Curtains, carts and the mobile screen

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One hundred-and-ten years after the first cinema showmen presented actualities in fairgrounds, eighty years after the 16 mm gauge helped film burst free of the darkened movie house, and sixty years after regularized television broadcasts began to animate living rooms, we continue to hear the plaintive cry of the cinema-mourner, railing against the degradation of the magic of films and cinemagoing that has resulted from the ubiquity of moving images. Theatrical celluloid projections tenaciously reside in the scholarly imagination as part of a foundational definition of cinema, making extra-theatrical screens always appear to be second-best options or curiosity venues. Senior film theorists can still be found making perplexed observations about the presence of moving images on buses, in subways and on handheld devices. Such bewilderment only reveals the primacy of the motion picture theatrical situation in their conceptualization of cinema – a powerful site of formative movie memories, certainly, but a reified, select and privileged location for the moving image experience all the same. Cinephilia can be a beautiful affliction, yet that admission seems to have blinded us to the variety of forms of moving image culture that have been with us for so long.

Contemporary life is awash with moving images. They may not be exactly ubiquitous, for there are plenty of places in which they do not appear, but moving images are most certainly ordinary and banal. Formats range from outdoor advertising loops lasting just seconds, to standard commercial feature films, to monumental endless real-time video feeds. The integration of audiovisual screen formats – including television, cinema, mobile phones and massive outdoor screens – with an array of everyday and aesthetic practices has multiplied the conditions

and occasions for encountering moving images. The situation has, in many ways, cheapened the artefact of the moving image, though the very fact of miniature dramas in the palm of one's hand and gigantic electronic billboards on the exterior of office blocks can still elicit wonderment or disorientation. In this environment, various screen theories and screen studies, including work on cultural practice, policy and exhibition, are working to expand film scholarship, thankfully rescuing it from becoming the limited subfield of 'celluloid studies' and invigorating research activity shared by film, media and cultural studies.

Screen images arrive, occupy a portion of our sensory field with sound and vision, and then leave. In this way screens designate circuits as much as display formats. They represent links between dispersed spectatorial conditions, and are best seen as a network built to move texts around. Moreover, screen venues and occasions can compel people to move and gather together, for instance at gallery installations or archival screenings; or they can move with people, as do laptop and vehicular screens. Viewing circumstances can facilitate isolated individuality or spark practices of congregation. These features not only push us to address the conditions of screen presentation but also make us aware of the ways in which such conditions structure and regularize relations and traffic between people and screens. These relations are temporal and spatial, varying across time and location, and they prompt us to consider who is part of any networked screen practice, who is not, and what, exactly, is circulating. The alternation, replacement and flow of texts give screens the appearance of elasticity and variability. Accordingly, many critics have seen these impermanent views, and the appearance before one's eyes of something that is 'not truly there', as having a deep association with the virtual. Yet although there has been plenty of productive work in this vein, it is impossible to shake the obvious, gut-level observation that screens, and the cultural practices that surround and accompany them, are material.[1] Screens are things: they are the products of industry and labour; they take up space; they are made of solid substance; they change people's bodily orientation; and they send light into our eyes and, with the audio component of most screens, soundwaves into our ears. There is nothing immaterial about any of this. And anyone who remains unconvinced need only consider the outrageous environmental impact of the metals and toxins that constitute our screen world.[2]

Mobility is perhaps the most frequently deployed descriptor of contemporary screen culture, though it is worth reminding ourselves that it has long been a feature of modern media. The printing press prompted the mobility of books. The telegraph so mobilized language that it was seen as an annihilation of space. Even Walter Benjamin's famous artwork essay was, in part, about the circulation of art in the age of film and photography.[3] If we look closely at contemporary talk about mobile technology, without fail we see that it is not just about the situational variability of exhibition and the movement of screens, texts and people.

1 Two exemplary works that navigate both the material and the virtual dimensions of screen culture are Anne Friedberg, *The Virtual Window: from Alberti to Microsoft* (Cambridge, MA: MIT Press, 2006); and Janine Marchessault and Susan Lord (eds), *Fluid Screens, Expanded Cinema* (Toronto: University of Toronto Press, 2007).

2 For an itemization of the environmental hazards of the computer industry, see Elizabeth Grossman, *High Tech Trash: Digital Devices, Hidden Toxics and Human Health* (Washington, DC: Island Press, 2006); for a mapping of environmental issues for media studies, see Richard Maxwell and Toby Miller, 'Ecological ethics and media technology', *International Journal of Communication*, vol. 2, (2008), pp. 331–53.

3 Walter Benjamin, 'The work of art in the age of its technological reproducibility', in Howard Eiland and Michael W. Jennings (eds), *Selected Writings, Volume III, 1935–1938* (Cambridge, MA: Belknap Press, 2002), pp. 101–33.

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It includes reproducibility, with multiple copies available in multiple locations at once, and miniaturization, with comparative lightness and compactness facilitating portability. Media mobility subsumes discourses of instantaneity, at least as this appears related to the speed and the range of consumer choice ('I want to watch *Juno*, now'); it also subsumes discourses of personalization and individual localization of consumer choice, best represented by a language of clips on demand ('No, I want to see the David Letterman interview with Diablo Cody from a few years ago'). Textual variability – or versioning – is another characteristic linked to mobile culture. It refers to textual transfer between media formats and to successive and multiple editions, including directors' cuts, soundtrack changes for different releases and fan-based textual play.

Together, situational variability, reproducibility, miniaturization, instantaneity, personalization and versioning have crucially marked our mobile media era with informality, where easy and abundant adaptability to a variety of formats has increased the ordinary, quotidian aspect of moving images, as well as the relative disposability of any given incarnation. Motion pictures once had a precious status, needed care and skill in handling, and required special venues for exhibition. The formats that typify today's moving images – such as e-mail links to web-based clips, DVD recordings and episodes of serialized narratives specifically for mobile phones – are closer to the crude ephemera of newspapers and brochures, so unremarkable have they become.

Significantly, this rising informality does not operate in isolation but requires its corollary, in that it is accompanied by efforts to instal formal practices. Sharing family snapshots on a dinky mobile phone screen is informal next to the history of studio portraiture. Viewing part of *Pirates of the Caribbean: at World's End* (Gore Verbinski, 2007) on a PlayStation Portable while waiting for a train is a casual use when compared with attending the opening night of *Kung Fu Panda* (Mark Osborne and John Stevenson, 2008) in IMAX. In other words, the depreciating value of the artefact of moving images comes with an intensified discussion of the quality and appropriateness of various formats and spectatorial situations. This can be seen in the scholarly prognostications about 'the death of cinema', in the technologically-focused cinephilia of home theatres, and in the everyday cinemagoing decisions about whether a film is a big-screen movie or a 'renter' to be seen later when released on DVD. David Denby has claimed that the expansion of exhibition possibilities has produced 'platform agnosticism', such that people no longer care in which format films are seen.[4] However, I would maintain that exactly the opposite has occurred: the versioning of film has produced a heightened platform consciousness with more talk and more decision-making concerning screen formats than ever before.

Connected to platform consciousness, the cheapening of moving image material is one of the factors that have provoked concerns about

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preservation, as well as appreciation, of 'true' or 'classic' cinematic forms and environments. Embedded in such distinctions between an informal and a more rigorously serious appreciation of moving images is a hierarchy of taste. This hierarchy includes all the special restorations, architectures and museological treatments designed precisely to help set up procedures for consecrating 'the good' in moving image culture. Developing alongside this is a class of experts and entrepreneurs able to identify and evaluate the artfulness of screen images, poised against the barbaric, ordinary disregard of their value. Indeed, to revise the Bourdieuian formulation: as moving image culture becomes more informal, additional status accrues to a specialized class able to rescue the art from the disposable.

The hierarchy of taste evident in bourgeois film culture, and the class-bound experts who legitimize it, are an inseparable part of the organization of formal and informal encounters with mobile media – that is, of the conditions, practices and material manifestation of all five aforementioned facets. In this respect, materialist historical research is an essential component in the study of screen culture. And for this reason a full encounter with the social, political and economic dimensions of screen culture benefits from a serious engagement with the approaches and concepts of Raymond Williams and Pierre Bourdieu. Their work helps us see the deep structural organization of social relations in everyday life, which is essential to understanding the political import of moving image culture. Williams draws us towards the ordinary, seeing cultural patterns as typifying period, place and generation. Following his form of cultural materialism, we might ask about the structures of feeling of screen culture as they reveal distinctive and intelligible senses of our media world.[5] What forms of 'practical consciousness' develop so that we may live with, negotiate and make sense of media culture? Bourdieu's methodologies map the correlations between hierarchies of class and of culture.[6] For Bourdieu, social spaces embody systems of dispositions, which in turn produce senses of class appropriateness, entitlement and inaccessibility. Both provide ways of elucidating the forces and conditions that organize the lived experience of capitalist culture, which is foundational to an analysis of class formation and differential distribution of social power. Thinking about our culture of screens, Williams's and Bourdieu's writings clarify that media culture consists of a legible set of experiences about a shared contemporary moment, advanced and legitimized by a related class stratum of experts and connoisseurs – lay and professional – in the realm of technology, design, use, advocacy and critique of that same media environment.

Just as Williams and Bourdieu offer us a way of examining how power operates in the realm of culture, so too do issues of historical continuity and disjunction figure in their analyses. Accordingly, in order to evince the dynamics of contemporary conditions of screen informality and formality, we need to engage fully with the entire history of screen mobility. Of particular interest is the fact that motion pictures have long

5 Cf. Raymond Williams, *Marxism and Literature* (Oxford: Oxford University Press, 1977).

6 Cf. Pierre Bourdieu, *The Field of Cultural Production*, ed. and trans. Randal Johnson (New York, NY: Columbia University Press, 1993).

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7 See Charles Acland and Haidee Wasson (eds), *Useful Cinema* (Durham, NC: Duke University Press, in preparation).

8 Peter Harcourt, 'Towards higher education', *Screen Education* (first series), no. 26 (1964), p. 20.

9 Lynn Spigel, *Make Room for TV: Television and the Family Ideal in Postwar America* (Chicago, IL: University of Chicago Press, 1992).

10 For some of the research I have conducted in this area, see Charles Acland, 'Classrooms, clubs, and community circuits: reconstructing cultural authority and the Film Council movement, 1946–1957', in Lee Grieveson and Haidee Wasson (eds), *Inventing Film Studies* (Durham, NC: Duke University Press, 2008), pp. 149–81; 'Patterns of cultural authority: the National Film Society of Canada and the institutionalization of film education, 1938–41', *Canadian Journal of Film Studies*, vol. 10, no. 1 (2001), pp. 2–27; 'Mapping the serious and the dangerous: film and the National Council of Education, 1920–1939', *Cinéma*, vol. 6, no.1 (1995), pp. 101–18. Other related work includes Eric Smoodin, *Regarding Frank Capra: Audience, Celebrity and American Film Studies, 1930–1960* (Durham, NC: Duke University Press, 2004); Anne Morey, *Hollywood Outsiders: the Adaptation of the Film Industry, 1913–1934* (Minneapolis, MN: University of Minnesota Press, 2003); Nicholas Sammond, *Babes in Tomorrowland: Walt Disney and the Making of the American Child* (Durham, NC: Duke University Press, 2005); Ronald Walter Greene, 'Y movies: film and the modernization of pastoral power', *Communication and Critical/Cultural Studies*, vol. 2, no. 1 (2005), pp. 20–36; Dana Polan, *Scenes of Instruction: the Beginnings of the US Study of Film* (Berkeley, CA: University of California Press, 2007).

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circulated for instructional, scientific, promotional, community and religious purposes, though film studies and theory have conventionally ignored or devalued these non-art and non-feature texts and venues. This 'useful cinema' of institutionally functional deployments of moving image materials exploited the relative mobility of the cinematic apparatus, and with it the conversion of sundry locations into screening sites.[7] In some notable instances, the episteme of 'useful cinema' and its special relationship with new pedagogical and information dissemination strategies linked education *through* film to education *about* film. This observation is especially fitting for the fiftieth anniversary of a journal whose origins lie in the irregular publication *The Film Teacher*, then the regularized appearance of *Screen Education*, the forerunner of *Screen*. Regarding the parallel historical development of the film education and the film society movements, Peter Harcourt, then with the British Film Institute Education Department, wrote in 1964 that 'Screen education began in schools and youth clubs'.[8]

What follows, albeit in condensed form, is one branch on a materialist history of institutional screens, with special focus on post-World War II USA and Canada, using the discursive activity of organizational formation, policy debates, trade publications and advertising images as sites of evidence and illustration. The need for such a history exists because in research on extra-theatrical viewing contexts there is more media studies and film studies work on the arrival of moving images in domestic space than in other locations. Taking a cue from Lynn Spigel's invaluable book *Make Room for TV*, the work proposed here can be seen as a kind of 'make room for AV'.[9] These media of still and moving image projection and of audio recording and playback are so familiar to teachers and students as to be easily ignored or forgotten. Yet they are direct precursors of today's reigning common sense about wired classrooms and communities. Interestingly, the initials 'AV' often carry connotations of school, despite their use in any number of industrial and technical settings. Let us bear in mind, too, that this is a living and continuous history, with the clunkiness of earlier audiovisual playback devices, whether in use or in storage, still amply evident in institutions. The postwar historical moment speaks directly to the challenges currently faced by film and media scholars and teachers, especially those concerning our role in both constructing and critiquing a contemporary, technologically invested elite.

The mobilization of moving images and of the associated spectators and publics opened up new occasions for learning and instruction. Accordingly, with a myriad of potentially wily, even subversive, educational applications, concerns about the conduct and utilization of provisional exhibition venues arose among cultural authorities. A dynamic relationship between pedagogical reform and pedagogical alarm is evident in non-theatrical film organizations, including film societies and councils, in Canada and the USA between 1920 and 1960.[10]

11 Helen Seaton Preston (ed.), *Audio-Visual Materials Toward International Understanding* (Washington, DC: American Council on Education, 1946), p. 2.

12 Leslie J. Briggs, Peggie L. Campeau, Robert M. Gagné and Mark A. May, *Instructional Media: a Procedure for the Design of Multi-Media Instruction, a Critical Review of Research, and Suggestions for Future Research*, final report prepared by the Instructional Methods Program of the Center for Research and Evaluation in Applications of Technology in Education (CREATE), submitted to US Department of Health, Education, and Welfare, Office of Education (Pittsburgh, PA: American Institutes for Research, 1967), p. 4.

Among the activities of organizations such as the highly visible Film Council of America (FCA) was the functional deployment of film – that is, the use of the medium for specific and narrowly defined instructional purposes, an engagement that frequently dovetailed with issues of film aesthetics and appreciation. The FCA's operations involved the establishment of procedures of film evaluation and modes of group discussion about films and issues, as well as the advancement of a production industry and of distribution channels both parallel with and connected to the mainstream commercial sector. The media educationalists who spearheaded these enterprises formed a compact of concerned citizens who, through their efforts to advance an idea of progress and modernization through media participation and availability, were helping to stabilize the class divisions of this new phase of mass democratic society. These educationalists might be seen as the first generation of media experts. Their efforts, in which the language of liberal pluralism and public access dominated, helped to introduce ways of seeing, knowing and managing the expanded citizen–audience as its encounters with media forms, as consumers and producers, became an increasingly central part of school, work and leisure. In this way, the media educational activists, some voluntary and some salaried, were organic intellectuals in the Gramscian sense, not because they were ideologically progressive – they were not unproblematically so – but inasmuch as they participated in, and benefited from, the refortification of class boundaries.

The mobility of functional film did not stand as evidence of the singular technological advantage of motion pictures, but was appended to a series of other media innovations designed specifically for the classroom and community context. Film was part of an expanded media environment that included opaque and overhead projectors, tachistoscopes, film strips, slide shows, television, sound materials (record players, recording devices and radio) and, in the 1960s, the programmed instruction of teaching machines (figures 1, 2 and 3). For example, at a 1946 conference on audiovisual methods for international understanding sponsored by the American Council on Education (ACE) and the FCA, participants made a point of explaining that when people talked about film or motion pictures, which they did throughout, they were in fact referring to all audiovisual materials.[11] Throughout the post-World War II period, the various forms of social scientific or psychological monitoring of academic performance associated with educational media operated with an eye to 'a package of multi-media instructional segments', or what was sometimes called a 'total systems approach'.[12]

The rise of audiovisual education was neither automatic nor sudden. Compared with the way new media training for a world of technology is now taken for granted, the levels of scepticism were astronomical, and indeed prompted some ironic commentary by these technologized educationalists. A 1949 issue of *Educational Screen* covered a mock trial

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Fig. 1. Classroom film scene, from Kodak Pageant Projector advertisement, *Educational Screen,* April 1954, p. 135.

Fig. 2. Classroom audiovisual scene, EDL Tachistoscope advertisement, *Educational Screen,* December 1953, p. 429.

13 Evelyn Oelen, 'Mr AVA vs the State of NJ', *Educational Screen*, February 1949, p. 61.

14 Ibid., p. 62.

of instructional media. Written in a hardboiled, court reporting style, 'Mr AVA vs the State of NJ' had audiovisual aids charged with the student and teacher time it 'did abstract, filch, waste, fritter, consume, destroy and otherwise dispose of '.[13] Irene Cypher, of the NYU Department of Communication, and a leading researcher and advocate for technology in the classroom, is shown testifying with 'her jaw set against blandishments' of the prosecutor.[14] The jury, not surprisingly, found Mr AVA not guilty as charged.

Although the instructional genre had been evident in the first decade of cinema, and safe 16 mm film was available from the 1920s onwards, as Robert Filep and Wilbur Schramm observed: 'Instructional films . . . have been available for many decades but their use was negligible until

TELEVISION

goes
to school

15 Robert Filep and Wilbur
    Schramm, *A Study of the Impact
    of Research on Utilization of
    Media for Educational Purposes,*
    sponsored by NDEA Title VII
    1958–1968 (Washington, DC: US
    Department of Health, Education
    and Welfare, Office of Education,
    1970), p. 6.

the launching of Sputnik sparked an unprecedented concern and dissatisfaction with the learning devices and practices of the time'.[15] While 'negligible' is not an entirely accurate assessment, there was a sense, at least from the 1930s on, that institutional media, in particular film, were under-utilized as a consequence of teacher and community leader confusion, lack of training, and lack of coordination between users and producers. What was called visual education at the turn of the last century, and then audiovisual instruction in the 1940s, was a long, slow reformation of pedagogical and technological practice.

This reformation of pedagogical practice, and its usage for mass-mediated education, was not some ideologically neutral enterprise aimed simply at doing things better. It harboured an ideal of liberal, technocratic society; it redrew class boundaries around professions and expertise that served this vision; and it constituted an unprecedented redefinition of learning contexts as markets to be exploited. Indeed, the history of the educational market is tightly bound up with the history of audiovisual instructional technologies. There existed trade publications for and about these technologies, including *Educational Screen*, *Business Screen*, *Film News*, *Educational Technology* and *Audiovisual Instruction*. In these sources one finds that the watchwords of the day were democratization, community orientation, speed, low skill requirement, simplicity of use, mobility, adaptability and informality. In fact, 'informal education' described the kind of media learning that occurred almost by accident during the course of daily life, as well as the experiments in the less rigidly structured pedagogy of the 1960s and 1970s, such as open classrooms.

World War II gave an enormous boost to mass mobilization and mass education efforts, which included experiments in how these programmes could best be mounted through film and other media.[16] An alternately chaotic and well-coordinated campaign to sell the promises of mass-mediated education to public institutions continued through the postwar decades. The problems impeding the widespread acceptance of electronically accessorized courses included a sort of consumer fatigue from too many materials available or, more damaging to the presumptions of the rising technocracy, a reluctance to change pedagogical practices due to an inability to see any advantages in doing so. Recommendations continued to stress testing and experimentation of the media in question, to demonstrate and discern the most effective media choices for different pedagogical goals. The Yale University Motion Picture Research Project, for example, used controlled experimental situations to determine the best types of teaching films, with differing versions of films tested on school children. Funding for this came from the MPAA and from Teaching Film Custodians, a distributor and promoter of educational film noted especially for its handling of Hollywood shorts and excerpted features.[17]

Since the benefits were not equally evident to everyone, they had to be demonstrated and sold. The collective resources devoted to this enterprise were remarkable. But the questions addressed were largely not about the long-term consequences of creating a citizenry for a technologized world through technologized means. They focused on how fast, how efficiently, how expansively, through what procedures and through what mechanisms different instructional tasks could be accomplished. In the USA, a number of organizations sponsored this new world. For example, the National Education Association (NEA), a leading agenda-setting organization for educational policy established in 1848, launched its Department of Visual Instruction in 1923, changing its

16 For a valuable summary of this work, see Charles F. Hoban, Jr and Edward B. Van Ormer, *Instructional Film Research 1918–1950* (New York, NY: Arno Press, 1970), originally a report from the Instructional Film Research Program at Pennsylvania State College, 1951.

17 See Mark A. May and Arthur A. Lumsdaine, *Learning From Films* (New Haven, CT: Yale University Press, 1958).
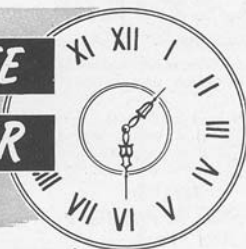
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Fig. 4. Ancient vs modern teacher, Victor film projector advertisement, *Educational Screen,* December 1946, p. 548.

name to Department of Audio-Visual Instruction (DAVI) in 1947; in 1971, this department became a separate organization, the Association for Educational Communications and Technology. DAVI and others produced and circulated audiovisual catalogues, policy documents and scholarly research, all with the intention of advancing the beneficial use of audiovisual materials in instructional situations. In addition to explicitly educational enterprises such as DAVI and FCA, there were a number of industry lobbies including the National Association of Visual Education Dealers (renamed the National Audio Visual Association after World War II) and the Visual Equipment Manufacturers Council.

Making the case for the audiovisual revolution were educationalists, psychologists, sociologists and early communication scholars, among

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Fig. 5. Efficient learning, Spencer Delineascopes advertisement, *Educational Screen,* April 1948, p. 189.

whose number were communication studies *éminence grise* Wilbur Schramm, Scott Fletcher of Encyclopedia Brittanica Films and the Ford Foundation's Fund for Adult Education, Samuel Renshaw, Mark May and Edgar Dale, the latter three of whom had conducted and published research in the 1930s as part of the Payne Fund studies on the effects of films on children. Together with many others, they formed a breed of applied communication specialists and media experts, with links to a new and increasingly powerful industrial sector. Developing workshops and

Fig. 6. Dramatic new teaching aid, American Optical opaque projector advertisement, *Educational Screen,* **September 1955, p. 309.**

conferences (such as the American Film Assembly) and journals (such as *AV Communication Review*) and inventing new job responsibilities and titles (such as Director of AV Services), here was what Williams called a cultural formation, which begins as a timely alliance of actors within a more stable preexisting institutional setting. Importantly, cultural formations are one way in which classes recalibrate their membership and assist in a degree of intergenerational continuity.

For this cohort of media enthusiasts, the air of the little schoolhouse was stale, especially when compared with the flashy media that people were experiencing in their everyday lives. Instructional methods had to be brought in line with the media with which people already lived. An anxiety about relevance crept into the rationales for electric learning, and the imperative of modernization was prevalent. As portrayed in an advertisement for Victor film projectors, the single student conversing directly with the teacher was an ancient approach to education. In contrast, 'the way in modern pedagogy' was the motion picture, the 'modern teacher' that could bring ancient times to life for enthralled children (figure 4). Bound up with this modern way were methods to instruct quickly and efficiently, as represented in the Spencer Delineascopes advertisement's assertion that its products help 'picture in a minute what you'd say in an hour' (figure 5). The processing and the measurement of the success of the task of teaching were introduced as objectives, and the cult of performance measures for teachers was

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Fig. 7. Self-contained projection unit with 'desk top screen', Bell Boy portable sound slide film projector advertisement, *Educational Screen*, February 1950, p. 87.
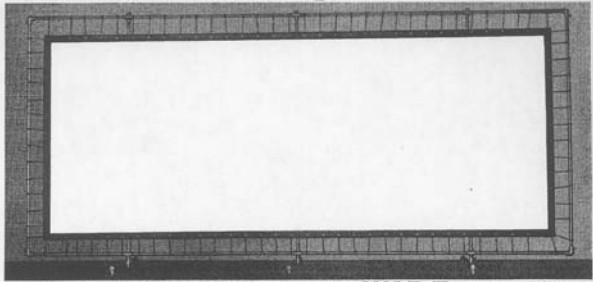
growing. In effect, an instrumentalist battle against wasteful learning was being waged.
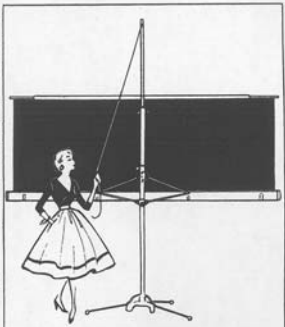
For all of the language of democratization and access to media hardware, AV lent authority to teachers. The media's newness and ability to dazzle provided a way to command learning situations. The 'dramatic new' American Optical opaque projector expresses a certain muscularity and seems to advocate a 'shock and awe' mode of instruction (figure 6). Contrary to the impression given by the Victor film projectors advertisement, only rarely were 'teacherless' classrooms promoted as a benefit of instructional audiovisual equipment. Instead, the dominant rhetoric defined new roles for teachers, roles that stressed an expansion in the numbers of students managed and processed, whether through the integration of group discussion with instructional media or by teachers

acting as guides and facilitators for individual learning. The facilitator role became a leading pedagogical approach in the 1960s.

Portability disseminated a sense of the everywhere-ness of instruction and supposedly matched a rising mass democratic and participatory culture. Movie-Mite's Bell Boy sound slide film unit offered a hand-carry screen and projector from 1945 onwards (figure 7). The complete presentational device, though still weighing in at a hefty twenty-nine pounds, was marketed for use in sales training and Sunday schools, and boasted an exceptionally early appearance of what was referred to as a 'desk top screen'. This was a unified media system, with a combination of screen, projector and speakers permitting situational flexibility. In the postwar period, much discussion and many products on the market emphasized configurations of media rather than a single medium. A good deal of the design of programmes and many of the media devices sold were premissed on the integration of materials: essays *and* films, recordings *and* opaque projectors. Organizations like the FCA publicized not only film but certain kinds of reading material, film strips and television, as well as techniques of discussion. The National Film Board
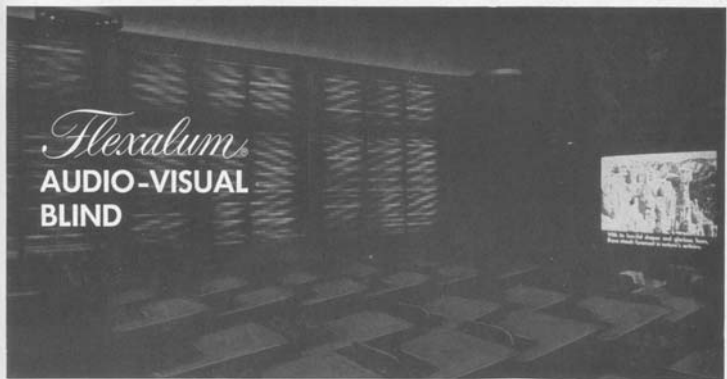
of Canada, beyond its central commitment to film production and distribution, created and circulated newsletters, teacher manuals, overhead transparencies, film strips and still photographs. In essence, a medium was not expected to stand on its own, and content was seen as adaptable, transferable and complementary to material in other formats. One might think of this as a brand of convergence *avant la lettre*. As a starting point for a classroom's media system, in 1962 University of Southern California professor James D. Finn listed seven essential components in contemporary teaching: 16 mm sound film projector, film strip projector, overhead projector, radio, record player, tape recorder and television. He recommended that at least five of these be made available to all classrooms.[18] Given, then, that a dominant understanding on the part of educationalists and entrepreneurs highlighted film's relationship to other media formats, it is a historical miscalculation for contemporary scholarship to treat film as a singular and stable medium, at least for this extra-theatrical sector (and arguably for other film sectors as well).

Included in this 'interrelated *system* of learning resources'[19] were all sorts of materials besides projectors and content, elements that tend to fall off the map for film and media scholars. The 'system' consisted of a variety of screens, from state-of-the-art retractable wide screens (figure 8) to portable floor-level viewing huts (figure 9). To convert spaces into suitable screening locations, companies offered various methods of darkening rooms, as seen with the Flexalum Audio-Visual blind (figure 10). To store the various materials, space had to be allocated either in meeting halls and classrooms themselves or in designated

18 'Schools are held in need of funds for machine aids', *The New York Times*, 2 October 1962, p. 33.

19 Filep and Schramm, *A Study of the Impact of Research on Utilization of Media for Educational Purposes*, p. 7 (emphasis in original).

equipment depots. Carts, stands and extension cords were designed to accommodate an easy and temporary transformation of spaces into projection rooms (figure 11). These were not inconsequential elements: these things were commodities. They were marketed and sold; they were altered and improved regularly; budgets had to be provided for them and rationales for budget commitments had to be made; space was needed to house them. The seemingly trivial materials of cords, carts, curtains and closets were essential for the temporary spatial and architectural reorientation and reprioritization of institutions required by the media revolution. Elaborate plans for specially designed and constructed media training facilities circulated, and a few such models for the future of media-assisted instruction were built; but the primary experience was

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Fig. 11. Modern audiovisual cart,
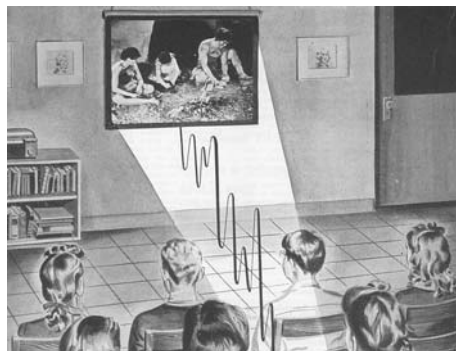*Educational Screen,* **January 1954, p. 31.**

Fig. 12. View on the premodern, from RCA projector advertisement,
Educational Screen, **May 1946, p. 255.**

one of the familiar metal cart being wheeled from one location to another and of battles with offending daylight.

The representational strategies of these advertisements must be read alongside the democratic ideal of expanded access to technological facilities. Women were one important front for the normalization of media expansion, with new expectations for the training of a female labour force of teachers. And while figures of women appear in many of the advertisements for media products as a primary target market of users, they also appear as a way to connote ease of use and portability. Furthermore, advertisements frequently depict instructional media as a vehicle to bring a palatable image of distant peoples into classrooms (figure 12). Along with this quasi-anthropological lesson was a confrontation between the modern and its racialized other, with the presumptively uniformly white classroom using its superior technological systems to open up a portal to the premodern. Versions of this discourse, reinstating media as a marker between the advanced and the backward, are just as apparent in trade news, where one finds that stories on audiovisual training programmes emphasized extension to historically disadvantaged populations, whether an *Educational Screen* cover story about visual education in Papua–New Guinea or a report on audiovisual teacher training at the famed African–American school, the Tuskegee Institute in Alabama.[20]

With this budding alignment of a dispersed educational market already in process, the 1958 National Defense Education Act in the USA institutionalized and solidified this activity. This Act was President Eisenhower's response to the Sputnik crisis. Included in the Act was Title VII, 'research and experimentation in more effective utilization of television, radio, motion pictures, and related media for educational purposes'. By 1968, six hundred research projects had been funded through Title VII, to the tune of $40.3 million.[21] Meanwhile, Title III of the Act made new money available to purchase media equipment and to remodel schools: $280 million in the first four years.[22] The boom in audiovisual purchases through the 1960s was astonishing, a direct result

20 'Visual education in Papua and New Guinea', *Educational Screen*, vol. 30, no. 1 (1951), p. 18; Pearl W. Headd, 'A basic AV course', *The Audio-Visual Magazine: Educational Screen*, vol. 35, no. 6 (1956), pp. 218–19.

21 Filep and Schramm, *A Study of the Impact of Research on Utilization of Media for Educational Purposes*, p. 1.

22 Theodora E. Carlson, *Guide to the National Defense Education Act of 1958* (Washington, DC: US Department of Health, Education and Welfare, Office of Education, 1960), p. 3.

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23 Michael Molenda, 'Association
    for Educational Communications
    and Technology in the 20th
    century: a brief history', 28 June
    2005, http://www.aect.org/
    About/History/ [accessed 26
    June 2008].

of this federal support. For instance, DAVI saw its members grow from three thousand in 1958 to eleven thousand in 1970.[23]

The rise of audiovisual technologies after World War II, and the discursive terms of this expansion, continue to resonate in our own historical context. The ordinary presence of these objects and practices is part of the texture of our media culture, and hence merits our scholarly attention. Moreover, the reigning common sense concerning the indispensability of new media to contemporary education and training would not exist were it not for the years of advocacy for, and experiments with, those drab grey-green instructional aids. As film and media teachers and scholars, we tend to be stalwart supporters of access to certain kinds of projection and display formats. For this reason, it is essential that we understand the ways we have benefited from, and are implicated in, the history of the formation of this common sense about media use. The practices associated with that earlier era of mobile screens have had three lasting consequences, each of which involves the production of what Bourdieu described as distinction between classes in the realm of culture.

Firstly, building the modern classroom and training site – the structures of formal and informal instruction – involved systems of media formats, equipment, catalogues, accessories, spatial transformation, temporal reorientation, new relations between teachers and students, and new procedures and modes of evaluation. The terms of argument and materials were interconnected, signaling the methodological necessity for film scholars today to consider fully things, practices and ideas that promote different kinds of media use. In other words, we need to leave behind methods that draw artificial barriers around the singularity of a medium in favour of more complete renditions of the relations between media and practices.

Secondly, the rise of audiovisual technologies and their attendant priorities put in place the conditions of possibility for the very existence of the fields we call film, media, communication, screen and visual cultural studies. The ferment produced by agents and agencies of post-World War II media education solidified a distribution network for the instructional market, produced catalogues of media materials, argued for budget lines for film and media purchases and rentals, and institutionalized evaluation committees' assessments of usage and effectiveness. Obviously, a full history of disciplinary formation involves multiple forces and factors. However, the availability of film libraries, 16 mm projectors, and installed pulldown screens, not to mention curtains and carts, allowed us to treat with a scholarly eye what was being deployed along the corridor for other pedagogical purposes.

Thirdly, the era helped to develop and circulate a brand of media knowledge – including sets of arguments, evidence, methods and approaches associated with film, television, and the projection and audio technologies used in institutional settings. At the same time, these ideas were associated with a cohort of educationalists and scholars whose

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economic and cultural power rose as their ideas took root as essential to the operations of training venues specifically, and of mass democratic society generally. This cohort valorized methods and objectives for the deployment of media, and thus was born a model for what were seen as community and educational media experts. This is exactly how Gramsci described the formation of hegemony: in this instance, the organization of a class of technologically-invested figures with their resident organic intellectuals, a group whose work was to interpret situations, set agendas and make sense of contexts. Through this group's activities, class characteristics and boundaries were delineated and a space opened up in which an emergent elite found purchase. Through their writings, speeches, policy briefs, organizations and businesses, this new breed of experts put in place a hierarchy of cultural authority in which their ideas mattered, marking out the class and skill expectations that have expanded in the years since. The film reels and extension cords, the storage depots and projectors, produce an orientation towards textual material, and towards its multi-institutional availability, as well as an orientation towards a structure of authority and a vision of the future. The very process of directing time and energy to this media circuit is the prime ideological feature – a politics at the level of procedure – constructing a relation between materials, people and power. Understanding our role in the wider sea-change in the everyday presence of mobile media unmasks our own ongoing involvement in the creation and promotion of a specially trained technocratic elite.

Part 4