industrial entrepreneurs were enrolled in a "gymnasium", but would soon drop out and

pursue business careers.¹¹ So, the “gymnasium” stayed reserved mostly for those who intended to go to the university, which brings me to the third traditional subtype: the jurist. More about this subtype is discussed below, in the case of the Kozler brothers.

It is easy to understand why “gymnasiums” presented an unattractive choice for the future entrepreneurs; their curriculum based on humanistic sciences had little to offer to the budding industrialists. There was a great divide between the reality of developing capitalist world and the world of the antiquity the “gymnasium” curricula were primarily concerned with. It comes then as no surprise that “realka” school, “gymnasium” greatest rival in the field of secondary schooling in the 19th century,¹² derives its name from reality itself: its main goal was namely to provide its students with knowledge based on the so called “real” sciences, and thus equip them to find their place in the “real world”. As such, “realka” schools represented a strong opposition against the “unreality” of “gymnasium” school program, its supposed out-datedness, and its inability to keep in step with the changing times.

The available data suggests that there was an overall rise in the level of entrepreneurial education in the time-frame discussed here. This rise took place among the traditional types, and created the modern type, which would not have existed had it not been for the structural changes in the realm of education in the second part of the 19th century. The most notable change detected in the traditional type was the increase of entrepreneurs’ education on a secondary level, as more and more industrialists gained their education from various secondary schools. Of great importance is also the development of vocational schooling. The two main reasons for this, as was already at some length stated above, were the rising complexity of the productive processes, tools of production and social networks, accompanied with the rising institutionalization of society. But even in times when a lot of modern types got involved in industry, especially in the interwar period, they never constituted a majority of industrial entrepreneurs; both the traditional and modern types of entrepreneurs coexisted and complemented their activities in the economic field. It would seem that the level of an individual entrepreneur’s education played a part in the choice of the company-type which he was involved with. Judging from the available historical data, it can be deduced that the level of entrepreneurial education was mostly higher in joint-stock companies, as opposed to smaller companies or single-owned industrial enterprises, but further research would be needed to confirm or refute this claim.

11 Such was the case of Jožef Blaznik, bookbinder and cardboard producer. Rudolf Andrejka, *Znameniti slovenski obrtniki (1575–1940)* (Ljubljana, 1940), p. 14.

12 *ES, book 10*, Ljubljana 1996, p. 126.

The traditional type

The story of Fidelis Terpinč, the first and undoubtedly the greatest Slovene industrialist of the 19th century, shows an interesting discrepancy between the formal school system and an industrialist's needs in the early stages of industrialization. Although Fidelis Terpinč finished two grades of the lower "gymnasium" in Ljubljana – his father sent him there because he considered Fidelis to be a gifted child – he gained most of his knowledge of industry in an empirical manner, mostly by travelling abroad. It also has to be taken into consideration that he was born in 1799 and attended "gymnasium" in the school years 1813–14, when Austrian curriculum was re-established after a transitional period of four years (1809–14), when part of the Slovene lands was occupied by France, which introduced its own school-system.¹³ Fidelis' schooling at the "gymnasium" lasted for only two years. The curriculum of the two beginning grades was strictly focused on Latin: Fidelis had 18 hours of classes per week, of which half were devoted to elementary Latin. Three hours per week were reserved for history and geography; religion and morals were taught two hours per week. The natural sciences were not given much space: there was two hours of mathematics and two hours of various natural sciences (biology, physics, chemistry, etc.) combined per week.¹⁴ Fidelis thus gained some basic knowledge that can probably be considered useful in the field of industry, but it still was not much use to a young man aspiring to become an entrepreneur. So, after finishing the two years of "gymnasium", Fidelis discontinued his schooling and at the age of 16 he started working in his father's shop. He became a merchant by profession, gaining all the necessary knowledge at his father's successful business. Later he started his own trade in Ljubljana, but Fidelis could not settle with being just a tradesman. He searched for other business opportunities and found them in industry. He bought a castle near Ljubljana and took advantage of the nearby river to create a modern and successful mill industry.

After marrying a woman from a respectable Ljubljana family, he spent a lot of years travelling abroad, attending world fairs and visiting various factories. All this supplied him with the knowledge of the latest technological advances in the fields of industry and agriculture, which enabled him to become a pioneer of paper-making, as well as chemical (on a smaller scale) branches of industry in Slovenia; he was also one of the biggest advocates of agricultural mechanization and overall modernization of farming.¹⁵ The conclusion drawn from this account can only be that in the early days of industrial development in Slovenia there was no educational system appropriate for the people who were thinking of becoming active in this field. This lack of a possibility to gain formal knowledge caused

13 Vladimir Schmidt, *Zgodovina šolstva in pedagogike na Slovenskem, book 1* (Ljubljana, 1963), pp. 78–79, 252.

14 *Ibid.*, p. 40.

15 Rudolf Andrejka, "Fidelis Terpinč", *Kronika slovenskih mest*, Vol. 1, No. 2, 1934, pp. 114–120.

these ambitious individuals to seek alternative ways of learning, and there was only one path to do it: through practical training and empirical knowledge. This is why travelling and the institution of world fairs played such an important role as a means of disseminating information in times when technical literature was still scarce.

The lack of formal vocational and technical schools was especially felt in the relatively backwards Slovene lands. In the 1852 report of the Ljubljana *Handels- und Gewerbekammer*¹⁶ it is written that the two biggest obstacles standing in the way of the development of Slovene industry were the shortage of sufficient capital and low technical knowledge. In this respect, they called on the ministry of trade to work towards providing a better education for Slovene apprenticeship. The concrete solution they recommended was the establishment of a lower "realka" school in Ljubljana and the granting of scholarships for technical schools, which would provide those from poorer families with a chance of gaining an education bound to bring them success in the modern times. The Ljubljana merchants claimed that only reading and writing were not enough anymore, but that unfortunately, people still were not persuaded about the usefulness of the theoretical technical knowledge. The view of the businessman writing the report was that there would be no progress until people realized that the technical field provided humanity with endless possibilities for a better life.¹⁷ It is interesting to note that 68 years later, when Slovenia was on the brink of a rapid industrialization, the same complaints about the connection between the lack of quality vocational schooling and industrialization can be found in a booklet written by Mihael Presl, a professor at a State Artisan School in Ljubljana (*Državna obrtna šola v Ljubljani*). His main claim was that the lack of vocational schooling meant the lack of industry and his goal was to show, through the description of vocational schooling in the West, the paths that Slovenia needed to take. He viewed the First World War as a fundamental break with the past. With its massive mechanization, it showed the tremendous importance of industry, and thus the striving for a qualified workforce was a matter of Yugoslavia's national security.¹⁸

If Fidelis Terpinc was not destined to receive a very helpful education on a secondary level, and had to realize his goals through gaining empirical knowledge, the case of Avgust Žabkar, one of the pioneers of Slovene iron industry, serves as an example of the importance that the secondary vocational schooling had

16 The "Gewerbs- und Handelskammer"-s were compulsory organizations comprised of the representatives of the Habsburg monarchy's historical lands' trade, industry and artisanship. The organizations were meant as intermediaries between business world and the state; their aim was to coordinate the interests of both parties with the goal of their mutual satisfaction. *Österreichisches Staatswörterbuch*, book 2 (Vienna, 1906), pp. 687–690.

17 *Bericht der Handels- und Gewerbekammer für das Kronland Krain* (Ljubljana, 1852), pp. 16, 27–28.

18 Mihael Presl, *Namen, razvoj in organizacija obrtnega in strokovnega šolstva drugod in pri nas* (Ljubljana, 1920), p. 3.

gained in the course of the 19th century in helping to shape new entrepreneurs. Avgust Žabkar was born in 1854, 55 years after Fidelis Terpinč, near Mokronog in the region of Lower Carniola. His father was a forester. After he finished elementary school he started his apprenticeships with various locksmiths in Novo Mesto and Ljubljana. His ambition and a will to learn probably caused him to start attending the Sunday vocational school organized by Katoliško društvo rokodelskih pomočnikov (Catholic Society for Artisan Apprentices), meant to expand the education of artisan apprentices. There, Avgust was learning German, arithmetic and technical drawing among other subjects. But there was some force that pushed him on, and in 1873 he went to Vienna on foot to attend the world fair. He stayed there for a while, combining practice as an apprentice with gaining theoretical knowledge by studying relevant technical literature. And thus, having attained much knowledge in an informal way, he returned to Ljubljana in 1885, where, three years later, he established his own locksmith workshop, which he would transform into a factory for iron constructions in the early 20th century.¹⁹ The case of Avgust Žabkar shows that the various endeavours for expanding vocational education on a secondary level proved to be successful in creating new entrepreneurial cadre, of course only in combination with the individual's striving to broaden his empirical and theoretical knowledge. The Sunday vocational schools provided Žabkar with some basic knowledge which enabled him to take further steps, but it was his entrepreneurial drive that made him an industrialist.

The third subtype of the traditional group is the jurist. A good case of early industrial involvement of this subtype is the Kozler family, one of the richest and most successful dynasties living on Slovene soil in the 19th and 20th centuries. The family's roots were in a remote and poor Kočevska region south of Ljubljana, whose peasant occupants had to restore to other types of activity besides agriculture, if they wanted to survive: their specialty became peddling. The dynasty's originator Janez Kozler I was born in a small village called Kočevska Reka in 1780. He spent his youth as a herdsman and started going to a local auxiliary elementary school only at the age of 13. But this did not last long, because soon the boy decided to become a peddler. He learned the trade on his travels throughout the monarchy, on which he escorted his relative who sold horses. As he grew up, he became independent and started peddling oranges and other tropical fruit. After moving to Vienna, he started a successful tropical fruit trade in 1812. He gained most of his fabulous wealth during the Vienna Peace Congress of 1814-1815. As his riches grew, he bought himself and his family a castle near his native region.²⁰

19 *Slovenski biografski leksikon (hereafter SBL)*, book 15 (Ljubljana, 1991), pp. 915–916, Rudolf Andrejka, *Znameniti slovenski obrtniki (1575–1940)* (Ljubljana, 1940), p. 18.

20 Ivana Kordiš – Irena Škufca, “Po hribih, po dolih razširjen njih rod”, in Ivan Kordiš – Irena Škufca, *Peter Kozler in prvi zemljevid slovenskega ozemlja* (Kočevje, 1996), pp. 13–62; Arhiv republike Slovenije (ARS, i. e. Archive of the Republic of Slovenia), AS 811.

This was the social environment appropriate for the emergence of entrepreneurs with a university-level education. Despite having almost no formal education and perhaps even because of that, Janez Kozler I made sure that his three sons got a better schooling than him. The firstborn Janez Kozler II, who was destined to inherit the castle and the surrounding estate, graduated from the Ljubljana "gymnasium". The second-born Josip and the third-born Peter both finished law and worked as lawyers. It seems that their father was determined to provide for them the best possible education. Perhaps them not being meant as heirs to the estate played a part in having a higher education than their older brother. But after their father had died, the two younger brothers gave up the law practice and started to run the business of the deceased. The speed with which the sons stopped their law practice leads one to speculate that their father was the one who wanted them to become jurists. Speculations aside, it is clear that all three sons were men of action, interested in industry, mechanics, machines and modernization of agriculture. They possessed a knack for all technical things and were eager innovators.²¹ All this considered, it comes as no surprise that they established the first modern steam-driven beer brewery in Ljubljana, which developed into one of the biggest Slovene breweries, and still exists today. The explanation for this action found in literature is that the brothers wanted to protect the large amount of money left to them by their father from the threat of a future war.²² Taking all this into consideration, there must have been another motif for their action; some amount of entrepreneurial spirit, drive and a preparedness to take risks had to play a part in deciding to invest into industry. Peter Kozler, the former lawyer, took over the management of the company. In 1867, when the three brothers registered their firm Gebrüder Kosler, Bier und Spirituserzeugung (Kozler Brothers, Beer and Spirit Production), the brothers got involved in industry. But the Kozler brothers' ties with Slovene industry did not stop there. In 1873, Janez and Peter played a part in the establishment of the first construction joint-stock company in Ljubljana and Slovenia.²³

Aside from the Kozler brothers, there were other jurists involved in industrial joint-stock companies in the 1860s. The information about three early industrial joint-stock companies²⁴ established in Ljubljana shows that lawyers were participating in the leadership of industrial companies at the early stages

21 Ivan and Josip were involved in promoting agriculture in the marshy area around Ljubljana called Barje, Josip even did some experiments on his estate. Ivan was a big promoter of turf-usage as an alternative to coal. He was also a master of building watermills and water saw-mills. Peter was the creator of the first map of Slovene territories in the Habsburg Monarchy. *SBL, book 4* (Ljubljana, 1932), pp. 542–543.

22 Rudolf Andrejka, "Najstarejše ljubljanske industrije", *Kronika slovenskih mest*, Vol. 1, No. 4, p. 290.

23 Zgodovinski arhiv Ljubljana (ZAL, i. e. Historical Archive of the City of Ljubljana), LJU 88, register družbenih firm.

24 They were called: Krainische Baugesellschaft, Narodna tiskarna and Laibacher actiengesellschaft fur Gasbeleuchtung. All information op. cit.

of Slovene industrialization. This participation was twofold: monetary (capital) and entrepreneurial. Capital involvement meant they were shareholders and the entrepreneurial involvement meant they had a say in the running of the companies as members of the boards of directors. All three above-mentioned industrial companies were spawned in the decade from 1863 to 1873, i. e. in the years of a quick industrial development of the Habsburg Monarchy.²⁵ It is understandable that such distinguished and wealthy members of society such as lawyers would seek to increase their riches by investing into blooming industrial activity by becoming share-holders. What distinguished the subtype of lawyer-entrepreneur from other traditional entrepreneurs was not just his higher level of formal education, but also the types of companies they preferred to be involved in. The lawyers were namely present mostly in joint-stock companies, often as bank representatives. Contrary to this, a lot of early industrialists started out with single-owned firms or in companies with only a few partners. It was only later that they got involved in joint-stock companies. In time the lawyers' ties to banking institutions became more and more tight. At the early stages of industrialization, the lawyers often invested their own savings into joint-stock companies and thus, as members of boards of directors, represented their own individual interests. As time went on and the Slovene banking system evolved, the lawyers more and more often became involved primarily with banks, which was a career opportunity granted to them by their education, and so turned into the representatives of banks in the boards of directors of large industrial companies. Their immediate monetary participation in joint-stock companies began to lose its importance, with bank capital taking the forefront. The consequence of this was that the jurists progressively adopted a purely entrepreneurial function. This process came to its full fruition in the interwar period.

Rounding up the overview of traditional entrepreneurial subtypes, it is necessary to present an example of the first subtype. There are a lot of cases of industrialists who only finished elementary school and later became merchants or artisan apprentices. The story of Karel Pollak, one of the greatest Slovene leather industrialists, serves as a good example. Karel Pollak was born in Kranj in 1853 as an only son of a local tanner. After his father's early demise, he became an apprentice at his uncle's leather workshop in Tržič, a town in the Upper Carniola region, famous for its leather artisanship. In 1873, when he was just 22 years old, he started his own export leather trade in Ljubljana and used the capital he had saved to open leather factories first in Kranj and later in Ljubljana. His foray into leather industry happened in the late 19th/early 20th century and proved to be a success. During the First World War, when army's demand for leather products caused production to skyrocket, he opened another factory in Vrhnika

25 Roman Sandgruber, *Ökonomie und Politik. Österreichische Wirtschaftsgeschichte vom Mittelalter bis zur Gegenwart* (Vienna, 1995), pp. 245–251.

near Ljubljana.²⁶ He came out of the war as an owner of one of the biggest industrial empires in Slovene history and managed to achieve all that with just an elementary formal education.

The modern type

The first subtype of the modern industrial entrepreneur is the engineer-entrepreneur. Slovene engineers were schooled on technical faculties throughout the monarchy. The most popular were schools in Austria, especially in Graz and Vienna, but due to the cultural and political ties between Slovene and Czech lands, also in Brno and Prague. The founding of the technical faculty in 1919 as part of the Ljubljana University played an important role in shaping the upcoming entrepreneurial and professional cadres for the jobs in industry. This contributed to the process of Slovenization of the industry, a goal coveted for by the Slovene nationalists since the 19th century. The second subtype of modern industrial entrepreneur was distinguished by a degree from higher merchant schools. These merchant schools on the tertiary level, as for example the *Hochschule für Welthandel* (Higher School for International Trade) in Vienna, were those where the enrolment was only possible with a "matura" degree from the "realka" school. This distinguished them from merchant vocational schools on the secondary level, and placed such learning institutions firmly into the realm of tertiary education. The third subtype is the industrial entrepreneur who finished the study of natural sciences on the university level. They were only a few and it seems that individuals with this type of education were more interested in academia (research and teaching) than the entrepreneurial activity. Generally speaking, engineers numerically dominated the ranks of modern entrepreneurs. Their massive engagement in industry began in the interwar period.

There are many interesting examples of the modern type of industrial entrepreneurs. As my aim is not to bore the readers, I will limit myself to three cases. The first is Alojzij Kral from Moravia. Born in 1884, he was schooled in the Czech lands: after finishing secondary education (it is unclear whether he went to a "realka" school or a "gymnasium"), he graduated from the Brno Technical Faculty in 1910 as a building engineer and got his doctor's degree from the same school in 1916. Alojzij Kral is especially interesting as an example of a highly educated constructor involved in industry. He came to Ljubljana already in 1912. Here, he was employed with the state building administration until 1920, when he became a professor on Ljubljana's technical faculty.²⁷ Around this time he also got involved in the nascent Slovene building industry. As a member of the board of directors, he was active in two joint-stock companies in this field: Slograd, slovenska gradbena in industrijska d. d., Ljubljana (Slograd, Slovene Building

26 *SBL*, book 7 (Ljubljana, 1949), p. 438.

27 *Spominiski almanah slovenskih strokovnih pisateljev, publicistov in projektantov* (Ljubljana, 193?) [the exact date of publication is nowhere to be found], p. 297.

and Industrial Joint-Stock Company, Ljubljana) where he was active from 1922–1927 and Opekarna Emona d. d. v Ljubljani (Emona Brickworks, Joint-Stock Company in Ljubljana) from 1922–1926.²⁸ The first company started out in 1921 as a smaller firm involving mostly building engineers of Czech origin – the reason for its establishment was probably the liveliness of the post-war building activity – and was later turned into a joint-stock company when banks got involved. The second company was founded for the same reasons as the first: the entrepreneurs involved wrote that their goal was to provide the Yugoslav building industry with adequate building materials. Kral was involved in it as a representative of Slograd's interests; Slograd was namely a stock-holder in Emona.²⁹ In both companies, Alojzij Kral figured as a highly qualified expert involved in the bodies authorized to make chief entrepreneurial decisions. He was also one of the major stockholders in Slograd, showing that he was not just a scientist, but also an entrepreneur ready to take risks in the field of industry.

The next example of a natural-sciences-degree-holder-come-entrepreneur is even more interesting, because it involves not only one of the rare Slovene entrepreneurs with a degree in chemistry, but this individual also happened to be one of the rare women active in Slovene industry. Her name was Ana Kansky and she owned a company called Dr. A. Kansky, kemična tovarna, Podgrad pri Zalogu (Dr. A. Kansky, Chemical Factory, Podgrad near Zalog) and also a shop selling chemicals and laboratory equipment in her and her husband's house in Ljubljana. The extraordinary thing about Ana is not just her doctoral degree in chemistry, a title rare even among men at the time, but that her company was one of the most advanced factories in Yugoslavia. The factory was rather small,³⁰ but nonetheless the principles on which it was run were ahead of its time and it sticks out as one of the most ahead-of-its-time companies of the period. In the sense that the scientific and technical innovation was its main principle, it was a sign of the direction that the whole industry would take in the future. Such companies of course were not rare in the West at the time, but it definitely sticks out from the rest of the Yugoslav industry. It was run strictly scientifically and innovation was its main goal. Having a function of an industrial outlet for scientific research, it supposedly did not yield much profit, although its almost two decades long run bears witness to its relative success. It was founded by consorts Kansky in 1922 with the money left by Evgen Kansky's recently deceased mother.

The Kanskys were a very interesting couple: both were highly educated and competent scientists. Evgen Kansky was a Russian emigrant living in Ljubljana. He was a prominent researcher in the field of biochemistry and a professor on Ljubljana's medical school. Ana Kansky's maiden name was Mayer and she was born on 20 June 1895 in a small village Lože pri Vipavi as one of the five children.

28 ZAL, LJU 88, Trgovski register oddelek B, book 2, delniške družbe.

29 ARS, AS 76, konvoluta 118 and 125.

30 In 1937 there were 29 people employed. ARS, AS 448, fascikel 309/5.

She was from a quite well-to-do family. Her father was a land-owner. She spent her childhood in the family mansion and started elementary school in the nearby Vipava village in 1902. During weekdays she lived at her grandmother (on her father's side) who was a land-owner and a post-station leaseholder. In 1907, she departed to Ljubljana to get her secondary schooling in Ljubljana's city lyceum for girls. Because the lyceum could not provide her with a "matura" degree equal to that of a "gymnasium", as it only constituted of six grades, she had to take up private lessons, which enabled her to complete the seventh and eighth grade and gain the "matura" degree at Ljubljana's classical "gymnasium" in 1914. This made possible her enrolment on the philosophical faculty of the University of Vienna. During the First World War, from 1914 to 1918, she studied chemistry as her major, and physics as her second subject. The chaos of the ending war and the crumbling Habsburg Monarchy forced her to cut her classes short and on 1 November 1918, three days before Austria's capitulation, she left for home. The next year she continued her studies on the newly established University of Ljubljana. In quite a short time she prepared her doctoral dissertation on the effects of formalin on starch and in July 1920 she became the first woman with a doctor's degree in Slovenia, as well as the first doctor to be habilitated by the University of Ljubljana. For some time she continued with her research activities at the university. In 1921 she married Evgen Kansky and soon afterward they established their own company. It seems that Ana Kansky was not satisfied with just pure research, her entrepreneurial drive made her establish a company which, at the time, was a unique synthesis of scientific research and industrial production. The list of innovative products the company brought onto the Yugoslav market is a long one. Suffice to say that it provided the Yugoslav industry with many necessary chemical products. It was also pioneering in the production of many chemicals until then only available as imports. Factory's specialty was the production of technologically complex chemical products. Besides providing materials for chemical industry, Ana Kansky started company's own line of pharmaceutical products. In conclusion: Ana Kansky's company presented the apex of the combination of education and entrepreneurship in the pre-war period.

The third and last example pertains to the subtype of industrial entrepreneurs educated on the higher merchant schools. Such was the case of Branimir Tuma, the son of a distinguished Slovene politician, Henrik Tuma, born in Gorica in 1904. In 1922 he finished the "realka" school in his home town. Gaining the necessary "matura" degree meant that he could enrol in the Hochschule für Welthandel (Higher School for International Trade) in Vienna. He studied there from 1922 to 1925. After he had graduated he returned to Yugoslavia and after having worked as an employee in a pencil-producing plant, he started his own chemical factory in Ljubljana. His business associates were his three brothers, who all together had a winning educational combination for a successful running of a modern factory: Branimir had a merchant education, Boris was a jurist, Ostoj

an electro-technical engineer and Zoran a chemical engineer. The company was aptly named “Bratje Tuma” (The Tuma Brothers) and serves as a good example of the increase of the number of modern-type entrepreneurs in the interwar period, as well as an example of an overall increase in the level of education of those involved in the industry.

