

Zeitschrift:	Studies in Communication Sciences : journal of the Swiss Association of Communication and Media Research
Herausgeber:	Swiss Association of Communication and Media Research; Università della Svizzera italiana, Faculty of Communication Sciences
Band:	7 (2007)
Heft:	2
Artikel:	What is visual communication?
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DOI:	https://doi.org/10.5169/seals-791077

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Special Section
Research on Visual Communication

Studies in Communication Sciences 7/2 (2007) 7–34

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WHAT IS VISUAL COMMUNICATION?
PAST AND FUTURE OF AN EMERGING FIELD OF
COMMUNICATION RESEARCH

In the Anglo-American context visual communication has been on the academic radar since the late 1970s. In continental Europe the diversity of disciplines and the heterogeneity of national and cultural traditions in researching the visual have hampered a unified approach towards this expanding field of research that is in and by itself transdisciplinary in nature. This overarching quality of visual communication research is both the beauty and the beast. The “beauty” is the methodological as well as topical width of the scope that can be covered by visual research. The “beast” is that this disciplinary heterogeneity has, up to this point, deprived visual communication from a wider institutional impact in terms of curricula and third-party funding. In its current state, visual communication as organized in the International Communication Association (ICA), can be described as an expanding subfield of communication science that uses social scientific methods to explain the production, distribution and reception processes, but also the meanings of mass-mediated visuals in contemporary social, cultural, economic and political contexts. In this article a particular emphasis is placed on traditions and methods from the German-language tradition since these are little known in the anglophone scientific community.

Keywords: “*Bild*”, image, visual methodology, transdisciplinarity.

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*Figure 1: René Magritte, “La trahison des images (Ceci n'est pas une pipe)”, oil on canvas (1929), 64.45 x 93.98 cm, Los Angeles County Museum of Art (LACMA)**

“Ceci n'est pas une pipe” – this is not a pipe. The surrealist painting of Belgian artist René Magritte (1898–1967) is often cited when it comes to the paradox of labelling the visual depiction of an object (Figure 1). The intrinsic risk of this intellectual procedure that every human being performs on a daily basis, is to confuse the depiction with the actual object, the name with the thing itself. Complex visuals like the artwork of Magritte entice the beholder to “think twice,” to reflect the very rules and covenants of everyday discourse and of human reflection.

The purpose of this article is precisely this – to take a step back and look at the foundations of contemporary visual communication research: What are its roots? What is its current scope? What are its theoretical foundations and its applied methods? What is the relationship between visual communication and other disciplines – is it a “metascience” or rather a subfield of research? How is visual communication organized internationally? And, last but not least, how can visual communication be defined and what might be its future challenges?

This paper will first review the etymological history of the related, but not identical terms “image,” “picture,” “Bild” and “visual.” The second part is devoted to contrasting visual and textual communication in an effort to better define the commonalities and differences of these two distinct communication modes. The following chapters consider visual communication from three different perspectives – the disciplinary, and the methodological perspective, concluding with a definition of the field and an outlook on future challenges.

¹ http://collectionsonline.lacma.org/MWEB/about/modern_about.asp; image source: <http://upload.wikimedia.org/wikipedia/en/b/b9/MagrittePipe.jpg> [10.09.07]

1. An Image is an Image is an Image? – Understanding Visuals and Using the Right Terms: Image, Picture, *Bild*, and Visuals

Everybody knows what an image is, or at least we think we do. The obvious question “What is an image?” has not deterred two reknowned visual scholars from publishing an essay and a book on that very topic (Mitchell 1990; Boehm 1995).

In fact, the meaning of the word “image” depends on the disciplinary angle with which the term is approached, but also on the particular language used.

By comparison to other areas or sub-fields of communication science visual communication as a research field is less obvious. As opposed to, e.g., political communication where political science as a partner is a clear disciplinary reference point, the visual has been studied from various disciplinary perspectives, ranging from art history to philosophy, from anthropology to sociology, from psychology to computer science. Also, more theoretical approaches like e.g. semiotics (see van Leeuwen 2001; Jewitt & Oyama 2001; Kress & van Leeuwen 2005; Nöth 2005; Moriarty 2005) co-exist with more applied approaches to visual communication like e.g. visual literacy (Dondis 1973; Braden & Hortin 1982; Curtiss 1987; Messaris 1994, 1998; Doelker 1997; Siber 2005; Messaris & Moriarty 2005; Seppänen 2006) or information visualization² (Neurath 1991; Tufte 1990, 1997, 2006; Card et al. 1999; Bederson & Shneiderman 2003; Shneiderman & Pleasant 2004, Chen 2006; Ware 2006). Still, all of those diverse perspectives agree that the visual is both center and objective of their research. But, the definitions vary according to language traditions. And, there are slight differences between the meanings of the English terms “the visual,” “the image,” “the picture,” the German expressions “*das Bild*,” “*das Visuelle*,” the French corollaries “*l’image*,” “*le visuel*,” and the Italian “*l’immagine*.” Thus, arguably, also the language that is used to verbalize research designs and research findings determines what is considered to be visual communication and what not.

² See the proceedings of the 11th International Conference on Information Visualization (IV’07) 4–6 July 2007. Switzerland, Zurich, IEEE at <http://www.ia.arch.ethz.ch/publications.htm>.

Etymologically the word “*Bild*” which is only used in the German and Dutch languages (“*Beeld*”) can be traced back to the 8th century (Kluge 2002: 122), and is thus the oldest of all above mentioned visual terms. The original meaning of “*Bild*” was “role-model, pattern” (“*Vorbild, Muster*”). Only later, during the 18th century, it took on the most widely used meaning of material image (“*Abbild*”), (Kluge 2002: 122; Duden 2006: 95). In its original meaning the term is linked with a certain type of proper behavior (“*Benehmen*”), but also to having the right “form” (“*Billich*”), or Gestalt (Kluge 2002: 122). This brief etymological history explains the dual meaning that is inherent in the German term “*Bild*”: the close connection of a mental component (Vorbild, Benehmen) and a material component (Abbild). Both are interrelated. Hence, the single word “*Bild*” can be used to denote both meanings – mental and material images. This combination of two slightly different meanings in just one word is the major complication in translating the word “*Bild*” into other languages, and leading to the general lack of an equivalent for the German “*Bildwissenschaft*” (“image science, science of the image”) in the English language (Bredekamp 2003: 418).

Another, implied, meaning connected with the word “*Bild*” is also hidden in its etymological history: The assumption of the “power of images,” that images possess a certain thaumaturgical force. The Germanic root **bil-* carried the meaning “charism, miraculous sign” (“*Wunderkraft, Wunderzeichen*”), and is thus connected to notions of sorcery and thaumaturgy. An alternative name for wizard and troll used to be “*Bilwiss*,” meaning being knowledgeable about miracles (“*Wundersames wissend*”), (Duden 2006: 95). The visual magic (“*Bildmagie*,” “*Bildzauber*”) even nowadays associated with images might be connected to these original variants of meaning that still linger on without being consciously processed.

Another etymological connection can be drawn between the terms “*Bild*,” “*bilden*” (“to visualize, to create,” but also “to educate”!), and “*Bildung*” (“education,” but also the general forming of the character of a person or a social entity), (Mackensen & Hollander 1982: 185). For example the expression “*ein gebildeter Mensch*” can be translated as “an educated human being, a learned person,” and linguistically the syllable “*bild*” is part of that expression, attributing a subtle visual connotation to the words. As an advocate of visual research I cannot help, but argue

that this is not accidental, that this subtle visual connotation of “*Bildung*” reveals: The learning experience is at its core a visual experience.

The English language, by comparison, has three distinct visual terms carrying different meanings: image, picture, visuals. While the term “picture” denotes a particular material image, mostly a picture hanging on the wall, a painting or a work of graphic art, less frequently including sculptures as pictures, the broader and most widely used term is “image.” Funk & Wagnalls “Standard Dictionary of the English Language” (1964: 630) highlights eight different meanings of the term: “A visible representation of something”; the “picture or counterpart of an object produced by reflection or refraction,” (and here they distinguish “real images” from “virtual images”); a “natural resemblance,” a “representation in the mind of something not perceived at the moment through the senses”; a “metaphor or a simile”; the “optical replica of a scene produced by a television camera,” an “apparition.”

Most of the eight connotations are immaterial in their meaning, leading to a clear separation in the English language between the term “picture” used mainly to signify material images, while “image” rather describes immaterial images. This makes sense, since the etymological connection is very different from the German “*Bild*,” linking “image” with mental processes like “imagination” while the German term is closer to a certain “form” and the “production” (“*bilden, gestalten*”) of an end-product.

The English term “image” became fashionable in its meaning of mental images already in the 15th century, having been imported from old French “*imager*” (The Oxford English Dictionary 1989: 667).

The term “visual” has an even more complex origin, and was also imported from Spanish and Portuguese “*visual*,” Italian “*Visuale*” and French “*visuel*” during the 16th century. Its historical root is the Latin word “*visus*,” meaning “sight, vision” (The Oxford English Dictionary 1989: 667). While in the past “visual” has mainly been used as an adjective in combination with a noun, like in “visual aid,” it has most recently taken on the meaning of material visuals, and is used mostly in the plural: “A visual image or display, a picture, spec, the visual element of a film or television production” (The Oxford English Dictionary 1989: 667).

In the German language both terms, “*das Image*” and “*visuell*” have been incorporated in the second half of the 20th century. While the meaning

of “*Image*” is that of a mental image that involves a certain impression of the character of a person³ or the public impression of an organization (“*Corporate Image*”), the term “*visuell*” does not exist as a noun, but as an adjective that denotes anything that is seen or is related to visual perception (Mackensen & Hollander 1982: 559, 1067; Carstensen 1994: 693, 1667).

To summarize the above comparison of linguistic traditions and usages in the German and the English language: It appears crucial to understand the difference in connotations of the term “*Bild*” on the one hand, and “image,” “visuals” on the other.

While the German tradition combines mental and material meanings in one word, the English tradition has more or less separate words for material and mental images.⁴ Thus, visual research in Germany is characterized by a much more “abstract” terminology that is nonetheless rooted in the analysis of visual production and particularly the material products – the pictures (“*Abbilder*”) and their origins. While English language based research is more concretely focused on particulars of pictures, images or visuals, since already the choice of term (picture, image or visual) reflects a decision to focus on a peculiar aspect of the visual process. Also, anglophone visual research in general, exceptions prove the rule, is more process-oriented than the German product-oriented visual research. This general tendency can, but need not be, traced to the words’ etymological origins, since the key-term “image” is closer related to imaginative processes than to specific visual products. This distinction is, of course, a gross generalization and does in no way intend to suggest that Anglo-American visual research would not care about visual production nor visual products, nor that German visual communication research focuses merely on “the abstract.” But, the implications of the key terms used in different languages are that the term “*Bild*” conjures up different associations than “image” or “visual,” and these differences should be taken into account and discussed in future visual research.

³ See e.g. the volume edited by A. Köstler and E. Seidl: “*Bildnis und Image*”, 1998.

⁴ Mitchell (1990: 10) distinguishes five types of images: Graphic, Optical, Perceptual, Mental and Verbal.

2. Visual Communication Versus Textual Communication? Two Sides of the Same Coin?

What is the original contribution of “visual communication”? Is it an overarching approach that borders on a “metascience”? The answer to that question is quite clear: No. Despite its transdisciplinary nature and its potential to bridge disciplinary gaps, not all communication is visual and most types of visual communication have also other components like text, sound, and spoken word. In fact, it is very difficult to dissect “just the visual” from the whole communication process. In audio-visual material like video and film, this is rather obvious. But even in non audio-visual material like newspaper photography, the visual can hardly be studied without taking its textual context (caption, headers, accompanying articles) as well as its actual usage habits into account. The phenomenon of “multimodality” (see e.g. Forceville 2005) of contemporary communication is thus one of the challenges that visual communication research has to master in the future.

Despite the multimodal nature of contemporary communication practices, visuals are a unique form of communication. And, visuals are by comparison to text, an understudied field of communication research. Also, despite its complex interrelation, visual and textual communication differ from one another. They are two distinct modes of communication (Messaris 2003: 553). Visual communication and textual communication follow a different logic: While textual communication is based on argumentation, visual communication is based on association (Müller 2003: 22). The argumentation logic is structured according to a particular grammar and has – with the exception of poetic text – a certain “narrative” structure where one argument follows another, the latter building upon the former. Communication by association means that certain patterns and memorized visual precursors (“*Vor-Bilder*”) are more or less spontaneously “popping up” in the beholders’ minds, and that the rules that apply to visual meaning creation are less standardized and more context-dependent than meaning created and communicated in the textual mode.

This is the point at which semiologists and iconologists usually clash, because for a semiologist or a semiotic researcher images are just one of many

other “signs,” while for an iconological researcher the “image,” “visual,” or the “*Bild*” is the meta-category that cannot be subsumed under a different term.⁵ Arguably, from the perspective of visual communication, book titles like the groundbreaking and influential “Reading Images” (Kress & van Leeuwen 2005; same title: Thomas 2000), or “Reading Pictures” (Sepänen 2006) miss the point of visual communication. From a less language oriented and more image oriented point of view it has been argued that “images are not read, they are seen”⁶ (Müller 2003: 9). This difference might appear subtle, but using the term “read” suggests particular processes in the mind of an observer and downplays others.

As open as visual communication is to all sorts of multidisciplinary, methodological and theoretical input, the notion of visual communication as a particular mode and type of communication is “common ground” in this subfield of communication science. Visual communication is a research field that is largely rooted in the social sciences. Its research questions and research designs are shaped by a critical approach, and a focus on identifying problematic issues, aiming at understanding and finally explaining contemporary visual phenomena in their social, cultural, economic and political contexts.

3. The Disciplinary Perspective: From Art History to Visual Culture, from Visual Studies to Visual Communication

The “parenting” of visual communication research is complex. Depending on the disciplinary angle, art history (Stafford 1996; Elkins 1999, 2003; Belting 2001; Bredekamp 2003, 2004; Boehm 2004; von Falkenhausen 2007), philosophy (Bohn 1990; Boehm 1995; Faßler 2002; Sachs-Hombach 2005), anthropology (Banks & Morphy 1997; Banks 1998; Belting 2001; Pink 2003; Harper 2004; Ruby 2005), sociology (Pauwels 2000; Newbury 2005; Ludes 2005), statistics (Neurath 1991; Nikolow 2005), information visualization (Tufte 1990, 1997, 2006; Card et al. 1999; Bederson and Shneiderman 2003; Shneiderman and Plaisant 2005; Plaisant and Shneiderman 2006; Chen 2006; Ware 2006), psychology (Frey

⁵ For an interesting case study bridging semiotics and iconology see van Leeuwen (2001).

⁶ Original in German: «Bilder werden nicht gelesen, sondern gesehen oder geschaut.»

1999; Bryant & Zillmann 2002), even the neurosciences⁷ are major influences on visual communication.

Only few publications have so far been devoted to tracing the history of the emerging field “visual communication” since its early beginnings in the 1970s (Griffin 1991, 2001; Foss 1992; Müller 2003; Barnhurst et al. 2004). Particularly Griffin (1991: 9) can be credited to having unravelled the “earliest book to make prominent use of the term (visual communication),” being “William Ivins’ *Prints and visual communication*, published after more than a decade of preparation in 1953.” Barnhurst et al. deserve credit for writing a first and tentative history of visual communication research under the umbrella of the International Communication Association (ICA). The intention of this chapter is not to repeat their findings, but to add a transdisciplinary perspective on the various influences, and, complement this with an admittedly sketchy overview on the current state of the institutionalization of visual communication in terms of organizations and regular publications that are relevant to the field. To this end a list of the leading visual communication organizations, their major publications and their websites can be found on the last pages of this article.

Perceived from the vantage point of German⁸ art history, the history of art is the mother of all visual sciences. In the past decade, art history as an academic discipline was torn between “conservative forces,” arguing in favor of keeping the artwork at the center of the discipline. On the other side, “progressive” art historians are advocates of a broader visual perspective. They perceive themselves in the tradition of early 20th century cultural historian Aby M. Warburg (1868–1929), who already then had defined as property of art history “image-making in all its forms” (Warburg 1920: 598), and not “just” artworks. Warburg was an exceptional visual scholar, whose intellectual legacy is less apparent in his programmatic written work, but rather in his library that survived its imminent

⁷ Cognitive psychology has a booming subfield of research labelled “Visual Expertise.” This specialized field is of interest to visual communication research, but cannot be covered in this article. For further information see M. Sugimoto & G.W. Cottrell 2001; C. Joyce & G.W. Cottrell 2004. See also Solso 1994.

⁸ The word “German” is meant here as “of German language”, thus including Swiss, Austrian as well as German art historical research, e.g. the substantial influence of Swiss historian Jakob Burckhardt (1818–1897).

destruction in 1933 and has remained in its London exile ever since (Diers 1993; Warnke 1993; Forster 1999; Rampley 2001). As late as 1995 the building that originally housed the “Kulturwissenschaftliche Bibliothek Warburg” in Hamburg was re-opened again. The “Warburg-Haus” is affiliated with the University of Hamburg and houses a research center on political iconography founded by the art historian Martin Warnke (Warnke 1994, 2007). This progressive contemporary art history school sees the Warburg-tradition as the origin and anchor of a new discipline labelled “*Bildwissenschaft*,” a term that, for already mentioned reasons, can only inadequately be translated as “image science” (Bredekamp 2003). The label “*Bildwissenschaft*” has also been appropriated by other scholars (see the art historians Belting 2001 and Schulz 2005, and the philosopher Sachs-Hombach 2005, 2005a). Sachs-Hombach and his collaborators consider “*Bildwissenschaft*” as an umbrella term that covers all disciplines with a visual focus, but rather see philosophy, instead of art history, at the core of the new discipline (Sachs-Hombach & Rehkämper 2004; Sachs-Hombach 2005, 2005a).

British and US-American art history have taken a different route. US art history, in its beginnings, was strongly influenced by German immigrants (see Eisler 1969) like Erwin Panofsky (1892–1968), who introduced the three-step-method of iconological analysis (see Panofsky 1972, 1982, 2006). The term iconology was originally coined by Panofsky’s senior colleague in Hamburg, Aby M. Warburg (Schmidt 1993: 26), but Panofsky can be credited for having further developed and standardized this method of visual interpretation by incorporating a systematized sociological approach conceived by Hungarian sociologist Karl Mannheim (1893–1947).

Panofsky can be described as the nexus between art history and the social sciences, and visual sociology in particular. Not only did Panofsky’s highly influential iconological method build on Mannheim’s sociology of knowledge (see Mannheim 1972), Panofsky in turn was an inspiration to French sociologist Pierre Bourdieu (1930–2002), who developed his theory of the “*habitus*” after reading Panofsky’s work.⁹

⁹ See P. Bourdieu (1991: 125, Footnote 1). This text was originally written as an afterword for the French translation of Panofsky’s “Gothic Architecture and Scholasticism.” See also Bourdieu 1991: 165–166.

The British art history tradition¹⁰ lived through a similarly controversial period as the German discipline (Rampley 2005), only that the keyword for the British “progressivists” was not “image science” (“*Bildwissenschaft*”), but Cultural Studies and its corollary “Visual Culture.”¹¹ As James Elkins (2003: 1–2) describes vividly, Cultural Studies “started in England in the late 1950s,” spread through the “red-brick universities” in England during the 1970s and ten years later to the US, Australia and Canada.

Visual culture, also known as visual studies, is a new field for the study of the cultural construction of the visual in arts, media, and everyday life. It is a research area and a curricular initiative that regards the visual image as the focal point in the processes through which meaning is made in a cultural context. (Dikovitskaya 2001: 1)

While, in the above definition, Margaret Dikovitskaya treats “Visual culture” and “Visual Studies” synonymously, Elkins (2003: 6–7) draws a clear distinction between the two. “Visual Studies” for him is a further development of “Visual Culture.” Visual Studies is “the study of visual practices across all boundaries.” On Visual Culture ample literature is available (Bryson et al. 1994; Jenks 1995; Mitchell 1995; Walker & Chaplin 1997; Evans & Hall 1999; Barnard 2001; Helfand 2001; Lister & Wells 2001; Sturken & Cartwright 2001; Howells 2002; Mirzoeff 2004; Dikovitskaya 2006; Doyle & Jones 2006; Pauwels 2006; Downing 2007; von Falkenhausen 2007). Visual Studies is a rather new term, and few publications are yet titled in that way (Elkins 2003, Barnhurst et al. 2004, Rusted 2004, Newbury 2005). But, in 2002, the International Visual Sociology Association (IVSA) renamed its journal which now carries the title *Visual Studies* and is one of four international review journals in the field (see Annex).

It is apparent that both Visual Culture and Visual Studies are strong influences on visual communication, but they are not identical with visual communication.

¹⁰ For a prominent “counterpart” to the general visual culture trend see the latest work of Paul Crowther 2007.

¹¹ The first usage of the term “visual culture” is commonly attributed to the art historian Svetlana Alpers (1983), see Rampley 2005: 53.

Further influences on visual communication as a research field are generated by the social sciences, and both Visual Anthropology as well as Visual Sociology are recognized subfields of their mother disciplines with their own organizations – the Society for Visual Anthropology, and the already mentioned IVSA.

In Germany, a small group of political scientists has devoted their research interests to political visuals and visual politics (Müller 1997; Hofmann 1998, 1999; Grittman 2001; Drechsel 2005), thus complementing the social scientific shaping of visual communication research. Due to language barriers most of the German visual communication literature has had little international impact. Since its founding in 2000 the Visual Communication Division of the German Communication Association (DGfK), (see Annex), has published four edited volumes and a special issue of the review journal *Publizistik* (Knieper & Müller 2001, 2003, 2004, 2005; *Publizistik* 2006). These publications provide an overview on the core topics, but also the methodological diversity of German visual communication research.

The multidisciplinary influences on the emerging field “visual communication” can be summarized as follows:

The German art historical and philosophical traditions, despite their differences, share a more or less holistic approach. The characteristic of the Warburg-tradition is the combination of focus on production structures and the individual (artist) at center-stage. British art history is less concerned with particular production processes and their impact on the (intended) meanings of the artwork, and more with style. Visual Anthropology scrutinizes the usage of visuals in particular cultural contexts and uses visual documentation (mainly photography and film) as a research tool – thus showing a double use of the visual both as object of study, and as instrument of research.¹² Visual Sociology is interested in the broader processes and structures of visuals while media psychology – to the contrary – focuses on individual and group perception of visuals and the effects rather than the production of visual communication. A substantial contribution is provided by the more applied fields of visual design and information visualization. Visual literacy follows an educational mission and has a cer-

¹² See the seminal article by Margaret Mead (1963).

tain pedagogical goal, namely to increase the individual and societal level of visual literacy. The cognitive and media psychological approaches to visuals are focussing on the effects of visuals on the beholders.

This multidisciplinary background provides visual communication with the theoretical and methodological tools necessary to answer communication specific research questions. These research questions are informed by a social scientific tradition which is targeted on the present, and takes the past mainly into consideration to shed light on current visual phenomena. Research questions and research designs in visual communication scholarship are also more empirical in style than e.g. the Visual Studies and Art History tradition would imply. As a subfield of communication science, visual communication follows a problem-oriented approach,¹³ focused on contemporary mass-mediated visuals, using both qualitative and quantitative empirical methods to explore the actual structuring, functioning and effects of visual phenomena in complex social, economic, political and cultural contexts.

The challenges for Visual communication, according to Paul Messaris (2003: 551) are twofold:

[Visual communication] is increasingly confronted with two major issues. First, on a theoretical level, visually oriented scholars need to develop a sharper understanding of the distinctions among the major modes of communication (image, word, music, body display, etc.) and a clearer appreciation of the specific role that each plays in social processes. Second, on the research front, there is a need for more sophisticated ways of exploring visual meanings and investigating viewers' responses to images.

To master those challenges an attempt has to be made to specify the methodological contributions that visual communication has to offer in order to analyze, understand, explain and criticize contemporary visual reality. The next chapter is aiming at precisely that.

¹³ This problem-orientation is at the heart of any social science. But also the art historical Warburg-tradition considers problem orientation as its core: «Ein spezifisches Kennzeichen der Bibliothek Warburg ist, daß sie als eine ‚Problembibliothek‘ gedacht war» (Warnke 1993: 29) – “A particular trait of the Warburg Library is that it was conceived of as a ‘problem library’” (translation by Marion G. Müller).

4. The Methodological Perspective: Visual Content Analysis and Visual Interpretation as Original Methods of Visual Communication Research

The output of literature in the field of visual communication is steadily increasing, and a considerable amount of textbooks is currently available (Worth 1981; Berger 1989; Lester 2000; Emmison & Smith 2000; van Leeuwen & Jewitt 2001; Müller 2003; Prosser 2004; Rose 2005; Stanzak 2007). Recently a well edited compendium was added to this list, with the most pertinent theoretical texts on visuals (Manghani et al. 2006).

Thus, the basics for curricular integration and a thriving research network are provided for, but the question remains what, if at all, is the particular methodological contribution of visual communication?

During the approximately 60 years of its existence as an academic discipline, communication science has developed one sophisticated empirical method – quantitative content analysis (Rössler 2005: 13; see Berelson 1952). Both American and German communication science consider content analysis a standard method that is a staple of methods classes in any accredited communication program. Many textbooks are available, both in English and in German (Merten 1995; Früh 1998; Wirth & Lauf 2001; Neuendorf 2002; Krippendorf 2004; Rössler 2005). However, the application of quantitative content analysis to visuals is tricky, since standardization of visuals, due to their intrinsic associative nature, proves to be difficult. Particular case studies are scarce and Bell's article (2001) on the content analysis of advertisements is a rare treat. Also Grittman (2001) has further developed content analysis to be applied to visuals, and press photography in particular. Clearly, more case studies, using content analysis are needed to judge the full potential of this method.

The second method proper to visual communication is qualitative, and derived from its art historical roots: Iconography. "Iconography is that branch of the history of art which concerns itself with the subject matter or meaning of works of art, as opposed to their form." (Panofsky 1972: 3)

Applied to the study of mass-mediated images and communication, iconography focuses on the meanings of visuals in trying to trace culturally coded patterns of visual depiction (see e.g. van Leeuwen 2001; Müller & Özcan 2007). Iconography which is often also called Iconology (Panofsky 1972, 2006; Mitchell 1987; Cassidy 1993; Warnke 1994), thus

moving the connotations of the method closer to “logic” than to mere “description,” is a qualitative, non-standardized method that holds a huge potential for the analysis of complex mass-media visuals, because its social scientific roots potentially enable communication researchers to analyze complex visual contexts. Based on iconology, visual context analysis, as suggested by Kappas & Müller (2006: 16), could be a new methodological instrument to cope with the complexity that the visual communication process entails.

Other methods are used, depending on the particular types of visual communication studied. For example field experiments (Petersen 2006) or telephone surveys (Knieper 2006) are among the more experimental methods applied in current visual communication research.

5. The Defining Perspective: Visual Communication as a Subfield of Communication Research

The original heading for this chapter was called “The Theoretical Perspective,” but to the author this appeared too presumptuous for a research field that is expanding, but still in its early stages of formation. Also, so far no overarching theoretical framework for the study of visual communication has been agreed upon. In consequence, scholars typically use different combinations of methodological tools and theoretical assumptions. Advantageously, this heterogeneity creates a high amount of flexibility in scrutinizing particular aspects of the contemporary visual world. However, given that it is still too early to sketch a consensual theoretical core the reader is cautioned that the definition proposed at the end of this chapter does *not* claim to have the full support of all visual communication scholars. It is an attempt though to define the commonalities of visual communication scholarship, distinguishing visual communication research from neighboring fields like the aforementioned Visual Culture, Visual Studies, Art History, Visual Anthropology, Visual Literacy, Visual Sociology, “*Bildwissenschaft*” and Media Psychology.

The organizational structures in the major communication organizations that are listed at the end of this paper testify to the existence of an increasing amount of visual scholarship that is likely to further expand in the near future.

Another caveat has to be mentioned: The focus of this article has been on Anglo-American and German visual research traditions. The French, Italian, and particularly Spanish and Portuguese speaking world has a rich, and very different visual research tradition that could not be covered in this article. Particularly Brasilian research is wholeheartedly visual, but, due to the lack of translation, this body of research is largely inaccessible to the non-Portuguese speaking scientific community.¹⁴ Also German visual scholarship has, in the past, hardly had any impact on the international visual communication community, and much visual scholarship e.g. in Latin America and Asia remains to be “discovered” in the West. Here, dialogue is sorely needed.

From the perspective of visual communication research, a quote from one of the founding fathers of modern communication science seems particularly relevant. In his pioneering book of 1922 on “Public Opinion,” Walter Lippmann (1889–1974) wrote:

The world that we have to deal with politically is out of reach, out of sight, out of mind. It has to be explored, reported, and imagined. Man is no Aristotelian god contemplating all existence at one glance. He is the creature of an evolution who can just about span a sufficient portion of reality to manage his survival, and snatch what on the scale of time are but a few moments of insight and happiness. [...]

Those features of the world outside which have to do with the behavior of other human beings, in so far as that behavior crosses ours, is dependent upon us, or is interesting to us, we call roughly public affairs. *The pictures inside the heads of these human beings, the pictures of themselves, of others, of their needs, purposes, and relationship, are their public opinions.* (Lippmann 1997: 18; italics added)

Lippmann refers to the mental images, but uses the term “pictures” instead, thus insinuating that the material picture and the mental image are interrelated. The quote also testifies that the term “image” in the American language was only popularized during the later 20th century, poten-

¹⁴ This remark was made at an international conference on the topic “Visual Competence – Facets of a Paradigm Shift”, 6–8 July, 2007, Jacobs University Bremen, by two Brasilian scholars who emphasized that visual communication and visual studies are pervasive in Brasilian scholarship, and “visual communication” is an established discipline at many universities in Brasil.

tially influenced by Daniel J. Boorstin's "The Image. A Guide to Pseudo-Events in America," first published in 1961.

Both books, Lippmann's "Public Opinion" and Boorstin's "Image" are relevant for the future topics of visual communication as a research field, particularly since both authors formulate their observations on the increasing importance of the visual from the perspective of communication professionals. Lippmann was a journalist by training, and Boorstin (1889–1974) a professor of history, and later librarian of the Library of Congress.

But the actual credit for first use of "visual communication" is due to an almost forgotten author, William M. Ivins¹⁵ (1881–1961), (Griffin 1991: 9), who was influenced by the German philosopher Walter Benjamin (1892–1940), and particularly his influential essay "The Work of Art in the Age of Mechanical Reproduction" ("Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit").¹⁶ With respect to Ivins' use of the term "visual communication" Griffin (1991: 10) notes:

Ivins' use of the term visual communication to refer to the mechanical reproduction of pictures reflects his own desire to move beyond the art world, of which he was a part, and to focus concern on the media's capacity to replicate and disseminate images. This was a perspective that became possible only with the rise of the modern means of mass communication. As it is now understood, to speak of visual communication is to speak of the visual emphasis of today's mass media. Visual communication has become part and parcel of mass communication, and while the techniques and practices of picture making are firmly grounded in the history of art, the idea of visual communication has become more readily associated with "media" than "art."

Art and art history are thus definitely influences on the nascent field of visual communication, both in the anglophone and the germanophone traditions, but technological and social changes as well as the increasing

¹⁵ For the reception of Ivins in Anglo-American art history see Estelle Jussim 1974 and John A. Walker 2001: 68.

¹⁶ Benjamin's essay was first published in French in 1936, in German in 1955 (Benjamin 1963: 109)

prominence of mass media are likewise important shaping factors for the emergence of this new field of research.

With all these cautioning remarks in mind I propose a definition of what visual communication research in the 21st century is about:

Visual communication can be described as an expanding subfield of communication science that uses social scientific methods to explain the production, distribution and reception processes, but also the meanings of mass-mediated visuals in contemporary social, cultural, economic, and political contexts. Following an empirical, social scientific tradition that is based on a multidisciplinary background, visual communication research is problem-oriented, critical in its method, and pedagogical intentions, and aimed at understanding and explaining current visual phenomena and their implications for the immediate future.

6. Future Challenges of Visual Communication Research

As a visual scholar, predicting an all too bright future for one's own field of research is a serious temptation. The cosmopolitan omnipresence of visuals leads to the almost automatic assumption that globalized phenomena necessitate a closer scrutiny and will, thus, – sooner or later – result in an attention wave on the side of fellow researchers and funding organizations. Past experience, though, testifies to the contrary, to the pervasiveness of an *anti-visual bias* in Western thinking, or as Horst Bredekamp put it so aptly in his most recent publication (Bredekamp 2007a: 9): “The exclusion and devaluation, if not contempt of the visual is deeply embedded in the terminological structure of the Western world.”¹⁷

The “iconic turn” has been proclaimed and labelled a new paradigm (Maar & Burda 2004), following the “linguistic turn,” at least in the Humanities. However, the Social Sciences, and Communication Science is clearly rooted in the social scientific tradition, remain yet to discover the benefits of incorporating visual research in their “think-tool box.”

¹⁷ Quote in the German original: «Das Ausmaß dieser Hemmung lässt vermuten, daß der Grund in der Ausblendung, Geringschätzung oder gar Verachtung des Visuellen liegt, die tief in die begriffliche Struktur des Abendlandes eingedrungen ist.» (translation by Marion G. Müller).

The task of this last chapter is to sketch the preconditions for such an incorporation of the visual both as an acknowledged field of research and as a methodological tool in communication science. Six challenges can be distinguished that this research field has to overcome in order to move ahead from a mere subfield of communication research to a discipline in its own right:

Challenge 1: Internationalization — Despite the omnipresent catchword “globalization” language still constitutes a major barrier and translation of non-English scholarship is now needed more than ever to enable a “confrontation,” and potential integration of globally diverse visual communication approaches.

Challenge 2: Educational Institutionalization — Designing coherent curricula of visual communication studies on the graduate level (MA- and PhD-tracks) will be necessary in order to promote young scholarship and to professionalize visual communication education.

Challenge 3: Maintaining its Critical Potential — The diversity of approaches and methodologies in visual communication is both an asset and a drawback. A key element of this field of research is its potential of critique. Keeping the critical analysis of visuals as a chief objective both in research and in teaching will be tantamount.

Challenge 4: Mastering Transdisciplinarity — Communication Science and Media Studies – two disciplines that have hitherto been kept separate, at least in German academia, need to collaborate.¹⁸ Additionally, other disciplines and their methodological resources should be integrated, ranging from art history to media psychology. The common goal of all disciplinary approaches under the umbrella of visual communication should be to integrate research on the full visual communication process: from production, to distribution, to meaning-attribution and reception processes of visuals.

¹⁸ This is also the recommendation of the German “Wissenschaftsrat” in his latest report (see Wissenschaftsrat 2007).

Challenge 5: Coping with Multimodality — The disciplinary gaps between research on visuals, text and sound need to be overcome in order to better understand not only audio-visuals, but all visuals in their multimodal context.

Challenge 6: Bridging Mass-Media and Interpersonal Communication — Communication science has traditionally defined itself through the mass-mediated character of its object of study. The technological revolution of digitization and new electronic media like the Internet and mobile phone technology have reinvigorated the private user and the private uses of visual communication. More and more people are moving from mere users to producers of visuals. Interpersonal communication has up till now been the domain of media psychologists. For visual communication scholars it becomes relevant to broaden their focus from classical mass media to interpersonal communication content.

Provided that these six challenges are met, by mid-century visual communication might have passed the transformation stage from beautiful beast to fully developed discipline. It will be exciting to be part of this process and a realistic hope is that many young scholars will seize this opportunity to be at the forefront of a new discipline in the making.

References

ALPERS, S. (1983). *The Art of Describing: Dutch Art in the Seventeenth Century*. Chicago: University of Chicago Press.

BANKS, M. & MORPHY, H. (eds.) (1997). *Rethinking Visual Anthropology*. New Haven et al.: Yale University Press.

BANKS, M. (1998). Visual Anthropology: Image, Object and Interpretation. In: PROSSER, J. (ed.). *Image-based Research. A Sourcebook for Qualitative Researchers*. London: Routledge Falmer: 9–23.

BARNARD, M. (2001). *Approaches to understanding visual culture*. New York: St. Martin's Press.

BARNHURST, K.G.; VARI, M. & RODRÍGUEZ, I. (2004). Mapping Visual Studies in Communication. *Journal of Communication* 54: 616–644.

BEDERSON, B.B. & SHNEIDERMAN, B. (2003). *The Craft of Information Visualization: Readings and Reflections (Interactive Technologies)*. San Francisco: Morgan Kaufmann.

BELL, P. (2001). Content analysis of visual images. *Handbook of Visual Analysis*. London et al.: Sage: 10–34.

BELTING, H. (2001). *Bild-Anthropologie: Entwürfe für eine Bildwissenschaft*. München: Fink.

BENJAMIN, W. (1974). *Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit*. Frankfurt a.M.: Suhrkamp.

BERELSON, B. (1952). Content analysis in communication research. New York: Hafner.

BERGER, A.A. (1989). *Seeing is believing: An introduction to visual communication*. Mountain View: Mayfield Publishing Company.

BOEHM, G. (ed.) (1995). *Was ist ein Bild?* (2nd ed.). München: Wilhelm Fink Verlag.

BOEHM, G. (2004). *Jenseits der Sprache? Anmerkungen zur Logik der Bilder*. In: MAAR, C. & BURDA, H. (eds.). *Iconic Turn. Die neue Macht der Bilder*. Köln: DuMont: 28–43.

BOHN, V. (ed.) (1990). *Bildlichkeit. Internationale Beiträge zur Poetik*. Frankfurt a.M.: Suhrkamp.

BOORSTIN, D.J. (1992). *The Image. A Guide to Pseudo-Events in America*. New York: Vintage Books.

BOURDIEU, P. (1991). *Zur Soziologie der symbolischen Formen* (4th ed.). Frankfurt am Main: Suhrkamp.

BRADEN, R.A. & HORTIN, J.A. (1982). Identifying the theoretical foundations of visual literacy. In: BRADEN, R.A. & WALKER, A.D. (eds.). *Television and visual literacy*. Bloomington, IN: International Visual Literacy Association: 169–179.

BREDEKAMP, H. (2003). A Neglected Tradition? Art History as Bildwissenschaft. *Critical Inquiry* 29/ 3: 418–428.

BREDEKAMP, H. (2004). Drehmomente – Merkmale und Ansprüche des iconic turn. In: MAAR, C. & BURDA, H. (eds.). *Iconic Turn. Die neue Macht der Bilder*. Köln: DuMont: 15–26.

BREDEKAMP, H. (2007). *Bilder bewegen. Von der Kunstkammer zum Endspiel*. Berlin: Wagenbach.

BREDEKAMP, H. (2007a). *Galilei – der Künstler. Der Mond. Die Sonne. Die Hand*. Berlin: Akademie Verlag.

BRYANT, J. & ZILLMANN, D. (2002). *Media effects: Advances in theory and research*. London: Routledge.

BRYSON, N.M.; HOLLY, A. & MOXEY, K. (1994). *Visual cultures: Images and interpretations*. Hanover: Wesleyan University Press.

CARD, S.K.; MACKINLAY, J.D. & SHNEIDERMAN, B. (eds.) (1999). *Readings in Information Visualization. Using Vision to Think*. San Francisco: Morgan Kaufmann.

CARSTENSEN, B. (1994). *Anglizismen-Wörterbuch: der Einfluss des Englischen auf den deutschen Wortschatz nach 1945*. Begr. von BRODER CARSTENSEN. Fortgef. von ULRICH BUSSE. Unter Mitarb. von REGINA SCHMUDE. Berlin, New York: de Gruyter.

CASSIDY, B. (ed.) (1993). *Iconology at the crossroads*. Princeton: Princeton University Press.

CHEN, C. (2006). *Information Visualization: Beyond the Horizon*. London: Springer.

CROWTHER, P. (2007). Defining art, explaining its value. Oxford: Clarendon Press.

CURTISS, D. (1987). Introduction to visual literacy. Englewood Cliffs, NJ: Prentice Hall.

DIERS, M. (1993). Porträt aus Büchern. Stichworte zur Einführung. In: DIERS, M. (ed.). Porträt aus Büchern. Bibliothek Warburg & Warburg Institute. Hamburg: Dölling und Galitz Verlag: 9–27.

DIKOVITSKAYA, M. (2006). Visual Culture. The Study of the Visual after the Cultural Turn. Cambridge, London: MIT.

DOELKER, C. (1997). Ein Bild ist mehr als ein Bild. Visuelle Kompetenz in der Multimedia-Gesellschaft (2nd ed.). Stuttgart: Klett-Cotta.

DONDIS, D.A. (1973). A primer of visual literacy. Cambridge, MA: MIT Press.

DOWNING, J.D.H. (2007). The Imperiled “American”: Visual Culture, Nationality and U.S. Foreign Policy. *International Journal of Communication* 1: 318–341.

DOYLE, J. & JONES, A. (2006). Introduction: New Feminist Theories of Visual Culture. *Signs* 31/ 3: 607–615, 890.

DRECHSEL, B. (2005). Politik im Bild. Wie politische Bilder entstehen und wie digitale Bildarchive arbeiten. Frankfurt, New York: Campus Verlag.

DUDEN (2006). Das Herkunftswörterbuch. Etymologie der deutschen Sprache (4th ed.). Vol. 7. Mannheim et al.: Dudenverlag.

EISLER, C. (1969). Kunstgeschichte American Style: A Study in Migration. In: FLEMING, D. & BAILYN, B. (eds.). The Intellectual Migration. Europe and America 1830–1960. Cambridge, MA: Harvard University Press.

ELKINS, J. (1999). The domain of images. Ithaca, NY: Cornell University Press.

ELKINS, J. (2003). Visual Studies. A Skeptical Introduction. New York, London: Routledge.

EMMISON, M. & SMITH, P. (2000). Researching the Visual. London et al.: Sage.

EVANS, J. & HALL, S. (eds.) (1999). Visual culture. The reader. London: Corwin Press.

FALKENHAUSEN VON, S. (2007). Verzwickte Verwandtschaftsverhältnisse: Kunstgeschichte, Visual Culture, Bildwissenschaft. In: HELAS, P. ET AL. (eds.). Bild/Geschichte. Berlin: Akademie Verlag: 3–14.

FASSLER, M. (2002). Bildlichkeit. Navigationen durch das Repertoire der Sichtbarkeit. Wien et al.: Böhlau.

FORCEVILLE, C. (2005). Cognitive Linguistics and Multimodal Metaphor. In: SACHS-HOMBACH, K. (ed.). Bildwissenschaft zwischen Reflexion und Anwendung. Köln: Herbert von Halem Verlag: 264–284.

FORSTER, K.W. (1999). Introduction. In: WARBURG, A. (1999). The Renewal of Pagan Antiquity: contributions to the cultural history of the European Renaissance. Los Angeles: The Getty Research Institute for the History of Art and the Humanities: 1–77.

FOSS, S.K. (1992). Visual imagery as communication. *Text and Performance Quarterly* 12: 85–96.

FREY, S. (1999). Die Macht des Bildes. Der Einfluß der nonverbalen Kommunikation auf Kultur und Politik. Bern et al.: Verlag Hans Huber.

FRÜH, W. (1998). Inhaltsanalyse. Theorie und Praxis (4th ed.). Konstanz: UVK.

FUNK & WAGNALLS (1964). Standard Dictionary of the English Language. International Edition 1. New York: Funk & Wagnalls Company.

GRiffin, M. (1991). Defining visual communication for a multi-media world. *Journalism Educator* 46/ 1: 9–15.

GRiffin, M. (2001). Camera as witness, image as sign: the study of visual communication in communication research. In: GUDYKUNST, W.B. (ed.). *Communication Yearbook* 24. Tousand Oaks, CA: Sage: 433–463.

GRITTMANN, E. (2001). Fotojournalismus und Ikonographie. Zur Inhaltsanalyse von Pressefotos. In: WIRTH, W. & LAUF, E. (eds.). *Inhaltsanalyse. Perspektiven, Probleme, Potenziale*. Köln: Herbert von Halem Verlag: 262–279.

HARPER, D. (2004). An Argument for Visual Sociology. In: PROSSER, J. (ed.). *Image-based Research. A Sourcebook for Qualitative Researchers* (4th ed.). London: Routledge Falmer: 24–41.

HELPFAND, J. (2001). *Screen: Essays on graphic design, new media, and visual culture*. Princeton, NJ: Princeton Architectural Press.

HOFMANN, W. (ed.) (1998). *Visuelle Politik. Filmpolitik und die visuelle Konstruktion des Politischen*. Baden-Baden: Nomos.

HOFMANN, W. (ed.) (1999). *Die Sichtbarkeit der Macht – Untersuchungen zur Theorie und Empirie visueller Politik*. Baden-Baden: Nomos.

HOWELLS, R. (2002). *Visual culture: An introduction*. Cambridge, UK: Polity Press.

IVINS, W.M. (1969). *Prints and visual communication* (2nd ed.). New York: Da Capo Press.

JENKS, C. (1995). *Visual culture*. London: Routledge.

JEWITT, C. & OYAMA, R. (2001). Visual meaning: a social semiotic approach. In *Handbook of Visual Analysis*. London et al.: Sage: 134–156.

JOYCE, C. & COTTRELL, G.W. (2004). Solving the visual expertise mystery. In: BOWMAN, H. & LABIOUSE, C. (eds.). *Connectionist Models of Cognition and Perception II. Proceedings of the Eighth Neural Computation and Psychology Workshop*. Great Britain, Singapore: World Scientific: 127–136.

JUSSIM, E. (1974). *Visual Communication and the Graphic Arts*. New York: Bowker.

KAPPAS, A. & MÜLLER, M.G. (2006). Bild und Emotion – ein neues Forschungsfeld. *Publizistik* 1: 3–23.

KLUGE, F. (2002). *Etymologisches Wörterbuch der deutschen Sprache* (24th ed.). Bearb. von: SEEBOLD, E., Berlin, New York: de Gruyter.

KNIEPER, T. (2006). Die Flut im Wohnzimmer. Die Tsunami-Berichterstattung als traumatischer Stressor für die bundesdeutsche Bevölkerung. *Publizistik* 51/ 1: 52–66.

KNIEPER, T. & MÜLLER, M.G. (eds.) (2001). *Kommunikation visuell. Das Bild als Forschungsgegenstand – Grundlagen und Perspektiven*. Köln: Herbert von Halem Verlag.

KNIEPER, T. & MÜLLER, M.G. (eds.) (2003). *Authentizität und Inszenierung von Bilderwelten*. Köln: Herbert von Halem Verlag.

KNIEPER, T. & MÜLLER, M.G. (eds.) (2004). *Visuelle Wahlkampfkommunikation*. Köln: Herbert von Halem.

KNIEPER, T. & MÜLLER, M.G. (eds.) (2005). *War Visions. Bildkommunikation und Krieg*. Köln: Herbert von Halem Verlag.

KÖSTLER, A. & SEIDL, E. (eds.) (1998). *Bildnis und Image. Das Portrait zwischen Intention und Rezeption*. Köln et al.: Böhlau.

KRESS, G. & VAN LEEUWEN, T. (2005). *Reading Images. The Grammar of Visual Design*. London, New York: Routledge.

KRIPPENDORF, K. (2004). *Content Analysis: an introduction to its methodology* (2nd ed.) Thousand Oaks et al.: Sage.

LESTER, P.M. (2000). *Visual Communication. Images with Messages* (2nd ed.). Belmont: Wadsworth.

LIPPmann, W. (1997). *Public Opinion*. New York et al.: Free Press (Orig. 1922).

LISTER, M. & WELLS, L. (2001). Seeing beyond belief: Cultural Studies as an approach to analysing the visual. In: VAN LEEUWEN, T. & JEWITT, C. (eds.). *Handbook of Visual Analysis*. London et al.: Sage: 61–91.

LEEUWEN VAN, T. (2001). Semiotics and iconography. In: VAN LEEUWEN, T. & JEWITT, C. (eds.). *Handbook of Visual Analysis*. London et al.: Sage: 92–118.

LEEUWEN VAN, T. & JEWITT, C. (eds.). (2001). *Handbook of Visual Analysis*. London et al.: Sage.

LUDES, P. (ed.) (2001). *Visual Hegemonies. An Outline*. Münster: LIT.

MAAR, C. & BURDA, H. (eds.) (2004). *Iconic Turn. Die neue Macht der Bilder*. Köln: DuMont.

MACKENSEN & HOLLANDER (1982). *Das neue Wörter- & Fremdwörterbuch*. Hamburg: Xenos Verlagsgesellschaft.

MANGHANI, S.; PIPER, A. & SIMONS, J. (2006). *Images: A Reader*. London et al.: Sage.

MANNHEIM, K. (1972). On the Interpretation of “Weltanschauung”. In: MANNHEIM, K. (ed.). *Essays on the Sociology of Knowledge* (4th ed.). London: Routledge & Kegan.

MEAD, M. (1963). Anthropology and the camera. In: MORGEN, W. (ed.). *The Encyclopedia of Photography* 1. New York: Greystone Press: 166–184.

MERTEN, K. (1995). *Inhaltsanalyse. Einführung in Theorie, Methode und Praxis* (2nd ed.). Opladen: Westdeutscher Verlag.

MESSARIS, P. (1994). *Visual Literacy. Image, Mind, & Reality*. Boulder: Westview Press.

MESSARIS, P. (1998). Visual Aspects of Media Literacy. *Journal of Communication*, Winter: 70–80.

MESSARIS, P. (2003). Visual Communication: Theory and Research. A review essay. *Journal of Communication*, September: 551–556.

MESSARIS, P. & MORIARTY, S. (2005). Visual Literacy Theory. In: SMITH, K.; MORIARTY, S.; BARBATSIS, G. & KENNEY, K. (eds.). *Handbook of visual communication. Theory, Methods, and Media*. Mahwah: Lawrence Erlbaum Publishers: 479–502.

MIRZOEFF, N. (2004). *An Introduction to Visual Culture* (5th ed.). London, New York: Routledge.

MITCHELL, W.J.T. (1987). *Iconology. Image, Text, Ideology*. Chicago, London: The University of Chicago Press.

MITCHELL, W.J.T. (1990). Was ist ein Bild? In: BOHN, V. (ed.). *Bildlichkeit. Internationale Beiträge zur Poetik*. Frankfurt a.M.: Suhrkamp: 17–68.

MITCHELL, W.J.T. (1995). Interdisciplinarity and visual culture. *Art Bulletin* 77: 540–541.

MORIARTY, S. (2005). Visual Semiotics Theory. In: SMITH, K.; MORIARTY, S.; BARBATIS, G. & KENNEY, K. (eds.). *Handbook of visual communication. Theory, Methods, and Media*. Mahwah: Lawrence Erlbaum Publishers: 227–242.

MÜLLER, M.G. (1997). *Politische Bildstrategien im amerikanischen Präsidentschaftswahlkampf 1828–1996*. Berlin: Akademie Verlag.

MÜLLER, M.G. (2003). *Grundlagen der visuellen Kommunikation*. Konstanz: UVK.

MÜLLER, M.G. & KNIEPER, T. (eds.) (2006). Emotionalisierung durch Bilder? *Publizistik*, Sondernummer 51/1.

MÜLLER, M.G. & ÖZCAN, E. (2007). The Political Iconography of Muhammad Cartoons. Understanding Cultural Conflict and Political Action. *PS: Political Science & Politics*: 287–292.

NEUENDORF, K.A. (2002). *The content analysis guidebook*. Thousand Oaks et al.: Sage.

NEURATH, O. (1991). Gesammelte bildpädagogische Schriften. In: HALLER, R. & KINROSS, R. (eds.). Wien: övhpt.

NEWBURY, D. (2005). Editorial: the challenge of visual studies. *Visual Studies* 20/1: 1–3.

NIKOLOW, S. (2005). Kurven, Diagramme, Zahlen- und Mengenbilder. Die Wiener Methode der Bildstatistik als statistische Bildform. Bildwelten des Wissens. *Kunsthistorisches Jahrbuch für Bildkritik* 3/1: 20–53, 59.

NÖTH, W. (2005). Zeichentheoretische Grundlagen der Bildwissenschaft. In: SACHS-HOMBACH, K. (ed.). *Bildwissenschaft zwischen Reflexion und Anwendung*. Köln: Herbert von Halem Verlag: 33–44.

PANOFSKY, E. (1972). *Studies in Iconology. Humanistic Themes in the Art of the Renaissance*. New York et al.: Harper & Row.

PANOFSKY, E. (1982). *Meaning in the Visual Arts*. Chicago: The University of Chicago Press.

PANOFSKY, E. (2006). Ikonographie & Ikonologie. Bildinterpretation nach dem Dreistufenmodell. Köln: DuMont.

PAUWELS, L. (2000). Taking the visual turn in research and scholarly communication. *Visual Sociology* 15: 7–14.

PAUWELS, L. (ed.) (2006). *Visual Cultures of Science. Rethinking Representational Practices in Knowledge Building and Science Communication*. Hanover, NH: Dartmouth College Press.

PETERSEN, T. (2006). Lasswells Frage und Hovlands Problem. Feldexperimente zur Wirkung potenziell emotionalisierender Bildelemente in der Medienberichterstattung. *Publizistik* 51/1: 39–51.

PINK, S. (2003). Interdisciplinary agendas in visual research: re-situating visual anthropology. *Visual Studies* 18/2: 179–192.

PLAISANT, C. & SHNEIDERMAN, B. (2006). *Diseno de Interfaces de Usuario*. Madrid: Pearson Educacion.

PROSSER, J. (ed.) (2004). *Image-based Research. A Sourcebook for Qualitative Researchers* (4th ed.). London, New York: RoutledgeFalmer.

RAMPLEY, M. (2001). Iconology of the interval: Aby Warburg's legacy. *Word & Image* 17/4: 303–324.

RAMPLEY, M. (2005). Visual Culture: An End to the History of Art? *Ars* 38/1: 53–65.

RÖSSLER, P. (2005). Inhaltsanalyse. Konstanz: UVK, utb.

ROSE, GILLIAN (2005): Visual Methodologies. An Introduction to the Interpretation of Visual Materials (4th ed.). London et al.: Sage.

RUBY, J. (2005). The last 20 years of visual anthropology – a critical review. *Visual Studies* 20/2: 159–170.

RUSTED, B. (2004). Editor's introduction: visual studies, digital imaging and new media. *Visual Studies* 19/1: 2–5.

SACHS-HOMBACH, K. (ed.) (2005). Bildwissenschaft. Disziplinen, Themen, Methoden. Frankfurt a.M.: Suhrkamp.

SACHS-HOMBACH, K. (ed.) (2005a). Bildwissenschaft. Zwischen Reflexion und Anwendung. Köln: Herbert von Halem Verlag.

SACHS-HOMBACH, K. & REHKÄMPER, K. (eds.) (2004). Bild – Bildwahrnehmung – Bildverarbeitung (2nd ed.). Wiesbaden: DUV.

SCHMIDT, P. (1993). Aby M. Warburg und die Ikonologie. Wiesbaden: Harrassowitz Verlag.

SCHULZ, M. (2005). Ordnungen der Bilder. Eine Einführung in die Bildwissenschaft. München: Wilhelm Fink Verlag.

SEPPÄNEN, J. (2006). Reading Pictures. In: SEPPÄNEN, J. (ed.). *The Power of the Gaze: An Introduction to Visual Literacy*. New York: Peter Lang: 89–145.

SHNEIDERMAN, B. & PLAISANT, C. (2005). *Designing the User Interface: Strategies for Effective Human-Computer Interaction* (4th ed.). Boston et al.: Pearson.

SIBER, M. (2005). Visual literacy in the public space. *Visual Communication* 4/1: 5–20.

SOLSO, R.L. (1994). *Cognition and the visual arts*. Cambridge, MA: MIT Press.

STAFFORD, B.M. (1996). *Good looking: Essays on the virtue of images*. Cambridge, MA: MIT Press.

STANCAZAK, G.C. (ed.) (2007). *Visual Research Methods. Image, Society, and Representation*. Los Angeles et al.: Sage.

STURKEN, M. & CARTWRIGHT, L. (2001). *Practices of Looking: An Introduction to Visual Culture*. New York: Oxford University Press.

SUGIMOTO, M. & COTTRELL, G.W. (2001). Visual Expertise is a General Skill. *Proceedings of the 23rd Annual Cognitive Science Conference*, Edinburgh. Mahwah: Lawrence Erlbaum Publishers: 994–999.

THE OXFORD ENGLISH DICTIONARY (1989). Prep. by J.A. SIMPSON & E.S.C. WEINER, Vol. VII. Hat-Intervacuum (2nd ed.). Oxford: Clarendon Press.

THOMAS, J. (ed.) (2000). *Reading images*. New York: St. Martin's Press.

TUFT, E.R. (1990). *Envisioning Information*. Cheshire, CT: Graphics Press.

TUFT, E.R. (1997). *Visual Explanations: Images and Quantities, Evidence and Narrative*. Cheshire, CT: Graphics Press.

TUFT, E.R. (2006). *Beautiful Evidence*. Cheshire, CT: Graphics Press.

WALKER, J.A. (2001). *Art in the Age of Mass Media* (3rd ed.). London, Ann Arbor, MI: Pluto Press.

WALKER, J.A. & CHAPLIN, S. (1997). *Visual culture: An introduction*. Manchester: Manchester University Press.

WARBURG, A. (1920). *Pagan-Antique Prophecy in Words and Images in the Age of Luther*. In: WARBURG, A. (1999). *The Renewal of Pagan Antiquity: contributions to the cultural history of the European Renaissance*. Los Angeles: The Getty Research Institute for the History of Art and the Humanities: 597–698.

WARE, C. (2006). *Information Visualization. Perception for Design*. (2nd ed.). San Francisco: Morgan Kaufmann.

WARNKE, M. (1993). *Die Bibliothek Warburg und ihr Forschungsprogramm*. In: DIERS, M. (ed.). *Porträt aus Büchern. Bibliothek Warburg & Warburg Institute*. Hamburg: Dölling und Galitz Verlag: 29–34.

WARNKE, M. (1994). *Politische Ikonographie. Hinweise auf eine sichtbare Politik*. In: LEGGEWIE, C. (ed.). *Wozu Politikwissenschaft? Über das Neue in der Politik*. Darmstadt: Wissenschaftliche Verlagsgesellschaft: 265–275.

WARNKE, M. (2007). *Könige als Künstler*. Gerda Henkel Vorlesung. 30-jähriges Stiftungsjubiläum und Verleihung des Gerda Henkel Preises 2006. Münster: Rhema.

WIRTH, W. & LAUF, E. (eds.) (2001). *Inhaltsanalyse. Perspektiven, Probleme, Potentiale*. Köln: Herbert von Halem Verlag.

WISSENSCHAFTSRAT (2007). *Empfehlungen zur Weiterentwicklung der Kommunikations- und Medienwissenschaften in Deutschland*. Oldenburg: Drs: 7901–07.

WORTH, S. (1981). *Studying visual communication*. Philadelphia, PA: University of Pennsylvania Press.

Journals & Institutional Websites

(last retrieved 11.09.2007)

Journal (with no societal affiliation):

Visual Communication

<http://vcj.sagepub.com/>

AEJMC (Association for Education in Journalism and Mass Communication):

Visual Communication Division

<http://www.mtsu.edu/~aejmc/> (access restricted to members)

Publication: Visual Communication Quarterly

<http://jcomm.uoregon.edu/~vcq/>

DGPK (Deutsche Gesellschaft für Publizistik und Kommunikationswissenschaft):

Fachgruppe Visuelle Kommunikation

<http://www.fg-viskomm.de/>

ICA (International Communication Association)

Visual Communication Studies Division

<http://www.icahdq.org/sections/secdetinfo.asp?SecCode=DIV16>

IVLA (International Visual Literacy Association)

<http://ivla.org/>

Publication: Journal of Visual Literacy

<http://plato.ou.edu/~jvl/>

IVSA (International Visual Sociology Association)

<http://www.visualsociology.org/>

Publication: Visual Studies

<http://www.tandf.co.uk/journals/titles/1472586X.asp>

The Society for Visual Anthropology

<http://www.societyforvisualanthropology.org/svawelcome.html>