

Contributions to
A History of Photography in Austria

Edited by Monika Faber
for Photoinstitut Bonartes · Vienna
and Walter Moser
for the Photographic Collection of the Albertina · Vienna

Volume 11

Maren Gröning (ed.)
In cooperation with Ulrike Matzer

Frame and Focus
Photography as a Schooling Issue



Photoinstitut Bonartes · Vienna
Albertina · Vienna
Fotohof *edition* · Salzburg

Contents

11	Maren Gröning Introduction	156	Marija Tonković Izidor Kršnjavi and the Progress of Photography toward Modernity in Late-Nineteenth-Century Croatia
28	Ulrike Matzer “Le modèle tout complet”—Vienna’s Graphische Lehr- und Versuchsanstalt as a Study Center for Visual Communication	169	Anne McCauley Clarence H. White: Progressive Pedagogy and the Teaching of Art Photography in America
57	Julia Blume The Photomechanical Institute in Leipzig 1893–1914	196	Ann Thomas A Tale of Two Schools: The New School for Social Research and the Photo League 1934–1955
80	Michael R. Peres Photography as Science and Art at the Rochester Institute of Technology	214	John Fleetwood, Christine Frisinghelli, Walter Seidl The Market Photo Workshop, Johannesburg
98	Klaus Hentschel (Scientific) Photography as a Research-Enabling Technology— Not a Discipline	241	Alfred Holzbrecher Photography in (Extra-)Academic Educational Work
123	André Gunthert The “Conversational Image”: New Utilizations of Digital Photography	263	Authors’ Biographies
140	Rudolf Scheutle Georg Heinrich Emmerich and the Founding Years of the Lehr- und Versuchsanstalt für Photographie in Munich	268	Picture Credits
		269	Acknowledgments

Introduction

“Photography as a Schooling Issue”?

The idea for the workshop “Photography as a Schooling Issue,” whose proceedings are published here, emerged from a three-year research project on Josef Maria Eder (1855–1944), the internationally renowned photochemist and pioneer in the historiography of photography, which was subsidized by the Austrian Science Fund (FWF).¹

Today, Eder is widely regarded as a typical, not to say paradigmatic personification of nineteenth-century photographic culture. He is frequently associated with “positivist”² and/or “technicist”³ interpretations which unquestionably dominated the medium at that time. The main watersheds of this development are seen, on the one hand, in the advent of a markedly artistic, “pictorialist” movement around 1900 and, on the other, in critical reflection on the social consequences of photography as a “mass medium” that began to emerge in the 1920s, if not

1 See Maren Gröning, Ulrike Matzer, “Josef Maria Eder (1855–1944). Eine fotografiehistorische Monografie. Ein Forschungsprojekt an der Albertina Wien,” *Rundbrief Fotografie. Analoge und digitale Bildmedien in Archiven und Sammlungen*, vol. 16, 2009, no. 3 [N. F. 63]: 12–17.

2 See Herta Wolf, “Positivismus, Historismus, Photographie,” *Fotogeschichte*, vol. 17, 1997, issue 63: 31–44.

3 Timm Starl, “Bilderatlas und Handbuch. Zu einigen Aspekten der fotogeschichtlichen Darstellung bei Josef Maria Eder und Hermann Krone,” in Wolfgang Hesse, Timm Starl, eds., *Der Photopionier Hermann Krone—Photographie und Apparatur. Bildkultur und Phototechnik im 19. Jahrhundert* (Marburg: Jonas, 1998), 215–224.

earlier.⁴ Meanwhile, its creative potential in particular appears to have been generally acknowledged and indeed favored—above all retrospectively—when one considers its growing position on the art market and in museums and its new digital incarnation that now insistently promises almost unlimited creative potential. Additionally, the Internet brings the possibility of almost global exchange, with the effect that the problem of photography’s communicative competence, its “social use” (Pierre Bourdieu), is once again making its presence felt, in some cases quite drastically.⁵ A revision of existing material and material retrieved in the course of our project has meanwhile enabled us to see things from a perspective from which Josef Maria Eder’s message in terms of the history of photography does not appear quite as obviously obsolete—inasmuch as one wants to talk about the obsolescence of any given view of a thing when referring back to a “linear” faith in progress, which is in any case no longer uncontested today. Nonetheless, our emphasis is above all on Eder’s systematic advocacy of photography lessons, of an explicitly educational use of the medium. What is more, a number of his essays gain a certain depth in this respect that is in many cases lacking in his other writings (first and foremost in his most frequently quoted *Geschichte der Fotografie*). In addition to presenting the results of our research project, the aim of the workshop was to explore the possibilities of a comparison with problems of contemporary photography discussions. It must be said in advance that our approach to Eder should not be misinterpreted as providing the basis for deriving a thoroughgoing theory of pedagogy or school teaching. This would probably imply overestimating Eder’s

4 As we know, it was above all the Frankfurt Institut für Sozialforschung that authored the first trailblazing studies. For Gisèle Freund it was to begin with the increasing production of portraits thanks to photography that heralded a fundamentally changed culture of representation soon after its invention. In later versions of her dissertation, however, Freund also focused increasingly on the incorporation of photographs in the daily press, which led to a restructuring of the public sphere after 1900. Walter Benjamin’s essay on the demystification of the concept of art brought about by photography and technical reproduction is arguably still one of the most read treatises on the theory and history of photography.

5 The interests complement each other here in certain respects, at the same time clashing where, for example, photography as a discrete subject within the institutional framework of academic and art historical studies fails to achieve any real satisfaction at the moment of its fulfilment following a toilsome period of demanding this status. Exemplary for the turnaround: Douglas Crimp, “Fotografie am Ende des Modernismus,” in id., *Über die Ruinen des Museums* (Dresden, Basel: Verlag der Kunst, 1996), 22–51.

achievements in this context. Based on the description of the way in which he practically ordered “his” concept, the idea is, at least loosely, to provide food for discussion, question some habits of perception, and consider new hypotheses.

It is commonly known that Eder’s “work” not only comprises published writings (including reports on his photochemical experiments) but that he was also an ambitious and talented organizer who invested great energy in founding (1888) and running (up to 1923) an institution that continues to exist today as a state-operated vocational school in Vienna known as the “Höhere Graphische Bundes-Lehr- und Versuchsanstalt.” Originally centered wholly around photography, a department for book printing and illustration was added not ten years after its foundation, in 1897, to cater for the fact that the market for printed images had been growing consistently since the 1880s as a result of the ongoing development of photomechanical reproduction techniques for the high-speed printing press. At least since the Lumière brothers screened their films in Vienna in 1896, initially on the premises of Eder’s school, people here also began to discuss the elements of film production so that the institution, already under Eder’s control, comprised a field that can be described today as the classical range of “new” media. Meanwhile, 1,300 budding professionals study and learn there, instructed by some one hundred and ten permanent teachers, with temporary teaching staff recruited from the ranks of practitioners—a structure already in place when the school was founded. Its current outstanding achievements are in the realm of highly specialized printing processes (e.g. for banknote and security prints) and “multimedia” applications (for example for simulating eye operations). The technical orientation, then, has certainly been retained. One substantial difference to the old program, though, is that courses for auditors with no professional ambitions are no longer held today; back then, of course, attendees were required to pay a hefty surcharge on the normal course fees. Students no longer have to pay tuition fees at the “Graphische” today. Instead, candidates have to pass pretty strict aptitude tests in three of the four departments that exist today (photography, graphic design, multimedia). For the “Print and Media” department, as for “normal” Austrian vocational schools, it is sufficient to have attended primary school, although this is categorically linked to a trade apprenticeship.

“It was and, in some cases, still is a widely held view,” opined Josef Maria Eder in 1886, “that learning photography is a very easy, simple

affair, indeed that it is merely a subordinate craft involving a few clean glass plates and a silver bath; if the layman has but a modicum of taste, he will be able to advance himself after some instruction.”⁶ In so saying, Eder was in some respects at loggerheads with eminent authorities in the history of photography such as the French astronomer François Arago (1786–1853) or the American industrial magnate George Eastman (1854–1932), whose rhetoric concerning the future often culminated in the notion that photographs could be made by anyone anywhere in the most trivial manner.⁷ Not only did this concern the initial difficulties—that had arisen contrary to widely raised expectations—concerning the process that, in the beginning, by no means worked at the push of a button and which required not only tremendous precision but also great instinct and/or experience in order to achieve even mediocre results. Nearer to Eder’s generation, a good deal of systematic effort was required to avoid the “teething troubles” such as optical image defects with lenses or severe distortions in gray tone reproduction of different colors in the photochemical process. This scientific work combined with the increasingly important role of photography in the late nineteenth century as a multi-discipline technology for top-level scientific research were without doubt among the factors which induced Eder to emphasize the intellectual status of the profession. Although not this alone, for when he referred to a “subordinate craft,” he did not necessarily mean the technical dimension of photography per se. Rather, it could play an educational role, too: Eder found it important, for example, for students to prepare their own photographic papers instead of relying on prefabricated formats from the market, so that they would not only become aware

6 Josef Maria Eder, “Die Photographie als Schuldisciplin,” *Centralblatt für das gewerbliche Unterrichtswesen in Oesterreich*, supplement, vol. 4, 1886: 17–21, here 17.

7 « Le daguerréotype ne comporte pas une seule manipulation qui ne soit à la portée de tout le monde; il ne suppose aucune connaissance du dessin; il exige aucune dextérité manuelle. En se conformant de point en point à des prescriptions très-simples et très-peu nombreuses, il n'est personne qui ne doive réussir certainement et aussi bien que M. Daguerre lui-même » said François Arago, when he convinced the French parliament in 1839 to circumvent the usual patent laws and instead to proclaim the process—which seemed too primitive, as it were—a gift of the Grande Nation to the whole world for the price of an annuity to Louis Jacques Mandé Daguerre. See François Arago, *Rapport de M. Arago sur le daguerréotype, lu à la séance de la Chambre des Députés, le 3 juillet 1839 et à l'Académie des Sciences, séance du 19 août* (Paris: Bachelier, 1839). Kodak’s famous advertising slogan is well known.

of the difference to various “mechanical” processes but also, inevitably, of the creative scope involved.⁸

Stressing the procedural “how” of a photograph over its final result, breaking down the rigidity of an image with all of its magical, projective connotations, was certainly a matter close to Eder’s heart as an ardent “technician.” Yet he was fully capable of seeing the many different dimensions of the apparatus in terms of its application. His essentially natural willingness to do so was demonstrated, among other things, by his comment on the exhibition in Vienna in 1891 that was a beacon for the Austrian and international fine-art photography movement. Whereas his co-author Jacob von Falke (1825–1897) doggedly sought to conjure up the artistic character—be it “Chinese,” be it “impressionist”—of the photographs on show by insisting on an irreconcilable antithesis between technology and art, Eder’s explanation of the “connection between artistic photography and photographic technology” was comprehensible, if terse.⁹ Even today, this link may appear generally marginalized out of an abhorrence of (intellectual) control such as school or discipline. As the research group headed by Pierre Bourdieu on behalf of the French branch of Eastman Kodak (Kodak-Pathé) already observed in the 1960s, it is not only the idea of “amateurs” to evade the rituals of an everyday culture perceived as banal (and localized primarily in the family) and to move “from a naive practice to a scholarly practice” that is repeatedly reorganizing itself spontaneously.¹⁰ Instead it is precisely the knowledge and the

8 Precision, of course, remained a requirement immanent in the medium that was, incidentally, not always immediately acknowledged even in the industry. Fritz Wentzel recalls the trouble he had convincing leading entrepreneurs of the necessity for scrupulous cleanliness at work; see Fritz Wentzel, *Memoirs of a Photochemist*, ed. Louis Walton Siple (Philadelphia: American Museum of Photography, 1960), IX. On the other hand, this allowed the medium to turn out to be an essentially open one, not least in terms of its geometrical optics: “Actually there must be one more degree of freedom with which to hold the focal length. This is because a lens can be constructed to any desired focal length by merely scaling all the linear dimensions; consequently, a degree of freedom is really the ratio of one variable parameter to another, so there must be one more available parameter than the number of aberrations to be corrected.” Rudolf Kingslake, *A History of the Photographic Lens* (San Diego a.o.: Academic Press, 1989), 4.

9 See the portfolio *Amateur-Kunst. 37 Photogravuren nach Naturaufnahmen . . .* (Vienna: Verlag der Gesellschaft für vervielfältigende Kunst, 1891).

10 Robert Castel, Dominique Schnapper, “Aesthetic Ambitions and Social Aspirations,” in Pierre Bourdieu et al., *Photography, A Middle-brow Art* (Paris: Les Éditions de Minuit, 1965), trans. Shaun Whiteside (Cambridge: Polity Press, 1990), 104.—Countless courses

exploitation of this technology that are at the center of attention in many of these associations, even if their members hail above all from the lower classes.¹¹ Because the number of such initiatives is legion, because they are often relatively conservative and/or too studious, too smooth or, on the other hand, abruptly sensation-seeking in their often overzealous relationship to technology, one is not always keen to come into contact with them from an academic standpoint.¹² Simply because they do not create an output (visual or conceptual) that is readily coherent (i.e., from the point of view of outsiders), amateur photographers tend to be underestimated, if not ridiculed in their emancipatory endeavors.¹³ This may, as suggested, have its reasons in isolated professorial and general professional circles, whose educational relevance is, however, debatable.

What makes Josef Maria Eder's approach remarkable in this context is, on the one hand, that—amidst the pictorialist movements of fine-art photography of his day, inasmuch as they preached a kind of renaissance of genius-based aesthetic dogmas—he insisted that photography should indeed be seen primarily as a rationally constructed process. In this respect, he certainly showed himself to be a modernist.¹⁴ On the other hand, however, for him the rationality of the method by no means precluded the possibility of its failure, nor indeed that this itself

(not least in the workshop format) are available on the Internet, currently the go-to medium for alternative social experience: "Not only are there myriad workshops to choose from, but many types, formats, aesthetics, styles, genres, and payment plans." See Christopher Burnett, "Photographic Workshops: A Changing Educational Practice," in *Focal Encyclopedia of Photography: Digital Imaging, Theory and Applications, History, and Science*, 4th edition, ed. Michael R. Peres (Amsterdam a.o.: Elsevier, Focal Press 2007), CD-ROM, 221. Printed advice literature is also still amply published.

- 11 Bourdieu et al., *Photography, A Middle-brow Art*, 114–115.
- 12 Their key role is still rather rarely considered on an objective basis; see the seminal essay by Christine Frisinghelli, "Fotos die zu Bildern werden. Amateurfotografie in Österreich nach 1945," in *Verein zur Erarbeitung der Geschichte der Fotografie in Österreich*, ed., *Geschichte der Fotografie in Österreich*, vol. 1 (Bad Ischl, 1983), 463–474.
- 13 See, for instance, Clément Chéroux, *Fautografie. Petite histoire de l'erreux photographique* (Paris: Éditions Yellow Now, 2002).
- 14 "So far as one can see, science has never had any trouble representing itself as 'modern,' nor has it ever stood in need of doing so. The modernity of modern society is being discussed at length in sociology. And today, one still asks what modern art is. Yet as regards the field of science, its modernity does not even seem worth questioning, let alone an argument. Its modernity seems to go without saying." Niklas Luhmann, *Die Wissenschaft der Gesellschaft* (1990), 3rd paperback ed. (Frankfurt/Main: Suhrkamp, 1998), 702 (trans. Richard Watts).

constituted a vivid learning experience. In his manifesto of 1886 already quoted, whose title we borrowed for our workshop, he explains: "The author has, incidentally, in the course of his teaching practice become convinced that photography has a general educational effect particularly on those young people little engaged in observational natural sciences. Because all photographic methods can only return good results if the causal nexus is constantly observed and all sources of error are circumspectly heeded, the student learns to work thinkingly."¹⁵ By didactically pulling apart the photographic "act" (as Philippe Dubois called it)¹⁶ into sequential steps, attention is moreover shifted away from the seemingly all-important fact that photographs are projections. Which of course they are, albeit only in one respect. Otherwise they are surrounded by an extremely diverse set of instruments that is highly variable and equally possessed of fascinating uncertainties: color reproduction, resolution or focus, and phenomena of discontinuity in an attempt at linear intensification. The lens system in particular, in view of its habitual coincidence with perceptual psychological and physiological "mechanisms," presents a substantial array of questions. The transition from "archaic" analogue (photochemical) to "modern" digital (electronic) methods makes no substantive difference in this context. By dint of the simple fact that the everyday experience of photography has meanwhile become so profoundly dominated by science and technology that one no longer even notices its constructive aspects, one may nevertheless describe Eder's idea of using it for educational purposes as intrinsically sensible. This is not about condemning or glorifying its "instrumental reason" (Max Horkheimer/Theodor W. Adorno), but rather, for example, about simply understanding the instructions provided when one buys an ordinary camera,¹⁷ the distance to social interaction which the medium permits by

15 Eder, "Die Photographie als Schuldisciplin," 17–21.

16 Philippe Dubois, *L'Acte photographique et autres essais* (Bruxelles: Éditions Labor 1990).

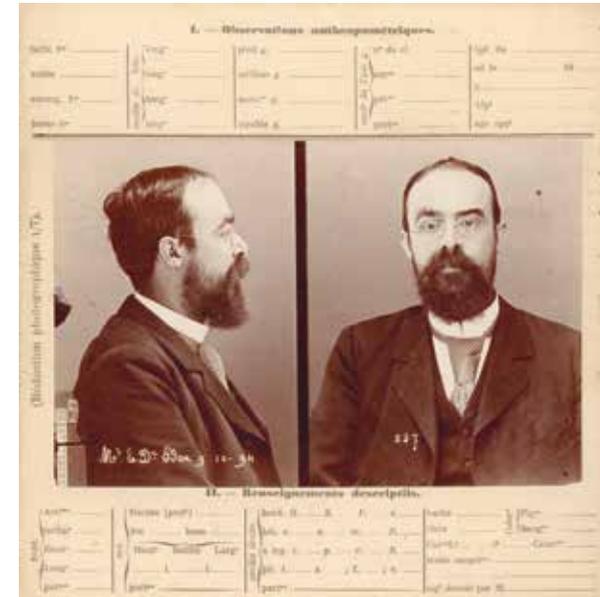
17 If, of course, one proceeds on the basis of a totally one-sided theory of learning in which pupils have to develop everything from within themselves, the question as to the mode of communication is no longer a serious one anyway. This fear of adopting or passing on something "inauthentic," as it were, is widespread above all in the art world; see the quotation from Paul Anderson "[T]echnique cannot be taught any more than can any other subject" at the beginning of Anne McCauley's essay in this book. The stigmatization of technology in particular as a trivial or vulgar complement to a mass "culture industry," in turn, often retreats to the view of a concept of culture that is as eccentric as possible, a stance that tends to give up when prompted to conceive it in democratic terms.

Ulrike Matzer

“Le modèle tout complet”—Vienna’s Graphische Lehr- und Versuchsanstalt as a Study Center for Visual Communication

It was above all a context of educational policy in which Josef Maria Eder (1855–1944) (fig. 1), known primarily as a photochemist and photohistorian, made a career for himself by organizing the system of photographic teaching and laboratory research in Austria.¹ Conversely, it was thanks to his efforts and the influence of the school founded by him that turn-of-the-century Vienna became a center of scientific and artistic photography and modern reproduction technologies, whose commercial and cultural significance had grown exponentially towards the end of the nineteenth century as a result of constant diversification. In addition to his *Geschichte der Photographie*, which is still consulted today and remains valid at least as a documentary source, the Graphische Lehr- und Versuchsanstalt was the greatest achievement of Eder’s life. His time as director of the school (1888–1923) overlaps with his most productive fifty years (1875–1925), and his most pronounced and at the same time most controversial statements revolve around the institution which he established, the “k. k. Lehr- und Versuchsanstalt für Photographie und Reproduktionsverfahren,” as it was initially known; it was not until 1897 that it was renamed “Graphische Lehr- und Versuchsanstalt” in the course of implementing a department for book printing and illustration, with “Die Graphische” meanwhile having become a household name.

¹ This essay is based on the outcome of the Austrian Science Fund (FWF) research project on Josef Maria Eder carried out together with Maren Gröning from 2009 to 2012.



1 · Atelier Alphonse Bertillon, *Josef Maria Eder, in profile and en face police record photographs, October 9, 1894, albumin print, on register card*

This commitment testifies to the extent to which Eder saw photography as a social agenda. At least, he took the relevance of the new media for society and the necessity of using them in a reflective manner very seriously—as a veritably paradigmatic representative of the liberal middle-class with their enthusiasm for progress and education, who had also dominated the political discourse in Austria since the 1860s.

In German-language art and cultural criticism, the term “school discipline” in the title of Josef Maria Eder’s signature essay from 1886 (to which we will return) and indeed “discipline” in general not only demarcate an extremely broad semantic field that was at that time replete with discussions on how to encourage or inhibit creative work by means of certain systematic, methodical instructions—a tradition of thinking possibly rooted in the Romantic period according to which teaching was fundamentally incompatible with the development of creative talent. What is more, the expression “school discipline” raises the question of disciplinary status as a discrete specialist or particular science generally embedded in an academic environment. The foundation of the

"Graphische," however, is situated not in the realm of classical university but rather in the context of the history of vocational schools and the applied arts reform. In this respect it is still a perfect example of the pioneering educational reforms in Austria after the mid-nineteenth century and above all as of the 1870s.

Eder's institution was, on the one hand, styled in a sense on even earlier foreign models such as the Conservatoire des arts et métiers in Paris, an encyclopedic training facility founded in 1794 with the aim of improving national industry and combining a museum of history and technology in the spirit of vivid demonstration with evening lectures.² At the same time, as a "state trade school" ("Staats-Gewerbeschule") the "Graphische" was a special variation. State commitment to applied arts and thus to art education is regarded as being unique to Europe; state trade schools were initiated in 1875 in the course of a reorganization of the vocational school system aimed at centralizing, systematizing, and not least assuring the quality of teaching, derived from the concept of early-nineteenth-century polytechnics.³ In the course of its conversion into a university around 1870, the aim of the Polytechnic Institute founded in Vienna in 1815 (the future "Technische Hochschule" or "Technische Universität" [University of Technology]) was to devote itself primarily to the "pure sciences"; likewise, the "Realschulen" (a type of secondary schools with an emphasis on vocational training) undergoing reorganization at the same time no longer felt it their mission to train students for particular branches of industry.⁴ The void to which this gave rise between "higher" technical scientific training and vocational formation for the "lower" trades was to be filled by technical commercial establishments.⁵

2 By installing chairs of engineering as of 1819, the school embarked on its epoch-making development. The first lectures on photography were given there in 1891.

3 See Josef Schermaier, *Wirtschaftsförderung durch zentralstaatliche Bildungsmaßnahmen im Vielvölkerstaat Österreich. Zentralanstalten und Staatsgewerbeschulen. Ein Beitrag zur Geschichte des höheren technischen, gewerblichen und kunstgewerblichen Unterrichts in Österreich* (Frankfurt/Main a.o.: Peter Lang, 1999).

4 Rudolf Freiherr von Klimburg, *Die Entwicklung des gewerblichen Unterrichtswesens in Oesterreich* (Tübingen, Freiburg/Breisgau, Leipzig: Mohr, 1900), 31 ff.

5 See Rudolf Stichweh, *Zur Entstehung des modernen Systems wissenschaftlicher Disziplinen. Physik in Deutschland 1740–1890* (Frankfurt/Main: Suhrkamp, 1984), 465 ff.

A Central Facility for Photographic Research and Teaching

Having just qualified as a university lecturer, Josef Maria Eder began teaching chemistry and physics in 1881 at the Vienna State Trade School, with its emphasis on construction and mechanical engineering, and had already developed very firm ideas of how photography and photomechanical reproduction technologies should be taught. At the age of just twenty-six, he devised detailed statutes for a "Section für Photographie und Reproductions-Verfahren" (Section for Photography and Reproduction Techniques)⁶ at the Technologische Gewerbemuseum (Museum of Applied Technology) founded in 1879, and was designated to head the section by Director Wilhelm Exner.⁷ Because the reorganization of the entire field of vocational education was at that time being given fresh impetus towards specific ends—with its agendas coming under the Ministry of Education at the beginning of 1882—Eder was, however, in the end entrusted with the task of activating a dedicated, self-contained central research and educational facility in this field by the highest levels of government.

By elaborating the final form of this structure and its curriculum, Josef Maria Eder was instrumental in promoting the long-standing efforts of the Vienna Photographic Society—one of the largest and oldest liberally and innovatively minded representative bodies in Europe at that time, of which he had been a member since 1876 and in which he had been recognized and distinguished as an outstanding young expert at an early stage.⁸ The Society's spokesmen had been demanding more active

6 N. N. [Josef Maria Eder], "Statuten der Section für Photographie und andere Reproductions-Verfahren am Technologischen Gewerbemuseum," *Photographische Correspondenz*, vol. 18, 1881: 114–117.

7 As Exner clarified years later. See N. N. [Wilhelm Exner], "Geschichte der Gründung der Graphischen Lehr- und Versuchsanstalt in Wien," *Photographische Rundschau und Mitteilungen*, vol. 65, 1928: 195–196.—Exner saw his museum as a complex of technical research institutes for the main branches of trade and industry in a logical combination with collections, libraries, laboratories, and workshops. See Ingo Andrichowicz, *Technischer Fortschritt und wirtschaftliche Freiheit. Wilhelm Franz Exner 1840–1931. Eine österreichische Karriere* (Vienna: Österreichischer Gewerbeverein, 1999), 73.

8 Michael Ponstingl, ed., *Die Explosion der Bilderwelt. Die Photographische Gesellschaft in Wien 1861–1945*, Beiträge zur Geschichte der Fotografie in Österreich, vol. 6 (Vienna: Brandstätter, 2011). On the genesis of the "Graphische" in detail *ibid.*: Maren Gröning, "Die Photographische Gesellschaft als Motor für die Gründung der k. k. Lehr- und Versuchsanstalt für Photographie und Reproductionsverfahren," 167–175.

promotion of research and organized higher-level training since the 1870s. Above all thanks to the initiatives of the then President, the chemist, publicist and publisher of the Society's magazine *Photographische Correspondenz*, Emil Hornig, demands to "substitute empirical with exact science"⁹ were at least to some extent beginning to take on concrete form. Hornig self-published memoranda on the necessity of a test laboratory for photography in Vienna¹⁰ in 1879 and 1880, thereby at least succeeding in obtaining public subsidies. The costly photographic and spectrographic equipment purchased with these funds was made available to Eder for his laboratory at the State Trade School. Having a talent for organization and communication, Eder never tired of presenting his project in the following years—albeit with a crucial shift of emphasis from the research laboratory previously promoted to an educational establishment. In the aforementioned statutes elaborated in 1881, the school forms one of four sections, with "evening and special courses" set up for adult education for practitioners and advanced lessons for the interested public. The establishment of a "photographic school and research institute," finally, was propagated by Eder in his 1885 lecture *Ueber die Einführung der Photographie an Kunstschulen und die Errichtung einer photographischen Versuchsanstalt in Wien (On the Introduction of Photography at Art Schools and the Establishment of a Photographic Research Laboratory in Vienna)*¹¹—an appeal addressed to a specialist audience at the Austrian Museum of Art and Industry. In 1867, an Arts and Crafts College constituting the model of a state trade school *avant la lettre* had been added to the museum founded in 1863 as the first museum of applied arts on the European continent after the style of London's South Kensington Museum. Immediately after its opening, a number of auxiliary units, as they were called, were installed, including a plaster casting unit and a photographic studio for producing reproductions as teaching materials for the study of applied arts and for drawing lessons at schools.¹² Eder's statement now is

9 Emil Hornig, *Memorandum über die Bedeutung und Nothwendigkeit eines Versuchsateliers für Photographie in Wien* (Vienna, 1879).

10 Hornig, *Memorandum*; Emil Hornig, *Vorschläge bezüglich der Massnahmen zur Förderung der Photographie und ihrer Anwendungen. Ein Nachtrag zu dem Memorandum [...]* (Vienna, 1880).

11 Josef Maria Eder, *Ueber die Einführung der Photographie an Kunstschulen und die Errichtung einer photographischen Versuchsanstalt in Wien*, offprint (Vienna, 1885).

12 See Klimburg, *Die Entwicklung des gewerblichen Unterrichtswesens in Oesterreich*, 22–23.

far more precise and succinct than Hornig's: with some diplomatic finesse, he qualifies photography as a "discrete branch of industry and science"—a remarkable postulate—only to present it, rather paradoxically, with the aid of countless applications as an "auxiliary science and complementary skill intimately related to art and trade" for schools in relevant fields. This evidently struck the nerve of the social and educational reform movement of the day that had resulted in the above-mentioned shift of trade school agendas from the Ministry of Trade to the Ministry of Education in 1882. The latter meant that training limited to immediate utility was broadened in favor of a formation of specialized theory and professional practice enriched with generalist subjects. Accordingly, Eder also uses the "general educational effect" of photography as an argument, with the aid of which the student, "rarely engaged in observational natural sciences particularly at art schools," would learn to "observe" and "avoid mistakes." With reference to existing educational establishments for photography, he offered the economically feasible version of installing a photographic department at the Austrian Museum. Indeed, the Museum's Director Rudolf Eitelberger was well disposed toward the project but died completely unexpectedly the same year.

This is why Eder straight away joined forces with the Central Commission for Vocational Education in Austria as the advisory committee of the Ministry of Cultural Affairs and Education. In the keynote article published in 1886, "Die Photographie als Schuldisciplin" ("Photography as a Schooling Issue")¹³ (which provided the impetus and title of the workshop organized by us), with pointed rhetoric he dialectically pits photography as an often dismissed "subordinate craft," the learning of which many people see as "a very easy, simple affair," against its "current high" status requiring "astute research." To his reasoning he adds an emphasis on the creativity-enhancing effect of the medium that can be a good complement to the drawing subjects, with which it could be integrated. The reference to drawing lessons as the center of teaching—with up to twenty periods allocated to the drawing subjects at vocational schools at that time (freehand and specialist drawing, geometric and ornamental drawing)—and the intellect-honing potential of photography

13 Josef Maria Eder, "Die Photographie als Schuldisciplin," *Centralblatt für das gewerbliche Unterrichtswesen in Oesterreich*, supplement, vol. 4, 1886: 17–21.

had already been emphasized by the Swiss professor of physics and mathematics Hermann Krippendorf in his brochure on the integration of the medium as a subject at vocational schools.¹⁴ Excerpts of his treatise, which evidently prompted some lively debate,¹⁵ were also published in the journal of the Vienna Photographic Society,¹⁶ as well as in one of the textbooks of Hermann Wilhelm Vogel,¹⁷ who was a great model to Eder, not least thanks to his photochemical laboratory established at the Königliche Gewerbeakademie, the Royal College for Vocational Studies, in Berlin-Charlottenburg in 1863.

To what extent Eder referred to Vogel's photochemical laboratory, and to what extent the conception of his own school transcended it, can be gathered from his organizational draft for the "k. k. Lehr- und Versuchsanstalt für Photographie und Reproductions-Verfahren" that he wrote in summer 1886 to be presented to the ministry. After all, the ultimate aim of his initiatives was to found a new model institution, a "central facility" as a higher version of a state trade school. Eder knew that not only several professional organizations but also the Minister of Education were on his side. The latter, Paul Gautsch, in office since 1879, had entrusted Eder with the task of elaborating the guidelines and drawing up the costs, after having had him evaluate what was at that time the only state-run technical school for photography and reproduction technologies at the Salzburg State Trade School. Although it may well have been regarded as progressive, this school founded in 1875 was situated in the provinces and had only modest funds; moreover, the small town lacked any nearby renowned reproduction facilities and thus specialists of the like found in Vienna. Eder's *Kurzer Bericht über die Fachschule für Photographie und Reproductionsverfahren in Salzburg und deren eventuelle Verlegung nach Wien (Brief Report on the Technical School of*

14 Hermann Krippendorf, *Die Photographie als Unterrichtsgegenstand der Gewerbeschule, mit besonderer Berücksichtigung des Trockenverfahrens und der Methode auf Chlorsilbercollodion* (Aarau: Buchdruckerei von H. R. Sauerländer, 1873).

15 Erich Stenger, *Siegeszug der Photographie in Kultur, Wissenschaft, Technik* (Seebuck/Chiemsee: Heering, 1950), 195; Dieter Osler, "Die Fotografie als Unterrichtsgegenstand der allgemeinbildenden Schulen," *Fotogeschichte*, vol. 9, 1989, issue 34: 41–47, here 43.

16 Hermann Krippendorf, "Die Photographie als Unterrichtsgegenstand," *Photographische Correspondenz*, vol. 10, 1873: 46–52.

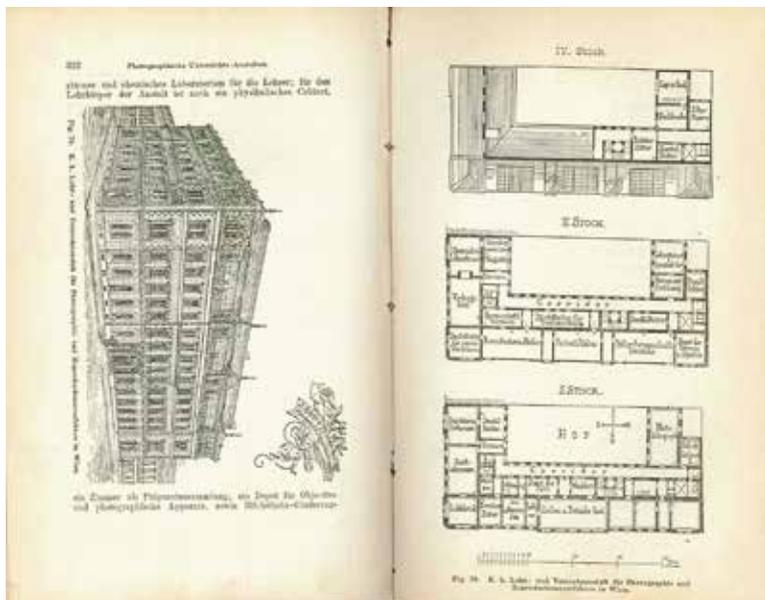
17 Hermann [Wilhelm] Vogel, *Die chemischen Wirkungen des Lichts und die Photographie in ihrer Anwendung in Kunst, Wissenschaft und Industrie*, 2nd edition (Leipzig: Brockhaus, 1884), 267–275.

Photography and Reproduction Technologies in Salzburg and its Possible Relocation to Vienna) of August 1886 was objective, but ultimately to the disadvantage of the school:¹⁸ the fact that heterogeneous tasks—taking photographs, copying, and retouching—clashed in the portrait studio, that there was no drawing room or lessons due to lack of space, and that students were most awkwardly forced to take photographs of each other all semester, essentially reflects the total ignorance of the aesthetic, social and communicative skills that would have been required to turn portrait photography into a serious, sustainable business. Considering that the Salzburg school laboratory lacked any kind of physics room, was limited to two wooden tables with chemicals, and had no dry plates or funds for purchasing them, let alone the abilities to make them itself, Eder's educational commitment to acquiring advanced technical and visual skills and his insistence on upgrading the scientific, intellectual and artistic qualification of photography become all the more understandable. In view of the alarming condition of the premises in terms of building regulations, the report concludes, it would seem only too appropriate to remove the photographic department from the Salzburg school and to adapt and reorganize the facility economically in the capital Vienna so as to offer a wide-ranging program "that would be unmatched at any facility in the world."

Egalitarian and "Multimedia" Training

In terms of contents, the foundation of the school and research institute (fig. 2) opened on March 1, 1888, which had not only taken over the furnishings and fittings along with a teacher from Salzburg but also incorporated the general school of drawing of Vienna's sixth district, was based on a universalistic teaching concept that combined the theoretical orientation of H. W. Vogel's university institute in Berlin (photochemistry and spectroscopy) with the vocational emphasis of the Salzburg school (reproduction techniques and portrait photography). By running a research and testing program alongside lessons, Eder attempted to realize

18 I am quoting from the manuscript (in respect of an order of the Ministry of Culture and Education, line 1103, July 13, 1886) in the Eder archives—mixed archival documents that the Höhere Graphische Bundes-Lehr- und Versuchsanstalt gave to the Albertina, Vienna, on permanent loan in 2000.



2 · The school building of the “k. k. Lehr- und Versuchsanstalt für Photographie und Reproduktionsverfahren”
 From: Josef Maria Eder, ed., *Jahrbuch für Photographie und Reproduktionstechnik für das Jahr 1888* (Halle/Saale, 1889), 322–323

a direct transfer of knowledge, while at the same time integrating courses on art theory and history. This gave rise to a differentiated range of contemporary applications, both in terms of training and further education. Not only thanks to this “multimedia” perspective and its university-style institutional form—research and teaching under one roof—did the Lehr- und Versuchsanstalt occupy a remarkable place in the Austrian school system at that time (and continues to do so today): as an “interdisciplinary,” practical middle ground situated between (applied) art and technology.¹⁹ In fact, it was equally open to university students, for whom Eder gave lectures and exercises in chemistry, apprentices

19 The Ministry of Culture and Education qualified the “administrative status of the school” immediately after the Kunstgewerbeschule (Arts and Crafts College) of the Austrian Museum of Art and Industry and before the construction- and mechanical-engineering-based Staatsgewerbeschule (State Trade School) in Vienna. See Austrian State Archives, (ÖStA), General Administrative Archives (AVA), Education, Sign. 16A, fasc. 3670, line 10132/1887.



3 · Anonymous, *Josef Maria Eder and Hans Lenhard with students of the “Second Course for Photography and Reproduction Techniques,”* 1890s, albumin print

(provided that their masters allowed them to learn), amateurs and scholars of all disciplines, as well as photographic staff, at whose request regular courses were initiated on the latest developments in the industry.

In the first semester, the newly founded institute was attended by 108 people aged between fifteen and forty-seven,²⁰ with the number of students almost doubling in the 1890s. The statutes and curriculum during the initial years—the trial period, as it were—were as yet provisional. Not until 1897, in the course of adding a department for book printing and illustration and renaming the school “Graphische Lehr- und Versuchsanstalt” (School and Research Institute for the Graphic Arts), did the Ministry approve both with final effect. The school was now divided into four sections: two “educational facilities” (for photography and reproduction technology and for book printing and illustration), the “research institute,” and the “collections” (with sample sheets and prints, apparatuses, and a specialized library). “Full-time students” with a minimum age of fourteen had to complete three successive modules, the

20 Josef Maria Eder, ed., “Die Fortschritte der Photographie in den Jahren 1887 und 1888. Photographische-Unterrichts-Anstalten,” in *Jahrbuch für Photographie und Reproduktionstechnik für das Jahr 1889*, vol. 3, part 2: *Original-Beiträge, Fortschritte der Photographie in den Jahren 1887 und 1888 [...]* (Halle/Saale: Knapp, 1889), 317.



4 · Graphische Lehr- und Versuchsanstalt, *Copy room of the Graphische Lehr- und Versuchsanstalt on Vienna's Westbahnstraße, 1906 or earlier, silver gelatin print*

“Preparatory and Drawing School,” and, in the next two years, the “First” and “Second Course for Photography and Reproduction Techniques” (fig. 3). “Part-timers,” who generally had relevant experience, could take part freely in courses chosen to suit their individual needs. All students had to pay moderate school fees and a monthly contribution to teaching materials for use of apparatuses, chemicals, and consumables. In addition, working people could attend special courses on the latest developments in the industry according to their needs; a “practical photography course for amateurs,” also generally held at weekends, conveyed basic techniques of photography and development (fig. 4).²¹

Photography lessons for women

Young women of sixteen or older were initially admitted as “part-timers,” “in cases worthy of consideration and subject to decisions of the Board”; in the first school year, and still at the turn of the century, they accounted for around one fifth of students in the drawing and retouching courses for

²¹ See *Statut für die k. k. Graphische Lehr- und Versuchsanstalt in Wien*, approved by the Ministerial Decrees May 29, 1897, No. 8591, and July 6, 1899, No. 3503 (Vienna, 1900).

which they were eligible and almost one tenth of total numbers.²² Only twenty years later, in 1908, was complete equality embodied, brought about to a substantial degree by the Federation of Austrian Women's Associations. As a champion of equal rights, the long-standing President of the Federation, Marianne Hainisch, had taken advantage of her privileged position to demand the installation of parallel classes for girls in secondary education since 1870, committing herself to the goal of opening up new professions for women befitting their social standing—as a socioeconomic necessity particularly for the distressed middle-classes. A pioneer of the Austrian women's movement, she belonged to the radical wing that spoke out in favor of equal treatment—unlike the moderates, whose concern it was to pay regard to the “female nature.”²³ Even though Hainisch herself argues the gender-specific qualities attributed to girls at that time—on account of their supposed “sensitivity”—of having an artistically trained eye and drawing ability in her application submitted to the Ministry of Education,²⁴ she implicitly ascribed to them the potential to develop at least “secondary technical expertise”²⁵ by means of practical and theoretical occupation with photography. Eder, himself the father of a daughter who attended the aforementioned courses as a “part-timer” from 1901 to 1908 (fig. 5), subsequently embarking on an artistic career as a painter, had also come to see admitting full-time female students to the Lehr- und Versuchsanstalt as “generally recommendable,” as there had

²² See the statutes of 1888 and 1900 and the student records in the archives of what is today the “Höhere Graphische Bundes-Lehr- und Versuchsanstalt.”

²³ A number of women were also involved in defining activities with regard to their suitability based on gender. See Dorothea Schmidt, “Konzeptionalisierungen von Technik und Geschlecht,” in Brigitte Fenner, Peter Döge, Sabine Collmer, eds., *Technik—Politik—Geschlecht. Zum Verhältnis von Politik und Geschlecht in der politischen Techniksteuerung* (Bielefeld: Kleine, 1999), 13–33, here 23.

²⁴ See ÖStA/AVA, Education, sign. 16A, fasc. 3670, line 24.070 XVI.

²⁵ In contrast to “primary technical expertise” developed mainly by men at related centers of research and production, the term seeks to cover the diverse use of technology as practiced primarily by women despite all stereotypical gender allocations. See Barbara Orland, Maria Osietzki, “Jüngere Ergebnisse der Frauenforschung zum Verhältnis von Technik und Geschlecht,” *Blätter für Technikgeschichte*, issue 57/58 (Vienna: Technisches Museum Wien, 1995/96): 171–185, here 171, and Gertraud Koch, Gabriele Winker, “Genderforschung im geschlechterdifferenzen Feld der Technik. Perspektiven für die Gewinnung von Gestaltungskompetenz,” *Stuttgarter Beiträge zur Medienwirtschaft*, no. 8, April 2003: 31–40.

Authors' Biographies

Julia Blume, born in Leipzig in 1959, has taught and worked as a research associate at the Hochschule für Grafik und Buchkunst (HGB), the Academy of Visual Arts, in Leipzig. Next to her main field of interest, the theory and history of print media, her investigations into the development of universities provide an essential foundation for her scientific and curatorial concerns. She completely restructured the HGB archives in the late 1990s. Together with Prof. Günter Karl Bose, she has led the Institute of Books Arts at the HGB since 1997. She has also been coordinator of the HGB's Evening Academy since 2008.

John Fleetwood, born in Johannesburg in 1970, is Head of the Market Photo Workshop, convener for the Joburg Photo Umbrella, and independent curator. He lives and works in Johannesburg. He was the co-curator for *A Return to Elsewhere* (Lathigra/Sekgala) (Brighton and Johannesburg, 2014) looking at the construction of communities and photography's factual and fictive modes and for *Transition*, a collaboration between South African and French photographers about South African land and the role that photography continues to play in its representation and reimagining (Johannesburg, 2012; Rencontres d'Arles, 2013) and Africa curator for *Photoquai 2013* (Paris). Fleetwood's key interests are the different developments in the field of documentary photography and the potential of photography within the aesthetics of advocacy.

Christine Frisinghelli, born in Graz, Styria in 1949, has—together with Manfred Willmann and in the context of Forum Stadtpark—conceived and realized exhibitions of modern photography since 1975 and annual symposia on photography from 1979 to 1997. She cofounded the magazine *Camera Austria International* in 1980 and, as its chief editor until 2010, has been responsible for 112 issues. She was director of the festival *steirischer herbst* in Graz from 1996 to 1999. Since 2001 she has been curator of Pierre Bourdieu's photo archives entrusted to *Camera Austria*. Having held teaching assignments in Vienna, Zurich, and Graz since 1991, she presently teaches at the Fondazione Fotografia in Modena. Curator of numerous exhibitions. Contributions to exhibition catalogues, anthologies, and magazines.

Maren Gröning, born in Cologne in 1959, studied art history and German language and literature in Vienna. She first worked as a freelance researcher at the Graphic Arts Collection of the Albertina, Vienna in 1990 and has been a curator at its Photographic Collection since 2001. Publications on nineteenth-century drawing, graphic art, and photography, National Socialist aesthetic, and contemporary image production. Teaching assignments at the Schule für künstlerische Fotografie in Vienna and at Zurich University. Research project on the photochemist and photohistorian Josef Maria Eder supported by the Austrian Science Fund (FWF) from 2009 to 2012. Since 2012 she is also curator for nineteenth-century art of the German-speaking countries at the Albertina.

André Gunthert, born in 1961, holds a PhD in art history. He is associate professor at the École des hautes études en sciences sociales (EHESS) in Paris. He founded the peer-reviewed journal *Études Photographiques* and the scientific social media initiative *Culture Visuelle. L'Art de la photographie des origines à nos jours* (Citadelles/Mazenod, 2007) has been published under his direction. His research about visual culture can be consulted on his blog *L'image sociale*. His most recent work *Paris 14–18. La guerre au quotidien. Photographies de Charles Lansiaux* (with Emmanuelle Toulet) was published in 2014 (Paris Bibliothèques).

Klaus Hentschel, born in Bad Nauheim in 1961, studied physics and philosophy. Head of the Section for History of Science and Technology in the History Department of the University of Stuttgart and substitute director of the History Department since 2007. Director of the History Department from 2010 to 2013; head of the Fachverband Wissenschaftsgeschichte since 2013; elected member of the national committee of the Federal Republic of Germany for the International Union of History and Philosophy of Science (IUHPS), Division of History of Science and Technology (DHST) since 2014. Main series editor of *Stuttgarter Beiträge zur Wissenschafts- und Technikgeschichte*, co-editor of *Sudhoffs Archiv*; editorial board member of *Physics in Perspective*. Since 1996 Hentschel has been scientific consultant for the English translation of all correspondence volumes of the *Collected Papers of Albert Einstein* (from vol. 8 until vol. 15 to date).

Alfred Holzbrecher, born in 1950, studied German language and literature, educational theory, and theology at the University of Tübingen. After teaching at the Heinrich-Böll-Gymnasium in Troisdorf-Sieglar, he worked at the Universität Gesamthochschule Essen, before he was offered a professorship at the Department of Educational Science of the University of Education in Freiburg/Breisgau, which he held until 2013, when he retired. His main working areas are educational issues in the fields of media and photography and intercultural education.

Ulrike Matzer, born in 1972, is a writer, critic, and historian of photography who lives in Vienna. She is currently completing her doctoral studies at the Academy of Fine Arts Vienna, working on a dissertation titled *Gendering eines Mediums. Frauen im fotografischen Gewerbe Wiens 1839–1914*. From 2009 to 2012 she has conducted research on the Austrian photochemist and photohistorian Josef Maria Eder at the Albertina's Photographic Collection. Together with project director Maren Gröning, she is the co-editor of *Josef Maria Eder: Fotografie als Wissenschaft. Positionen um 1900* (published in the series *photogramme*, ed. by Bernd Stiegler, Munich: Fink 2013).

Anne McCauley is David H. McAlpin Professor of the History of Photography and Modern Art at Princeton University. Among her publications are *A. A. E. Disdéri and the Carte de Visite Portrait Photograph* (1985); *Industrial Madness: Commercial Photography in Paris 1848–1871* (1994); *The Museum and the Photograph* (co-authored with Mark Haworth-Booth, 1998); and *'The Steerage' and Alfred Stieglitz* (co-authored with Jason Francisco, 2012). Her most recent essays include "Witch-Work, Art-Work, and the Spiritual Roots of Abstraction: Ezra Pound, Alvin Langdon Coburn, and the Vortographs" in *Vorticism: New Perspectives* (2013) and "The 'Big Show' and the Little Galleries: Alfred Stieglitz and the Search for Modern Art Photography" in *The Armory Show at 100: Modernism and Revolution* (2013). She is currently preparing a book on American modernist photography during World War I and an exhibition on Clarence H. White, a founding member of the Photo-Secession movement, for the Princeton University Art Museum.

Michael Peres, born in Utica, New York, joined the faculty of the Rochester Institute of Technology's School of Photographic Arts and Sciences in 1986. He is a professor of biomedical photographic communications and teaches photomicrography, biomedical photography, and other related applications of photography in science. Prior to joining the RIT faculty, Peres worked at Henry Ford Hospital and West Virginia University as a medical photographer. Enjoying a varied photographic career that began in 1973, he has led workshops worldwide and has been publishing continuously. In 2007, he served as the editor-in-chief of *Focal Encyclopedia of Photography: Digital Imaging, Theory and Applications, History, and Science, 4th edition*. Peres has received numerous awards including the RIT Eisenhart Award for Outstanding Teaching and the Schmidt medal from the BioCommunications Association for lifetime achievement in the field of bio-communications. He holds a master's degree in instructional technology and bachelor's degrees in biology and biomedical photographic communications.

Rudolf Scheutle read art history, sociology, and theater studies in Munich, where he graduated in 1982. Since long he has also been active as a journalist specializing in contemporary art and as a freelance curator. He now works as a curator at—and Deputy-Head of—the Photography Collection in the Münchner Stadtmuseum. He has lectured on the history of photography at Eichstätt University, and now does so at the University of Applied Sciences Munich. His numerous publications and exhibitions on photography and contemporary art include *Lehrjahre—Lichtjahre. Die Münchner Fotoschule 1900–2000* (2000); *Moving Pictures. Photography and Film in Contemporary Art* (2001); *Urban Conditions* (2006); *Nude Visions* (2009); and *Luxus der Einfachheit—Lebensformen jenseits der Norm* (2014).

Walter Seidl was born in Graz, Austria in 1973 and is based in Vienna. He works as curator, writer, and artist and earned his PhD in contemporary cultural history. Since 2004, he has been building up the art collection of Erste Group and ERSTE Foundation, which centers on the conceptual art tendencies in the region of former Eastern Europe. Due to his focus on the medium of photography, Seidl has become involved in the work of *Camera Austria*, the hundredth issue of which he co-edited together with Christine Frisinghelli in 2007. He also co-curated the accompanying exhibition, as well as other *Camera Austria* projects on special issues. Seidl has curated numerous exhibition projects throughout Europe,

North America, and Japan. His writings include various catalogue essays for artist monographs, as well as exhibition reviews and criticism. He contributes to several international art magazines, such as *Camera Austria*, *springerin* or *Život umjetnosti*.

Ann Thomas is curator of the Collection of Photographs at the National Gallery of Canada. She has organized numerous exhibitions and installations in this capacity and is the author of several catalogues and publications such as *Lisette Model* (1990); *No Man's Land: The Photography of Lynne Cohen* (2001); and *Modernist Photographs from the National Gallery of Canada* (2007). She is the editor of *Beauty of Another Order: Photography in Science* (1996). She has also co-authored a number of publications. Among her various current projects she is most excited about a series of exhibitions with accompanying catalogues from the National Gallery's Collection of Photographs and an independent research project on photography and art in the post-electrification era.

Marija Tonković, born in 1949, studied art history and Italian in Zagreb. For her Master of Science she worked on Juraj und Karlo Drašković, while her doctoral theses addressed the work of Franjo Mosinger in the context of Neue Sachlichkeit and Bauhaus photography. 1978–2014 museum counselor and head of the Photography Collection of the Muzej za umjetnost i obrt (Museum of Arts and Crafts) in Zagreb. Teaching assignments at the Akademija dramske umjetnosti (Academy of Dramatic Art) in Zagreb. Numerous articles, exhibitions, and television programs on the history of Croatian photography. Associate of the Hrvatska akademija znanosti i umjetnosti (Croatian Academy of Sciences and Arts) and member of the Croatian section of AICA, the Association Internationale des Critiques d'Art.

The German National Library (Deutsche Nationalbibliothek) stores bibliographic metadata on this publication as part of the German National Bibliography, available online under <http://dnb.d-nb.de>.

1st edition

Project management: Michael Ponstingl

Editing: Wolfgang Astelbauer

Translations into English: Branko Bošnjaković (Marija Tonković's text from the Croatian), John Doherty (André Gunthert's text from the French), Richard Watts (Maren Gröning's, Ulrike Matzer's and Rudolf Scheutle's texts from the German), and Wolfgang Astelbauer (captions, front and back matter)

Graphic design: Martha Stutteregger

Production: Peter Sachartschenko

Image editing: Pixelstorm, Vienna

Printed by REMAprint-Litteradruck, Vienna

© for this edition with Photoinstitut Bonartes, Vienna
and Fotohof *edition*, Salzburg, 2015

© for the texts with the authors, 2015

© for the pictures with the respective authors, their legal successors,
and the respective institutions, 2015

The work, including all of its parts, is protected by copyright. Any use of it is inadmissible without the publishers' express permission. This applies in particular to duplication, translation, micro-filming, and saving and processing in electronic media systems.

Fotohof *edition*, Volume 214, 2015

ISBN 978-3-902993-14-4

Photoinstitut Bonartes | Seilerstätte 22, 1010 Vienna | www.bonartes.org

Albertina | Albertinaplatz 1, 1010 Vienna | www.albertina.at

Fotohof *edition* | Inge-Morath-Platz 1-3, 5020 Salzburg | www.fotohof.at

The cover design uses the albumin print *Students leapfrogging on the roof of the Graphische Lehr- und Versuchsanstalt in Vienna (Westbahnstraße)* for a test of the focal-plane shutter of the Wanaus-Triumph camera photographed by the Graphische Lehr- und Versuchsanstalt; page 2 shows the whole picture.