journal of visual culture



There Are No Visual Media

W.J.T. Mitchell

Abstract

'Visual media' is a colloquial expression used to designate things such as television, film, photography and painting, etc. But it is highly inexact and misleading. On closer inspection, all the so-called visual media turn out to involve the other senses (especially touch and hearing). All media are, from the standpoint of sensory modality, 'mixed media'. The obviousness of this raises two questions: (1) why do we persist in talking about some media as if they were exclusively visual? Is this just a shorthand for talking about visual *predominance*? And if so, what does 'predominance' mean? Is it a quantitative issue (*more* visual information than aural or tactile?) or a question of qualitative perception, the sense of things reported by a beholder, audience, viewer or listener? (2) Why does it matter what we call 'visual media'? Why should we care about straightening out this confusion? What is at stake?

Keywords hearing • media taxonomy • medium specificity • touch • vision • visual media

'Visual media' is a colloquial expression used to designate things such as television, film, photography and painting, etc. But it is highly inexact and misleading. On closer inspection, all the so-called visual media turn out to involve the other senses (especially touch and hearing). All media are, from the standpoint of sensory modality, 'mixed media'. The obviousness of this raises two questions: (1) why do we persist in talking about some media as if they were exclusively visual? Is this just a shorthand for talking about visual *predominance*? And if so, what does 'predominance' mean? Is it a quantitative issue (*more* visual information than aural or tactile?) or a question of qualitative perception, the sense of things reported by a beholder, audience,

viewer/listener? (2) Why does it matter what we call 'visual media'? Why should we care about straightening out this confusion? What is at stake?

First, let me belabor the obvious. Can it really be the case that there are no visual media despite our incorrigible habit of talking as if there were? Of course, my claim can be easily refuted with just a single counter-example. So let me anticipate this move with a round-up of the usual suspects that one might want to propose as examples of purely or exclusively visual media. Let us rule out first the whole arena of mass media - television, film, radio - as well as the performance media (dance and theater). From Aristotle's observation that drama combines the three orders of lexis, melos and opsis (words, music and spectacle) to Barthes' survey of the 'image/music/text' divisions of the semiotic field, the mixed character of media has been a central postulate. Any notion of purity seems out of the question with these ancient and modern media, both from the standpoint of the sensory and semiotic elements internal to them and what is external in their promiscuous audience composition. And if it is argued that silent film was a 'purely visual' medium, we need only remind ourselves of a simple fact of film history - that the silents were always accompanied by music and speech and the film texts themselves often had written or printed words inscribed on them. Subtitles, intertitles, spoken and musical accompaniment made 'silent' film anything but silent.

So if we are looking for the best case of a purely visual medium, painting seems to be the obvious candidate. It is, after all, the central, canonical medium of art history. And after an early history tainted by literary considerations, we do have a canonical story of purification, in which painting emancipates itself from language, narrative, allegory, figuration and even the representation of nameable objects in order to explore something called 'pure painting' characterized by 'pure opticality'. This argument, most famously circulated by Clement Greenberg (1940) and sometimes echoed by Michael Fried (1967), insists on the purity and specificity of media, rejecting hybrid forms, mixed media and anything that lies 'between the arts' as a form of 'theater' or rhetoric that is doomed to inauthenticity and second-rate aesthetic status.¹ It is one of the most familiar and threadbare myths of modernism and it is time now to lay it to rest. The fact is that even at its purist and most singlemindedly optical, modernist painting was always, to echo Tom Wolfe's (1975) phrase, 'painted words'. The words were not those of history painting, poetic landscape, myth or religious allegory, but the discourse of theory, of idealist and critical philosophy. This critical discourse was just as crucial to the comprehension of modernist painting as the Bible, history or the classics were to traditional narrative painting. Without the latter, a beholder would be left standing in front of Guido Reni's Beatrice Cenci the Day Before Her Execution (c. 1598) in the situation of Mark Twain (1887), who noted that an uninstructed viewer who did not know the title and the story would have to conclude that this was a picture of a young girl with a cold, or a young girl about to have a nose bleed (Twain, 1887, chapter 4: 'City Sights'). Without the former (the discourse of theory), the uninstructed viewer would (and did) see the paintings of Jackson Pollock as 'nothing but wallpaper'.

Now I know that some of you will object that the 'words' that make it possible to appreciate and understand painting are not 'in' the painting in the same way that the words of Ovid are illustrated *in* a Claude Lorrain. And you might be right: it would be important to distinguish the different ways in which language enters painting. But that is not my aim here. My present task is only to show that the painting we have habitually called 'purely optical', exemplifying a purely visual use of the medium, is anything but that. The question of precisely how language enters into the perception of these pure objects will have to wait for another occasion.

But suppose it were the case that language could be absolutely banished from painting? I do not deny that this was a characteristic desire of modernist painting, symptomatized by the ritualistic refusal of titles for pictures and the enigmatic challenge of the 'untitled' to the viewer. Suppose for a moment that the viewer could look without verbalizing, could see without (even silently, internally) subvocalizing associations, judgements and observations. What would be left? Well, one thing that obviously would be left is the observation that a painting is a handmade object and that is one of the crucial things that differentiates it from, say, the medium of photography, where the look of mechanical production is so often foregrounded. (I leave aside for the moment the fact that a painter can do an excellent job of imitating the machinic look of a glossy photo and that a photographer with the right techniques can, similarly, imitate the painterly surface and *sfumato* of a painter.) But what is the perception of the painting as handmade if not a recognition that a non-visual sense is encoded, manifested and indicated in every detail of its material existence? (Robert Morris's Blind Time Drawings, drawn by hand with powdered graphite on paper, according to rigorous procedures of temporal and spatial targeting which are duly recorded in hand-inscribed texts on the lower margin, would be powerful cases for reflection on the quite literally non-visual character of drawing.)² The non-visual sense in play is, of course, the sense of touch, which is foregrounded in some kinds of painting (when 'handling', impasto and the materiality of the paint is emphasized) and backgrounded in others (when a smooth surface and clear, transparent forms produce the miraculous effect of rendering the painter's manual activity invisible). Either way, the beholder who knows nothing about the theory behind the painting, or the story or the allegory, need only understand that this is a painting, a handmade object, to understand that it is a trace of manual production, that everything one sees is the trace of a brush or a hand touching a canvas. Seeing painting is seeing touching, seeing the hand gestures of the artist, which is why we are so rigorously prohibited from actually touching the canvas ourselves.

Incidentally, this argument is not intended to consign the notion of pure opticality to the dustbin of history. The point is, rather, to assess what its historical role in fact was and why the purely visual character of modernist painting was elevated to the status of a fetish concept, despite the abundant evidence that it was a myth. What was the purification of the visual medium all about? What form of contamination was being attacked? In the name of what form of sensory hygiene?³

The other media that occupy the attention of art history seem even less likely to sustain a case of pure opticality. Architecture, the impurest medium of all, incorporates all the other arts in a Gesamtkunstwerk and typically it is not even 'looked at' with any concentrated attention, but is perceived, as Walter Benjamin noted, in a state of distraction. Architecture is not primarily about seeing, but about dwelling and inhabiting. Sculpture is so clearly an art of the tactile that it seems superfluous to argue about it. This is the one so-called visual medium, in fact, which has a kind of direct accessibility to the blind. Photography, the latecomer to art-history's media repertoire, is so riddled typically with language, as theorists from Barthes to Victor Burgin have shown, that it is hard to imagine what it would mean to call it a purely visual medium. Photography's specific role in what Joel Snyder has called 'Picturing the Invisible' – showing us what we do not or cannot see with the 'naked eye' (rapid body motions, the behavior of matter, the ordinary and everyday) – makes it difficult to think of it as a visual medium in any straightforward sense. Photography of this sort might be better understood as a device for translating the unseen or unseeable into something that looks like a picture of something that we could never see.

From the standpoint of art history in the wake of postmodernism, it seems clear that the last half-century has undermined decisively any notion of purely visual art. Installations, mixed media, performance art, conceptual art, sitespecific art, minimalism and the often-remarked return to pictorial representation has rendered the notion of pure opticality a mirage that is retreating in the rear-view mirror. For art historians today, the safest conclusion would be that the notion of a purely visual work of art was a temporary anomaly, a deviation from the much more durable tradition of mixed and hybrid media.

Of course this argument can go so far that it seems to defeat itself. How, you will object, can there be any mixed media or multimedia productions unless there are elemental, pure, distinct media out there to go into the mix? If all media are always and already mixed media, then the notion of mixed media is rendered empty of importance, since it would not distinguish any specific mixture from any purely elemental instance. Here I think we must take hold of the conundrum from both ends and recognize that one corollary of the claim that 'there are no visual media' is that all media are mixed media. That is, the very notion of a medium and of mediation already entails some mixture of sensory, perceptual and semiotic elements. There are no purely auditory, tactile, or olfactory media either. However, this conclusion does not lead to the impossibility of distinguishing one medium from another. What it makes possible is a more precise differentiation of mixtures. If all media are mixed media, they are not all mixed in the same way, with the same proportions of elements. A medium, as Raymond Williams (1977: 158) puts it, is a 'material social practice', not a specifiable essence dictated by some elemental materiality (paint, stone, metal) or by technique or technology. Materials and technologies go into a medium, but so do skills, habits, social spaces, institutions and markets. The notion of 'medium specificity', then, is never derived from a singular, elemental essence. It is more like the specificity associated with recipes in cooking: many ingredients, combined in a specific order in specific proportions, mixed in particular ways and cooked at specific temperatures for a specific amount of time. In short, one can affirm that there are no 'visual media', that all media are mixed media, without losing the concept of medium specificity.

With regard to the senses and media, Marshall McLuhan (1994[1964]) glimpsed this point some time ago when he posited different 'sensory ratios' for different media. As a shorthand, McLuhan was happy to use terms such as 'visual' and 'tactile media', but his surprising claim (which has been mostly forgotten or ignored) was that television, usually taken to be the paradigmatically visual medium, is actually a tactile medium: 'The TV image ... is an extension of touch' (p. 354), in contrast to the printed word which, in McLuhan's view, was the closest that any medium has come to isolating the visual sense. However, McLuhan's larger point was definitely not to rest content with identifying specific media with isolated, reified sensory channels, but to assess the specific mixtures of specific media. He may call the media 'extensions' of the sensorium, but it is important to remember that he also thought of these extensions as 'amputations' and he continually stressed the dynamic, interactive character of mediated sensuousness.⁴ His famous claim that electricity was making possible an extension (and amputation) of the 'sensory nervous system' was really an argument for an extended version of the Aristotelian concept of a sensus communis, a coordinated (or deranged) 'community' of sensation in the individual, extrapolated as the condition for a globally extended social community, the 'global village'.

The specificity of media, then, is a much more complex issue than reified sensory labels such as 'visual', 'aural' and 'tactile'. It is, rather, a question of specific sensory ratios that are embedded in practice, experience, tradition and technical inventions. We also need to be mindful that media are not *only* extensions of the senses, calibrations of sensory ratios, they are also symbolic or semiotic operators, complexes of sign-functions. If we come at media from the standpoint of sign theory, using Peirce's elementary triad of icon, index and symbol (signs by resemblance, by cause and effect or 'existential connection' and conventional signs dictated by a rule), then we also find that there is no sign that exists in a 'pure state', no pure icon, index or symbol. Every icon or image takes on a symbolic dimension the moment we attach a name to it, an indexical component the moment we ask how it was made. Every symbolic expression, down to the individual letter of the phonetic alphabet, must also resemble every other inscription of the same letter sufficiently to allow iterability, a repeatable code. The symbolic depends upon the iconic in this instance. McLuhan's notion of media as 'sensory ratios' needs to be supplemented with a concept of 'semiotic ratios', specific mixtures of signfunctions that make a medium what it is. Cinema, then, is not just a ratio of sight and sound, but of images and words and of other differentiable parameters such as speech, music and noise.

The claim that there are no visual media is really just the opening gambit that would lead toward a new concept of media taxonomy, one that would leave behind the reified stereotypes of 'visual' or 'verbal' media and produce a much more nuanced, highly-differentiated survey of types of media. A full consideration of such a taxonomy is beyond the scope of this article, but a few preliminary observations are in order.⁵ First, the sensory or semiotic elements need much further analysis, both at an empirical or phenomenological level and in terms of their logical relations. It will not have escaped the alert reader that two triadic structures have emerged as the primitive elements of media: the first is what Hegel called the 'theoretic senses' - sight, hearing and touch - as the primary building blocks of any sensuous mediation; the second is the Peircean triad of sign-functions. Whatever sorts of sensory/semiotic 'ratios' are deployed will be complexes of at least these six variables. The other issue requiring further analysis is the question of 'ratio' itself. What do we mean by a sensory or semiotic ratio? McLuhan never really developed this question, but he seems to have meant several things by it. First, the notion that there is a relation of dominance/subordination, a kind of literal realization of the 'numerator/denominator' relation in a mathematical ratio.⁶ Second, that one sense seems to activate or lead to another, most dramatically in the phenomenon of synesthesia, but far more pervasively in the way, for example, that the written word appeals directly to the sense of sight, but immediately activates audition (in subvocalization) and secondary impressions of spatial extension that may be either tactile or visual - or involve other, 'sub-theoretic' senses such as taste and smell. Third, there is the closely related phenomenon that I would call 'nesting', in which one medium appears inside another as its content (television, notoriously, treated as the content of film, as in films such as Network (1976), Quiz Show (1994), Bamboozled (2000) and Wag the Dog (1997)). McLuhan's aphorism, 'the content of a medium is always an earlier medium', gestured toward the phenomenon of nesting, but unduly restricted it as a historical sequence. In fact, it is entirely possible for a later medium (TV) to appear as the content of an earlier one (film) and it is even possible for a purely speculative, futuristic medium, some as yet unrealized technical possibility (such as teleportation or matter transfer), to appear as the content of an earlier medium (I consider The Fly (1986) the classic example of this fantasy, but the ritual request to 'Beam me up, Scottie', on almost every episode of Star Trek, renders this purely imaginary medium almost as familiar as walking through a door). Our principle here should be: any medium may be nested inside another and this includes the moment when a medium is nested inside itself – a form of selfreference that I have discussed elsewhere as a 'metapicture' and that is crucial to theories of enframing in narrative (Mitchell, 1994b). Fourth, there is a phenomenon that I would call 'braiding', when one sensory channel or semiotic function is woven together with another more or less seamlessly, most notably in the cinematic technique of synchronized sound. The concept of 'suture' that film theorists have employed to describe the method for stitching together disjunctive shots into a seemingly continuous narrative is also at work whenever sound and sight are fused in a cinematic presentation. Of course, a braid or suture can be unravelled and a gap or bar can be introduced into a sensory/semiotic ratio, which leads us to a fifth possibility: signs and senses moving on parallel tracks that never meet, but are kept rigorously apart, leaving the reader/viewer/beholder with the task of 'jumping the tracks' and forging connections subjectively. Experimental cinema in the 1960s and 1970s explored the desynchronization of sound and sight and literary genres such as ekphrastic poetry evoke the visual arts in what we loosely call a 'verbal' medium. Ekphrasis is a verbal representation of visual representation – typically a poetic description of a work of visual art (Homer's description of Achilles' shield being the canonical example; Mitchell, 1994a). The crucial rule of ekphrasis, however, is that the 'other' medium, the visual, graphic or plastic object, is never made visible or tangible *except* by way of the medium of language. One might call ekphrasis a form of nesting without touching or suturing, a kind of action-at-distance between two rigorously separated sensory and semiotic tracks, one which requires completion in the mind of the reader. This is why poetry remains the most subtle, agile master-medium of the *sensus communis*, no matter how many spectacular multimedia inventions are devised to assault our collective sensibilities.

If there is any shred of doubt lingering that there are no visual media, that this phrase needs to be retired from our vocabulary or completely redefined, let me clinch the case with a brief remark on unmediated vision itself, the 'purely visual' realm of evesight and seeing the world around us. What if it turned out that vision itself was not a visual medium? What if, as Gombrich (1961) noted long ago, the 'innocent eve', the pure, untutored optical organ, was in fact blind?⁷ Of course, this is not an idle thought but actually a firmly established doctrine in the analysis of the visual process as such. Ancient optical theory treated vision as a thoroughly tactile and material process, a stream of 'visual fire' and phantom 'eidola' flowing back and forth between the eye and the object (see Lindberg, 1976). Descartes famously compared seeing to touching in his analogy of the blind man with two walking sticks. Vision, he argued, must be understood as simply a more refined, subtle and extended form of touch, as if a blind man had very sensitive walking sticks that could reach for miles. Bishop Berkeley's New Theory of Vision argued that vision is not a purely optical process, but involves a 'visual language' requiring the coordination of optical and tactile impressions in order to construct a coherent, stable visual field. Berkeley's theory was based in the empirical results of cataract operations that revealed the inability of blind persons whose sight had been restored after an extended period to recognize objects until they had done extensive coordination of their visual impressions with touch. These results have been confirmed by contemporary neuroscience, most famously by Oliver Sacks' (1993) revisiting of the whole question in 'To See and Not See', a study of restored sight that exposes just how difficult it is to learn to see after an extended period of blindness. Natural vision itself is a braiding and nesting of the optical and tactile.

The sensory ratio of vision as such becomes even more complicated when it enters into the region of emotion, affect and intersubjective encounters in the visual field – the region of the 'gaze' and the scopic drive. Here we learn (from Sartre (1956) for example) that typically, the gaze (as the feeling of being seen) is activated not by the eye of the other, or by any visual object, but by the invisible space (the empty, darkened window) or even more emphatically by sound – the creaking board that startles the voyeur, the 'hey you' that calls to the Althusserean subject (Sartre, 1956). Lacan (1964) further complicates this issue by rejecting even the Cartesian model of tactility in 'The Line and the Light', replacing it with a model of fluids and overflow, one in which pictures, for example, are to be drunk rather than seen, painting is likened to the shedding of feathers and the smearing of shit and the principal function of the eye is to overflow with tears, or to dry up the breasts of a nursing mother (Lacan, 1964). There are no purely visual media because there is no such thing as pure visual perception in the first place.

Why does all this matter? Why quibble about an expression, 'visual media', that seems to pick out a general class of things in the world, however imprecisely? Is this not like someone objecting to lumping bread, cake and cookies under the rubric of 'baked goods'? Actually, no. It is more like someone objecting to putting bread, cake, chicken, a quiche and a cassoulet into the category of 'baked goods' because they all happen to go into the oven. The problem with the phrase, 'visual media', is that it gives the illusion of picking out a class of things about as coherent as 'things you can put in an oven'. Writing, printing, painting, hand gestures, winks, nods and comic strips are all 'visual media' and this tells us next to nothing about them. So my proposal is to put this phrase into quotation marks for a while, to preface it by 'socalled', in order to open it up to fresh investigation. And in fact that is exactly what I think the emergent field of visual culture has been all about in its best moments. Visual culture is the field of study that refuses to take vision for granted, that insists on problematizing, theorizing, critiquing and historicizing the visual process as such. It is not merely the hitching of an unexamined concept of 'the visual' onto an only slightly more reflective notion of culture - i.e. visual culture as the 'spectacle' wing of cultural studies. A more important feature of visual culture has been the sense in which this topic requires an examination of resistance to purely culturalist explanations, to inquiries into the nature of visual nature - the sciences of optics, the intricacies of visual technology, the hardware and software of seeing.

Some time ago Tom Crow (1996) had a good laugh at the expense of visual culture by suggesting that it has the same relation to art history as popular fads such as New Age healing, 'Psychic Studies', or 'Mental Culture' have to philosophy (p. 34). This seems a bit harsh, at the same time that it rather inflates the pedigree of a relatively young discipline such as art history to compare it with the ancient lineage of philosophy. But Crow's remark might have a tonic effect, if only to warn visual culture against lapsing into a faddish pseudo-science, or even worse, into a prematurely bureaucratized academic department complete with letterhead, office space and a secretary. Fortunately, we have plenty of disciplinarians around (Mieke Bal, Nicholas Mirzoeff and Jim Elkins come to mind) who are committed to making things difficult for us, so there is hope that we will not settle into the intellectual equivalent of astrology or alchemy.

The break-up of the concept of 'visual media' is surely one way of being tougher on ourselves. And it offers a couple of positive benefits. I have suggested already that it opens the way to a more nuanced taxonomy of media based in sensory and semiotic ratios. But most fundamentally, it puts 'the visual' at the center of the analytic spotlight rather than treating it as a foundational concept that can be taken for granted. Among other things it encourages us to ask why and how 'the visual' became so potent as a reified concept. How did it acquire its status as the 'sovereign' sense and its equally important role as the universal scapegoat, from the 'downcast eyes' that Martin Jay has traced, to Debord's 'society of the spectacle', Foucauldian 'scopic regimes', Virilian 'surveillance' and Baudrillardian 'simulacra'? Like all fetish objects, the eye and the gaze have been both over- and underestimated, idolized and demonized. Visual culture at its most promising offers a way to get beyond these 'scopic wars' into a more productive critical space, one in which we would study the intricate braiding and nesting of the visual with the other senses, reopen art history to the expanded field of images and visual practices which was the prospect envisioned by Warburgean art history and find something more interesting to do with the offending eye than plucking it out. It is because there are no visual media that we need a concept of visual culture.

Notes

- 1. Clement Greenberg's 'Towards a Newer Lacoon' is his most sustained reflection on the desired 'purification' of the visual arts. Michael Fried's 'Art and Objecthood' is the classic polemic against the mixed, hybrid character of Minimalist, 'literalist' and 'theatrical' art practices.
- 2. See also Jacques Derrida's *Memoirs of the Blind* (1993) for a discussion of the necessary moment of blindness that accompanies drawing and especially the self-portrait.
- 3. My own answers to these questions are outlined in Mitchell (1994c). See, more recently, Jones (2005) and Greenberg (2005).
- 4. See McLuhan (1994[1964]: 42): 'any extension of ourselves is an "autoamputation".
- 5. Currently the Chicago School of Media Theory, a student research collective organized at the University of Chicago in winter 2003, is exploring the possibility of such a media taxonomy, a 'Media HyperAtlas' that would explore the boundaries and blendings of media. For further information, see 'Projects' section on their homepage: http://www.chicagoschoolmediatheory.net/home.htm.
- 6. One might want to enter a caution here, however, that from a mathematical standpoint it is the denominator (spatially 'underneath') that gives the expression an identity (as a matter of 'thirds', 'fourths', etc.) and the numerator is merely a supernumary counting aspect of the fraction.
- 7. This is perhaps the central claim of Gombrich's classic, Art and Illusion (1961).

References

Crow, Tom (1996) 'Visual Culture Questionnaire', *October* 77(Summer): 34. Derrida, Jacques (1993) *Memoirs of the Blind*. Chicago: University of Chicago Press. Fried, Michael (1967) 'Art and Objecthood', *ArtForum* 5(June): 12–23. Gombrich, Ernst (1961) *Art and Illusion*. New York: Bollingen Foundation. Greenberg, Clement (1940) 'Towards a Newer Lacoon', *Partisan Review* 7(July–August): 296–310.

Greenberg, Clement (2005) *Modernism and the Bureaucratization of the Senses*. Chicago: University of Chicago Press. Jones, Caroline (2005) *Eyesight Alone: Clement Greenberg's Modernism and the Bureaucratization of the Senses.* Chicago: University of Chicago Press.

- Lacan, Jacques (1964) *The Four Fundamental Concepts of Psychoanalysis*, trans. Alan Sheridan. New York: Norton.
- Lindberg, David C. (1976) *Theories of Vision from Al-Kindi to Kepler*. Chicago: University of Chicago Press.

McLuhan, Marshall (1994 [1964]) Understanding Media. Cambridge, MA: MIT Press.

- Mitchell, W.J.T. (1994a) 'Ekphrasis and the Other', in *Picture Theory*. Chicago: University of Chicago Press.
- Mitchell, W.J.T. (1994b) 'Metapictures', in *Picture Theory*. Chicago: University of Chicago Press.
- Mitchell, W.J.T. (1994c) 'Ut Pictura Theoria: Abstract Painting and the Repression of Language', in *Picture Theory*. Chicago: University of Chicago Press.
- Sacks, Oliver (1993) 'To See and Not See', The New Yorker, 10 May: 59.
- Sartre, Jean-Paul (1956) 'The Look', in *Being and Nothingness*. New York: Philosophical Library.

Twain, Mark (1887) Life on the Mississippi. London: Chatto & Windus.

Williams, Raymond (1977) *Marxism and Literature*. New York: Oxford University Press.

Wolfe, Tom (1975) The Painted Word. New York: Farrar, Straus & Giroux.

W.J.T. Mitchell is Gaylord Donnelley Distinguished Service Professor of English and Art History at the University of Chicago and the Editor of *Critical Inquiry*. He is the author of *Blake's Composite Art* (Princeton University Press, 1978), *Iconology* (University of Chicago Press, 1986), *Picture Theory* (University of Chicago Press, 1994), *The Last Dinosaur Book* (University of Chicago Press, 1998) and *What Do Pictures Want? Essays on the Lives and Loves of Images* (University of Chicago Press, 2005).

Address: Wissenschaftskolleg zu Berlin, 19 Wallotstrasse, 14193 Berlin, Germany. [email: wjtm@uchicago.edu]