The end of cinema: multimedia and technological change

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Figure 23.1 'Now playing. Movies for your computer': a 1995 advertisement from Gametek

Cinema/Digital Movies, announcing movies on CD-ROM. 'Gametek presents six cult classic movies: Metropolis, Robotoch, R.G. Veda, Raveller Haddness, Tromo's Toxic Avenger and Class of Nuke 'Em High'.

The screen featured here (Figure 23.1) faces its audience: the regimented rows of a computer keyboard, each key in the fixed position of a cinema spectator. The image — of the transformative moment in Metropolis when the metallic robot Maria is infused with the life-force of electricity — suggests another moment of transformation. The cinema screen has been replaced by its digital other, the computer screen.

As this millennium draws to an end, the cinema — a popular form of entertainment for almost a century — has been dramatically transformed. It has become embedded in — or perhaps lost in — the new technologies that surround it. One thing is clear: we can note it in the symptomatic discourse, inflected with the atomic terms of 'media fusion' or 'convergence' or the pluralistic inclusiveness of 'multimedia' — the differences between the media of movies, television, and computers are rapidly diminishing. This is true both for technologies of production (that is, film is commonly edited on video; video is transferred to film; computer graphics and computer-generated animation are used routinely in both film and television production) and for technologies of reception and display (that is, we can watch movies in digitized formats on our computer screens or in video formats on our television screens.) The movie screen, the home television screen, and the computer screen retain their separate locations, yet the types of images you see on each of them are losing their medium-based specificity.

When Marshall McLuhan proclaimed 'the medium is the message' in 1964, this sound-bite aphorism drew attention not only to the mediation that the media incurred but also to the specificity of each separate medium. McLuhan inveighed against content-based studies: 'The "content" of any medium,' McLuhan wrote, 'blinds us to the characteristics of the medium.' Instead, he prescribed an account of the effects — the change of scale or pace or pattern — that each particular medium might produce. McLuhan analysed the interrelatedness of media in an evolutionary scheme ('The content of any medium is always another medium'), and he insisted that each new medium would 'institute new ratios, not only among our private senses, but among themselves, when they interact among themselves' (McLuhan, 1964: 8–9, 53). In the new media environment of the 1990s, the media of radio, telephone, television, movies, computer not only interact among themselves, but their cross-purposed interactions pose new questions about their technological specificities. German media theorist Friedrich Kittler anticipated this convergence of media when he wrote: 'The general digitalization of information and channels erases the difference between individual media' (1986: 102). Yet Kittler predicted that the installation of fiber-optic cable was the technology that would turn film, music and phone-calls into a 'single medium'. Given the suggested reconfiguration of screens and their spectators in the image of Metropolis on the computer monitor figured here (Figure 23.1), we must now ask: how have the material differences between cinematic, televisual, and computer media been altered as digital technologies transform them?

Nicholas Negroponte answers this question with a counter-polemical aphorism, turning McLuhan's 'the medium is the message' on its head. 'The medium is not the message in the digital world,' declares Negroponte, 'It is an embodiment of it. A message might have several embodiments automatically derivable from the same data' (1995: 71). Digital imaging, delivery, and display effectively erase the 'messages' implicit in the source 'medium'. The digitized Metropolis illustrates how almost all of our assumptions about the cinema have changed: its image is digital, not photographically-based, its
screen format is small and not projection-based, its implied interactivity turns the spectator into a 'user'.

The following chapter addresses two related issues. The first part examines a number of technologies introduced in the 1970s and 1980s which began to erode the historical differences between television and film. The video cassette recorder, the television remote control, and the growth of cable television significantly altered the terms of both televsional and cinematic viewing. As I will argue, these technologies led to a convergence of film and television technology that began without fiber-optic cable, occurred before the digitalization of imagery, and preceded the advent of the home computer.

Secondly, as a result of these initial reconstructions and as our visual field has been transformed by newer technologies, the field of 'film studies' finds itself at a transitional moment. We must add computer screens (and digital technologies), television screens (and interactive video formats) to our conceptualization (both historical and theoretical) of the cinema and its screens. Screens are now 'display and delivery' formats — variable in versions of projection screen, television screen, computer screen, or headset device. Film is a 'storage' medium — variable in versions of video, computer disks, compact discs (CDs), high-density compact video-disc players (DVDs), databanks, on-line servers. Spectators are 'users' with an 'interface' — variable in versions of remotes, mice, keyboards, touch screens, joysticks, goggles and gloves and body suits. Just as the chemically-based 'analog' images of photography have been displaced by computer-enhanced digital images; the apparatus we came to know as 'the cinema' is being displaced by systems of circulation and transmission which abolish the projection screen and begin to link the video screens of the computer and television with the dialogic interactivity of the telephone. Multimedia home stations combining telephone, television, and computer (what will we call these: tele-puters? image-phones?) will further reduce the technical differentiation of film, television, and the computer.

It now seems that a singular history of 'the film' without its dovetailing conspirators — the telephone, the radio, the television, the computer — provides a too-narrowly constructed genealogy. Once thought to be the province of 'information science' and not part of the study of 'visual culture', histories of the telephone and the computer become significant tributaries in the converging multimedia stream. In this way, perhaps, Charles Babbage's 1832 'analytical engine' could be measured as significant in the contemporary remaking of visual imagery as Joseph Plateau's 1823 phenakistoscope. Babbage's 'analytical engine' — a mechanical precursor to modern digital computing — could store a number, retrieve it, modify it, and then store it in another location (Figure 23.2). Plateau's phenakistoscope — an optical toy now considered a key pre-cinematic apparatus — demonstrated how movements analyzed into their static components could be perceived as moving images when perceived through the slits of a spinning disc (Figure 23.3). The 'analytical engine' turned perceived information into discrete, manipulable units; the phenakistoscope turned images into discrete and manipulable units. The historical coincidence between these two devices only emerges as significant in light of recent technologies of digital imaging and display.

**The new media environment**

But there were a number of pre-digital technologies that significantly changed our concept of film-going and television-viewing before the digital 'revolution'. The video cassette recorder (VCR), cable television, and the television remote control (Figure 23.4)
have prepared us for the advent of computer screens with wired (Internet) connections — for interactive 'usage' instead of passive spectatorship — and continue to produce profound changes to our sense of temporality. If television's innate 'liveness' — its ability to collapse the time of an event with the time of its transmission — was one of its key apparatical distinctions from the movies, the VCR collapsed these separations. Television's mode of absolute presence, as Jane Feuer has eloquently argued, became a key determinant of televisial aesthetics (1983: 12-22). The VCR demolished the aura of live television and the broadcast event, freeing the television screen from its servitude to the metaphysics of presence. Whereas the cinematic apparatus had the potential for re-seeing a film built into its means of mechanical reproduction, television had to await the advent of videotape recording and playback features of the VCR. The VCR introduced the potential to 'time-shift' (to view what you want, when you want), to 'zip' (to fast-forward and/or reverse the video cassette, effectively skipping portions of the taped program (with televised programming, this usually meant commercials)), and also made it easier to re-see a film or program over (and over) again. With the VCR, both the cinematic and the televisual past became more easily accessible and interminably recyclable.

Cable television not only changed the quality of and criteria for television reception, but expanded its offerings with increased channel choice, effectively breaking the monopolies of network broadcasting. In turn, the television remote control allowed the viewer instantaneously to change televised channels (to 'zap'), to fast-forward and/or reverse the video cassette (to 'zip'), to switch between live and taped programming, and to eliminate the lure or distraction of television's sound (to 'mute'). As a result of these technologies, the premises of cinema spectatorship and televisual viewing changed radically.5

The VCR

The time-shift machine

As the VCR became widely available in the mid-1980s, the number of VCR households grew in a parallel 'penetration' of the American home to the growth of television in the 1950s. In 1952 fewer than 250,000 sets were owned by American households; by 1960, 80 per cent of American homes had television; by 1993 there were 93.1 million television households, with a near total saturation, in the high 90 per cent. The marketing of the VCR followed this curve. While there were a variety of video cassette systems marketed in the 1970s, it was not until the early 1980s that the VCR became a common household appliance. In 1985, only 20 per cent of American households had VCRs; in 1989 the figure was 65.5 per cent. But by 1993 the total reached 80 per cent and by 1997, 88 per cent of American homes had VCRs (Lipton, 1991; Nielsen, 1996).

A videotape machine with the capacity for recording and playback on video cassettes, the VCR not only solved broadcast television's reception difficulties, but also freed the television viewer from its programming limitations and rigid timetable. In 1970, there were six competing 'cassette TV' systems in development, set for target marketing dates in mid-1971 or early 1972. [Five of these — Avco, Sony, Ampex, Mgnavox, Norelco — relied on videotape. CBS' EVR — Electronic Video Recording — used a photographic film which was scanned and converted to a television signal (Kern, 1970: 46-55).] The Sony Betamax, introduced in 1975, used 3½ inch videotape in a cassette format that could record for an hour; and a competing 3½ inch format VHS (Video Home System) was introduced in 1976. The VHS format initially had the advantage of recording for up to two hours. Since cassette recorders were first used primarily for recording broadcast feature films, the two-hour cassette made a difference in the competitive market (Lardner, 1987).

VCRs were first used for recording off the air, but through the 1980s as more and more pre-recorded video cassettes became available, a rental market (an entirely new industry) developed for movies, exercise videos, educational, and self-help material. Hence, the VCR — originally intended by its marketers to be used as a recording and
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The 1987 film Spaceballs (Mel Brooks, 1987) parodies some of the changes in movie reception produced by the VCR and the rental marketing of video cassettes. In the film, Dark Helmet (Rick Moranis) and his commander, Colonel Sanders, chase an intergalactic 'winnabo' driven by a space-bum-for-hire Lone Star (Bill Pullman) and his canine sidekick, Barf (John Candy). Dark Helmet and Colonel Sanders stand by the spaceship's video scanner screen when Sanders introduces a 'new breakthrough in video marketing - instant cassettes'. The rift between Helmet and Sanders toys with the new temporality produced by the video cassette: 'Prepare to fast forward ... go past this part ... the part on ridiculous speed'. When they suddenly stop the tape at a frame that matches the moment they are in, they do a double take between the screen and each other:

'When does this happen? Then?'
'Now.'
'When will then be now?'
'Soon.'

The jumbled tenses of present and past here form a parody on the very paradoxes of televisuol presence ("Now") and the VCR's deeper challenges to time and memory ("When will then be now! Soon!").

Paul Virilio has described this new temporality made possible by the VCR:

The machine, the VCR, allows man [sic] to organize a time which is not his own, a deferred time, a time which is somewhere else -- and to capture it ... The VCR ... creates two days: a reserve day which can replace the ordinary day, the lived day.

(1988)

For Virilio, the VCR produces a time that is shifted, borrowed, made asynchronous. The VCR is like an electronic melatonin, resetting the viewer's internal clock to a chosen moment from the past.

While these new attributes of televisuol time often lead to literary rhetoric about the VCR -- freeing its viewers from the tyranny of standard time and broadcast choices with button-pushing empowerment -- there remain limits to the choices available. Richard Dienst forecloses any emancipatory potential of this new temporality, reminding us that the privilege of individual prerogative ultimately profits 'paranatural ... conglomerates':

VCRs do nothing but extend the range of still and automatic time, offering an additional loop of flexibility in the circulation of images, bringing new speeds and greater turnover... video allows people to operate another series of switches, a privilege bought with more time, money and subjective attachment... who profits from this new and immense expansion in the volume of overall televisuol time? ... paranoian electronic manufacturers and entertainment conglomerates.

(1994: 165-6)

And now that the VCR has become a well-entrenched consumer durable, electronics companies are trying to supplant it with laser disc technology, hoping that the DVD player will become the next VCR, just as audio CD machines have supplanted record
players in the past decade (Bauman and Harmon, 1994). DVD technology offers some advantages: as with the larger laser disc formats, one can access a different section of the disc in a near instant; there is no fast-forwarding or rewinding required. But owing to more sophisticated image compression algorithms, a DVD, unlike larger laser discs and CD-ROM technology, can hold an entire feature film on a single disc. As Figure 23.1 illustrates, CD-ROM technology promised to bring ‘movies’ to your computer, with new playback possibilities, but the DVD may be the format that succeeds in doing so.

Cable television

Cable television is almost as old as commercial broadcast television. Because broadcast television required a clear 'line of sight' between the transmitter and the receiving set for adequate reception, cable television developed in areas where broadcast television was not easily received, where antennae could not ‘see’ each other, and where alternative methods were needed for transmitting broadcast signals. But cable television also offered some additional advantages: because it delivered television signals on coaxial cable it could carry more than one channel on the coaxial cable and import distant signals which were received by one master antenna (or, later, by one master satellite dish) and retransmit them.

In 1975 – the year that began the Betamax/VHS format wars – a dramatic change in cable programming occurred: Home Box Office (HBO) began distributing special events (beginning with the Ali-Frazier ‘Thriller in Manila’ fight) and movies via satellite. Shortly after HBO launched its service, Viacom launched a competing pay television service (Showtime) in 1976, and Warner Communication followed with The Movie Channel (which showed movies 24 hours a day) in 1979. These ‘pay’ or ‘premium’ cable channels relied heavily on the programming of feature films.

And not long after HBO began using satellite transmission, the owner of a low-rated UHF station in Atlanta put his station’s signal on satellite to be seen nationwide. This station, WTBS, owned by Ted Turner, became known as a ‘superstation’ because of its national availability. Turner’s ‘superstation’ was a ‘cable network’ which made economic sense both to subscribers and to local cable companies. Cable subscribers were not charged for an extra station, the local cable company was only charged a dime a month per subscriber, and the extra service increased subscribers. And even though the revenues from the local cable companies did not cover the superstation’s costs, the superstation could charge higher advertisement fees because it could boast a bigger audience. The core programming on WTBS consisted of Hollywood’s movie past. In 1986 Turner bought MGM and its film library; in 1987 Turner bought rights to an additional 800 RKO films (Gomery, 1992: 263–79).

In the late 1970s and early 1980s cable television grew phenomenally. Most of what we know now as ‘basic cable’ – CNN, MTV, Nickelodeon, C-Span, the superstations TBS, WOR, USA Network – were born within a timespan of a few years. In 1993, 64 per cent of television owners subscribed to cable; by 1996, the figure was 68.5 per cent (Nielsen, 1996). While studies on the movie-going habits of basic and pay cable subscribers have shown mixed results, indicating both a decrease and increase in movie-going (Austin, 1986: 93–4), one thing is certain: the increase in VCR users and cable subscribers meant that the cinematic spectator became a televisual viewer.

The television remote control

A third technology that transformed televisual viewing (and exacerbated its differences from film spectatorship) is the television remote control. The television remote control penetrated the American household as rapidly as VCRs and cable: in 1976, 9.5 per cent of televisions were sold with remote controls; by 1990, 90 per cent of them were (Napoli, 1999); in 1985, only 29 per cent of households had remote controls, in 1996, 90 per cent of US household had at least one (Nielsen, 1996). Versions of the television ‘remote’ control device were marketed in the 1950s – first tethered to a wire and later as a wireless light-sensor remote – but these offered fewer options to the couch-bound viewer of 1950s’ broadcast television than the same device did for the later VCR or cable subscriber. With a television remote control, the viewer becomes a montagist, editing at will with the punch of a fingertip, ‘zipping’, ‘sapping’, and ‘mutting’. Television programmers have noted that to capture the armchair channel-surfing requires more and more ‘visual’ programming – relying less on plot and characterization and more on fast rhythmic editing. Some studies have shown that this form of viewing even changes the ability to follow linear arguments (Meyerowitz, 1985). And, as if to demonstrate its telereological relation to computer usage, the television remote control is now – retromantically – referred to as an ‘air mouse’.

The film screen, the television screen, the computer screen

Certainly, much of the early competition between film and television centered around screen size and format; the television providing a 10–12 inch screen tailored to the domestic scale of the home, the movie screen differentiating its offerings with color, three-dimensional, and wider screen formats, compensating for what the black-and-white flat screens of television could not supply. Television ‘viewing’ altered some of the protocols of cinema ‘spectatorship’: unlike the cinema spectator, the television viewer watches a light-emitting cathode ray box in a partially darkened room. The optics of television do not rely on persistence of vision and projection but on scanning and transmission. [Our eyes have grown accustomed to NTSC 525 lines per image at 30 frames per second; or phase alteration line (PAL) at 624 lines at 25 frames per second; high definition television (HDTV) has 1125 lines per image.] And, as television scholars are quick to note, the placement of televisions in the home significantly alters the function of such spectatorship. Lynn Spigel, for example, likens the television’s screen – a form of ‘home theater’ – to the 1950s’ architectural use of the picture window, a ‘window-wall’ designed to bring the outside in (1992: 102).
Reinventing ‘film studies’

As the field of ‘film studies’ has been redefining itself, both revising its internal historical accounts and opening up its field to the emerging multiplicities of ‘cultural studies’ and ‘visual studies’, much of this work has been coincident with the campaign for the academic legitimacy of film studies as a republic separate from its former disciplinary overlords. But as new technologies trouble the futures of cinematic production and reception, ‘film’ as a discrete object becomes more and more of an endangered species, itself in need of asserting its own historicity. In the past decade or so, first with the VCR and more recently with on-line and digital technologies, the methods and source material for film and television scholarship have been radically transformed.  

Here it seems necessary to describe the following historiographical conundrum: David Bordwell and Kristin Thompson, arbiters of film history-as-text (and as textbook) have marked the history of film as a field of academic research ‘no more than thirty years old’ (1994: xxvi). Yet in the past several decades, while film scholars have been reworking the histories of cinema’s past — adjusting or refuting its teleologies, challenging its grand narratives — our concept of and access to not just the cinema’s past but to the past itself have also radically been transformed and this due in no small part to the cinema. Hence, there is a troubling paradox in the way in which the ascendency of film historical discourse in the past several decades may have worked to mask the very loss of history that the film itself inflicted. What I am invoking here are a familiar set of historiographic questions about the ways in which we can know the past, the truth claims of histories, and the nature of historical knowledge. As the field of ‘film history’ has flourished in its vitality, the concomitant changes to our concept of the past produce a reflexive problematic. Cinema spectatorship, as one of its essential features, has always produced experiences that are not temporally fixed, has freed the spectator to engage in the fluid temporalities of cinematic construction — flashbacks, ellipses, flashbacks — or to engage in other time frames (other than the spectator’s moment in historical time, whether watching the diegetic fiction of a period drama or simply a film from an earlier period).  

Without the discourse of film history, films would lose their historical identity, would slip into the fog of uncertain temporality. As an exercise in my undergraduate film history classes, I ask them to turn on TNT in the middle of the night, without their television guides in hand, and to try to identify a rough production date for the films they are watching.) But even with the discourse of film history, films continue to reconstitute our sense of historical past. Recent films which have digitally ‘revisted’ film footage from the 1960s – Nixon, JFK, Forrest Gump — illustrate the compelling urge to reprogram popular memory. And as the past is dissolved as a real referent and reconstituted by cinematic images which displace it, Charles Baudelaire’s 1859 cynical prophesy about photography’s ‘loathing for history’ meets Frederic Jameson’s (1983) dystopic symptonomy of history’s ‘disappearance’.  

And just as soon as film scholars have undone the set of teleologies which read film history backward from the classical Hollywood model, a newly constructed teleology seems to be in the making. If a 1995 New York Times front-page story, ‘If the medium is the message, the message is the Web’, is any indication, a new telos is beginning to appear. In a feature-spread headlined, ‘How the earlier media achieved critical mass’, separate articles on the printing press, the motion picture, radio, and television were juxtaposed, suggesting a synergy of the mythic moments that have transformed each medium from one with technological potential into one with ‘critical mass’, that is, into a medium of mass reception. In this article, Molly Haskell’s account of ‘the defining moment for motion pictures as a mass medium’ formulistically replays Birth of a Nation’s New York premiere as the event ‘that catapulted the medium from its 19thc peep-show origins into its status as the great new popular art form of the 20th century’ (1995: CS). While The New York Times did not directly assert the World Wide Web as the heir to the cultural centrality of the motion pictures and television (‘there will be no certainty that this medium will achieve the critical mass that capitalism demands of its mass media’), the Web was positioned as a challenging successor which, unlike ‘each previous mass medium . . . does not require its audience to be merely passive recipients of information’. Certainly, as the World Wide Web has become the modern medium (and medium) operandi of everyday life, media savants have had to change their predictions about the electronic future of the 500-channel information highway and adjust for a much more computer-based key to the electronic future (Levy, 1995).
And now as the cynical futurologists prophesy the future of each new technology, it is worth recalling that in 1895, Louis Lumière boasted 'the cinema is an invention with no future'. While we have some indications of where new technologies might take us, we still have no clear sense of what will be a 'sustainable' technology in market terms. Even the current storage and display media - CD-ROMs and video cassettes - may be seen as transitional technologies as films and other visual material move on-line. And yet it is more than apparent that with the speed of such rapid and radical transformations, our technological environments cannot be conclusively theorized.

The history of film studies in its own way parallels the history of film itself, with a lag of perhaps 40 years. In what has been called the 'classical' Hollywood period of film history there was a consensus not only as to what constituted narrative 'content' but also as to the size, shape, color, and scope of the screen. Similarly, during the 'classical' period of film studies there has been a general agreement as to what constitutes the size, shape, and scope of the discipline's objects. Now, a variety of screens - long and wide, and square, large and small, composed of grains, composed of pixels - compete for our attention without any arguments about hegemony. Not only does our concept of 'film history' need to be reconceptualized in light of these changes in technology, but our assumptions about 'spectatorship' have lost their theoretical pinions as screens have changed, as have our relations to them.

Endnotes

1. In the United States, the 1995 Telecommunications Bill introduced pro-competitive deregulatory policies which encouraged the merging of technology industries, thus erasing many of the historical bases for their separation.

2. These three technologies fit most of the criteria of Raymond Williams's tripartite typology of communication technologies as: amplificatory (distributing messages), durative (storing messages), and alternative (altering the form of messages) (Williams, 1980). In this way, the VCR is 'durative', cable television is 'amplificatory', and the television remote is 'alternative'.

3. Hence, the schoolyard epitaph: 'Your folks are so old, they get up to change the channels'.

4. The VCR became a basic household appliance, but the puzzle of programming a VCR became a running national gag. President George Bush joked at a commencement speech at Caltech in 1991: 'The seventh goal of education should be that by the turn of the century, Americans must be able to get their VCRs to stop flashing 12:00' (Ferguson, 1993: 72).

5. Soon after Sony won the copyright battle it lost the format battle. Betamax was a format that - although it offered better picture quality - lost its market share as the majority of new VCR buyers bought VHS.

6. The Mia Farrow character, Cecilia, in Purple Rose of Cairo (Woody Allen, 1985) was a pre-VCR viewer who had a viewing repetition compulsion made possible by the cinematic potential for re-seeing/re-experiencing the identical film over and over.

7. When Microsoft trademarked its second-generation software as Windows™ they emphasized the metaphoric nature of much of our computer usage - 'mice' which scurry under our fingers at the fluid command of wrist and palm; 'desktops' which defy gravity and transform the horizontal desk into a vertical surface with an array of possible colors and digital textures. The computer 'window' is only a portion of the computer screens, scalable in size. Windows can overlap, stack, or abut each other. The windows 'environment' makes the screen smaller and allows for simultaneous applications. As an 'interface', Windows™ extends screen space by overlapping screens of various sizes; each 'window' can run a different application; you can scroll through a text within a 'window', arrange windows on your screen in stacked or overlapping formations, decorate your 'desktop' (with wallpapers, textured patterns). A paradox begins to emerge: the more the image becomes digital, the more the interface tries to compensate for its departure from reality-based representation by adopting the metaphors of familiar objects in space.

8. For example: as part of an on-line collection deemed 'American Memory' the Library of Congress has made films in their 'Early Motion Picture Collection' available for downloading off the World Wide Web along with hyperlinked texts relating the historical context of 'America at the turn of the century', complete with a selected bibliography. (Although conclusions drawn from these films have to take into account that in their digitized format, 5-10 per cent of the original film frames are lost in the transfer.)

9. In 1859, Charles Baudelaire indicted photography as being a 'cheap method of disseminating a loathing for history'. Baudelaire was an early declamer of the dangerous transformations of history and memory that the photographic image would produce. Despite photography's 'loathing for history', Baudelaire also recognized it as a technique that could preserve 'precious things whose form is dissolving and which demand a place in the archives of our memory' (1862: 153).

10. In a 1983 essay, Fredric Jameson, one of the key diagnosticians of postmodernity, catalogued some of its symptoms as:

   the disappearance of history, the way in which our entire contemporary social system has little by little begun to lose its capacity to retain its own past, has begun to live in a perpetual present and in a perpetual change that obliterates traditions.

   (1983: 125, emphasis added)

References


Adam S. Bauman and Amy Harmon 1994: Rival systems of VCR 'Replacement' could spark standards war. Los Angeles Times 14 September 1, D1, D4.