



THE IDEA OF A UNIVERSAL *BILDWISSENSCHAFT*

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The emergence of *Bildwissenschaft* (image science) as a new interdisciplinary formation that is intended to encompass *all* images calls for an analysis of the grounds on which the claim to universality can be upheld. I argue that whereas the lifting of scope restrictions imposes only a weak universality requirement, the identification of features that belong to the entire class of entities that are categorized as images imposes a strong universality requirement. Reflection on this issue brings into focus the distinctive character of *Bildwissenschaft* and the features that distinguish it not only from other related disciplines such as art history and visual studies, but also from recent work in the philosophy of the image.

I

When Raymond Geuss wrote his short book, *The Idea of a Critical Theory*, he set himself 'the modest task of explaining clearly what a critical theory is meant to be.'¹ His aim was not to provide a full account of the views of the various authors he discusses but rather to assess the claim that 'critical theories have special standing as guides for human action' by analysing the grounds for drawing a principled distinction between a descriptive and a critical theory.² The allusion to Geuss's book in the title of this article is intended to indicate a similar restriction in scope. The emergence of *Bildwissenschaft* as a new disciplinary – or, rather, interdisciplinary – formation that is intended to encompass *all* images calls for an analysis of the grounds on which the claim to universality can be upheld. While *Bildwissenschaft* has firmly established itself in German-speaking countries over the last two decades, questions concerning the limits of the field of enquiry and the appropriate methods of investigation remain central to a research project that is still in the process of development. I shall therefore begin with some general reflections on the meaning of *Bildwissenschaft* and the different directions in which it is currently being pursued. The central question that concerns me here, however, is whether it is possible or, indeed, desirable to provide a 'universal' account of the nature of images, that is to say, an account that is both singular

This article is a substantially revised and expanded version of an essay that first appeared under the title 'On *Bildwissenschaft*: Can There Be a Universal "Science of Images"?' in *The Aesthetic Dimension of Visual Culture*, ed. Ondřej Dadejík and Jakub Stejskal (Newcastle: Cambridge Scholars, 2010), 33–49. I am grateful to the editors of that volume and to the editors of *Estetika* for the opportunity to rework this material for publication in the fiftieth-anniversary issue of this journal.

¹ Raymond Geuss, *The Idea of a Critical Theory: Habermas and the Frankfurt School* (Cambridge: Cambridge University Press, 1981), 3.

² *Ibid.*, 2.



and comprehensive, and that can be made to accommodate any image whatsoever. As we shall see, the claim to universality has been interpreted in different ways, but reflection on this matter usefully brings into focus the distinctive character of *Bildwissenschaft* and the features that distinguish it not only from other related disciplines such as art history and visual studies, but also from recent work in the philosophy of the image.

II

Each part of the binomial expression *Bildwissenschaft* can be analysed separately. The term *Wissenschaft* (built from the root *Wissen*, meaning 'knowledge') corresponds closely to the English word 'science', but it is employed in different ways and carries a different range of connotations. Whereas English tends to reserve the term 'science' for the natural sciences and for those disciplines that have a strong empirical or evidential basis, the German term is used more widely to characterize any field of enquiry that is organized in a cohesive manner. *Bildwissenschaft* thus takes its place in the German university system alongside other 'sciences' such as *Kommunikationswissenschaft* (communication studies), *Kognitionswissenschaft* (cognitive studies), and *Medienwissenschaft* (media studies). The use of the term *Wissenschaft* signifies a 'body of knowledge' rather than a commitment to the methods of the natural sciences and it should not be taken as evidence of an underlying scientism. Nonetheless, in contrast to the more open term 'studies', it does indicate the requirement that knowledge be ordered systematically and that careful attention be given to questions of method and consistency. If the study of images is to qualify as a *Wissenschaft*, it must provide, or at least aim to provide, a unified and comprehensive treatment of its subject.

Similar translation problems attend the term *Bild*, which carries a much wider range of meanings than the English term 'image'. In its everyday usage, it is employed to describe any sort of picture, irrespective of the medium or the process through which it is made, including painting, drawing, photography, computer-generated images, film, and even sculpture (the German word for a sculptor is *Bildhauer*, literally an 'image hewer'), irrespective of whether the image is representational or abstract. Unlike the word 'picture', it is used to refer to illustrations, figures, maps, and mathematical diagrams, and also to immaterial objects such as mental images and metaphors. Unless appropriately qualified, the richly polysemic character of the term *Bild* carries a risk of ambiguity and imprecision. Its broad extension has, however, been embraced positively by the proponents of *Bildwissenschaft* as a means of overcoming traditional disciplinary boundaries and establishing new areas of interdisciplinary collaboration. Since the term is value-neutral concerning art status, it allows

scholars to side-step the problematic distinction between art and non-art, and between so-called low and high culture. *Bildwissenschaft* embraces not only the full range of 'demotic' visual imagery but also informational images that are not primarily intended to fulfil an aesthetic or artistic function. The opening up of the field of study to include scientific visualizations, X-rays, fMRI scans, architectural elevations, diagrams, data graphics, maps, and so forth, reveals the need to draw on the specialized knowledge developed in other disciplines ranging from the medical sciences to cartography.

This conception of *Bildwissenschaft* as an interdisciplinary research project is best represented by the work of Klaus Sachs-Hombach. Rather than seeking to impose a specific methodology or set of concerns on what is still an emergent field, Sachs-Hombach and his colleagues at the University of Magdeburg invited researchers from a wide variety of disciplines to pool their understanding of 'image competence' and to discuss how both images and our interactions with images are addressed across these different domains. The resulting publication, which came out in 2005, contains essays by specialists in twenty-eight separate disciplines, divided into ten 'foundational disciplines' (including cognitive science, neuroscience, philosophy, rhetoric, semiotics, and psychology) and eighteen practical and applied disciplines (including ethnography, sociology, archaeology, political science, computer imaging, and design).³ The sheer number of disciplines involved invites the question whether *Bildwissenschaft* should be understood as a single, unified enterprise, or whether it is simply an umbrella term for a multiplicity of overlapping and potentially divergent approaches that cannot be brought into alignment.

Sachs-Hombach acknowledges the considerable problems that this cross-disciplinary research project needs to overcome. Nonetheless, he defends the view that 'there can and ought to be a universal, interdisciplinary image science [*eine allgemeine, interdisziplinär verfasste Bildwissenschaft*]:'⁴ This would not be a new discipline, distinct from the others, but a 'common theoretical framework that could provide an integrative research programme for the various disciplines'. Its 'minimal criterion' would be the provision of a model 'that allows all the other sciences of the image to be connected in a systematic manner without impairing their independence.'⁵ On this conception, a universal image science should (1) integrate the perspectives, methodologies, and results of the different disciplines into a systematic body of knowledge; (2) analyse and define the basic concepts

³ Klaus Sachs-Hombach, ed., *Bildwissenschaft: Disziplinen, Themen, Methoden* (Frankfurt: Suhrkamp, 2005).

⁴ *Ibid.*, 11.

⁵ *Ibid.*

employed so that research can proceed on a common basis; and (3) develop strategies for effective interdisciplinary cooperation.

What we might term the 'synthetic approach' has been criticized by another leading proponent of *Bildwissenschaft*, Horst Bredekamp, who contends that the construction of *Bildwissenschaft* by means of multi-disciplinary collaboration is based on the 'illusionary idea' that a new science can be developed simply through the 'addition' of a plurality of existing disciplines.⁶ It is not clear that this criticism properly locates its target. Central to the project developed by Sachs-Hombach and his colleagues is the attribution of a regulative or guiding role to the concept of a universal *Bildwissenschaft*: a genuinely interdisciplinary image science cannot simply aggregate a plurality of discrete insights; it must strive to integrate them into a coherent body of knowledge. More problematic is the absence of a realistic set of guidelines for how this is to be achieved in practice. Not only is the task of higher-order reflection shared out among ten 'foundational disciplines', none of which takes precedence over the others, but there is no recognized authority that can reconcile differences or systematize conflicting results. It may be that the resulting pluralism has methodological benefits and that the project of establishing a universal *Bildwissenschaft* should be relinquished in favour of a multitude of independent *Bildwissenschaften*, but this is clearly incompatible with the 'minimal criterion' established by Sachs-Hombach.

The claim that a universal *Bildwissenschaft* is something we should strive to realize, but whose exact scope and methods have yet to be determined, has also been defended by other prominent figures. Hans Belting, for example, characterized his 2001 book *Bild-Anthropologie* as a set of 'outlines' or 'proposals' (*Entwürfe*) for an image science, and his most recent edited collection is subtitled *Bildwissenschaften im Aufbruch*.⁷ In contrast to the inclusive strategy adopted by Sachs-Hombach, in which each and every discipline that has an interest in images is invited to participate on equal terms, Belting's proposals have a strongly revisionist character and are explicitly aimed at correcting the 'current discourse'.⁸ The imposition of a universality requirement on *Bildwissenschaft* here takes on a polemical dimension, serving to highlight the Western bias and cultural conservatism of mainstream art history.

Belting's anthropological approach, which emphasizes the interrelation between 'image', 'body', and 'medium', represents just one of several innovative

⁶ Horst Bredekamp, 'Bildwissenschaft', in *Metzler Lexikon Kunstwissenschaft: Ideen, Methoden, Begriffe*, ed. Ulrich Pfisterer (Stuttgart: Metzler, 2003), 58.

⁷ See Hans Belting, *Bild-Anthropologie: Entwürfe für eine Bildwissenschaft* (Munich: Fink, 2001), and Hans Belting, ed., *Bildfragen: Die Bildwissenschaften im Aufbruch* (Munich: Fink, 2007).

⁸ Belting, *Bild-Anthropologie*, 30.



attempts to find new theoretical resources for understanding the affective presence of images. A common thread running through much recent work is the contention that the realm of the visual possesses its own *sui generis* properties and so cannot be subsumed without loss under linguistic theories of meaning and interpretation. Whereas Sachs-Hombach includes both semiotics and rhetoric among the 'foundational disciplines' of *Bildwissenschaft*, Gottfried Boehm has argued for the need to bring about an 'iconic turn' that would free the study of images from its dependence on language-based models.⁹ As Christopher Wood has pointed out, the 'existing discourse' that Belting and others seek to overthrow 'is not simply the old empiricist art history [...] but precisely the "new" art history that has internalized critical theory (ideology critique, poststructuralism, psychoanalysis) over the course of the 1980s and 1990s'.¹⁰ One of the motivations for the shift towards *Bildwissenschaft* is the belief that current approaches to art history still allow the linguistic to dominate the visual and that they smother the independent 'life of images' under a blanket of interpretation through which language is once again accorded primacy.

The establishment of *Bildwissenschaft* in German-speaking countries shares a number of features with visual and cultural studies in Britain and America. As has often been remarked, there is a close parallel between Boehm's call for an 'iconic turn' and W. J. T. Mitchell's conception of a 'pictorial turn', which was developed at roughly the same time.¹¹ Nonetheless, there are important differences of emphasis. While *Bildwissenschaft* embraces contemporary and popular culture, it gives equal prominence to the early modern period and it sustains many of the traditional concerns of art history and the history of science. Rather than declaring a decisive 'break' with earlier models, many proponents of *Bildwissenschaft* seek to identify hidden continuities and to reopen lost paths of enquiry. A good example is provided by the way in which Bredekamp's analysis of the work of Galileo establishes connections with the pioneering research carried out in the mid-twentieth century by the art historian Erwin Panofsky, including his influential essay 'Galileo as Critic of the Arts'.¹² Bredekamp worked closely with a team of experts from a range of disciplinary backgrounds to investigate a newly discovered edition of the *Sidereus Nuncius* (1610) that

⁹ Gottfried Boehm, 'Die Wiederkehr der Bilder', in *Was ist ein Bild?*, ed. Gottfried Boehm (Munich: Fink, 1994), 11–38.

¹⁰ Christopher Wood, review of *Bild-Anthropologie*, by Hans Belting, *Art Bulletin* 86 (2004): 370.

¹¹ See Boehm, 'Wiederkehr der Bilder', and W. J. T. Mitchell, 'The Pictorial Turn', in *Picture Theory: Essays on Verbal and Visual Representation* (Chicago: University of Chicago Press, 1994), 11–34.

¹² Erwin Panofsky, 'Galileo as Critic of the Arts: Aesthetic Attitude and Scientific Thought', *Isis* 47 (1956): 3–15.



appeared to contain five previously unknown bistre ink sketches by Galileo.¹³ Bredekamp's contention that Galileo's drawings do not merely 'illustrate' the results of scientific enquiry but are themselves a form of 'visual thinking' that enabled him to make important scientific discoveries has been put into question by the revelation that the edition is a sophisticated forgery.¹⁴ Despite the criticisms that the project inevitably attracted, including the suggestion by Wolfgang Ullrich that the forgery had been designed to meet the expectations of Bredekamp and his colleagues, the decision of the team to publish a full documentation of the deception together with a critical reassessment of their methods of analysis can reasonably be taken as evidence of the scientific basis of the project and its status as a cooperative undertaking.¹⁵

While there are, of course, exceptions, the development of a comprehensive *Bildwissenschaft* is informed by a concerted effort to overcome the artificial divisions that separate the humanities from the natural sciences. Whereas Anglo-American visual studies can plausibly be characterized as a continuation of critical theory by other means, providing new methods and resources for unmasking hidden power relations, *Bildwissenschaft* is not explicitly political in orientation. Indeed, in the hands of some of its exponents it is an attempt to extend instrumental reasoning into the domain of the visual, organizing and systematizing available knowledge so that more effective use can be made of images in diverse areas, ranging from medical research to advertising and party-political campaigning. The goal of providing more effective 'mastery' of the visual through an increase in understanding is particularly prominent in the contributions to Sachs-Hombach's interdisciplinary volume, *Bildwissenschaft: Disziplinen, Themen, Methoden*, though several authors also address the extent to which images can be used to simplify or distort information, and thus potentially to mislead as well as to inform.¹⁶

The relation of *Bildwissenschaft* to art history continues to be a matter of dispute. It would seem to follow from the expansion of the field of study to

¹³ See Irene Brückle and Oliver Hahn, eds., *Galileo's 'Sidereus Nuncius': A Comparison of the Proof Copy (New York) with Other Paradigmatic Copies*, vol. 1 of *Galileo's O*, ed. Horst Bredekamp (Berlin: Akademie, 2011); Paul Needham, *Galileo Makes a Book: The First Edition of 'Sidereus Nuncius', Venice 1610*, vol. 2 of Bredekamp, *Galileo's O*.

¹⁴ See Horst Bredekamp, *Galilei der Künstler: Die Zeichnung, der Mond, die Sonne* (Berlin: Akademie, 2007), and Horst Bredekamp, Irene Brückle, and Paul Needham, *A Galileo Forgery: Unmasking the Sidereus Nuncius* (Berlin: de Gruyter, 2014), available online at <http://www.degruyter.com/view/product/416084?format=EBOOK>.

¹⁵ See Wolfgang Ullrich, 'Der gefälschte Mond, Teil 3', *Die Zeit*, January 16, 2014, <http://www.zeit.de/2014/04/galilei-faelschung-bredekamp-3>, and Bredekamp, Brückle, and Needham, *Galileo Forgery*.

¹⁶ See, in particular, Frank Lesske, 'Politikwissenschaft', and Thomas Schierl, 'Werbungsforschung', in Sachs-Hombach, *Bildwissenschaft*, 236–46, 309–19.

include informational images such as data graphics and fMRI scans that art history is obliged to relinquish its position as the privileged interpreter of the visual. This is the case whether art history is treated simply as one among a plurality of other specialist disciplines – as Sachs-Hombach proposes – or as an outmoded and potentially obsolete disciplinary formation, whose limitations and restrictions are made manifest by the emergent ‘sciences of the image’ (Belting). These assumptions have been challenged, however, by Bredekamp, who argues that art history, at least in the Austro-German tradition, has always been implicitly universal in orientation and that by the late nineteenth century it ‘had become a *Bildwissenschaft* in the full sense of being dedicated both to the arts and to non-art images.’¹⁷ He supports this claim by drawing attention to three important historical developments: (1) the ground-breaking work of art historians such as Aby Warburg, whose research embraced the entire spectrum of visual culture; (2) the role of photography not only as an indispensable tool of art-historical research but also as itself a subject of art-historical enquiry; and (3) the founding of applied arts museums as institutions for the study and preservation of all kinds of artefacts, irrespective of their categorization as art or non-art.¹⁸ Bredekamp contends that this original conception of art history as *Bildwissenschaft* was lost after the Nazi assumption of power in 1933 and that it is now the object of ‘conscious amnesia.’¹⁹ Far from constituting a new disciplinary formation, whose success depends on its ability to displace art history, *Bildwissenschaft* should therefore be understood as an attempt to recover art history’s own universalist commitments.

Whereas Bredekamp’s version of art history’s history is open to challenge, the resulting conception of a ‘universal’ image science is relatively uncontroversial.²⁰ Consider, for example, his claim that ‘Historically [...] two essential points comprise *Bildwissenschaft*: first, art history embraced the whole field of images beyond the visual arts, and secondly, it took all of these objects seriously.’²¹ The reconstitution of art history as *Bildwissenschaft* amounts to the recognition that it should be non-exclusive and non-hierarchical: a universal image science should not be limited by geographical or temporary boundaries and it should not be constrained by distinctions between so-called high and low cultures or

¹⁷ Horst Bredekamp, ‘A Neglected Tradition: Art History as *Bildwissenschaft*?’, *Critical Inquiry* 29 (2003): 422.

¹⁸ Bredekamp, ‘*Bildwissenschaft*’, 56–57.

¹⁹ Bredekamp, ‘Neglected Tradition’, 419.

²⁰ For an alternative account that emphasizes the internal tension between ‘reactionary nationalism’ and ‘progressive cosmopolitanism’, see Matthew Rampley, ‘Art History and the Politics of Empire: Rethinking the Vienna School’, *Art Bulletin* 91 (2009): 446–62.

²¹ Bredekamp, ‘Neglected Tradition’, 418.

between art and non-art. Although normative assumptions continue to play a role in the selection and prioritization of appropriate areas of research, few would be prepared to offer an explicit defence of evaluative criteria based on a culturally specific concept of art. In principle, if not yet in practice, the field of enquiry is unbounded. But the lifting of scope restrictions, where they still exist, meets the universality requirement only in the weak sense of not excluding any potentially relevant topic of enquiry rather than the strong sense of identifying properties that are universally shared. This leaves Bredekamp's conception exposed to the same challenge that he raises against Sachs-Hombach: can a genuinely universal image science be constructed simply by aggregating the results of a plurality of different research projects? No matter how wide the net is cast, it is unclear how the transition is to be made from a multiplicity of discrete studies to a comprehensive and systematic account of the nature of the image.

III

One way of addressing this problem is to adopt an alternative approach that effectively withdraws the universality claim from *Bildwissenschaft* and relocates it in the domain of philosophy. This is the strategy pursued by Lambert Wiesing, who draws a sharp distinction between a properly philosophical concern with the question 'what is an image?' and those other forms of enquiry – be they historical, empirical, or psychological – that investigate 'real objects' (*reale Gegenstände*).²² Wiesing's position rests on the claim that in order to fulfil the universality requirement it is necessary to identify those properties that belong to any picture or image whatsoever. Whereas the lifting of scope restrictions imposes only a weak universality requirement, the identification of features that belong to the entire class of entities that are categorized as images imposes a strong universality requirement. Wiesing maintains that genuine universality can only be achieved through philosophical reflection, for the progressive enlargement of the field of study to include an ever greater number and range of images would only tell us about the images that have been studied, not each and every image, irrespective of when, where, by whom, and for whom a particular image was made.

Like Bredekamp, Wiesing acknowledges that 'the tendency towards a universal *Bildwissenschaft* is already inherent in art history'.²³ He argues, however, that an

²² Lambert Wiesing, 'Vorwort zur Neuausgabe 2008', in *Die Sichtbarkeit des Bildes: Geschichte und Perspektiven der formalen Ästhetik*, 2nd ed. (Frankfurt: Campus, 2008), iv.

²³ Lambert Wiesing, *Artifizielle Präsenz: Studien zur Philosophie des Bildes* (Frankfurt: Suhrkamp, 2005), 13.

image science that is concerned not merely with individual images or particular groups of images but with *all* images goes beyond what can be carried out with the methods and resources of art-historical enquiry. He therefore identifies a difference in kind between the investigation of specific images or groups of images and an investigation that aims to establish the identity conditions for what counts as an image in the first place. Although he characterizes the transition from art history to philosophy as a progression through different levels of generality, the distinction, once it has been made, is absolute:

The enlargement of the field of study from a determinate group of works, no matter how large that group might be, to the concept of the image is not merely an extensional, quantitative enlargement, but a categorial shift (*ein Schritt ins Kategoriale*), which necessarily requires a change of method. A *Bildwissenschaft* that aims to discuss all objects that are images can no longer be an empirical science on grounds of principle. [...] Whoever seeks to conduct a scientific investigation into all images is primarily concerned with the question of what should be identified as an image and on what grounds – and this question can only be answered through argument.²⁴

Wiesing's description of the transition from one level of enquiry to another as 'a development, whose end point is the philosophy of the image' suggests that the greater the level of generality, the closer we approach philosophy, with empirical and historical forms of inquiry eventually left behind.²⁵ However, the metaphor of an 'ascent' towards universality also invites consideration in terms of the older model of philosophy as a foundational discipline. Here we might think of Richard Rorty's analysis of the historical process through which the conception of philosophy as the 'queen of the sciences' was transformed in the course of the eighteenth century into the notion that it is the 'most basic' discipline because of its concern with what is 'most universal and least material'. Rorty's observation that 'Philosophy became "primary" no longer in the sense of "highest" but in the sense of "underlying"' has application to any account in which philosophy is assumed to provide the conceptual underpinnings for empirical and historical research.²⁶ Much of Rorty's work has been devoted to releasing the grip of this picture on our thinking and to analysing the seemingly intractable problems to which it gives rise. I now want to consider Wiesing's conception of a universal 'philosophy of the image' more closely and to examine whether it leads to comparable difficulties. In particular, I want to assess the viability of the claim that it is necessary to draw a principled distinction between *Bildwissenschaft*, construed as a fundamentally empirical form of enquiry that is concerned

²⁴ Ibid., 13–14.

²⁵ Ibid., 13.

²⁶ Richard Rorty, *Philosophy and the Mirror of Nature* (Oxford: Blackwell, 1980), 132.

exclusively with specific objects or groups of objects, and a properly philosophical concern with analysing concepts and categories.

IV

In order to mark the difference between the diverse body of historical and empirical research that investigates specific images or groups of images and the problem domain that belongs to the philosophy of the image, Wiesing draws a terminological distinction between *Bildwissenschaft* (image science) and *Bildtheorie* (image theory):

Bildwissenschaft is concerned in every case with concrete things. The subject of investigation is real objects: how they come to be made, the psychological effects they produce, the medium-specific conditions of their production, the meaning of their contents, their social significance, their historical context, and numerous other empirical aspects. It is precisely this fundamentally empirical orientation that in German distinguishes *Bildwissenschaft* from *Bildtheorie*, just as in English 'Image Science' can be distinguished from 'Picture Theory'. The difference can be accentuated by observing that although *Bildwissenschaft* is concerned with all images, it is not, like *Bildtheorie*, concerned with the question of what is an image.²⁷

Wiesing emphasizes that *Bildwissenschaft* and *Bildtheorie* stand in a relationship of complementarity rather than rivalry, but the point of the distinction is surely to identify a principled division of interest. This approach is at variance with the inclusive model of *Bildwissenschaft* proposed by Sachs-Hombach, in which philosophy is just one of the participating disciplines without any particular claim to distinction, and there is little doubt that many of those who have contributed to the development of *Bildwissenschaft* would resist the characterization of their work as predominantly empirical in orientation.²⁸ It is telling that the recent Stone Art Theory Institutes seminar series, which brought together some of the leading proponents of the 'pictorial turn', including Gottfried Boehm, W. J. T. Mitchell, and James Elkins, was explicitly addressed to the question 'What is an image?', which

²⁷ Wiesing, 'Vorwort zur Neuausgabe 2008', iv.

²⁸ In a paper co-authored with Jörg Schirra in 2008, Sachs-Hombach draws a distinction between *Bilderwissenschaft* (science of images) and *Bildwissenschaft* (image science) that, initially at least, appears similar to Wiesing's distinction between *Bildtheorie* and *Bildwissenschaft*, albeit with the meaning of the terms reversed. *Bilderwissenschaft* is the expansion of art history to include the study of all images and groups of images; *Bildwissenschaft*, by contrast, 'addresses the question of what it fundamentally means to engage with images (as such)'. The key difference is that whereas *Bildtheorie* is concerned with establishing the identity conditions for what counts as an image, Sachs-Hombach and Schirra identify *Bildwissenschaft* with the study of 'image competence', that is to say, how images are made, received, and used. See Klaus Sachs-Hombach and Jörg R. J. Schirra, 'Bild und Wort: Ein Vergleich aus bildwissenschaftlicher Sicht', *Elise: Essener Linguistische Skripte* 6 (2006): 52.



also formed the title of the resulting publication.²⁹ It could be countered that the participants were, in that case, doing *Bildtheorie* rather the *Bildwissenschaft*, but there is a risk of circularity here, such that any attempt to address broader theoretical questions, even where this arises out of close attention to ‘real objects’, is re-identified as a contribution to *Bildtheorie* simply in virtue of the way in which the terms are defined.

Wiesing rightly observes that problems of categorization cannot be resolved simply by adducing further instances, for the identification of relevant examples itself depends on the operative definition of the category. However, given that many of the proponents of *Bildwissenschaft* operate with a weak conception of universality – that is to say, a maximally permissive conception of what counts as an image, such that nothing is, in principle, excluded from consideration – it is unclear what contribution is to be made by the philosophical concern with establishing ‘what should be identified as an image and on what grounds.’³⁰ Even if this is something that can only be decided ‘through argument’, and thus is properly the concern of philosophy, it is likely to have the same lack of traction with practitioners that has befallen the attempt by philosophers to identify the conditions that are jointly necessary and sufficient for something to count as a work of art. There are some intriguing parallels here with the earlier debate between figures like William E. Kennick and Morris Weitz as to whether art is an ‘open concept’ that is resistant to definition.³¹ It may well be that the concept of an image functions differently to the concept of art, but in both cases it is difficult to see how philosophy can provide guidance when the practices it purports to underpin are characterized by a maximally permissive openness to candidate status. Although the formulation sounds paradoxical, the more demanding, normative conception of universality seeks to delimit the field of enquiry by establishing what counts as an image and it is therefore incompatible with a commitment to weak universality.

The distinction between *Bildwissenschaft* and *Bildtheorie* can also be questioned from the other side by asking whether it accurately characterizes current research on the philosophy of the image, including Wiesing’s own richly nuanced and insightful work on the nature of images and the distinctive kinds of experience they sustain. At the start of his book *Artifizielle Präsenz*, he declares: ‘Only once it

²⁹ James Elkins and Maja Naef, eds., *What Is an Image?*, Stone Art Theory Institutes 2 (University Park: Pennsylvania State University Press, 2011). Note, too, the title of the volume edited by Gottfried Boehm in 1994: *Was ist ein Bild?*

³⁰ Wiesing, *Artifizielle Präsenz*, 14.

³¹ See William E. Kennick, ‘Does Traditional Aesthetics Rest on a Mistake?’, *Mind* 67 (1958): 317–34, and Morris Weitz, ‘The Role of Theory in Aesthetics’, *Journal of Aesthetics and Art Criticism* 15 (1956): 27–35.



is understood that the distinguishing feature of each and every image is the artificial presence of the object that is made visible in the image will *Bildwissenschaft* work with a concept of the image that identifies what images alone can do and, consequently, their significance for human beings.³²

'Artificial presence' is Wiesing's term for a specific theory of the image that can be found in the writings of Edmund Husserl, Jean-Paul Sartre, and other philosophers working in the phenomenological tradition. Through a highly productive development and further refinement of this theory, Wiesing shows how Husserl's three-fold distinction between the 'image carrier' (*Bildträger*), the 'image subject' (*Bildsujet*), and the 'image object' (*Bildobjekt*) can be used to clarify many of the ambiguities surrounding the use of the term 'image' and to provide a more precise account of the complex intentionality that is involved in seeing something as an image. Consider the following example. When I note that Rembrandt's *A Woman Bathing in a Stream* (1654, London: National Gallery) is illuminated from above by the light from the ceiling, that its surface can fade and gather dust, and that the materials out of which it is made age with time, I refer to the 'image carrier', the physical support through which the image is made. When I identify the depicted figure as Rembrandt's companion, Hendrickje Stoffels, I refer to the 'image subject', that is to say, to the image's real-world denotatum. However, when I observe that the scene is always lit by the same mysterious light, that the figure remains forever youthful, and – the wisdom of Heraclitus notwithstanding – she always steps into the same stream, I refer to the 'image object', an intentional object that is dependent on the viewer for its existence. Wiesing concludes: 'Images always in principle show something unreal, for they always show something that does not get any older; they show something that is liberated from the constraints of physics. By contrast, without images, we could only view things that are subject to the laws of physics.'³³

The question at issue here is not the persuasiveness of this theory or the extent to which it provides genuine insight into the nature of images but whether or not it should be accorded primacy. Wiesing's contention that a universal *Bildwissenschaft* must take the concept of 'artificial presence' as its starting point can be challenged on a number of grounds. One objection is to note that in Wiesing's own, later work it provides the basis for a highly original but also controversial account of the non-participatory nature of our engagement with images that is diametrically opposed to the current interest in exploring the 'power' of images and the various forms of derived agency

³² Wiesing, *Artifizielle Präsenz*, 7.

³³ *Ibid.*, 69.



through which images are attributed with 'living presence'.³⁴ These are complex issues that need to be argued through in detail rather than decided in advance on the basis of a prior commitment to a particular theory of the image.³⁵ To put the same point another way, the theory of artificial presence, like any philosophical position, is itself open to contestation. The obvious rejoinder is that since this debate takes place through argument we are already at the level of philosophy, which is all Wiesing requires to mark the principled distinction between *Bildtheorie* and *Bildwissenschaft*. Nonetheless, there doesn't seem to be any binding reason why a starting point in the phenomenological tradition should be preferred, especially since so much recent work in *Bildwissenschaft* is directly concerned with the way in which images are used to coordinate action and hence with problems of intersubjectivity that are notoriously difficult to address from a phenomenological standpoint.³⁶ There are a number of other, competing positions that have been developed within the philosophy of depiction, including perceptualist, structuralist, and semantic approaches, and it may well be that some or all of these alternatives would yield different results.

A second, related issue concerns the status of individual images or groups of images as suitable subjects for investigation. Wiesing maintains that while a particular image or a group of images might serve to *illustrate* a philosophical argument, *Bildtheorie* does not proceed through the analysis of specific cases: 'Compared to *Bildwissenschaft*, *Bildtheorie* pursues a fundamentally different [...] question, which it answers by taking the concrete image not as an object of research but only as an example for principled statements about the nature of images.'³⁷ In short, *Bildtheorie* is 'not interested in the concrete image, but only in the image as a medium.'³⁸ The global claim that philosophy does not proceed through analysing specific examples could be challenged by considering the role played by thought experiments, which some philosophers take to be able to provide new insights.³⁹ Here, however, I want to examine

³⁴ See the final chapter, 'Die Partizipationspause' (The pause of participation), in Lambert Wiesing, *Das mich der Wahrnehmung: Eine Autopsie* (Frankfurt: Suhrkamp, 2009), 195–228, and the strongly voiced criticisms of the 'new image mythology' in Lambert Wiesing, *Sehen lassen: Die Praxis des Zeigens* (Frankfurt: Suhrkamp, 2013), 78–105.

³⁵ I address this problem and seek to provide an alternative account in Jason Gaiger, 'Participatory Imagining and the Explanation of Living-Presence Response', *British Journal of Aesthetics* 51 (2011): 363–81.

³⁶ See, for example, Edmund Husserl, 'Fifth Meditation: Uncovering of the Sphere of Transcendental Being as Monadological Intersubjectivity', in *Cartesian Meditations: An Introduction to Phenomenology*, trans. Dorion Cairns (Dordrecht: Nijhoff, 1960), 89–151.

³⁷ Wiesing, 'Vorwort zur Neuausgabe 2008', iv.

³⁸ Ibid.

³⁹ It also interesting to note that some philosophers defend the view that certain works of art, such as films, count as thought experiments insofar as they provide a fictional



whether the study of 'concrete images', or what Wiesing also terms 'real objects', can lead to philosophical insight into the nature of the image *as a medium* and the route or process of discovery through which this might be achieved. The primary evidence for this investigation is provided by one of Wiesing's first major publications, *Die Sichtbarkeit des Bildes* (1997), in which he set out to identify a distinctive tradition of 'formalist aesthetics' that is concerned not with what an image represents but with the nature of the image itself.⁴⁰ The book is both an historical account of a particular tradition of thought – tracing its various stages of development from the initiating work of Johann Friedrich Herbart and Robert Zimmerman through to the ideas of Maurice Merleau-Ponty and Charles Morris – and an attempt to show that the insights of this tradition are directly applicable to 'contemporary aesthetic phenomena', ranging from advertising and video clips to computer-generated imagery.⁴¹ A central contention of the book is that since formalist aesthetics identifies those properties that belong to an image *qua* image, irrespective of the vehicle or support through which it is made, it is able to accommodate the subsequent proliferation of new forms of imagery in the second half of the twentieth century and in our own, digital age.

Of particular interest in the present context is Wiesing's identification of Alois Riegl (1858–1905) and Heinrich Wölfflin (1864–1945) as key figures in this tradition. Both qualify as contributors to the modern discipline of art history as *Bildwissenschaft* in Bredekamp's use of this term insofar as they sought to expand the field of study to include previously ignored or marginalized areas of enquiry. This is most clearly the case with Riegl, whose first two books, *Altorientalische Teppiche* (1891) and *Stilfragen* (1893), were based on his museum work with textiles and decorative objects.⁴² Riegl went on to demonstrate the importance of considering the full range of so-called fine and applied arts in his *Spättrömische Kunstindustrie* (1901), dedicated to the neglected period of late Roman Imperial culture. Similar observations can also be made in the case of Wölfflin, whose analysis of the innovative stylistic features of the Baroque and what we now term Mannerism helped to undermine the classicist assumption that the post-Renaissance period should be understood in terms of exhaustion and decline.

means of imagining counterfactual situations and states of affairs. For an excellent discussion, see Murray Smith, 'Film, Argument, and Ambiguity', *Journal of Aesthetics and Art Criticism* 64 (2006): 33–42.

⁴⁰ This book, whose full title translates as 'The visibility of the image: History and perspective of formalist aesthetics', was first published by Rowohlt in 1997. It was reissued by Campus Verlag in 2008, with a new Preface by the author.

⁴¹ Wiesing, *Sichtbarkeit des Bildes*, 11.

⁴² Alois Riegl, *Altorientalische Teppiche* (Leipzig: Tauchnitz, 1891) and *Stilfragen: Grundlegungen zu einer Geschichte der Ornamentik* (Berlin: Siemens, 1893).

While Wiesing would accept the claim – put forward in a recent art-history textbook – that Riegl and Wölfflin ‘radically broadened the enterprise of art history’, his interest in their work lies not in the extension of the range of objects that are included in the field of enquiry but in the corresponding advance in our understanding of the image as a medium.⁴³ According to Wiesing, both Riegl and Wölfflin contributed to formalist aesthetics by investigating the ‘logical’ rather than the ‘empirical’ conditions of image production. Riegl’s theory of style ‘is not a theory of artistic epochs, but a *transcendental theory* about the conditions of visibility’, while Wölfflin ‘pursued the idea, introduced into aesthetics by Herbart and Zimmermann, that aesthetics can be developed as an *a priori* science of concepts’.⁴⁴

This approach is not as far removed from the work of Riegl and Wölfflin as it might at first appear. It has long been recognized that the so-called ‘critical historians of art’ drew on a rich confluence of ideas deriving from philosophy, psychology, empathy theory, and the social sciences, and that the relation between these various disciplines was still comparatively fluid in the late nineteenth and the early twentieth century.⁴⁵ Both Riegl and Wölfflin studied philosophy (Riegl with Zimmermann and Wölfflin with Wilhelm Dilthey) and both sought to address the complex theoretical questions that are raised once art history is charged not merely with providing a descriptive account of ‘what happened when’ but with explaining the large-scale transformations that connect apparently disparate historical phenomena. By resituating their ideas within the tradition of formalist aesthetics, Wiesing reveals the philosophical ambition of their work and brings it into dialogue with positions in contemporary aesthetics, where, for the most part, it has been overlooked.⁴⁶ His interpretation is thus of considerable independent interest, making an important contribution to the critical reassessment of texts whose status as ‘classics’ of art history has impeded rather than stimulated their reception by philosophers.

Let us simply grant the legitimacy of this enterprise and put to one side reservations concerning the partial or selective character of Wiesing’s reconstruction, which, of necessity, focuses on certain aspects rather than others. The question I want to address is whether relevant differences still remain

⁴³ See Michael Hatt and Charlotte Klonk, *Art History: A Critical Introduction to Its Methods* (Manchester: Manchester University Press, 2006), 65.

⁴⁴ See Wiesing, *Sichtbarkeit des Bildes*, 70 and 103.

⁴⁵ The term was introduced by Michael Podro, *The Critical Historians of Art* (New Haven, CT: Yale University Press, 1982).

⁴⁶ This situation is beginning to change. See, for example, the special issue of *The Journal of Aesthetics and Art Criticism*, ‘Heinrich Wölfflin, 100 Years After’, to mark the hundredth anniversary of the publication of *Kunstgeschichtliche Grundbegriffe*, which is due to appear in 2015, edited by Bence Nanay.

between the identification of a set of proposals that contribute to a formal 'logic of the image' (*Bildlogik*) and the 'context of discovery' in which these proposals were originally developed.⁴⁷ The guiding idea behind the development of formalist aesthetics – that 'the relation between forms is what is decisive about forms' – can be traced back to Herbart, who recognized that it is possible to study the immanent relations visible on the 'image surface' (*Bildoberfläche*) independently of what the image represents.⁴⁸ According to Wiesing, Riegl was the first to recognize that an analysis of the immanent relations between the different elements of the image surface could be extended to include the 'transitions' (*Übergänge*) between the marks or other elements out of which an image is made. In an important essay entitled 'Naturwerk und Kunstwerk', first published in 1901, Riegl argued that the natural world does not reveal itself to us in a constant or uniform fashion: 'Natural things appear to the human sense of sight both as isolated figures and also as connected with the whole. [...] They are limited by outlines, but they also merge more or less fluidly with their environment.'⁴⁹ What Riegl terms the 'double appearance of all natural things' (*Doppelperscheinung aller Naturdinge*) forms the basis for his account of a fundamental drive or tendency, the so-called *Kunstwollen* or 'will to art', which moves between two logically graspable extremes, marked by 'individual isolation on the one hand and dissolution into the environment on the other'.⁵⁰ Wiesing rightly observes that Riegl here seeks to identify a fundamental condition that any visual representation must satisfy: the relation between its constituent elements must be locatable somewhere on the scale between the maximally distinct and the maximally fused or merging. Purged of the connection to the idea of a *Kunstwollen*, the relational contrast between isolation and merging has application to any image whatsoever, whether it be a *bande dessinée* by Hergé, a painting by Turner, or computer imagery generated using pixels or vector graphics.⁵¹

Wiesing goes on to argue that 'Riegl's aesthetics does not deal with particular artistic styles but with their logical presuppositions, that is to say, with the conditions of the possibility of style'.⁵² The claim that it is possible to distinguish Riegl's aesthetics from his work as an art historian concerns the validity

⁴⁷ Note Wiesing's observation: 'Although as an art historian Wölfflin was concerned with particular historical styles, his reflections are aimed at the logic of the image [*Bildlogik*].' Wiesing, *Sichtbarkeit des Bildes*, 103.

⁴⁸ *Ibid.*, 44.

⁴⁹ Alois Riegl, 'Naturwerk und Kunstwerk' (1901), in *Gesammelte Aufsätze*, ed. Karl M. Swoboda (Augsburg: Filser, 1929), 60.

⁵⁰ *Ibid.*, 60–61 and 67–68.

⁵¹ Wiesing, *Sichtbarkeit des Bildes*, 59 and 107.

⁵² *Ibid.*, 71.

or truth-preserving status of his insight into a specific relational property of images. However, if we ask after the genesis or 'context of discovery' through which he arrived at this insight, there seems little doubt that his study of the history of ornament and his wide-ranging investigation of late Roman artistic production had a crucial role to play. Consider, for example, his observation in *Spätromische Kunstindustrie* that in order to analyse the stylistic differences between disparate kinds of artefacts it was necessary to examine the 'relations in which the parts stand to each other and to the whole'.⁵³ One of the motivations behind Riegl's work as an art historian was to challenge the standard Vasarian conception of art-historical development in which stylistic change is explained in terms of a progressive advance in techniques of naturalism. Not only does this explanatory model have a hidden normative bias towards certain periods of art, such as fifth-century Hellenism and the High Renaissance, it also privileges certain forms of artistic production over others. By turning his attention to the history of ornament and tracing the development over time of specific motifs such as the acanthus leaf, Riegl showed that it is possible to identify internal patterns of change that are responsive to the imperatives of design rather than to the requirements of verisimilitude or naturalistic imitation. In Michael Podro's elegant summary, he proposed that we should 'understand art as initially transforming nature and then as transforming itself from within, out of purposes that are strictly artistic'.⁵⁴

Riegl's challenge to the Vasarian conception of art history was taken up by Wölfflin in *Kunstgeschichtliche Grundbegriffe* (1915). Wölfflin does not reject the claim that there can be advances in naturalism or that Renaissance artists developed new techniques for conveying visual appearances. But he does maintain that this provides a one-sided and hence insufficient basis for explaining stylistic change:

It is a mistake for art history to work with the clumsy notion of the imitation of nature, as though it were merely a homogenous process of increasing perfection. All the increase in the 'surrender to nature' does not explain how a landscape by Ruysdael differs from one by Patenir, and by the 'progressive conquest of reality' we still have not explained the contrast between a head by Frans Hals and one by Dürer.⁵⁵

⁵³ Alois Riegl, *Spätromische Kunstindustrie* (1901; Vienna: Österreichische Staatsdruckerei, 1927), 96.

⁵⁴ Podro, *Critical Historians of Art*, 71.

⁵⁵ Heinrich Wölfflin, *Kunstgeschichtliche Grundbegriffe: Das Problem der Stilentwicklung in der neueren Kunst* (1915; Basle: Schwabe, 1991), 26; *Principles of Art History: The Problem of the Development of Style in Later Art*, trans. M. D. Hottinger (New York: Dover, 1950), 13.

Wölfflin's celebrated contrast between the 'linear' and the 'painterly' style is rooted in Riegl's distinction between two different forms of beholding. In the first case, 'interest lies more in the perception of individual material objects as solid, tangible bodies; in the other, in the apprehension of the world as a shifting semblance.'⁵⁶ The characteristic achievement of the Baroque – in which the 'image as a whole' rather than the 'separate form' is given priority – is thus to be understood 'neither as a rise nor a decline from classic, but a totally different art.'⁵⁷

The five pairs of 'fundamental concepts' that Wölfflin develops to characterize stylistic differences between the classic art of the High Renaissance and the freer art of the Baroque can plausibly be understood as a further extension of Riegl's identification of a distinctively visual relational property: linear and painterly, plane and recession, closed form and open form, multiplicity and unity, and clearness and unclearness, can all be recast as constituents of a formal *Bildlogik*.⁵⁸ Thus, for example, the distinction between plane and recession permits the identification of another relational property of images: the depicted contents can be organized parallel to the picture plane or situated behind one another so that they recede into depth. This relational property derives from the intrinsically perspectival character of depiction, which, unlike linguistic representation, cannot represent a plurality of objects or distinct parts of a single object without providing some information on how they stand spatially in relation to one another.⁵⁹

As in the case of Riegl, Wiesing concludes: 'The fundamental concepts are not descriptive concepts for the stylistic characterization of individual works. Their philosophical significance resides therein, that they disclose the a priori formal properties of [visual] representation.'⁶⁰ Wölfflin himself was more hesitant about the extension of the five pairs of concepts to other historical periods, but it is clear that he intended them to have more general application. The terminology of 'fundamental concepts' invites comparison with Kant's transcendental project and at one point Wölfflin directly contrasts his pairs of concepts with Kant's

⁵⁶ *Ibid.*, 27; 14.

⁵⁷ *Ibid.*, 34–35 and 26; 14 and 20.

⁵⁸ For a more detailed discussion of Wiesing's reconstruction of the fundamental concepts, see Jason Gaiger, 'The Analysis of Pictorial Style', *British Journal of Aesthetics* 42 (2002): 20–36, and *Aesthetics and Painting* (London: Continuum, 2008), 91–115.

⁵⁹ Consider Hopkins's observation: 'depiction is essentially perspectival [...]. I cannot depict a chair, say, without depicting some part of it as nearer than another. And in general any depiction of any thing must represent it as spatially related to a certain point, the point from which it is depicted.' See Robert Hopkins, *Picture, Image and Experience: A Philosophical Inquiry* (Cambridge: Cambridge University Press, 1998), 27. It should be noted, however, that not all images are depictions in the sense in which Hopkins uses this term.

⁶⁰ Wiesing, *Sichtbarkeit des Bildes*, 97.



deduction of the categories in the *Critique of Pure Reason*: 'We can call them categories of beholding without danger of confusion with Kant's categories. Although they clearly run in one direction, they are still not derived from one principle. (To a Kantian mentality they would look merely adventitious.)'⁶¹ Wölfflin's main concern here is to emphasize that he has arrived at the fundamental concepts empirically, that is to say, through the detailed analysis and comparison of individual works and groups of works, rather than through a process of philosophical deduction. This is why, from a Kantian standpoint, they will appear to be adventitious or merely 'thrown together' (*als bloß 'aufgerafft' erscheinen*). It is important to note that *Kunstgeschichtliche Grundbegriffe* is a comparatively late work, which systematizes and further develops ideas that Wölfflin had presented in *Renaissance und Barock* (1888) – where the distinction between the linear and the painterly first appears as a means of characterizing differences between Renaissance and Baroque architecture – and *Die klassische Kunst* (1899), in which his analysis of the constituent elements of the 'new pictorial form' achieved by classical art is based on the preceding chapters devoted to the work of individual artists.⁶²

V

The reason for emphasizing the rather obvious point that as art historians Riegl and Wölfflin arrived at their conclusions through close attention to specific examples is to suggest that an instructive analogy may hold with the project of developing a universal *Bildwissenschaft* that encompasses both art and non-art images. The expansion of the field of study to include informational or 'epistemic' images has parallels to the way in which Riegl and Wölfflin sought to broaden the enterprise of art history.⁶³ It doesn't seem implausible to identify a link between this extensional transformation and the development of a strongly theoretical orientation in which questions concerning the nature and function of images are recognized as *internal* to the project of a universal 'image science'. If, as Sachs-Hombach and others have argued, the success of this enterprise depends on the development of an integrative programme that allows insights from different domains to be unified into a coherent body of knowledge, we need to find a way of showing how the distinctive philosophical concern with

⁶¹ Wölfflin, *Kunstgeschichtliche Grundbegriffe*, 264; *Principles of Art History*, 227.

⁶² See Heinrich Wölfflin, *Renaissance und Barock: Eine Untersuchung über Wesen und Entstehung des Barockstils in Italien* (Munich: Bruckmann, 1888) and *Die klassische Kunst: Eine Einführung in die italienische Renaissance* (Munich: Bruckmann, 1899).

⁶³ For the use of the term 'epistemic image', see Ladislav Kesner, 'A Universal Image Science? Only in Our Dreams', in Elkins and Naef, *What Is an Image?*, 193–96. Kesner is doubtful of the prospects of developing a genuinely interdisciplinary *Bildwissenschaft*, emphasizing 'the near incompatibility of discourses' within the natural sciences and the humanities.



conceptual analysis and logical argument can both feed into and, in turn, be informed by the consideration of new problems and, indeed, new empirical information. Cross-disciplinary research into scientific imagery and visualization techniques – including the specific kinds of achievement that make visual representations valuable as sources of knowledge – is still relatively uncharted territory and it seems likely that this new subject domain will provide fertile ground for philosophical insights that have wider relevance. We may not yet be in a position to specify the exact relation between empirical and philosophical investigation into the full range and diversity of images, but, from a pragmatic standpoint, it seems advisable to heed the principle that C. S. Peirce claimed should ‘be inscribed upon every wall of the city of philosophy: Do not block the way of inquiry.’⁶⁴ The permissive conception of universality that underpins the project of a universal *Bildwissenschaft* falls short of the more demanding, normative conception of universality required by philosophy, but it has the advantage of keeping the question open.

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BIBLIOGRAPHY

- Belting, Hans. *Bild-Anthropologie: Entwürfe für eine Bildwissenschaft*. Munich: Fink, 2001.
- , ed. *Bildfragen: Die Bildwissenschaften im Aufbruch*. Munich: Fink, 2007.
- Boehm, Gottfried, ed. *Was ist ein Bild?* Munich: Fink, 1994.
- , 'Die Wiederkehr der Bilder.' In *Was ist ein Bild?*, 11–38.
- Bredenkamp, Horst. 'A Neglected Tradition: Art History as *Bildwissenschaft*?' *Critical Inquiry* 29 (2003): 418–28.
- , 'Bildwissenschaft.' In *Metzler Lexikon Kunstwissenschaft: Ideen, Methoden, Begriffe*, edited by Ulrich Pfisterer, 56–59. Stuttgart: Metzler, 2003.
- , *Galilei der Künstler: Die Zeichnung, der Mond, die Sonne*. Berlin: Akademie, 2007.
- , ed. *Galileo's O*. 2 vols. Berlin: Akademie, 2011.
- Bredenkamp, Horst, Irene Brückle, and Paul Needham. *A Galileo Forgery: Unmasking the Sidereus Nuncius*. Berlin: de Gruyter, 2014. Available online at <http://www.degruyter.com/view/product/416084?format=EBOOK>.
- Brückle, Irene, and Oliver Hahn, eds. *Galileo's 'Sidereus Nuncius': A Comparison of the Proof Copy (New York) with Other Paradigmatic Copies*. Vol. 1 of Bredenkamp, *Galileo's O*.
- Elkins, James, and Maja Naef, eds. *What Is an Image?* Stone Art Theory Institutes 2. University Park: Pennsylvania State University Press, 2011.

⁶⁴ Charles Sanders Peirce, 'The Scientific Attitude and Fallibilism', in *Philosophical Writings of Peirce*, ed. Justus Buchler (New York: Dover, 1955), 54.



- Gaiger, Jason. 'The Analysis of Pictorial Style.' *British Journal of Aesthetics* 42 (2002): 20–36.
- . *Aesthetics and Painting*. London: Continuum, 2008.
- . 'On *Bildwissenschaft*: Can There Be a Universal "Science of Images"?' In *The Aesthetic Dimension of Visual Culture*, edited by Ondřej Dadejčík and Jakub Stejskal, 33–49. Newcastle: Cambridge Scholars, 2010.
- . 'Participatory Imagining and the Explanation of Living-Presence Response.' *British Journal of Aesthetics* 51 (2011): 363–81.
- Geuss, Raymond. *The Idea of a Critical Theory: Habermas and the Frankfurt School*. Cambridge: Cambridge University Press, 1981.
- Hatt, Michael, and Charlotte Klonk. *Art History: A Critical Introduction to Its Methods*. Manchester: Manchester University Press, 2006.
- Hopkins, Robert. *Picture, Image and Experience: A Philosophical Inquiry*. Cambridge: Cambridge University Press, 1998.
- Husserl, Edmund. 'Fifth Meditation: Uncovering of the Sphere of Transcendental Being as Monological Intersubjectivity.' In *Cartesian Meditations: An Introduction to Phenomenology*, translated by Dorion Cairns, 89–151. Dordrecht: Nijhoff, 1960.
- Kennick, William E. 'Does Traditional Aesthetics Rest on a Mistake?' *Mind* 67 (1958): 317–34.
- Kesner, Ladislav. 'A Universal Image Science? Only in Our Dreams.' In Elkins and Naef, *What Is an Image?*, 193–96.
- Lesske, Frank. 'Politikwissenschaft.' In Sachs-Hombach, *Bildwissenschaft*, 236–46.
- Mitchell, W. J. T. 'The Pictorial Turn.' In *Picture Theory: Essays on Verbal and Visual Representation*. Chicago: University of Chicago Press, 1994.
- Nanay, Bence, ed. 'Heinrich Wölfflin, 100 Years After.' Special issue, *Journal of Aesthetics and Art Criticism* (forthcoming).
- Needham, Paul. *Galileo Makes a Book: The First Edition of 'Sidereus Nuncius', Venice 1610*. Vol. 2 of Bredekamp, *Galileo's O*.
- Panofsky, Erwin. 'Galileo as Critic of the Arts: Aesthetic Attitude and Scientific Thought.' *Isis* 47 (1956): 3–15.
- Peirce, Charles Sanders. 'The Scientific Attitude and Fallibilism.' In *Philosophical Writings of Peirce*, edited by Justus Buchler, 42–59. New York: Dover, 1955.
- Podro, Michael. *The Critical Historians of Art*. New Haven, CT: Yale University Press, 1982.
- Rampléy, Matthew. 'Art History and the Politics of Empire: Rethinking the Vienna School.' *Art Bulletin* 91 (2009): 446–62.
- Riegl, Alois. *Altorientalische Teppiche*. Leipzig: Tauchnitz, 1891.
- . *Stilfragen: Grundlegungen zu einer Geschichte der Ornamentik*. Berlin: Siemens, 1893.
- . *Spätromische Kunstindustrie*. 1901. Vienna: Österreichische Staatsdruckerei, 1927.
- . 'Naturwerk und Kunstwerk.' In *Gesammelte Aufsätze*, edited by Karl M. Swoboda, 51–70. Augsburg: Filser, 1929.
- Rorty, Richard. *Philosophy and the Mirror of Nature*. Oxford: Blackwell, 1980.
- Sachs-Hombach, Klaus, ed. *Bildwissenschaft: Disziplinen, Themen, Methoden*. Frankfurt: Suhrkamp, 2005.
- Sachs-Hombach, Klaus, and Jörg R. J. Schirra. 'Bild und Wort: Ein Vergleich aus bildwissenschaftlicher Sicht.' *Elise: Essener Linguistische Skripte* 6 (2006): 51–72.
- Schierl, Thomas. 'Werbungsforschung.' In Sachs-Hombach, *Bildwissenschaft*, 309–19.
- Smith, Murray. 'Film, Argument, and Ambiguity.' *Journal of Aesthetics and Art Criticism* 64 (2006): 33–42.
- Ullrich, Wolfgang. 'Der gefälschte Mond, Teil 3.' *Die Zeit*, January 16, 2014. <http://www.zeit.de/2014/04/galilei-faelschung-bredekamp-3>.
- Weitz, Morris. 'The Role of Theory in Aesthetics.' *Journal of Aesthetics and Art Criticism* 15 (1956): 27–35.





- Wiesing, Lambert. *Artifizielle Präsenz: Studien zur Philosophie des Bildes*. Frankfurt: Suhrkamp, 2005.
- . *Die Sichtbarkeit des Bildes. Geschichte und Perspektiven der formalen Ästhetik*. 2nd ed. Frankfurt: Campus, 2008.
- . 'Vorwort zur Neuauflage 2008.' In *Sichtbarkeit des Bildes*, i–xii.
- . *Das mich der Wahrnehmung: Eine Autopsie*. Frankfurt: Suhrkamp, 2009.
- . *Sehen lassen: Die Praxis des Zeigens*. Frankfurt: Suhrkamp, 2013.
- Wölfflin, Heinrich. *Renaissance und Barock: Eine Untersuchung über Wesen und Entstehung des Barockstils in Italien*. Munich: Bruckmann, 1888.
- . *Die klassische Kunst: Eine Einführung in die italienische Renaissance*. Munich: Bruckmann, 1899.
- . *Kunstgeschichtliche Grundbegriffe: Das Problem der Stilentwicklung in der neueren Kunst*. 1915. Basle: Schwabe, 1991.
- . *Principles of Art History: The Problem of the Development of Style in Later Art*. Translated by M. D. Hottinger. New York: Dover, 1950.
- Wood, Christopher. Review of *Bild-Anthropologie*, by Hans Belting. *Art Bulletin* 86 (2004): 370–73.

