Forming a Common Language
The Teaching of Drawing in the Habsburg Empire from 1850

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In the second half of the nineteenth century, society in the Habsburg Empire underwent a complete transformation.[1] During this period, the impact of industrialization could be felt and a systematic, empirical approach emerged in the natural sciences. At the same time, the concept of the nation state was evolving and the importance of the middle classes had increased in society.

The development of the states that would go on to form the German Empire in 1871 was completely different from the development of the Habsburg Empire. The latter was a vast multilingual territorial state that had arisen from feudal systems of rule. Consequently, forming an identity, which in Germany occurred through the language, was a far more complex process in the Habsburg Empire. One of the pillars in this process was education with a special emphasis on mathematics, a cosmopolitan language in which visual geometry was capable of explaining complex relationships based, for example, on the simple shape of the triangle. Transferred to art lessons, this entailed teaching drawing through a focus on mathematics and geometry, which was a key aspect in the pedagogy of the philosopher Johann Friedrich Herbart. Art curricula based on Herbart's teachings were mandatory at the various school types throughout the Habsburg Empire. As a result, approaches to art, and by extension ways of looking at art in the Habsburg Empire, differed significantly from the idealist theories that predominated in German countries.[2] This difference, scarcely acknowledged today, was widely known in around 1900. Speaking about art history in his inaugural speech at the *k. k. technische Hochschule* in Vienna in 1902, Friedrich Jodl outlined the essential characteristics:

1 This article expands on the educational aspects first explored in: Klee 2016.
2 Cf. Klee 2017.

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> If Hegel's aesthetics, in a way that is again proclaimed today as the most modern wisdom, had placed the main emphasis on the idea, the inner significance of the content that emerges in the artwork's sensory appearance, Herbart, on the other hand, has found the other point of view without which current academic art theory would be inconceivable: the significance of form as a particular way of connecting and structuring sensory content, the realization that the impact of an artwork, quite apart from what it lets us experience as a thought, is essentially conditioned by a number of elemental pleasing effects arising from its formal language, from the composition of its sensory expressive means. Of course, this realization was expressed by Herbart and the most important direct follower of his aesthetic theories Robert Zimmermann, still remembered in Vienna as a sensitive art connoisseur and expert, in a very abstract way, alienated from artistic life in practice.[3]

These observations raise an issue that has been largely ignored by art history until now: the influence of the professionalization of schools and teaching practices in the Habsburg Empire in the second half of the nineteenth century upon art in this period and into the twentieth century.

In the nineteenth century there was a growing need in the Habsburg Empire, as in other regions, for a trained and more specialized workforce. A basic prerequisite for this was a more educated population. The *Realschule* evolved in response to these new demands in the empire. Starting in around the mid-1850s, it developed under Thun-Hohenstein's ministry from a school with an emphasis on the vocational into a model for other types of schools. The teaching of drawing played a very prominent role. After intensive discussion, both free-hand drawing and geometric drawing were given key importance in the curriculum at *Realschulen*. Today this may come as a surprise, in view of the current meager allocation of art lessons, yet from a purely educational point of view it made sense.

3 Jodl 1902, p. 39: "Wenn die Hegel'sche Aesthetik in einer Weise, die heute wieder als modernste Weisheit verkündet wird, das Hauptgewicht auf die Idee, auf die innere Bedeutsamkeit des Inhaltes gelegt hatte, der im Kunstwerk zur sinnlichen Erscheinung kommt, so hat dagegen Herbart den anderen Gesichtspunkt gefunden, ohne den wir uns heute keine wissenschaftliche Kunstlehre denken können: die Bedeutsamkeit der Form als einer bestimmten Weise der Verknüpfung und Gliederung sinnlicher Inhalt, die Einsicht, daß die Wirkung eines Kunstwerkes, ganz abgesehen von dem, was es uns als Gedanke erleben läßt, wesentlich bedingt ist durch eine Anzahl von elementaren Wirkungen des Gefallens, die aus seiner Formensprache, aus der Gestaltung seiner sinnlichen Ausdrucksmittel hervorgehen. Dieser Erkenntnis ist freilich bei Herbart und auch bei dem wichtigsten unmittelbaren Fortbilder seiner ästhetischen Gedanken, bei dem in Wien als feinsinniger Kunstfreund und Kunstkenner noch unvergessenen Robert Zimmermann, in sehr abstrakter Form aufgetreten und dadurch der Berührung mit der Praxis des künstlerischen Lebens entfremdet worden."

The pedagogy of Johann Friedrich Herbart was important in this respect. Like the contemporaneous endeavors of Johann Heinrich Pestalozzi and Friedrich Fröbel, Herbart developed his ideas from a mathematical understanding of the world in which everything could be presented in a geometric, mathematical way. For Herbart this was based around the triangle, which pupils had to master in free-hand drawing as well as in geometry lessons.

Herbart's philosophy opposed German idealism,[4] with Hegel's philosophy and the Hegel school being the object of particular criticism.[5] In contrast to the rest of the German-speaking region, particularly Prussia, where, in the first half of the nineteenth century, the philosophical views of Kant and Hegel had taken root and gained a widespread following, in the Habsburg Empire these ideas were roundly attacked, with Bernard Bolzano leading the charge.[6] Bolzano's philosophical views were aligned with Herbart's in many respects. In fact, we should really speak of a Bolzano-Herbartian philosophy, as many supporters and students of Bolzano, including Exner and Zimmermann, were champions of Herbartianism.[7] Moreover, the banning of Kant's and Hegel's theories throughout the Habsburg Monarchy further intensified a development that was genuinely Austrian and was not confined solely to philosophy. The philosophy of both Bolzano and Herbart shows a close affinity with Leibniz. An intensive study of Leibniz's teachings is also demonstrated in the writings of Franz Serafin Exner and Robert Zimmermann.[8] Leibniz's theories argue that of all the potential worlds, the existing one is best and any change would only worsen the situation. This conformed to the Neoabsolutist views of the Habsburg Empire in the same way that Leibniz's explanation of the world through mathematics echoed the intentions and opinions of both Herbart and Bolzano.[9] Mathematics reflected a universal and cosmopolitan worldview and so could not be exploited for nationalist aims. In a multi-ethnic state like the Habsburg Empire, it was a language that could be universally understood and therefore a constant,[10] which, unlike the philosophy of Hegel and Kant, could not be reinterpreted to serve national interests.[11]

The dominance of Herbart's theories in Austria, both before and after 1848, ultimately resulted in his philosophy becoming so universal that he is often dubbed the official philosopher of the Habsburg Empire, without ever having actually taught there.[12] The stronghold of Herbartianism became Prague, where the groundwork had

4 Bauer 1966.
5 Stachel 1999, p. 141.
6 Stachel 1999a.
7 Stachel 1999a, p. 289.
8 Seiler 2002, p. 188.
9 Stachel 1999a, pp. 274–275.
10 Stachel 1999a, pp. 283–288.
11 Stachel 1999a, pp. 258–261.
12 Winter 1975, p. 12; Jäger 1982, p. 198.

been laid by Bernard Bolzano.[13] It was Prague's professor of philosophy Franz Serafin Exner who finally paved the way for the educational reforms after joining the Ministry of Culture and Education, established following the 1848/49 Revolution, where he worked under Minister Leo von Thun-Hohenstein.[14] Exner's students included important Herbartians such as František Čupr, Josef Durdík,[15] Eduard Hanslick, Gustav Adolf Lindner,[16] Franz Karl Lott,[17] Joseph Wilhelm Náhlovsky, Wilhelm Fridolin Volkmann, and Robert Zimmermann, the man who would dominate Austrian philosophy for over thirty-five years at the University of Vienna.[18] At the same time it was Exner who, by appointing Herbartians, consolidated the influence of Herbart's philosophy and pedagogy in the Habsburg Monarchy, and on various occasions took a bold stance against the Hegel school.[19]

The consequences of this dominance of Herbart's theories can be seen in drawing lessons that used trigonometry to develop basic visual skills and to help recognize how the world is ordered.[20] The pupil was tasked with understanding the principle of standardized triangles (»*Figs. 1, 2, 3*) and internalizing their forms so as to acquire the ability of pure seeing.[21]

In order to gain a clear overview of the number and variety of forms, Herbart omitted the teaching of perspective to focus instead on the surface,[22] formed out of triangular components, the elementary shapes.[23]

These demands made by Herbart were met in free-hand drawing lessons. The objective was not simply to reproduce things, such as a tree, a house etc., but to master a basic geometric vocabulary in drawing. Forms were created by building on triangles, paying special attention to the planar, often ornamental basic visual vocabulary. Just as an alphabet is the basis for communication in language, used for making words into sentences and ultimately producing language and literature, planar geometry derived from the triangle was the basis for pictorial communication, resulting in a common 'language of images'. Gustav Adolf Lindner described this aspect of drawing in his article *ABC der Anschauung:*

13 Clausberg 1983, p. 159; Feichtinger 2010, p. 151.
14 Sauer 1995, p. 312; Cernoch 1995, p. 683; Stachel 1999a, p. 140.
15 Durdík 1875.
16 Grimm 2009, pp. 21–36.
17 Lott's appointment to the University of Vienna was backed by Exner. His successor was Exner's student Zimmermann (Adam 2002, p. 6). Lott was also the father-in-law of Rudolf von Eitelberger (*Österreichisches biographisches Lexikon und biographische Dokumentation 1815–1950*, vol. 1, pt. 3 [1956], p. 239).
18 Jäger 1982, p. 197.
19 Stachel 1999, p. 141.
20 Wagemann 1957, p. 127; Skladny 2009, pp. 112–113.
21 Skladny 2009, p. 120.
22 Wagemann 1957, p. 125.
23 Skladny 2009, p. 120.

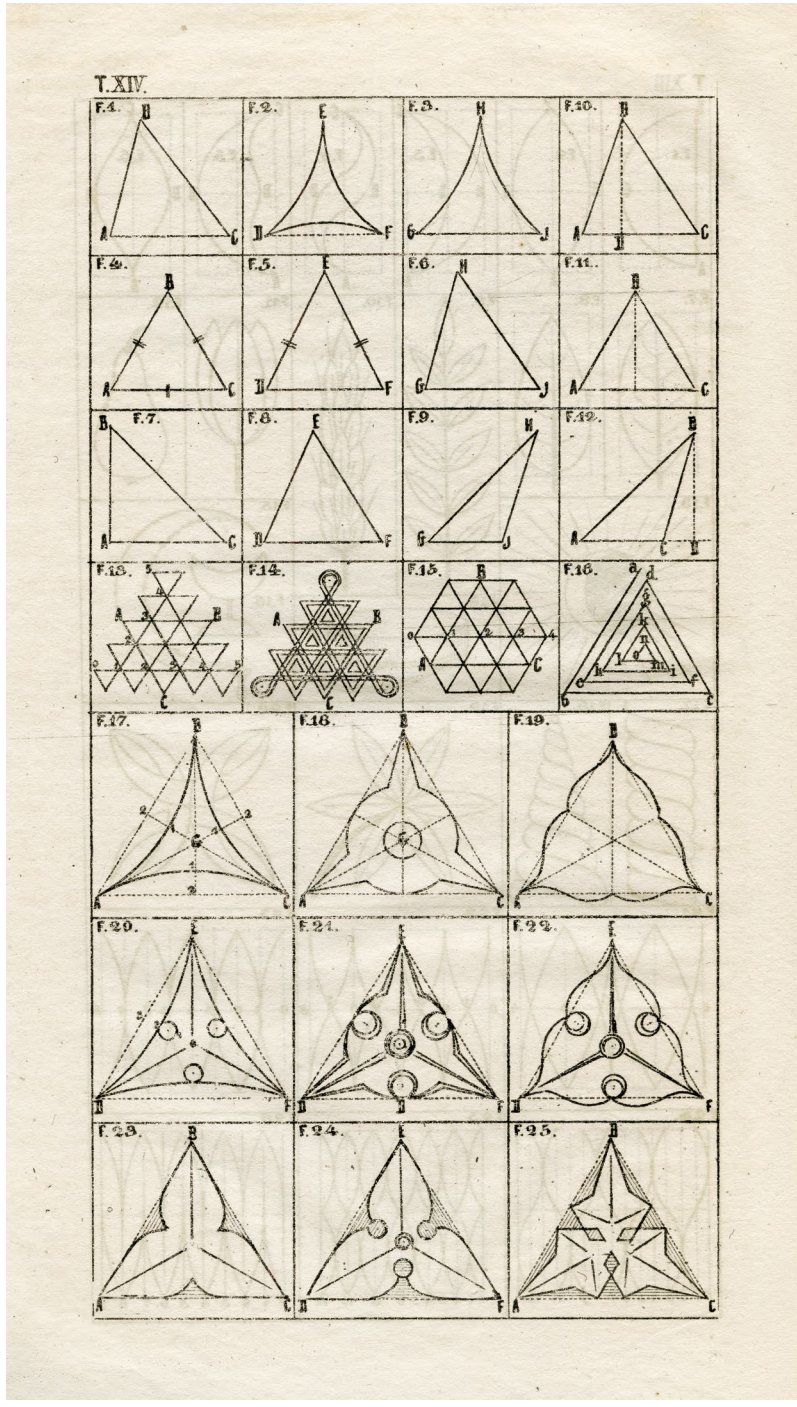


Fig. 1 Plate XIV from *Die geometrische Formenlehre* (Fialkowski 1864), MAK – Museum für angewandte Kunst, Wien.

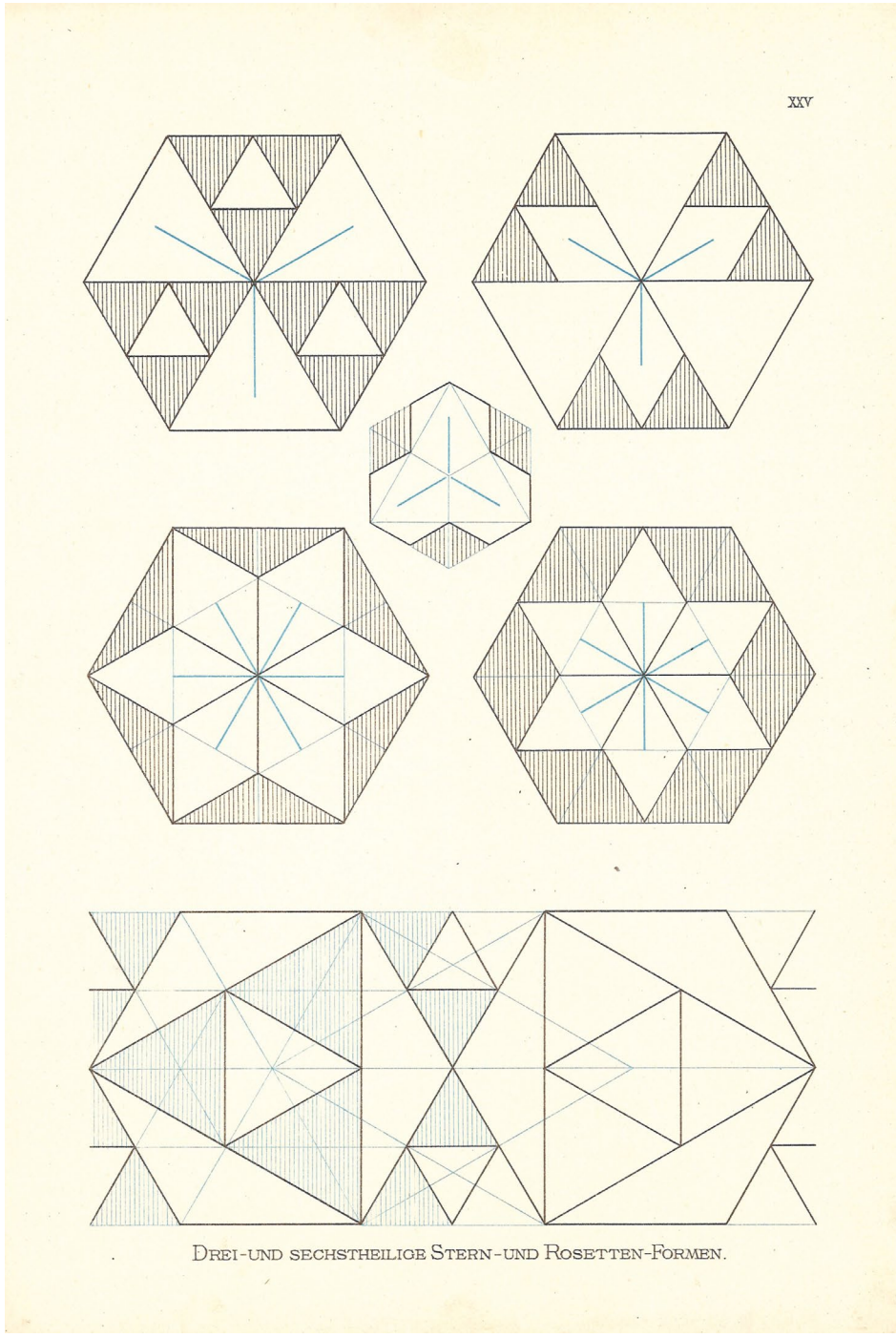


Fig. 2 Plate XXV from *Das geometrische Ornament* (Anděl 1876), MAK – Museum für angewandte Kunst, Wien.

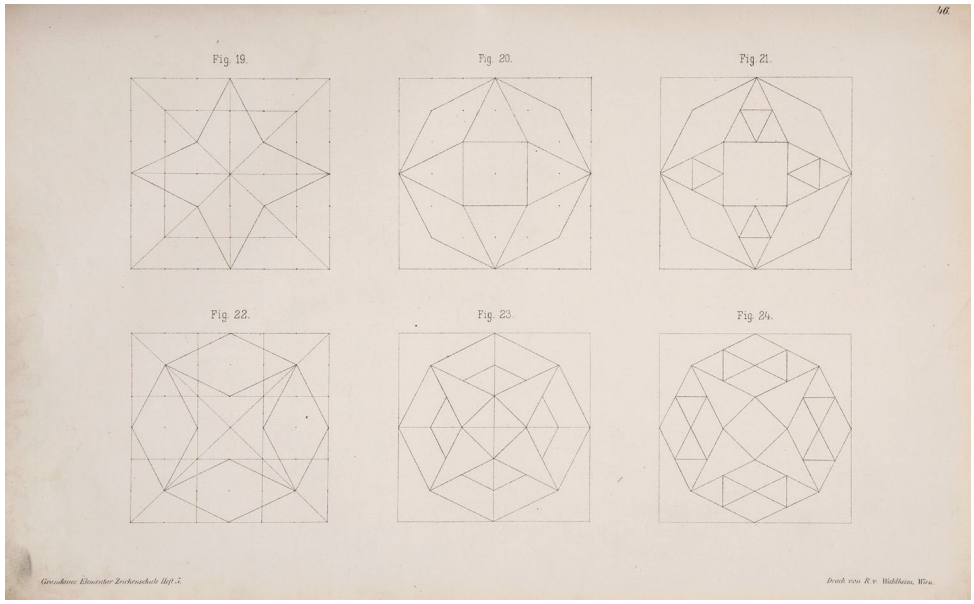


Fig. 3 Plate 46 from *Elementar-Zeichenschule* (Grandauer 1878), MAK – Museum für angewandte Kunst, Wien.

> The language of perception and drawing, which serves it, is a cosmopolitan means of human understanding as much as music. While words and writing are conventional signs invented by humanity and only understood by those to whom their meaning has been explained, the notes of music and their interrelationships and the lines of drawing, in their no less harmonious combinations, are a language in which nature speaks to us directly – a language that can be understood in Philadelphia and Beijing just as well as in Berlin and Paris.[24]

This mathematics-based education taught that geometric shapes are the basis of beautiful form and thus conveyed an aesthetic that sees complex structures as a framework of interrelating forms and their ratios.[25]

Gustav Adolf Lindner also followed these ideas with his proposal to base the 'rational' teaching of drawing at elementary level on the triangle.[26] Lindner, one of the most influential Herbartians in the Habsburg Empire, referred to this as "a method based on the principles of science, namely on mathematics and psychology."[27]

Herbart's aims in this mathematics-based approach to teaching drawing were to reaffirm the world and its order, a world in which ultimately the individual would meekly toe the line. This served the interests of the Neoabsolutist Habsburg Monarchy and corresponded with the reforms of the Ministry of Culture and Education. Teaching drawing, therefore, was not only concerned with fostering artistic and intellectual skills but also with manifesting a particular worldview.[28]

It was therefore possible to compile non-representational compositions out of representational forms. Art thus arose out of the composition of aesthetic forms and was not confined to content. In the words of Robert Zimmermann: "As only forms can absolutely please or displease, art is required in its expressions of the spirit to focus on form, and so in meeting this requirement all art is by necessity *Formkunst.*"[29]

24 Lindner 1871, p. 4: "Die Sprache der Anschauungen und das ihr dienende Zeichnen ist ebenso ein kosmopolitisches Mittel des Menschenverstandes, wie die Musik. Während Worte und Schriftzüge konventionelle Zeichen sind, welche Menschen erfunden haben und welche nur Derjenige versteht, dem ihre Bedeutung erklärt wird: sind die Töne der Musik in ihren gegenseitigen Verhältnissen einerseits und die Striche der Zeichnung in ihren nicht minder harmonischen Combinationen andererseits eine Sprache, in welche die Natur selbst zu uns redet – eine Sprache, die in Philadelphia und Peking ebenso gut verstanden wird, wie in Berlin und Paris."

25 Wagemann 1957, p. 126; Skladny 2009, p. 124.

26 Lindner 1871, pp. 1–16.

27 Lindner 1871, p. 15: "[…] ein Verfahren, welches auf den Prinzipien der Wissenschaft, nämlich auf jenen der Mathematik und der Psychologie beruht."

28 Wagemann 1957, pp. 140–141; Stachel 1999a, p. 274.

29 Zimmermann 1865, vol. 2, p. 138, §283: "Da das absolut Wohlgefällige und Missfällige nur Formen sind, so ist alle Kunstforderung an die Erscheinung des Geistes auf die Formen der Erscheinung gerichtet, alle Kunst als Ausführung dieser Forderung notwendig Formkunst."

Fig. 4 Josef Hoffmann, vase with handles and glass insert, 1904/05, galvanized and perforated iron, painted white, 11.8 x 3.7 x 3.7 cm; execution: Wiener Werkstätte, Ernst Ploil collection.

Formkunst differed from the concept of abstraction as – strictly speaking – abstraction entailed the simplification of an object's appearance. This means that the artist gradually pared down the image of a house, for instance, usually in many stages, to produce simplified forms. The development towards abstraction reflected a move towards both a culmination and a conclusion. *Formkunst*, furthermore, was not a development towards a higher plane, nor a sudden awakening, but a means of communication.

Formkunst does not necessarily move towards abstraction but, in fact, works in the opposite direction: it starts with the form, i.e. the non-objective, but can, at any time, be manifested in the representational image – although this is not necessarily the case. The basic structures of *Formkunst* can be generally taught and learned. Non-objective art is therefore not the invention of a modern artist genius but the outcome of an educational approach in the mid-nineteenth century. Art or, more precisely, drawing lessons at the Habsburg Empire's schools were 'only' a means of communication and are rooted in historical tradition. The geometry in Czech Cubism and the all-embracing design of the Wiener Werkstätte also aimed to shape an aesthetic sensibility (»*Figs. 4, 5*).

Fig. 5 Pavel Janák, crystal-shaped box, 1911 (copy by Ján Terray, 2001), stoneware, height 9 cm, execution: Graniton, Rydl & Thon Svijany Podolí commissioned by Artěl, The Museum of Decorative Arts in Prague.

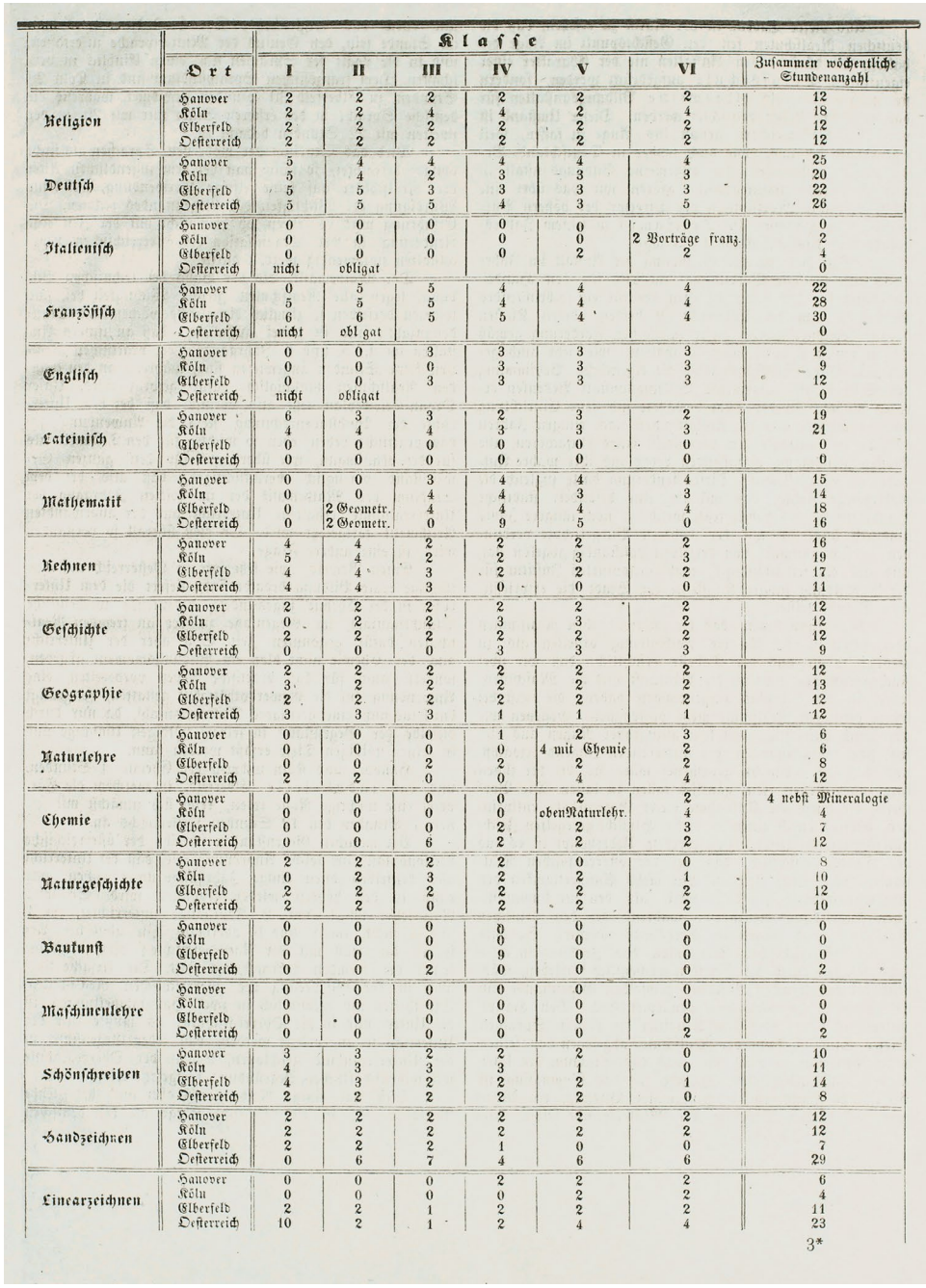
The language of forms, conveying relations based on basic geometric shapes, is completely in line with the concept behind educating people and the communication of a comprehensible worldview.

A new and as yet unestablished type of school, the pioneering *Realschulen* in the Habsburg Empire were subject to frequent scrutiny. As a way of assessing the situation in Austria and considering possibilities for improvement, comparisons were drawn with schools in other countries, such as Prussia. One of the critical observers was Joseph-Adolf Auspitz, head of the *k. k. Oberrealschule* in Brünn (Brno). In 1856, Auspitz compared three *Realschulen* in Prussia – Hannover, Cologne, and Elberfeld – with the Austrian system. As in Austria, at the time they were all six-year schools, the lessons in the curriculum distributed across the classes. The comparison revealed the importance that the Habsburg Empire's *Realschulen* attached to manual drawing skills and to training an understanding of mathematical, abstract spatial constructions (» *Fig. 6*).

Joseph-Adolf Auspitz[30] noted:

> In general, it can be seen from the table that at Austrian Realschulen a great deal more time and attention is devoted to scientific subjects than humanist education while at the German Realschulen the opposite situation exists. There are fifty-two drawing lessons a week through all six years at Austrian

30 Cf. Klee 2017, pp. 46–49.



	Ort	Klasse I	II	III	IV	V	VI	Zusammen wöchentliche Stundenanzahl
Religion	Hanover	2	2	2	2	2	2	12
	Köln	2	2	4	4	2	4	18
	Elberfeld	2	2	2	2	2	2	12
	Oesterreich	2	2	2	2	2	2	12
Deutsch	Hanover	5	4	4	4	4	4	25
	Köln	5	4	2	3	3	3	20
	Elberfeld	5	5	3	3	3	3	22
	Oesterreich	5	5	5	4	3	5	26
Italienisch	Hanover	0	0	0	0	0	0	0
	Köln	0	0	0	0	0	2 Vorträge franz.	2
	Elberfeld	0	0	0	0	2	2	4
	Oesterreich	nicht	obligat					0
Französisch	Hanover	0	5	5	4	4	4	22
	Köln	5	5	5	4	4	4	28
	Elberfeld	6	6	5	5	4	4	30
	Oesterreich	nicht	obl gat					0
Englisch	Hanover	0	0	3	3	3	3	12
	Köln	0	0	0	3	3	3	9
	Elberfeld	0	0	3	3	3	3	12
	Oesterreich	nicht	obligat					0
Lateinisch	Hanover	6	3	3	2	3	2	19
	Köln	4	4	4	3	3	3	21
	Elberfeld	0	0	0	0	0	0	0
	Oesterreich	0	0	0	0	0	0	0
Mathematik	Hanover	0	0	3	4	4	4	15
	Köln	0	0	4	4	3	3	14
	Elberfeld	0	2 Geometr.	4	4	4	4	18
	Oesterreich	0	2 Geometr.	0	9	5	0	16
Rechnen	Hanover	4	4	2	2	2	2	16
	Köln	5	4	2	2	3	3	19
	Elberfeld	4	4	3	2	2	2	17
	Oesterreich	4	4	3	0	0	0	11
Geschichte	Hanover	2	2	2	2	2	2	12
	Köln	0	2	2	3	3	2	12
	Elberfeld	2	2	2	2	2	2	12
	Oesterreich	0	0	0	3	3	3	9
Geographie	Hanover	2	2	2	2	2	2	12
	Köln	3	2	2	2	2	2	13
	Elberfeld	2	2	2	2	2	2	12
	Oesterreich	3	3	3	1	1	1	12
Naturlehre	Hanover	0	0	0	1	2	3	6
	Köln	0	0	0	0	4 mit Chemie	2	6
	Elberfeld	0	0	2	2	2	2	8
	Oesterreich	2	2	0	0	4	4	12
Chemie	Hanover	0	0	0	0	2	2	4 nebst Mineralogie
	Köln	0	0	0	0	oben Naturlehr.	4	4
	Elberfeld	0	0	0	2	2	3	7
	Oesterreich	0	0	6	2	2	2	12
Naturgeschichte	Hanover	2	2	2	2	0	0	8
	Köln	0	2	3	2	2	1	10
	Elberfeld	2	2	2	2	2	2	12
	Oesterreich	2	2	0	2	2	2	10
Baukunst	Hanover	0	0	0	0	0	0	0
	Köln	0	0	0	0	0	0	0
	Elberfeld	0	0	0	9	0	0	0
	Oesterreich	0	0	2	0	0	0	2
Maschinenlehre	Hanover	0	0	0	0	0	0	0
	Köln	0	0	0	0	0	0	0
	Elberfeld	0	0	0	0	0	0	0
	Oesterreich	0	0	0	0	0	2	2
Schönschreiben	Hanover	3	3	2	2	2	0	10
	Köln	4	3	3	3	1	0	11
	Elberfeld	4	3	2	2	2	1	14
	Oesterreich	2	2	2	2	2	0	8
Handzeichnen	Hanover	2	2	2	2	2	2	12
	Köln	2	2	2	2	2	2	12
	Elberfeld	2	2	2	1	0	0	7
	Oesterreich	0	6	7	4	6	6	29
Linearzeichnen	Hanover	0	0	0	2	2	2	6
	Köln	0	0	0	0	2	2	4
	Elberfeld	2	2	1	2	2	2	11
	Oesterreich	10	2	1	2	4	4	23

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Fig. 6 Joseph-Adolf Auspitz, Timetable of Austrian Realschulen compared with the timetables of German Realschulen (Auspitz 1857, p. 20).

> Realschulen while at foreign institutions a maximum of eighteen lessons are devoted to the same subject.[31]

The success of the *Realschulen* and their teaching system increased their standing and also brought about change.

Greater attention was given to drawing. The emphasis on geometry in free-hand drawing and geometric drawing is directly related to Herbart's pedagogy and a rational philosophy based on mathematical relations. The ability to represent these relations in drawing should help pupils understand them conceptually. From today's perspective, however, it is still astonishing that free-hand drawing was a mandatory subject needed to progress to the next class. A student who did not demonstrate adequate ability in this subject was not allowed to move up to the next grade.[32] Drawing was therefore not regarded as some special gift, but an acquired, trained skill, a form of communication.

It emerged that the *Realschulen* were not only very popular but also released previously untapped potential. In order to foster this, *Realschulen* were institutionally aligned with the *Gymnasien* or high schools. This went hand in hand with an increase in the number of school years. At the end of 1869, the number of grades at *Realschulen* rose from six to seven and students had the opportunity to take the high school-leaving examination (*matura*). This meant that after secondary vocational schools, students were now eligible for technical colleges.[33]

In 1873, the *Realschulen* success story prompted[34] the Ministry of Culture and Education to introduce the free-hand drawing curriculum to other schools as well.[35] With the exception of the *Obergymnasien*, this subject became mandatory and was required for progression to the next class across the board at elementary, secondary, and vocational schools and was also introduced at teacher training colleges. In order to further professionalize drawing tuition, a four-year curriculum was envisaged for

31 "Ueberhaupt ist es aus der Tabelle ersichtlich, daß bei den österreichischen Realschulen vielmehr Zeit und viel mehr Aufmerksamkeit den Realgegenständen gewidmet wird, als den zur humanistischen Ausbildung dienenden; während bei den deutschen Realschulen das umgekehrte Verhältnis obwaltet. So wird bei den österreichischen Realschulen das Zeichnen in allen sechs Klassen durch 52 Stunden wöchentlich betrieben, während bei den fremden Anstalten demselben Gegenstande nur 18 Stunden in maximum gewidmet sind." Auspitz 1857, pp. 16–21, p. 20.
1874 curriculum for a boys' school with eight grades (by decree of the Minister of Education from May 18, 1874. Z. 6549), Vienna 1874, p. 20.

32 E.g.: Sechster Jahresbericht der n. ö. Landes-Ober-Realschule in St. Pölten, St. Pölten 1869, p. 61.

33 Wögerbauer 1869, p. 75.

34 Walser 1873, p. 92. Cf. Klee 2016.

35 For details of the curricula introduced by the Ministry of Culture and Education see: Ministerium für Cultus und Unterricht 1873.

elementary school drawing teachers[36] and art teachers at other schools had to complete three years of training at a special college.[37]

Consequently, drawing lessons modeled on the *Realschulen* were also introduced at the *Volks- und Bürgerschulen* (elementary and lower secondary schools). Whereas the *Volksschule* provided a six-year broad basic education including drawing, the eight-grade *Bürgerschulen* aimed to provide a higher standard of education. The importance ascribed to free-hand drawing is revealed even in the number of lessons allocated to this subject. While in first grade, the priority was mastering the language of instruction, drawing lessons were seen as extremely important throughout. In the final school year, drawing even became the main subject with the highest number of lessons (» *Fig. 7*).

At the high schools, the *Realgymnasien* and *Gymnasien*, art lessons were also modeled on the successful system of free-hand drawing at the *Realschulen* (although these were still not mandatory at *Gymnasien* in 1873; » *Fig. 8*).

Its importance as a subject is again demonstrated by the number of lessons, which over a period of fifty years almost matched the number of lessons allotted to the language of instruction, the first foreign language, and mathematics. This is documented by a 1905 *Festschrift* (commemorative publication) produced by the first *k. k. Staatsrealschule* in Vienna's second district. As virtually every school grade had four drawing lessons, these would have formed a major part of pupils' schooling.

This is clearly reflected by the *k. k.* monarchy's multiple artistic talents and many influential teachers. By way of example, I should like to cite teachers working in Munich and its environs around 1900. For instance, there was the highly successful school of Anton Ažbe, a *k. k.* Austrian from modern-day Slovenia. Contemporary reports hailed his school as the largest and most famous private art school in Munich and it continued to exist long after Ažbe's death in 1905. Similarly, the *k. k.* Austrian Heinrich Knirr ran a painting school in Munich as well as teaching at its Academy of Fine Arts. He was from Pančevo, the Banat military border, today in Serbia.[38]

Another example is Simon Hollosy, a *k. k.* Hungarian, who taught in Munich after attending Budapest's drawing school through the years 1875–1878. After completing his studies in Munich, Hollosy founded a highly successful school for painters in 1886 and was the spiritus rector of the artist colony in Nagybánya.[39] Then there is Hans von Hayek from Vienna, who ran a painting school in Dachau near Munich and, last but not least, Adolf Hölzel and his school. Hölzel was also a native *k. k.* Austrian and hailed from the town Olomouc in Moravia, today in the Czech Republic.

36 Ministerium für Cultus und Unterricht 1873, pp. 529–531.

37 Ministerium für Cultus und Unterricht 1873. At Hungarian high schools, free-hand drawing had been mandatory since 1871, although, as the drawing school in Budapest was founded that same year, it took sometime before there was sufficient trained staff available. (Iván 1882, p. 56). Cf. Klee 2016, p. 28.

38 Cf. Klee 2017a, pp. 50–51.

39 Sármány-Parsons 1999, p. 14.

1. Gruppirung der Schüler.

Jeder Classe entspricht ein Schuljahr.

2. Stundenausmass.

Unterrichtsgegenstände	Erste Classe 1. Schulj.	Zweite Classe 2. Schulj.	Dritte Classe 3. Schulj.	Vierte Classe 4. Schulj.	Fünfte Classe 5. Schulj.	Sechst. Classe 6. Schulj.	Siebte. Classe 7. Schulj.	Achte Classe 8. Schulj.
Religionslehre	1	1	2	2	2	1	1	1
Unterrichtssprache	12	10	9	9	6	4	4	3
Geographie und Geschichte	—	—	1	2	3	3	3	3
Naturgeschichte	—	—	1	1	3	2	2	2
Naturlehre						2	2	3
Arithmetik	½	4	4	4	4	4	4	4
Geometrie und geom. Zeichnen	—	—	—	—	1	3	3	3
Freihandzeichnen	—	½	½	2	2	4	4	6
Schreiben	—	2	2	2	2	1	1	—
Gesang	½	½	½	½	½	1	1	1
Turnen	½	½	2	2	2	2	2	2
Zahl der wöchentl. Unterrichtsstunden	18	20	23	25	26	27	26	27

3. Bestimmung bezüglich des Gebrauches von Lehrbüchern für Realien.

Besondere zulässig erklärte Lehrbücher für Realien (Geographie, Geschichte, Naturgeschichte und Naturlehre) dürfen erst von der 6. Classe an in Verwendung genommen werden.

Fig. 7 Lehrplan der achtklassigen Bürgerschule für Knaben (Timetable for eight graders (boys) of the Bürgerschule), Wien 1874. The curriculum also applied to eight-grade *Volksschulen*, which should attain the educational goals where possible. Independent *Bürgerschulen* with three grades must follow the curriculum for grades 6, 7, and 8 from the eight-grade *Bürgerschulen* (by decree of the Minister of Education from May 18, 1874. Z. 6549.).

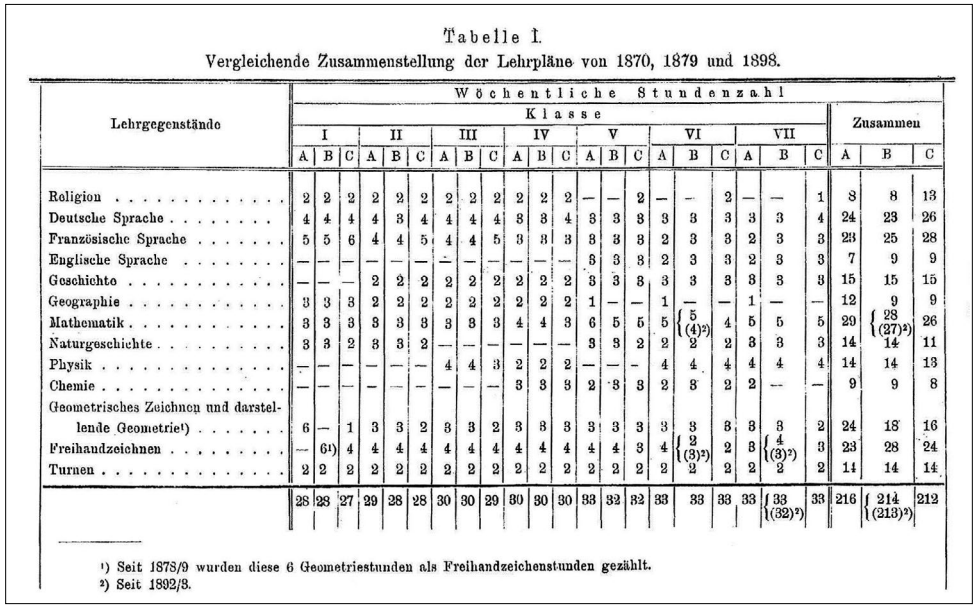

Tabelle I.

Vergleichende Zusammenstellung der Lehrpläne von 1870, 1879 und 1898.

Lehrgegenstände	Wöchentliche Stundenzahl in Klasse I A	I B	I C	II A	II B	II C	III A	III B	III C	IV A	IV B	IV C	V A	V B	V C	VI A	VI B	VI C	VII A	VII B	VII C	Zusammen A	Zusammen B	Zusammen C
Religion	2	2	2	2	2	2	2	2	2	2	2	2	—	—	2	—	—	2	—	—	1	8	8	13
Deutsche Sprache	4	4	4	4	3	4	4	4	4	3	3	4	3	3	3	3	3	3	3	3	4	24	23	26
Französische Sprache	5	5	6	4	4	5	4	4	5	3	3	3	3	3	3	2	3	3	2	3	3	23	25	28
Englische Sprache	—	—	—	—	—	—	—	—	—	—	—	—	3	3	3	2	3	3	2	3	3	7	9	9
Geschichte	—	—	—	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	15	15	15
Geographie	3	3	3	2	2	2	2	2	2	2	2	2	1	—	—	1	—	—	1	—	—	12	9	9
Mathematik	3	3	3	3	3	3	3	3	3	4	4	3	6	5	5	5	5 (4)[2]	4	5	5	5	29	28 (27)[2]	26
Naturgeschichte	3	3	2	3	3	2	—	—	—	—	—	—	3	3	2	2	2	2	3	3	3	14	14	11
Physik	—	—	—	—	—	—	4	4	3	2	2	2	—	—	—	4	4	4	4	4	4	14	14	13
Chemie	—	—	—	—	—	—	—	—	—	3	3	3	2	3	3	2	3	2	2	—	—	9	9	8
Geometrisches Zeichnen und darstellende Geometrie[1]	6	—	1	3	3	2	3	3	2	3	3	3	3	3	3	3	3	3	3	3	2	24	18	16
Freihandzeichnen	—	6[1]	4	4	4	4	4	4	4	4	4	4	4	4	3	4	2 (3)[2]	2	3	4 (3)[2]	3	23	28	24
Turnen	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	14	14	14
	28	28	27	29	28	28	30	30	29	30	30	30	33	32	32	33	33	33	33	33 (32)[2]	33	216	214 (213)[2]	212

[1]) Seit 1878/9 wurden diese 6 Geometriestunden als Freihandzeichenstunden gezählt.
[2]) Seit 1892/3.

Fig. 8 Comparative compilation of the curricula from 1870, 1879 and 1898 (Kaller 1905).

This high density of teachers from the Austro-Hungarian Monarchy[40] and their success is hardly surprising considering the progressive approach to teaching drawing in the Habsburg Empire, unique in its training methods and intensity.[41] This pedagogy that placed an emphasis on formal questions and exercises can also provide the key to explaining and understanding the Ažbe School's "Kugelprinzip" (principle of the sphere) and its theory of form.[42] It therefore comes as no surprise that both Ažbe and Hölzel ultimately opened up avenues to their students that could lead them to an abstract pictorial approach. This occurred in a similar fashion and at the same time as Cézanne's approach to painting, often seen as the source for a new art based on form and for Cubism in particular. This artistic development cannot be explained through style alone with reference to artistic contacts and correlations (Jugendstil, Fauvism, Cubism). It also arose from the teaching of drawing that was a central part of education in the Habsburg Empire. In this way, the educational system of the imperial-and-royal monarchy had a significant influence, both directly and indirectly, on classic modern art and on art in the years after 1900.[43]

40 Gabriel von Hackl, Anton Hermann Ritter von Stadler, Director of Munich's Academy of Art, Robert Poetzelberger and his stepbrother Leo Putz all deserve a mention here as well.
41 Husslein-Arco/Klee 2016.
42 Ambrozić 1988, p. 97.
43 Cf. Klee 2017a, p. 51.

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