

Remediation and the Desire for Immediacy¹

Jay David Bolter

Abstract: What is new about the so-called 'new media'? Enthusiasts often assume that digital media must break radically with the aesthetic and cultural traditions of their predecessors. However, new media and new genres are best understood by examining the ways in which they refashion or 'remediate' older forms. Computer graphics, virtual reality, and the World Wide Web define themselves by borrowing from and remediating television, film, photography and painting, as well as print. Virtual reality remediates film as well as perspective painting; digital photography remediates the analogue photograph; the World Wide Web refashions almost every previous visual and textual medium. Furthermore, older media can remediate newer ones. For example, television is making such extensive use of computer graphics that TV screens often look like pages of the web.

As argued in a recent book (co-authored with Richard Grusin), remediation operates according to two representational strategies. The first, which is 'transparent immediacy', attempts to erase or conceal the process of remediation by making the medium invisible. Linear-perspective painting since the Renaissance, most photography, and the Hollywood film style all pursue transparent immediacy. The second strategy, which is 'hypermediacy', calls attention to the process of remediation by acknowledging or highlighting the medium itself. Much of television, rock music stage productions, and the World Wide Web are hypermediated. In either case, the producer seeks to arouse in the viewer 'a desire for immediacy', and it is this desire that leads digital media to borrow avidly from each other as well as from their analogue predecessors.

Immediacy and hypermediacy 'This is not like TV only better,' says Lenny Nero in the futuristic film *Strange Days* (Kathryn Bigelow, USA 1995). 'This is life. It's a piece of somebody's life. Pure and uncut, straight from the cerebral cortex. You're there. You're doing it, seeing it, hearing it ... feeling it.' Lenny is touting to a potential customer a technological wonder called 'the wire'. When the user places the device over her head, its sensors somehow make contact with the perceptual centres in her brain. In its recording mode, the wire captures the sense perceptions of the wearer; in its playback mode, it delivers these recorded perceptions to the wearer. If

the ultimate purpose of media is indeed to transfer sense experiences from one person to another, the wire threatens to make all media obsolete. Lenny mentions television, but the same critique would seem to apply to books, paintings, photographs, film, and so on. The wire bypasses all forms of mediation and transmits directly from one consciousness to another.

However, the film *Strange Days* is less enthusiastic about the wire than Lenny and his customers. Although the wire embodies the desire to get beyond mediation, *Strange Days* offers us a world fascinated by the power and ubiquity of media technologies. Los Angeles in the last two days of 1999, on the eve of '2K', is saturated with cellular phones, voice-and-text-based telephone answering systems, radios, and billboard-sized television screens that constitute public media spaces. In this media-filled world, the wire itself is the ultimate mediating technology, despite or indeed because of the fact that the wire is designed to efface itself, to disappear from the user's consciousness. When Lenny coaches the 'actors' who will appear in a pornographic recording, it becomes clear that the experience the wire offers can be as contrived as a traditional film. Although Lenny insists that the wire is not 'TV only better', the film ends up representing the wire as 'film only better'. When Lenny himself puts on the wire and closes his eyes, he experiences the world in a continuous, first-person point-of-view shot, which in film criticism is called the 'subjective camera'.

Strange Days is a compelling film because it captures the ambivalent and contradictory ways in which new digital media function for our culture today. The film projects our own cultural moment a few years into the future in order to examine that moment with greater clarity. The wire is just a fanciful extrapolation of contemporary virtual reality, with its goal of unmediated visual experience. The contemporary head-mounted display of virtual reality is considerably less comfortable and fashionable, and the visual world it generates is far less compelling. Still, contemporary virtual reality is, like the wire in *Strange Days*, an experiment in cinematic point of view. Meanwhile, the proliferation of media in 2K LA is only a slight exaggeration of our current media-rich environment, in which digital technologies are proliferating faster than our cultural, legal or educational institutions can keep up with them. In addressing our culture's contradictory imperatives for immediacy and hypermediacy, this film demonstrates what we call a double logic of 'remediation'. Our culture wants both to multiply its media and to erase all traces of mediation: ideally, it wants to erase its media in the very act of multiplying them.

In this last decade of the twentieth century, we are in an unusual position to appreciate remediation, because of the rapid development of new digital media and the nearly as rapid response by traditional

media. Older electronic and print media are seeking to reaffirm their status within our culture, while digital media are challenging that status. Both new and old media are invoking the twin logics of immediacy and hypermediacy in their efforts to remake themselves and each other. To fulfil our apparently insatiable desire for immediacy, 'live' point-of-view television programmes show viewers what it is like to accompany a policeman on a dangerous raid or to be a skydiver or a racing car driver hurtling through space. High-budget filmmakers spend millions of dollars to film 'on location' or to recreate period costumes and places in order to make their viewers feel as if they were 'really' there. Others with smaller budgets make sophisticated use of studio shots and computer compositing to achieve the look of authenticity. 'Webcams' on the internet pretend to locate us in various natural environments – from a backyard bird feeder in Indianapolis to a panorama in the Canadian Rockies. In all these cases, the logic of immediacy dictates that the medium itself should disappear and leave us in the presence of the thing represented: sitting in the racing car or standing on a mountaintop.

Yet these same old and new media often refuse to leave us alone. Many web sites are riots of diverse media forms, including graphics, digitised photographs, animation, and video – all set up in pages whose graphic design principles recall the psychedelic 1960s or dada in the 1910s and 1920s. Hollywood films, such as *Natural Born Killers* (Oliver Stone, USA 1994) and *Strange Days*, mix media and styles unabashedly. Televised news programmes feature multiple video streams, split-screen displays, composites of graphics and text – a welter of media that is somehow meant to make the news more perspicuous. Even webcams, which operate under the logic of immediacy, can be embedded in a hypermediated website, where the user can select from a 'jukebox' of webcam images to generate her own panelled display.

As the webcam jukebox suggests, our two seemingly contradictory logics not only coexist in digital media today, but are mutually dependent. Immediacy depends upon hypermediacy. In the effort to create a seamless moving image, filmmakers combine live-action footage with computer compositing and two- and three-dimensional computer graphics. In the effort to be up to the minute and complete, television news producers assemble on the screen ribbons of text, photographs, graphics, and even audio without a video signal when necessary (as was the case during the Persian Gulf War). At the same time, even the most hypermediated productions strive for their own brand of immediacy. So, for example, directors of music videos rely on multiple media and elaborate editing to create an immediate and apparently spontaneous style: they take great pains to achieve the sense of 'liveness' that characterises rock music. The desire for immediacy leads digital media to borrow avidly from each other as well as from

their analogue predecessors such as film, television, and photography. Whenever one medium seems to have convinced viewers of its immediacy, other media will try to appropriate that conviction. The CNN site² is hypermediated – arranging text, graphics, and video in multiple panes and windows and joining them with numerous hyperlinks; yet the web site borrows its sense of immediacy from the televised CNN newscasts. At the same time the televised newscasts are coming to resemble web pages in their hypermediacy. The team of web editors and designers, working in the same building in Atlanta from which the television news networks are also administered, clearly do want their technology to be ‘television only better’. Similarly, one of the most popular genres of computer games is the flight simulator. The action unfolds in real time, as the player is required to monitor the instruments and fly the plane. Such games promise to show the player ‘what it is like to be’ a pilot, and yet in what does the immediacy of the experience consist? As in a real plane, the simulated cockpit is full of dials to read and switches to flip. As in a real plane, the experience of the game is that of working an interface, so that the immediacy of this experience is pure hypermediacy.

A taxonomy of remediation On the opening page of *Understanding Media* Marshall McLuhan remarked that ‘the “content” of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph’.³ As his problematic examples suggest, McLuhan was not thinking of simple repurposing, but perhaps of a more complex kind of borrowing in which one medium is itself incorporated or represented in another medium. Dutch painters incorporated maps, globes, inscriptions, letters, and mirrors in their works.⁴ In fact, all our examples of hypermediacy are characterised by this kind of borrowing, as is also ancient and modern *ekphrasis*, the literary description of works of visual art, which W.J.T. Mitchell in *Picture Theory* defines as ‘the verbal representation of visual representation’.⁵ Again, I call the representation of one medium in another ‘remediation’, and I will argue that remediation is a defining characteristic of the new digital media. What might seem at first to be an esoteric practice is so widespread that we can identify a spectrum of different ways in which digital media remediate their predecessors, a spectrum depending upon the degree of perceived competition or rivalry between the new media and the old.

At one extreme, an older medium is highlighted and re-presented in digital form without apparent irony or critique. Examples include CD-ROM (or DVD) picture galleries (digitised paintings or photographs) and collections of literary texts. There are also numerous web sites that offer pictures or texts for users to download. In these cases, the electronic medium is not set in opposition to painting, photography, or printing; instead, the computer is offered as a new means of gaining access to

these older materials, as if the content of the older media could simply be poured into the new one. Since the electronic version justifies itself by granting access to the older media, it wants to be transparent. The digital medium wants to erase itself, so that the viewer stands in the same relationship to the content as she would if she were confronting the original medium. Ideally, there should be no difference between the experience of seeing a painting in person and on the computer screen, but this is never so. The computer always intervenes and makes its presence felt in some way, perhaps because the viewer must click on a button or slide a bar to view a whole picture or perhaps because the digital image appears grainy or with untrue colours. Transparency, however, remains the goal.

Creators of other electronic remediations seem to want to emphasise the difference rather than erase it. In these cases, the electronic version is offered as an improvement, although the new is still justified in terms of the old and seeks to remain faithful to the older medium's character. There are various degrees of fidelity. Encyclopedias on CD-ROM, such as Microsoft's *Encarta* or Grolier's *Electronic Encyclopedia*, seek to improve on printed encyclopedias by providing not only text and graphics, but also sound and video and feature electronic searching and linking capabilities. Yet, because they are presenting discrete, alphabetised articles on technical subjects, they are still recognisably in the tradition of the printed encyclopedia since the eighteenth-century *Encyclopédie* and *Encyclopaedia Britannica*. In the early 1990s, the Voyager Company published series of 'Expanded Books' on CD-ROM, an eclectic set of books originally written for printed publication including *Jurassic Park* and *Brave New World*. The Voyager interface remediated the printed book without doing much to challenge print's assumptions about linearity and closure. Even the name 'Expanded Books' indicated the priority of the older medium. Much of the current World Wide Web also remediates older forms without challenging them. Its point-and-click interface allows the developer to reorganise texts and images taken from books, magazines, film, or television, but the reorganisation does not call into question the character of a text or the status of an image. In all these cases, the new medium does not want to efface itself entirely. Microsoft wants the buyer to understand that she has purchased not simply an encyclopedia, but an electronic and therefore improved encyclopedia. So the borrowing might be said to be translucent rather than transparent.

The digital medium can also be more aggressive in its remediation. It can try to refashion the older medium or media entirely, while still marking the presence of the older media and therefore maintaining a sense of multiplicity or hypermediacy. This is particularly clear in many rock CD-ROMs, such as the Emergency Broadcast Network's *Telecommunication Breakdown*,⁶ in which the principal refashioned

media are music recorded on CD and its live performance on stage. This form of aggressive remediation throws into relief both the source and the target media. In the 'Electronic Behavior Control System', old television and movie clips are taken out of context (and therefore out of scale) and inserted absurdly into the techno-music chant. This tearing out of context makes us aware of the artificiality of both the digital version and the original clip. The work becomes a mosaic in which we are simultaneously aware of the individual pieces and of their new, inappropriate setting. In this kind of remediation, the older media are presented in a space whose discontinuities, like those of collage and photomontage, are clearly visible. In CD-ROM multimedia the discontinuities are indicated by the window frames themselves and by buttons, sliders, and other controls, which start or end the various media segments. The windowed style of the graphical user interface favours this kind of remediation: different programs, representing different media, can appear in each window – a word-processing document in one, a digital photograph in another, digitised video in a third – while clickable tools activate and control the different programs and media. The graphical user interface acknowledges and controls the discontinuities as the user moves among media.

Finally, the new medium can remediate by trying to absorb the older medium entirely, so that the discontinuities between the two are minimised. The very act of remediation, however, ensures that the older medium cannot be entirely effaced; the new medium remains dependent upon the older one in acknowledged or unacknowledged ways. For example, the genre of computer games like *Myst* or *Doom* remediate cinema, and such games are sometimes called 'interactive films'. The idea is that the players become characters in a cinematic narrative. They have some control over both the narrative itself and the stylistic realisation of it, in the sense that they can decide where to go and what to do in an effort to dispatch villains (in *Doom*) or solve puzzles (in *Myst*). They can also decide where to look, where to direct their graphically realised points of view, so that in interactive film, the player is often both actor and director. On the World Wide Web, on the other hand, it is television rather than cinema that is remediated. There are numerous web sites that borrow the monitoring function of broadcast television. These sites present a stream of images from digital cameras aimed at various parts of the environment: pets in cages, fish in tanks, a soft drink machine, one's office, a highway, and so on. Although these point-of-view sites monitor the world for the web, they do not always acknowledge television as the medium that they are refashioning. In fact, television and the World Wide Web are engaged in an unacknowledged competition in which each now seeks to remediate the other. The competition is economic as well as aesthetic; it is a struggle to determine whether broadcast television or the internet will dominate the North American and world markets.

Like television, film is also trying to absorb and repurpose digital technology. As we have mentioned, digital compositing and other special effects are now standard features of Hollywood films, particularly in the 'action-adventure' genre. And in most cases, the goal is to make these electronic interventions transparent. The stunt or special effect should look as 'natural' as possible, as if the camera were simply capturing what really happened in the light. Computer graphics processing is rapidly taking over the animated cartoon; indeed, the takeover is already complete in Disney/Pixar's *Toy Story* (USA 1995). And here too the goal is to make the computer disappear: to make the settings, toys, and the human characters look as much as possible like live-action film. Hollywood has incorporated computer graphics at least in part in an attempt to hold off the threat that digital media might pose for the traditional linear film. This attempt shows that remediation operates in both directions: users of older media such as film and television can seek to appropriate and refashion digital graphics, just as digital graphics artists can refashion film and television.

Unlike our other examples of hypermediacy, this form of aggressive remediation does create an apparently seamless space. It conceals its relationship to earlier media in the name of transparency; it promises the user an unmediated experience, whose paradigm again is virtual reality. As we noted earlier, games like *Myst* and *Doom* are desktop virtual reality applications, and, like immersive virtual reality, they aim to inspire in the player a feeling of presence. On the other hand, like these computer games, immersive virtual reality also remediates both television and film: it depends upon the conventions and associations of the first-person point-of-view or subjective camera. The science fiction writer Arthur C. Clarke has claimed that: 'Virtual Reality won't merely replace TV. It will eat it alive.'⁷ As a prediction of the success of this technology, Clarke is likely to be quite wrong, at least for the foreseeable future, but he is right in the sense that virtual reality remediates television (and film) by the strategy of incorporation. This strategy does not mean that virtual reality can obliterate the earlier visual point-of-view technologies; rather, it ensures that these technologies remain at least as reference points by which the immediacy of virtual reality is measured. Paradoxically, then, remediation is as important for the logic of transparency as it is for hypermediacy.

The consumption of media artifacts

The two representational strategies of immediacy and hypermediacy can help us understand not only the aesthetics of new media, but also their cultural uses and patterns of consumption. Indeed we can see that the aesthetic or formal meaning and the patterns of consumption are inseparably linked.

The economic aspects of remediation have already been acknowledged and explored by cultural theorists. Each new media form has to find its

economic place by replacing or supplementing what is already available, and popular acceptance and therefore economic success can only come by convincing consumers that the new form improves on the experience of older ones. Thus, new media forms circulate based on claims of remediation. For example, the telecommunications industry claims that its new delivery products (such as ADSL and cable modems) will provide a greater immediacy than traditional phone lines or cable connections, because greater bandwidth makes possible live video and interactive television, not mere text and static graphics. Likewise, new DVD devices are supposed to give the viewer a more authentic reproduction of video and sound by remaking the television monitor into a movie screen. New web genres and services, such as web newspapers and journals, on-line bookstores, and virtual shopping malls, promise greater interactivity, more up-to-date information, and so on. Consumers must replace their older modems, CD-ROMs, and VCRs, in order to satisfy the desire for immediacy that consumer culture has fuelled.

At the same time, the economic success of workers in a new medium depends on the medium's acquired status. Web designers currently command higher salaries than technical writers and graphic designers for print: it is in their interest to promote the belief that digital media will not only replace printed documents, but vastly improve on them. Similarly, the whole entertainment industry's understanding of remediation as repurposing shows how economic and material concerns are inseparable from formal properties. As we have noted, the entertainment industry defines repurposing as the pouring of a familiar content into another media form: a comic book story is repurposed as a live-action movie, a televised cartoon, a video game, and a set of action toys. The goal is not to replace the earlier forms, to which the company may own the rights, but rather to spread the content over as many markets as possible. Each of those forms takes part of its meaning from the other products in a process of honorific remediation and at the same time makes a tacit claim to offer an experience that the other forms cannot. Together these products constitute a hypermediated environment in which the repurposed content is available to all the senses at once, a kind of mock *Gesamtkunstwerk*. For the repurposing of blockbuster movies such as the *Batman* series, the marketers would seem to want a child to be watching a *Batman* video while wearing a *Batman* cape, eating a 'happy meal' with a *Batman* promotional wrapper, and playing with a *Batman* toy. Their goal is literally to engage all of the child's senses in the consumption of the *Batman* property.

Implicitly and often explicitly, claims of immediacy are what govern the circulation and consumption of new media products. What producers of new media artifacts are selling are experiences of immediacy. They engage in an ongoing struggle to define or redefine immediacy or

authenticity of experience in a way that particularly enhances their own products. Often the immediacy of the product is expressed as transparency: you can see through the product to the ostensible reality behind it. Sometimes, however, it is expressed as a fascination with media, so that the product is to be consumed as an experience in itself.

The offer of immediacy is therefore common to both artistic and popular or consumer forms. This strategy of remediation can be found in digital art installations, like those of the Ars Electronica festival. The same strategy can be found in theme parks, malls and other mediated spaces designed for the general consumer. A good example of a new mediated space designed for both literal and figurative consumption are the so-called 'eatertainments'. Eatertainments are themed restaurants, which combine the traditional function of an eating establishment with the entertainment qualities of a theme park. Restaurants with themes are not a new form: for decades we have had space-burger stands and Jolly Roger pirate restaurants, as well as dinner theatre. But the form has now become a new media genre. Some companies now promote themselves as specialists in conceiving and designing such eatertainments, as Mars 2112 (by Daroff Designs Inc), which is:

a space age must-see dining and family entertainment experience. This event dining venue treats its guests to a journey to Mars with an exploration of the Red Planet. A ramp leads guests towards an Earth Spaceport where they receive their Martian visas and tickets for the voyage to Mars. After a four-minute virtual ride through space, customers arrive at this 32,000 square feet restaurant/entertainment facility and are drawn to a recently landed 'spaceship' which hovers in the plaza pit. ... Via a Martian Transporter Device, Mars 2112 provides transportation back to 'Earth' where guests are invited to explore Galactic retail opportunities.⁸

As we read further in the descriptive material, we find that Mars 2112 is a three-dimensional cinematic experience. It becomes clear that this entertainment is, like most theme parks, a remediation, borrowing its sense of immediacy from our experience of science-fiction film. Mars 2112 is not like being on Mars; it is being in a science-fiction film about the Red Planet. In an eatertainment like this one, the consumption of the media artifacts and consumption of food are combined.

As new media artifacts, installation art pieces found at the Ars Electronica festivals⁹ and eatertainments like Mars 2112 are two expressions of the same desire. The Ars Electronica installation may construct itself as a critique of our media-saturated society, while eatertainments are a celebration. But both do the cultural work of remediation. They cannot offer the viewer (or diner) an experience

independent of the media that they critique or celebrate. Like every form of new media, they depend on earlier media for their definition of the immediacy of the experience that they provide.

- Notes**
- 1 This paper is a revised version of the keynote address I presented at the Creativity and Consumption conference, University of Luton, 29-31 March 1999. The thesis that media borrow from and refashion one another in a process of 'remediation' was developed by myself and Richard Grusin and explored in our co-authored book, *Remediation: Understanding New Media* (Cambridge, Mass. & London: MIT Press, 1999). Portions of this essay are taken from Chapters 1 and 2 of the book and are used with the kind permission of MIT Press.
 - 2 At www.cnn.com (25 January 2000).
 - 3 Marshall McLuhan, *Understanding Media: The Extensions of Man* (New York: New American Library, Times Mirror, 1964), pp. 23-24.
 - 4 Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: The University of Chicago, 1983).
 - 5 W.J.T. Mitchell, *Picture Theory* (Chicago: University of Chicago Press, 1994), pp. 151-152.
 - 6 Emergency Broadcast Network, *Telecommunications Breakdown* CD-ROM (New York: TVT Records, 1995).
 - 7 Quoted in Howard Rheingold, *Virtual Reality* (New York: Simon & Schuster, 1991), back cover.
 - 8 At www.daroffdesign.com/mars1.htm (21 December 1999).
 - 9 See their website kultur.aec.at/festival/ (25 January 2000).
-