

Seeing the World through Technology and Art

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Mediated Vision, edited by Petran Kockelkoren, is a collection of articles and art exhibitions that each explores the effects that technology has upon the ways humans experience the world. After a review of the collection as a whole, I return in a final section to two of the articles, those written by Don Ihde and Peter-Paul Verbeek, to provide them further contextualization and commentary. Verbeek's piece, I suggest, represents an important next step in a specific line of criticism of Ihde's work.

With *Mediated Vision*, Kockelkoren has made the rare accomplishment of assembling a collection that taken together amounts to more than the sum of its individual contributions. The articles and works of art are quite diverse, but are related to one another in that each explores aspects of human vision mediated by technology. The essays are written by philosophers and art historians such as Don Ihde, Thomas Y. Levin, Peter Sonderen, Robert Zwijnenberg, Peter-Paul Verbeek, and Kockelkoren himself. The artists featured include Annie Cattrell, Felix Hess, Wouter Hooijmans, Esther Polak, The Realists (Jan Wierda and Carel Lanfers), Gerco De Ruijter, Frank Sciarone, and Jeroen van Westen.

Mediated Vision is structured to be an inviting read. Every page is colorful, and (as necessitated by the theme) there are interesting images throughout. The articles are short in length, each getting across specific insights rather than fully-developed theses. Thus the book has a resonance more like a symposium than a collection of separate works. Each page of an article is framed by a colorful backdrop of pictures of technologies or computer-produced images. The chapters of *Mediated Vision* alternate between articles and short exhibitions of artwork. Each art presentation includes an introduction by Kockelkoren and a few pages of representative images of the artist's work. And several of the articles respond to the works of the artists included. The interspersing of artistic and textual contributions is effective; the sum total of the contributions creates a context of insight and creativity that amplifies the ideas of each individual entry.

Both those working on theory regarding technological mediation (philosophers of technology, art historians, etc.), and also artists interested in these themes, will find *Mediated Vision* to be an approachable collection. Since the articles are concise, the art exhibitions come with introductions, and Kockelkoren has included a set of short biographies of the philosophers and artists mentioned throughout the book, anyone interested in the topics explored in this volume should be able to comfortably pick it up. In the next section, I summarize the articles and artwork presentations.

Essays and Artwork

Don Ihde and Peter-Paul Verbeek both approach issues of technology from the perspective of a tradition of philosophy called phenomenology. Phenomenologists explore philosophical questions from the starting point of human bodily experience of the world. For thinkers such as Ihde and Verbeek, a technology is investigated in terms of the way an individual's experience of the world is altered or enhanced through its use. In Ihde's article, "Art Precedes Science, Or Did The *Camera Obscura* Invent Modern Science?," he investigates the ways that technological developments lead scientific research along particular directions, and also how technology leads the directions of our greater epistemological discourse. Ihde follows the use of a device called the camera obscura (a gadget that works like a pinhole camera but can be the size of a room) from its use by Renaissance artists to its development into optical devices in science, and then to the advancement of these tools into present day imaging techniques. As well, Ihde explores the way that the camera obscura has been used as a central metaphor by modern epistemologists, helping to articulate the conception of the division between subject and object, and also the notion that the mind can be thought of as a theatre where representations of the world are experienced (Phenomenologists like Ihde oppose these sorts of modern conceptions of the mind).

Peter-Paul Verbeek's piece, "Beyond the Human Eye: Technological Mediation and Posthuman Visions," expands upon the vocabulary Ihde has offered for understanding technological mediation. In so doing, Verbeek lays out a useful new classification of approaches toward understanding the way images mediate our experience of the world. Verbeek offers three categories: modern visions, postmodern visions, and posthuman visions. "Modern visions" are experiences which presume that an image can provide an objective relation to reality, reinforcing an idea of the autonomy of the viewer and of the world (e.g. a painting that realistically conveys its subject matter). "Postmodern visions" instead emphasize the need for the viewer to interpret what he or she sees, such as a highly technical image from medicine or scientific research (e.g. CT or MRI). In contrast, "posthuman visions" are those that emphasize the "intentionality" of the mediating technology itself, such as works of art that present aspects of the world that would be impossible to view without specific mediation. Verbeek offers the creations of artists such as Wouter Hooijmans, Esther Polak, and The Realists (all contributors to this volume, reviewed below) as examples of postmodern visions. In the next section, I return to Verbeek and Ihde's contributions to consider the contrast between them in greater detail.

Robert Zwijnenberg's article, "From Mirror to Screen: Mediating My Own Body," consists of a series of reflections regarding the experience of an image of oneself as perceived through different mediating technologies. Zwijnenberg contrasts two technologies that allow us to perceive our own bodies: Leonardo de Vinci's thought experiment of the mirror room, and Mona Hatoum's contemporary video art installation *Corps étranger*. In a small sketch, de Vinci devises a person-sized booth whose interior walls are comprised of six mirrors. A person standing inside the mirror room would receive a view of many sides of him or herself at once, as in the case of department store dressing rooms equipped with several mirrors. Zwijnenberg suggests that de Vinci's thought experiment can be understood to raise issues regarding the nature of technological mediation, and regarding the corporeal manner in which an experimenter interacts with his or her own instruments. *Corps étranger* expands upon these themes. In this installation, a viewer enters a small cylindrical room in which plays video and audio of the interior surfaces of the artist's body captured by medical technologies. Reflecting upon the contrast between these examples, Zwijnenberg argues that the difference between mirrors and screens in terms of the mediating role they play in our experience is an inessential one.

In a particularly entertaining entry entitled “Surveillance and the Ludic Reappropriation of Public Space,” Thomas Y. Levin reviews a number of attempts by artists to comment upon the pervasive presence of surveillance technologies in society. The projects he reviews are creative and fun examples of performance art, often making a public spectacle of otherwise unseen surveillance equipment. Artists such as Denis Beaubois and others create video installations of themselves holding signs up to cameras, challenging the conventions of being watched, and changing the awareness of passersby. Levin concludes with some reflections regarding the nature of surveillance with the advent of facial recognition technology and thus the certainty (rather than just the possibility) that there is nobody on the other end of the lens to read one’s protest signs.

Of the essays included in this collection, Peter Sonderen’s “The Sublime: A Matter of Time” has the least connection to the theme of technological mediation. Instead, Sonderen reflects upon the temporal aspects of our experience of the sublime, building upon the philosophy of Edmund Burke (and of Immanuel Kant). Burke has provided a sophisticated account of how the experience of something sublime brings about feelings of pain and danger, and causes effects such as astonishment and reverence. Sonderen investigates how artwork can cause this experience and comments upon its temporal nature. Not an art historian myself, I would be interested to see a critical examination of the way that Sonderen so deeply and explicitly understands the sublime to be connected to modernity, representation, and the autonomous moral subject.

Just before coming upon the final essay of *Mediated Vision*, Petran Kockelkoren’s “The Artists as Researcher,” I had worried that the collection as a whole put too exclusive an emphasis upon the ways our perception is mediated by fine art and by scientific instrumentation. Kockelkoren considers a wider scope of technologies, including those of popular culture. As a jumping off point, he reviews Walter Benjamin’s influential essay “The Work of Art in the Age of Mechanical Reproduction” (Benjamin, 1969 [1936]). Benjamin considers the consequences of technologies of mass production such as film and photography for our conceptions of artwork and artistic genius. In Kockelkoren’s perspective, though the piece is typically regarded as a conservative and pessimistic view of technology, Benjamin should be read differently; Benjamin’s work investigates the novel ways that people relate to the world in this new era of technological mediation.

Kockelkoren claims that our senses become conditioned by the technologies that mediate our experience. This conditioning has changed as technology has evolved. As a guiding example, he reviews Erwin Panofsky’s controversial history of the shift from the perceptual habits of the Middle Ages to those of the Renaissance, claiming “People perceived in a different way in the Middle Ages, as the composition of their painting shows, in which distance was suggested by vertical stacking” (Kockelkoren, 2007, 133). This regime of perception changed with the “central perspective” of Renaissance art and the philosophical investigations of the autonomous subject position in the works of René Descartes and others.¹ Another example of a historical change in perceptual regime comes from Schivelbusch’s account of the experience of riders of early trains (Schivelbusch, 1986). The view from a moving train presented a novel perceptual sensation. One’s position on the moving train had to be actively incorporated into the way one perceived the environment, a difficult experience for some at the time. Kockelkoren writes, “What happened in this transition was that a Renaissance conditioning, namely the freezing of the image through the application of central perspective, clashed with the gaze of the moving subject” (2007, 135). This understanding of the history of changing technologies and changing perceptual regimes opens up

a space for artists to make special contributions. In Kockelkoren's view, artists play (and have always played) a number of crucial roles in a society's ever-changing perceptual disciplining. These roles can be understood as a sort of "artistic research."

Kockelkoren attempts to articulate this kind of research by identifying a number of ways artists investigate changing technologies and shifting perceptual regimes. Through the review of many Dutch artists (including several contributors here), he identifies five types of artistic research. First, there is "recursion," or the use of art to contest the dominant perceptual paradigm, opening up space for potential alternatives. "Remediation" refers to attempts to revisit and reopen controversies of previous paradigms. The transformation of information perceivable by one sense into something perceivable by another (e.g. visual to audio), he calls "conversion." "Translation" is his term for an artist's attempt to introduce the technologies of experts to the lay public. And lastly, the use of art to create new relationships to the environment he calls "reorientation." Kockelkoren's list is not meant to be a comprehensive account, but a sketch of what it can mean for artists to engage in research on technological mediation.

Though each art installation in this book receives only a few pages, their inclusion is effective. These short sections provide nice introductions to the sorts of works each artist creates. It is difficult to express the impact of the art pieces in writing here, so I will simply summarize the contributions to convey the overall flavor. The work of Annie Cattrell includes glass sculptures of inner parts of our bodies, such as the lungs, and even the parts of our brains in use while our different senses operate. Artistic duo "The Realists," Jan Wierda and Carel Lanter, use stereoscopic photography to create 3-dimensional experiences. The book includes sets of images which, with training, a reader can use to produce these effects. The work of Esther Polak included here regards images of convoluted lines created by mapping people's everyday routines with GPS tracking devices. There are also photos of Frank Sciarone's public art pieces, whose size create unusual visual gestalts. Felix Hess's work on the conversion of things typically experienced through one of our senses into something sensible with another (e.g. air movements into sound) is represented through photos of his installations and machines. Gerco de Ruijter's work featured here consists of bird's-eye-view photography captured by fixing cameras to kites. The work of Jeroen van Westen investigates the way natural landscapes exist among the influences and effects of human communities. And Wouter Hooijmans' photography of natural scenes explores the effects of extremely long exposure times.

One criticism to register of the total entries into this volume is that there is not enough engagement with both artistic projects and philosophical works that make politically-charged investigations into the topic of technologically mediated visual experience. I have in mind philosophical and artistic work that explicitly reveals and critically analyzes the ways that specific conventions of technological mediation support oppressive institutions and unjust practices in our society. Just a few examples of culturally critical projects on these topics include the work of Rosalind Pollack Petchesky, Michael Dumit, Susan Bordo, Valerie Hartouni, and Donna Haraway (e.g. Petchesky, 1987; Hartouni, 1996; Bordo, 1997; Dumit, 1999; Haraway, 2007). These sorts of issues do not receive adequate attention in this volume. Levin's piece comes closest, reflecting upon the efforts of artists to make unnoticed surveillance technologies more apparent. I do not mean to imply that every article, collection, or monograph on the issue of mediation and imaging technologies must spend time considering issues of politics, justice, and oppression; academic research productively takes up a narrow focus upon its different objects of study. But several of the pieces in this collection claim to offer wide histories of imaging technologies, novel classifications, philosophical reflection upon our conceptions of selfhood, and

reflection upon the roles of artists. With these expansive themes addressed, the two topics of the politics of imaging technologies and the potential for political resistance in artwork are important holes in the general impression that emerges from *Mediated Vision*.

Postphenomenology and Posthumanity

As a final set of reflections, I would like to further contextualize Ihde and Verbeek's entries into this volume. Both philosophers are figures in an emerging perspective in the philosophy of technology called "postphenomenology" (e.g. Ihde, 1993; Ihde, 2003; Verbeek, 2005; Ihde, forthcoming; Rosenberger, forthcoming; Selinger, forthcoming).³ This developing school of thought includes a focus upon the technologies that mediate human experience of the world, an effort to amalgamate the philosophical traditions of phenomenology and pragmatism, and an emphasis on concrete case studies. Those working from this perspective generally utilize Ihde's insights as starting points. But Verbeek, while advancing the postphenomenological view, has also offered a specific critique of Ihde's work along the way.

With his recent book *What Things Do: Philosophical Reflections on Technology, Agency, and Design*, Verbeek has positioned himself as a rising star within the field of philosophy of technology (2005). Declaring commitment to the postphenomenological perspective, the book thus also becomes an important touchstone for this emerging school. But, interestingly, Verbeek presents his version of postphenomenology as more radical than Ihde's. He explains, "it is necessary to hone Ihde's analysis on one point. For the way in which he speaks about technological mediation seems at times to lapse once again back into the subject-object schema that it is precisely the phenomenological ambition to overcome" (Verbeek, 2005, 129). A greater emphasis, in Verbeek's view, needs to be placed upon the ways that humans themselves are transformed by the process of technological mediation. "Mediation," he says, "does not take place *between* a subject and an object, but rather *coshapes* subjectivity and objectivity" (Verbeek, 2005, 130).

But how much do Ihde and Verbeek's positions in fact differ? In his review of *What Things Do* here in *Techné*, Evan Selinger comes to Ihde's defense (2005). He suggests that Verbeek makes too much of some of the language Ihde uses when making points about technological mediation. Selinger agrees that it is important to study the topic of the transformations of humans through their experience of technology use, but does not view Verbeek's position to be significantly different than Ihde's in terms of content or emphasis.

I suggest that Verbeek's critique of Ihde is further advanced through his piece in *Mediated Vision*. As well, Ihde's article itself can be seen to show how close he and Verbeek's positions in fact remain.

Ihde's piece, taken alone, can be interpreted to provide support to Selinger's defense. By suggesting that the advance of particular technologies has played a significant role in the development of scientific research, and also in the development of Western conceptions of epistemology, Ihde reveals the intimate ways that technologies deeply inform our actions and perceptions. Laboratory technologies, for example, do not only change the world so that we can perceive it, they also influence the directions scientific research travels, and they impact our very conceptions of ourselves, of truth, and of the nature of knowledge.

But Verbeek's piece here can be read as providing further tools for distinguishing his own more radical understanding of technology's "coshaping" capacity. His claim, for example, that certain relations to technology are best understood in terms of "posthumanity" represents a direction for thinking about what a more radical view of postphenomenology could look like. This raises specific questions: as in Selinger's defense above, we can ask whether the posthuman account Verbeek provides indeed offers something different from Ihde's view. We can also question whether the categories Verbeek creates are themselves coherent and useful.

In my view, Verbeek succeeds in pointing toward the direction of a more radical postphenomenology, but he does not offer a clear distinction between Ihde's postmodern claims and his own posthuman observations (and, to be fair, this is more than can be reasonably expected from a short article). With the notion of the "posthuman vision," Verbeek attempts to articulate a certain form of relating to the intentionalities of technologies. He explains, "Rather than putting these intentionalities in the service of human relations to the world—as in what Don Ihde calls 'hermeneutic relations,' where technologies provide representations of reality that need to be interpreted by humans in order to constitute a 'perception'—they [posthuman visions] explore technological intentionalities as relevant *in themselves*" (Verbeek, 2007, 49).

There are two problems with the notion of posthuman visions as offered here. First, since Verbeek uses only examples from fine art to articulate this concept, it is unclear whether posthuman visions refer exclusively to specific attempts to disrupt conventional conceptions of human subjectivity, or if they instead also refer to visions occurring pervasively throughout our everyday interactions with technologies. And second, the notion of posthuman vision is not as clearly independent from that of postmodern vision as Verbeek implies.

The definition which Verbeek has provided for his notion of post human vision, and articulated with examples from fine art, appears applicable to instances of more familiar technologies. A fast-forwarded film of a turning sunflower, a slow-motion film of a vehicle crash test, or satellite pictures of one's home may all qualify as posthuman visions. But more, the very examples which Verbeek uses to describe postmodern visions also in some ways resemble posthuman ones, and vice versa. On the one side, the medical imaging technologies Verbeek offers as examples of postmodern visions (since such scans require human interpretation) all contain their own "intentionalities" in the way of posthuman visions; one sort of scan may reveal dense internal features, another may reveal blood flow, another the burning of glucose. On the other side, the examples Verbeek offers in his definition of posthuman vision themselves require a bit of hermeneutic instruction to be appropriately viewed. For instance, one viewing Hooijman's sustained exposures or Polak's GPS drawings for the first time may require some information about what one is looking at before one is able to experience the significance of the intentionalities of the mediating technologies at work.

Importantly, these criticisms do not, in my view, amount to a critical blow to Verbeek's concept of posthuman vision. The observations that the definition of posthuman vision applies to many everyday examples, and that it shares essential overlapping points with postmodern notions, simply provide important qualifications. With the introduction of posthuman vocabulary into discourse on the phenomenology of technology, Verbeek successfully provides a new direction for further emphasizing and articulating the capacity for technology to change and guide human perception.

In Summary

While this review can relay some of the claims and ideas of the entries in *Mediated Vision*, it cannot capture the experience of the combined written and visual pieces of this collection. Each individual entry here stands fine alone, but the total sum of this collection results in an engaging, approachable, and thought-provoking experience. *Mediated Vision* impressively accomplishes the task of inspiring new ideas within its readers.

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Endnotes

- 1 Panofsky's views appear in (Panofsky (1991) [1927]). Kockelkoren complicates Panofsky's story with review of Jonathan Crary's work which suggests that views of subjectivity in the Renaissance were influenced in a variety of ways by a number of technologies, including the kaleidoscope, stereoscope, and especially the camera obscura (Crary 1992).
- 2 An expanded version of this history of perceptual regimes occurs in Kockelkoren's *Technology: Art, Fairground and Theatre* (2003).
- 3 See also a forthcoming issue of the journal *Human Studies* on the topic of postphenomenology. Contributors include Cathrine Hasse, Don Ihde, Evan Selinger, Peter-Paul Verbeek, and myself.