The Future Past: The Story of Electronovision, a Precedent for "Live" Digital Cinema

MICHAEL BRENDAN BAKER

Media technologies are "failing" all around us. The perception that the hardware, platforms, and software of today will soon be relegated to the dustbin of history is a popular one and it is true that much of the physical infrastructure of our networked lives is waiting for its trip to the scrap heap.[1] Yet oftentimes the "failure" of a format is just one step in an evolutionary path. Indeed it often feels that technology, as objects for critical and historical inquiry, is most important when it fails. Such failures often establish the conditions by which subsequent innovations will be understood to have succeeded or come to naught.

Electronovision was an early video-to-film system that used specialized broadcast television cameras to capture electronic video signals and convert them on the fly to motion picture film – a hot-rodded kinescope, if you will. It attempted to position itself as a low-cost, cinema-ready format that could be used to bring theatrical, musical, and sporting events to a film audience soon after the original occasion. More importantly, Electronovision's inventor, self-made American technology entrepreneur William Sargent Jr., self-consciously tried to leverage the allure of the "liveness" of these representations and the exclusive nature of limited-engagement screenings to differentiate the technology within the North American market.

The story of this technology, its charismatic inventor, and its resonance in contemporary cinema culture is largely overlooked in film and media studies. There is only one academic publication focused on Electronovision as an exemplar of post-war electronic motion picture technology: Leonard Leff's "Instant Movies," published in 1981, is invaluable to media historians charting the development of "on demand" or "live" cinema. Largely journalistic in its account of Sargent's foray into the movie business, Leff attempts to define Electronovision as a "third medium" occupying a space on a spectrum between television and cinema, a

[1] Jonathan Sterne considers new media's future, specifically hardware, and argues today's technology is defined by its future decomposition in "Out with the Trash: On the Future of New Media," in Charles Acland (ed.) *Residual Media* (Minneapolis: University of Minnesota Press, 2007), 16-31.

conception of video-based moving images that has a particular resonance in the digital era.[2] What follows is a tale that serves as an instructive moment in the history of film technology and an occasion to think through our contemporary moment in which cinema, to borrow a phrase from David Rodowick, "faces an uncertain future."[3] Cinema, in this particular space, is something more than just "cinema." It is closer to what André Gaudreault, during his Martin Walsh Lecture to the Film Studies Association of Canada in spring of 2010, described as the "agora-télé" – that curious but no longer exceptional screen space wherein the stuff of movie theatres is no different from that of living rooms or laptops. The story of Electronovision, a failed motion picture technology-cum-viewing experience, thus speaks to our contemporary moviegoing moment in an interesting way, and there is an important link between how it sought to re-define the space of the movie theatre and the "live" digital cinema events – such as *The MET: Live in HD* (2006) and the *VEVO: Unstaged Live* concert series launched by YouTube in partnership with American Express (2010) – that increasingly occupy screen spaces across the globe. From the perspective of the present age of media convergence (experienced by audiences as the conflation of content, platform, and industry and the related reorganization of our expectations for entertainment experiences), Sargent's belief that Electronovision would appeal greatly to audiences invested in the exclusivity and "authentic" experience of live music and theatre – best described as *liveness*, a historically constructed myth sanctifying the co-presence of audience and performer in the age of pre-recorded images and sound – demands revisiting.

Giusy Pisano, in her work on the Théâtrophone (a late-nineteenth-century sound reproduction device), summarizes the ongoing re-examination of neglected media technologies as the analysis of "the interdependence between old and new media," research that inevitably helps focus inquiries pertaining to the historical relationship between past audiovisual forms and emerging digital technologies.[4] Jay Bolter and Richard Grusin articulate this dynamic and the particular phenomenon of one medium's representation in another in terms of a theory of *remediation*, which posits "what is in fact new [about new media] is the particular way in which each innovation rearranges and reconstitutes the meaning of earlier elements."[5] A central

[2] Leonard Leff, "Instant Movies: The Short, Unhappy Life of William Sargent's Electronovision (1964-65)," *Journal of Popular Film and Television* 9, no. 1 (Spring 1981): 28.
[3] David N. Rodowick, *The Virtual Life of Film* (Cambridge: Harvard University Press, 2007), 90.
[4] Giusy Pisano, "The Théâtrophone, an Anachronistic Hybrid Experiment or One of the First Immobile Traveler Devices?," in André Gaudreault, Nicolas Dulac, and Santiago Hidalgo (eds.) *A Companion to Early Cinema* (Oxford: John Wiley & Sons, Ltd., 2012), 80.
[5] Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge: MIT Press, 2002), 270.

feature of remediated objects in Bolter & Grusin's contemporary history is the notion of immediacy – the instantaneity of the communication or the transparency with which information is communicated – and its attendant consequences. They argue "each [new] medium promises to reform its predecessors by offering a more immediate or authentic experience, [yet] the promise of reform inevitably leads us to become aware of the new medium as a medium. Thus, immediacy leads to hypermediacy."[6] In the case of Electronovision it is the remediation of plays and concerts within the medium of film and the exhibition space of cinema, and the particular ways that the technology drew attention to itself. But in the larger sweep of moving image history, it is the influence of this quirky technology and the echo of its claims within the contemporary space of digital cinema that informs our study of these new media objects.

In Lisa Gitelman's essential work on new media historiography, she reminds us by way of Jonathan Crary's equally crucial account of pictorial representation and modernity that the nature of the object necessarily dictates the approach we take to its study:

> Rather than static, blunt and unchanging technology, every medium involves a "sequence of displacements and obsolescences, part of the delirious operations of modernization." (Crary 1999, 13) […] Media, it should be clear, are very particular sites for very particular, importantly social as well as historically and culturally specific experiences of meaning. For this reason, the primary mode of [*Always Already New*] is the case study.[7]

While my theoretical inquiries are focused by the work of Bolter and Grusin, Gitelman, Rodowick and others associated with the study of visual culture and media in transformational moments in history, my methodology and the narrative presented here is inspired chiefly by Gitelman's call for a serious, historically situated examination of media objects; it is based primarily on a large collection of secondary documentary sources chronicling its emergence and subsequent failure. With this in mind, media historians owe a huge debt to the litigious environment of the United States because it was a series of lawsuits that brought and kept the story of Electronovision in the press for several months in 1965, and this makes tracking the story and understanding its relationship to mainstream North American cinema culture and technology easier to follow and expand upon. The story of Electronovision was hiding in plain sight – in fact, it has a small place in theatre studies as a result of the Wooster Group's much

[6] Ibid., 17.
[7] Lisa Gitelman, *Always Already New: Media, History, and the Data of Culture* (Cambridge, MIT Press, 2006), 8.

discussed remediation of an Electronovision production in their own stage version of *Hamlet* in 2007 – so it was not a matter of uncovering it so much as it was an exercise in revisiting the events and assembling the narrative into a coherent whole.

Electronovision and William Sargent Jr.

Electronovision was both the brand name of the exhibition format and the proprietary name of a set of customized pre-existing technologies responsible for these motion picture presentations. In this way it is probably best understood as aspiring to what Charles Acland described with reference to IMAX as "a multiple articulation of technological system, corporate entity and cinema practice"[8] and is not unlike other spectacular formats of the mid-twentieth century including CinemaScope and Cinerama. Electronovision – and its related trademark Theatrofilm – sought to bring Broadway and other time- or location-exclusive stage productions to movie-going audiences across North America. Such an idea was not new to cinema; there is a history of turning plays into films dating back to the birth of motion pictures itself, and the theatrical heritage of the earliest narrative films includes canonical examples such as *Uncle Tom's Cabin* (Edwin S. Porter, USA, 1903). Using modified television cameras, the patented Electronovision conversion technology provided an image resolution (800-plus vertical lines) higher than that of standard television broadcasts (525 vertical lines of which 486 are visible in the rasterized image) and this allowed for acceptable 35mm film projection (1400 theoretical lines) at a fraction of the cost of a full-scale film production. Most importantly, the cameras – modified RCA TK60s, the pinnacle of monochrome television cameras before the arrival of colour – required significantly less light than conventional film and television cameras.[9] Theoretically, a stage presentation could be economically filmed, edited, printed, distributed, and exhibited in a matter of days. *T.A.M.I. Show* (Steve Binder, USA, 1964), the second Electronovision production, was shot on October 28 and 29, previewed for the press days later, and released nationally to over 600 theatres in late December of the same year (and to an additional 1000 theatres internationally in early 1965). Other Electronovision productions were previewed live to newspaper writers via closed-circuit television. As the debut of the Electronovision brand, *T.A.M.I. Show* was a fantastic success. However, the speed, simplicity, and cinema-ready nature of the Electronovision process were its only competitive attributes when compared to the improved quality and budget-smart 16mm film processes of the era.

[8] Charles Acland, "IMAX Technology and the Tourist Gaze," *Cultural Studies* 12, no. 3 (July 1998): 429.
[9] Albert Abramson and Christopher H. Sterling, *The History of Television, 1942 to 2000* (Jefferson: McFarland, 2007), 103.

A major drawback to the technology was its reliance upon existing television production processes such as live-switching to ensure savings were achieved. Necessarily or not, this meant individual cameras did not record their own footages to be edited later but instead fed to a central console (an RCA TFR television film recorder, according to television historians Abramsom and Sterling) whereupon the director compiled a "final cut" as the live performances were recorded – no work print, no outtakes, and strict limitations in terms of lighting, camera location, and movement, but limited post-production delays in preparing the footage for theatrical release. If each camera were to produce its own footage both the economic benefits and swift workflow and production timeline of the format would be nullified. Despite these shortcomings, Electronovision's limited set of innovative features formed the basis of Sargent's business model and marketing plan: the cinema exhibition of "live" events in the context of a limited-run engagement on a national scale. Advertisements for Electronovision films proclaimed, "Don't miss the once-in-a-lifetime special!," and traded on the entrepreneur's explicit PR claim that all prints of Electronovision films would be destroyed after their initial theatrical run to ensure the time-exclusive nature of the format.

After making his first small fortune installing public-address systems for hospitals, schools, and hotels in New Orleans, William Sargent Jr. arrived in Hollywood in the late 1950s and "designed one of the first 'commercially feasible' pay-TV systems, the Home Entertainment Co." before selling it and its subscriber base of 20,000 locations for the funds with which he began development on what was variously described as Theatrofilm and Electronovision.[10] Among his many profitable intellectual properties, he held patents on tape heads, a single-channel sound system for movie theatres, and twenty individual parts of electronic cameras. Sargent was nothing if not relentless in his goals, and at one point in its development he planned to produce a new Electronovision feature every month through 1965. He announced Electronovision and his arrival to feature-filmmaking with the production of Richard Burton's *Hamlet* (Bill Colleran and John Gielgud, USA, 1964) and immediately set out to negotiate with Laurence Olivier to film a production of *Othello*,[11] as well as stating his desire to feature Richard Burton and Elizabeth Taylor in a screen adaptation of *Macbeth*.[12] Perhaps the seeds of Electronovision's demise were sown with Sargent's grandstanding and the speed with which he sought to establish himself within the film industry.

[10] Philip K. Scheuer, "Electronic 'Hamlet' Meets Test Today," *Los Angeles Times*, 23 September 1964.
[11] Peter Bart, "Tv-Film Producer Sets More Shows," *New York Times*, 15 October 1964.
[12] Philip K. Scheuer, "Mirisches and UA Sign 10-Year Pact, Burton's 'Hamlet' Raises Millions – and Questions," *Los Angeles Times*, 28 September 1964.

While *Hamlet* ultimately recoups its costs and *TAMI Show* was a box-office success, essentially heralding the arrival of the theatrical popular music concert film and confirming the star status of its performers (including the Rolling Stones, James Brown, and the Beach Boys), the beginning of the end of Electronovision was marked by Sargent's ill-fated attempt to use the technology's quick turn-around time to out-manoeuvre rival studios and beat them to the box-office with a screen biography of Hollywood starlet Jean Harlow.[13] By late July 1965, Electronovision was shuttered amidst a series of expensive anti-trust and fraud lawsuits relating to his hasty production of *Harlow* (Alex Segal, USA, 1965) and a nasty breach of contract dispute with the Screen Actors Guild which took place from May to June 1965. While Sargent ultimately won many of the lawsuits relating to this episode, remained solvent, and returned to the motion picture business in the 1970s as a pioneer of closed-circuit and pay-per-view television systems – in 1977 his offer of $400 million to the NFL for exclusive closed-circuit rights to the Super Bowl prompted a Congressional review – Electronovision was no more. Sargent hoped to move into the production of colour films and widescreen cinematography with a screen version of the Broadway musical comedy, *Fade Out, Fade In* starring Carol Burnett, but that production was abandoned. The final release bearing the Electronovision brand name was the film-version of the Broadway musical, *Stop the World: I Want to Get Off* (Philip Saville, UK, 1966). His achievement in the late 1970s, however, with a television system delivering "something close to motion picture quality" for broadcasting live events in cinemas, was a direct descendent of his earlier conversion technology and serves as the forerunner of the pay-per-view phenomenon that took root in the 1980s (and remains a going concern).

Liveness and "Live" Digital Cinema Events

Returning to the bravura which announced the arrival of Electronovision to American cinemas, history demonstrates Sargent was wholly misguided in his belief that one of the appeals of the format would be the ability of producers to quickly destroy their creations. His shift in focus to pay-per-view and closed-circuit theatrical specials demonstrates that he came to understand that the appeal of Electronovision productions was never necessarily their time-limited exclusivity, especially when it was an arbitrary construct of the promoter. Sargent quickly reneged on his original promise, announcing after the box-office difficulties of *Hamlet* that earnings would rise with the sale of theatrical prints to colleges.[14] Only Richard Burton, who was appalled with the results of the Electronovision production of *Hamlet*, seemed

[13] Peter Bart, "Filmed 'Hamlet' Gets Costly Push," *New York Times*, 19 September 1964.
[14] Peter Bart, "Tv-Film Producer Sets More Shows," *New York Times*, 15 October 1964.

motivated to see the quirky motion picture pioneer follow through with the vow that the film be destroyed. Ironically, it was the discovery and auction of Richard Burton's own personal 35mm print of the film that resulted in its eventual release on various home video formats. Instead, the phenomenon Sargent successfully anticipated with Electronovision and his subsequent pay-per-view and closed-circuit theatrical specials was *access* to live performance and theatrical works for mass audiences by establishing a place for such events in American movie theatres – the cineplex could (and would) be a venue for "live" cinema, even if the programming was more often than *not* cinema: André Gaudreault's "*films-not-on-film* in *cinemas-that-are-not-only-cinemas*."

Sargent, recognizing that the economics of Electronovision was made redundant by the reduced costs of film and television production through the late 1960s and 1970s, refocused his energies on the notion of "appointment viewing" at the cineplex. In this way, Electronovision directly contributes to the contemporary cinema experience of special "live broadcast" events exemplified in the direct-to-theatre phenomenon, which is itself another evolutionary step rooted in an illusory promise of early cinema: an opera house in every city of the world. Writing in late 2010, critic Gavin Smith made the logical connection between these experiments in film exhibition and the "other" dominant moving image technology of the last half century:

> In his 1999 *New York Press* essay "The Death of Film/The Decay of Cinema," Godfrey Cheshire predicted that the advent of digital projection and transmission in America's multiplexes would inevitably open theatrical exhibition up to the presentation of live performances and special events – in short, television. Eleven years later, it's a reality, with the phenomenal success of NCM Fathoms nationwide, 15,000-theatre network simulcasting of Lincoln Center's Metropolitan Opera, as well as Glenn Beck, Bon Jovi, and even sing-along *Sound of Music* events.[15]

Live television and closed-circuit programming have since been re-imagined in the age of digital cinema with live-streaming events such as the Metropolitan Opera's enormously successful "Live in HD" series and web-based enterprises such as the American Express-sponsored VEVO "Unstaged Live" events on YouTube, some of which have been simulcast in cineplexes. Beyond these public exhibition spaces, pay-per-view is alive and well in living rooms across the globe. Other digital transmission and subscription services including Netflix, Hulu, MUBI, and interactive platforms for sports such as NHL GameCentre Live are proof that

[15] Gavin Smith, "State of the Art: Taking the Pulse of Cinema in 2010," *Film Comment* 47, no. 1 (January-February 2011): 52.

the original transmedia ideals of Sargent are taking root in the contemporary mediascape. In each of these cases, like Electronovision before them, the proprietary technology and the commercial brand are collapsed – improved picture resolution, delivery capabilities, or interactive features are both brand features and marketed as the viewing experience itself. NHL GameCentre Live, for example, doesn't *feature* high-definition video with live statistical displays, it *is* the high-definition hockey experience with its cross-platform and multi-device viewing options, interactive stats, and live chat features.

Electronovision's influence on these contemporary examples of "appointment viewing" within the cineplex and at home, particularly the business of it all, is evident. It places the story of this "failed" technology within larger narratives addressing the mediatization of live performance and the transformation of cinema exhibition in an age of digital production and delivery. Gaudreault has referred to this trans- or intermedia dynamic that displaces the moving image from one platform to the next as the "digital fracture" while acknowledging it is also, quite simply, media convergence. Convergence has been best described by Henry Jenkins as

> the flow of content across multiple media platforms, the cooperation between multiple media industries, and the migratory behaviour of audiences who will go almost anywhere in search of the kinds of entertainment experiences they want. Convergence is a word that manages to describe technological, industrial, cultural, and social changes depending on who's speaking and what they think they are talking about.[16]

Sargent's basic interest was making a dollar by bringing the theatre and other live acts into the cineplex. More crucially, however, is the way the inventor and entrepreneur anticipated the allure of liveness in a changing media environment.

Liveness is a particular type of exclusivity, a historical construct that reveals its true complexity when we acknowledge the role we play in participating in and privileging particular types of performances and media experiences. It is observable throughout the history of film, in cases such as synchronized sound and 3D formats, for example, that technological innovation rarely leads immediately to aesthetic revolution or rupture. Just as the Electronovision films were faulted for their poor visual qualities, the current wave of "live" digital cinema events broadcast to cineplexes and streamed on the internet feature conservative stylistic approaches – based largely on the standard scenographic practices of live drama and music that restrict camera locations and lighting, among other elements – and are hindered further by the vagaries

[16] Henry Jenkins, *Convergence Culture: Where Old and New Media Collide* (New York: New York University Press, 2006), 2.

of data transmission errors and the complications introduced by data buffers and interactive user interfaces. (One can interrupt or outright cancel their viewing experience accidentally or through improperly navigating the onscreen display.) These realities require a new understanding of liveness in an age of quotidian digital media.

Liveness, originally defined by Philip Auslander as performances in which the performers and audience are both physically and temporally co-present to one another – a distinction that became necessary following the advent of recorded sound and radio – is now under revision to accommodate precisely these transformational cultural conceptions of liveness in the realm of digital technology. Pushing the concept into the digital age while carefully sidestepping the trap of technological determinism, Auslander now describes liveness as "an interaction produced through our engagement with [an] object and our willingness to accept its claim [that it is, in fact, 'live']."[17] New instances of digital transmission and display technologies like those itemized earlier, and vernacular instances of digital video such as Skyping, provide opportunities to both contextualize and interrogate these digital forms and the experience of their "liveness" in relation to their predecessors, reinforcing Auslander's central argument that "liveness is not an ontologically defined condition but a historically variable effect of mediatization."[18] Such an intervention seems critical in order to effectively historicize and interrogate the implicit claims made by digital cinema technology and its attendant exhibition practices.

An acknowledgement of Rodowick's theory concerning the *persistence* of the cinematic in this age of the digital and new media, and the prominence of cinema's representational strategies in our contemporary audiovisual culture, seems appropriate here. As cinema endlessly fails-yet-refuses-to-die, it is understood to have a value rooted in its cultural and aesthetic history.[19] In the case of Electronovision, its failure to establish itself in the marketplace of the mid-1960s does not reflect the innovation it brought to the film and television industries, nor diminish the vigour of Sargent's foresight. Sargent sought to leverage the heritage and exclusivity of live dramatic theatre, and the spectacular appeal of popular music in the case of *TAMI Show*, within a transformative moment in the history of the moving image. Electronovision arrived (and disappeared) at time when many were questioning the traditional roles of both television – with its growing but increasingly segmented audience – and cinema

[17] Philip Auslander, "Digital Liveness: A Historico-Philisophical Perspective," *PAJ: A Journal of Performance and Art* 34, no. 3 (September 2012): 9.
[18] Ibid., 3.
[19] D.N. Rodowick, *The Virtual Life of Film*, op. cit., 110.

in popular culture. Those very same questions are circulating today on a grander scale encompassing numerous media, and figure prominently in the consideration of "the digital" within moving image studies. Electronovision, through Sargent's attempts to play upon cultural conceptions of liveness and to emphasize the exclusive nature of these filmed events, illuminates a crucial, often over-looked step on the pathway toward our current moment of digital cinema. Just as interesting, perhaps, is the manner in which the story of Electronovision highlights failure as a precondition of technological innovation and change, all within a process that culminates with the emergence of the "live" digital cinema event. The lasting influence of this technology, however, was not pre-ordained; the absence of Electronovision and William Sargent Jr. from general histories of moving image technologies suggests that these contributions to our contemporary cinema culture are not yet fully understood or appreciated.